Annual Water Quality Monitoring Report

Pacific Highway Upgrade: Woolgoolga to Ballina Sections 3 to 11: July 2020 to June 2021

Transport for New South Wales | April 2023

NSW GOVERNMENT

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Executive Summary

This is the fifth annual water monitoring report for Sections 3 to 11 of the Woolgoolga to Ballina (W2B) Pacific Highway upgrade. This report covers the first year of project operation. The reporting period for this annual report is 1 July 2020 to 30 June 2021.

The water quality monitoring program is described in the *Pacific Highway Upgrade – Woolgoolga to Ballina Sections 3 to 11: Water Quality Monitoring Program* (WQMP) (dated 26 June 2019, GeoLINK ref: 2476-1026). The purpose of the WQMP is to monitor the construction and operation impacts of the highway upgrade on surface water bodies and groundwater resources, and to provide input into the environmental management of the project.

As outlined in previous annual monitoring reports, a 'result of interest' is a result that has potentially been influenced by project activities and has been investigated.

The WQMP proposes that water quality monitoring results be assessed by comparing sampling results to the corresponding 80th percentile (P80) figure and/or 20th percentile (P20) figure (as relevant) from the baseline data. The P80 is applicable to parameters where high values are potentially an issue (e.g. turbidity), while the P20 is applicable to parameters where low values are potentially an issue (e.g. dissolved oxygen), and both figures are relevant for parameters where either a high value or a low value are potentially an issue (e.g. pH).

For surface water monitoring, where a downstream result is greater than the P80 baseline value (or is less than the P20 baseline value, where relevant) comparison with the upstream result collected at the same time is undertaken to determine whether it is a result of interest. During the reporting period, results of interest were identified at all sites.

For groundwater quality monitoring, bores have been classified as either 'up gradient' or 'down gradient'. For a pair of bores, the down gradient bore is the one that typically has the lower groundwater level, indicating that the direction of groundwater flow is from the up gradient bore to the down gradient bore. Where the down gradient result is greater than the P80 value (or is less than the P20 value, where relevant), it is considered to be a result of interest. During the reporting period, results of interest were identified at most sites.

For groundwater level monitoring, the operation phase groundwater level data has been assessed by comparing the difference in groundwater level between a pair of bores to the P80 of the difference in groundwater level between the same pair of bores during the pre-construction monitoring period. During the reporting period, results of interest were identified at some sites.

Updated monitoring data is provided to Transport for NSW (TfNSW) on a regular basis. The project responds to the water monitoring results as follows:

1. The water monitoring data is reviewed, with particular focus on the results of interest that have been identified.
2. The results assist with setting the focus for the project's environmental management inspections.
3. During these inspections, environmental controls are checked and reviewed against the relevant environmental plans and pollution control measures for adequacy and any required actions (e.g. maintenance, replacement or upgrade) are identified.
4. The aforementioned actions are tracked and implemented.

1. Introduction

1.1 Background

This is the fifth annual water monitoring report for Sections 3 to 11 of the Woolgoolga to Ballina (W2B) Pacific Highway upgrade. The reporting period for this report is 1 July 2020 to 30 June 2021. This is the first monitoring report covering the operational phase of the project.

1.2 Overview of Monitoring Program

The water quality monitoring program is described in the *Pacific Highway Upgrade – Woolgoolga to Ballina Sections 3 to 11: Water Quality Monitoring Program* (WQMP) (dated 26 June 2019, GeoLINK ref: 2476-1026).

1.2.1 Objectives

The purpose of the WQMP is to monitor the construction and operation impacts of the highway upgrade on surface water bodies and groundwater resources and provide input to the environmental management of the project.

The key surface water quality objective of the W2B project is to protect downstream environments from the potential impacts of surface runoff during the construction and operational phases of the project (RMS, Aurecon, SKM, 2012a). Similarly, the key groundwater objective of the W2B project is to protect environmental receivers of groundwater flows and groundwater users from the potential impacts on groundwater levels and quality during the construction and operational phases of the project (RMS, Aurecon, SKM, 2012b).

The outcomes of the WQMP will assist with achieving water quality and hydrology related management objectives for the W2B project including:

- Mitigating impacts to surface water quality in order to protect aquatic ecology and ecosystem characteristics in adjacent catchments.
- Mitigating impacts to groundwater hydrology in order to protect licensed bores and dams, water bodies and groundwater dependant ecosystems.

2. Monitoring Methodology

2.1 Surface Water Quality

2.1.1 Monitoring Locations

The surface water monitoring locations are described in Section 2.1 of the WQMP. Maps of the surface water monitoring locations are presented in **Appendix A**.

There were no changes to the monitoring locations during the reporting period.

2.1.2 Sampling Regime and Parameters

As per Section 4.2.2.1 of the WQMP, the required frequency of sampling and the sampling parameters are as follows:

- One wet event sampling round per quarter:
  - Type A parameters every quarter (refer to **Table 2.1**); plus
  - Type B parameters (refer to **Table 2.1**) every second quarter.
- One dry event sampling round every six months (two rounds in the first year of operation):
  - Type A and Type B parameters.

Wet events are defined as 15 mm or more of rain within 24 hours. Wet event sampling is to be undertaken within 48 hours of the rain event.

Some sites were not monitored during some monitoring rounds because they either could not be accessed or had insufficient water. These instances are noted in the results spreadsheet presented in **Appendix C**.

Table 2.1 Surface Water Sampling Parameters

Parameter	Type A Parameters	Type B Parameters
pH (measured in the field)	X	
Temperature (measured in the field)	X	
Electrical Conductivity (EC) (measured in the field)	X	
Dissolved Oxygen (DO) (measured in the field)	X	
Turbidity (measured in the field)	X	
Total Suspended Solids (TSS)		X
Total Oils and Grease (include as Type A parameter if oil/ grease is visible)	*	X
Total Phosphorous (TP), Total Nitrogen (TN)		X
Total Recoverable Hydrocarbons (TRH) (include as Type A parameter if oil/grease is visible)	*	X
Heavy Metals (Total): Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc		X

** Note: Oils and grease and TRH to be analysed as Type A parameters if oil/grease is visible*

2.1.3 Sample and Data Collection

The collection of in-situ water quality data and the collection of water samples for laboratory analysis were undertaken in accordance with the methodology described in Sections 5.1 and 5.2 of the WQMP.

2.2 Groundwater Quality

2.2.1 Monitoring Locations

The groundwater quality monitoring locations are described in Section 2.2 of the WQMP. Maps of the groundwater monitoring locations are presented in **Appendix A**.

There were no changes to the monitoring locations during the reporting period.

2.2.2 Sampling Regime and Parameters

Sampling parameters are as per **Table 2.2** overleaf. As per Section 4.3.2.2 of the WQMP, sampling over the first year of the operational phase comprised of six-monthly monitoring of both Type A and B parameters.

Some bores were not monitored during some monitoring rounds due to insufficient water. These instances are noted in the results spreadsheet presented in **Appendix E**.

2.2.3 Sample and Data Collection

The collection of in-situ water quality data was undertaken in accordance with the methodology described in Sections 5.1 and 5.3 of the WQMP. A passive sampling approach was used to collect groundwater samples.

Table 2.2 Groundwater Quality Sampling Parameters

Parameter Group	Parameter	Type A Parameters (Field Analysis)	Type B Parameters (Laboratory Analysis)
Physical and Chemical Properties	pH	X	
	Temperature	X	
	Electrical Conductivity (EC)	X	
Hydrocarbons	Total Recoverable Hydrocarbons (TRH)		X
Nutrients	Total Phosphorous, Total Nitrogen		X
Major Cations	Sodium (Na+), Potassium (K+), Calcium (Ca2+), Magnesium (Mg2+)		X
Major Anions	Chloride (Cl-), Sulfate (SO42-), Bicarbonate (HCO3-)		X
Heavy Metals	Aluminium, Cadmium, Copper, Lead, Zinc		X

2.3 Groundwater Levels

2.3.1 Monitoring Locations

The groundwater level monitoring locations are described in Section 2.2 of the WQMP. Maps of the groundwater monitoring locations are presented in **Appendix A**.

There were no changes to the monitoring locations during the reporting period.

2.3.2 Sampling Regime

As per Section 4.3.1.2 of the WQMP, the automatic water level recorders are required to be downloaded on a quarterly basis with the recorders set to take readings at a maximum of six-hour intervals. Physical measurement of the depth to standing water level is to be taken at the same time as the quarterly download.

The monitoring undertaken during the reporting period complied with the above. Some bores were not monitored during some monitoring rounds due to various reasons, including insufficient water, access constraints and issues with the loggers. These instances are noted in the results spreadsheet presented in **Appendix E**.

2.3.3 Sample and Data Collection

The collection of groundwater level data was undertaken in accordance with the methodology described in Sections 5.1 and 5.3 of the WQMP.

3. Results

3.1 Climatic Conditions

Figure 3.1 to **Figure 3.4** present monthly totals for the reporting period compared to long-term averages (data sourced from BoM website). The recorded rainfall across Sections 3 to 11 of the W2B project during the reporting period varied in comparison with long-term averages.

Generally, rainfall was approximately average for most of the reporting period. However, significantly higher than average rainfall was experienced in December 2020 and through late summer and autumn 2021 across all weather stations.

Rainfall totals for the 12 months of the reporting period were significantly higher than the long-term average annual rainfalls (**Table 3.1**).

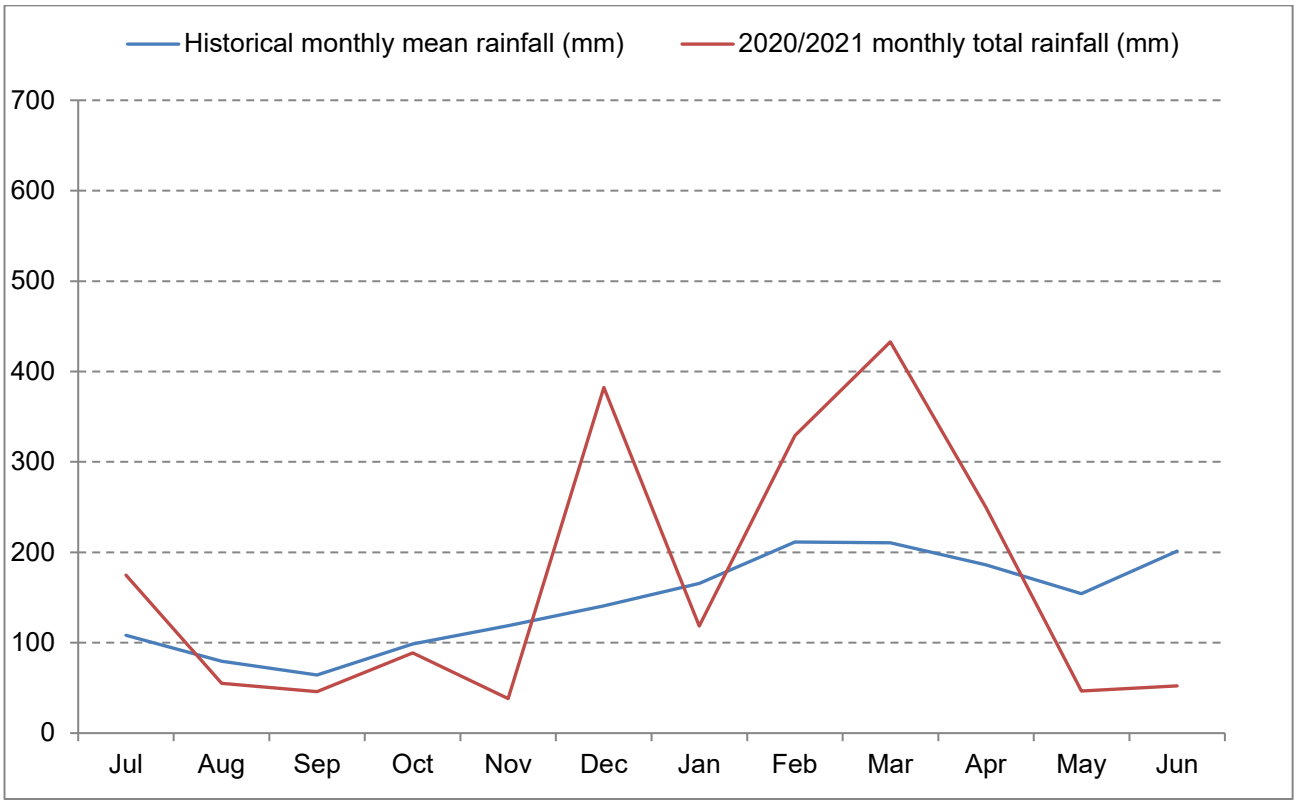


Figure 3.1 Ballina monthly rainfall over the reporting period versus long-term average

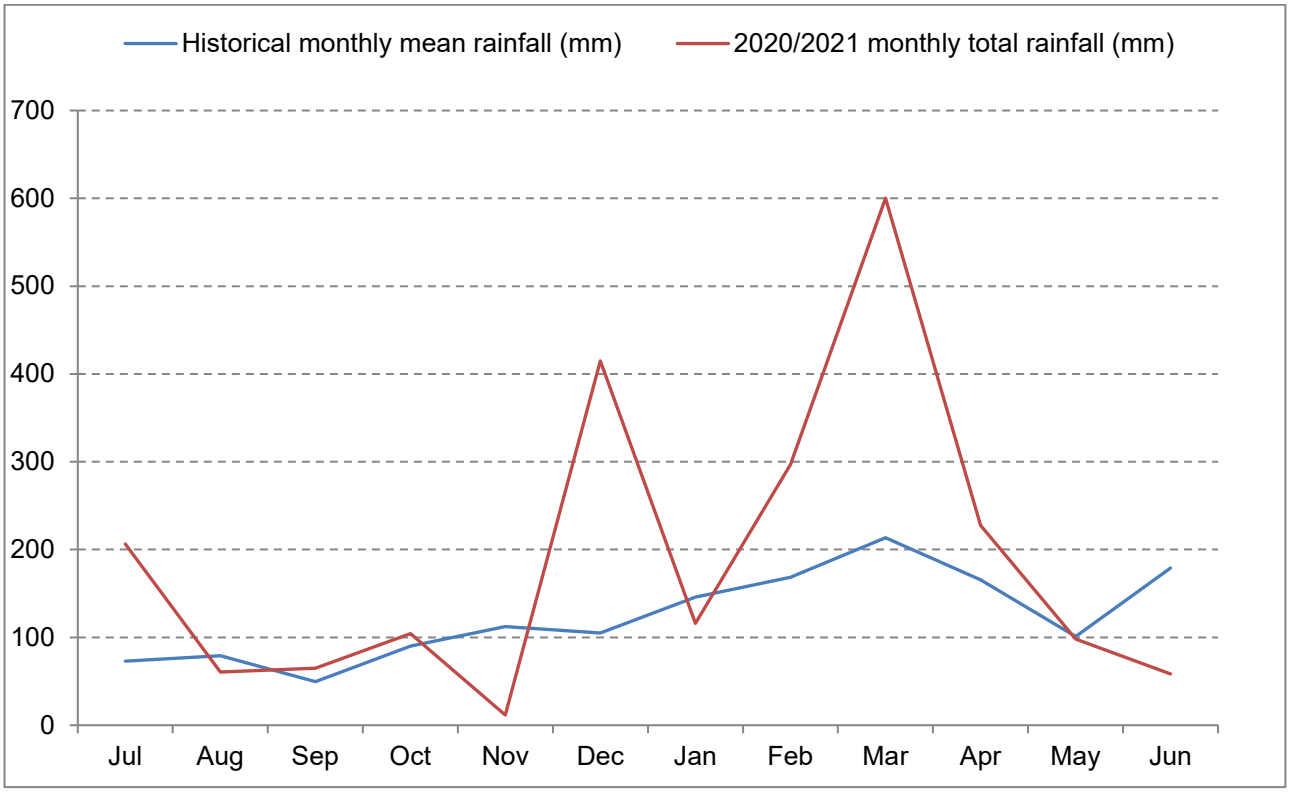


Figure 3.2 Evans Head monthly rainfall over the reporting period versus long-term average

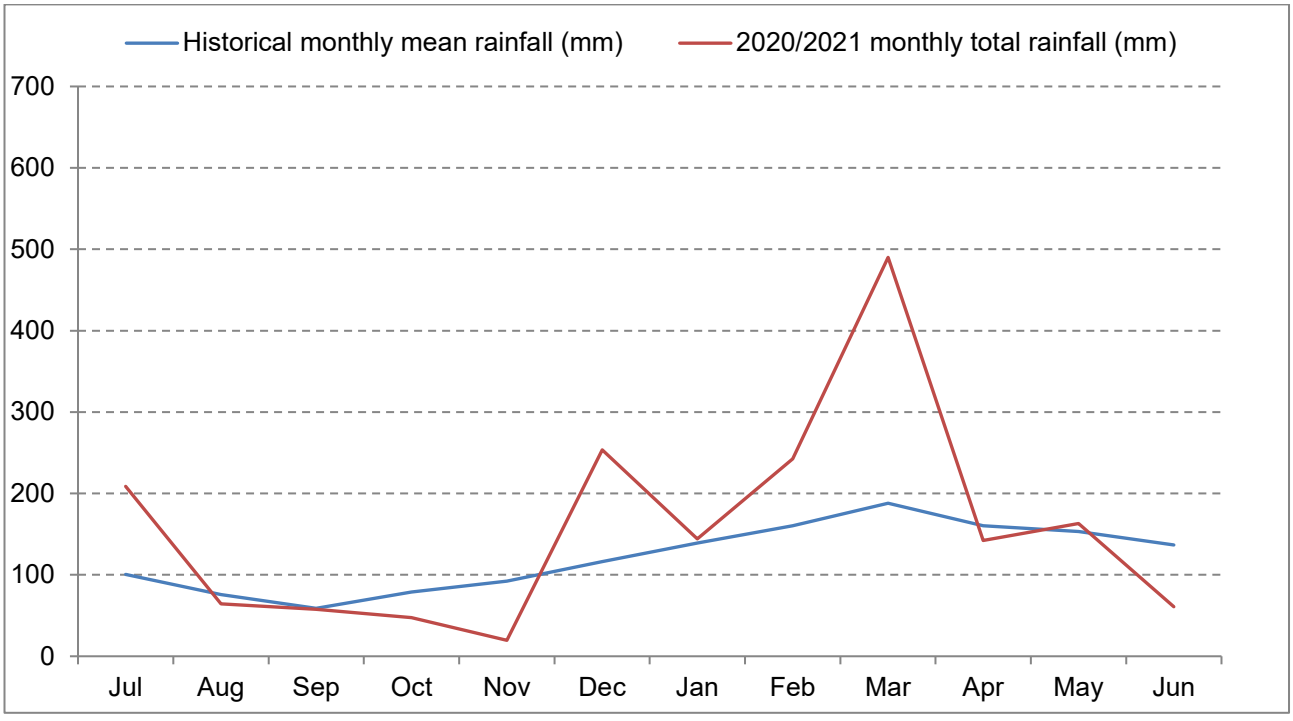


Figure 3.3 Yamba monthly rainfall over the reporting period versus long-term average

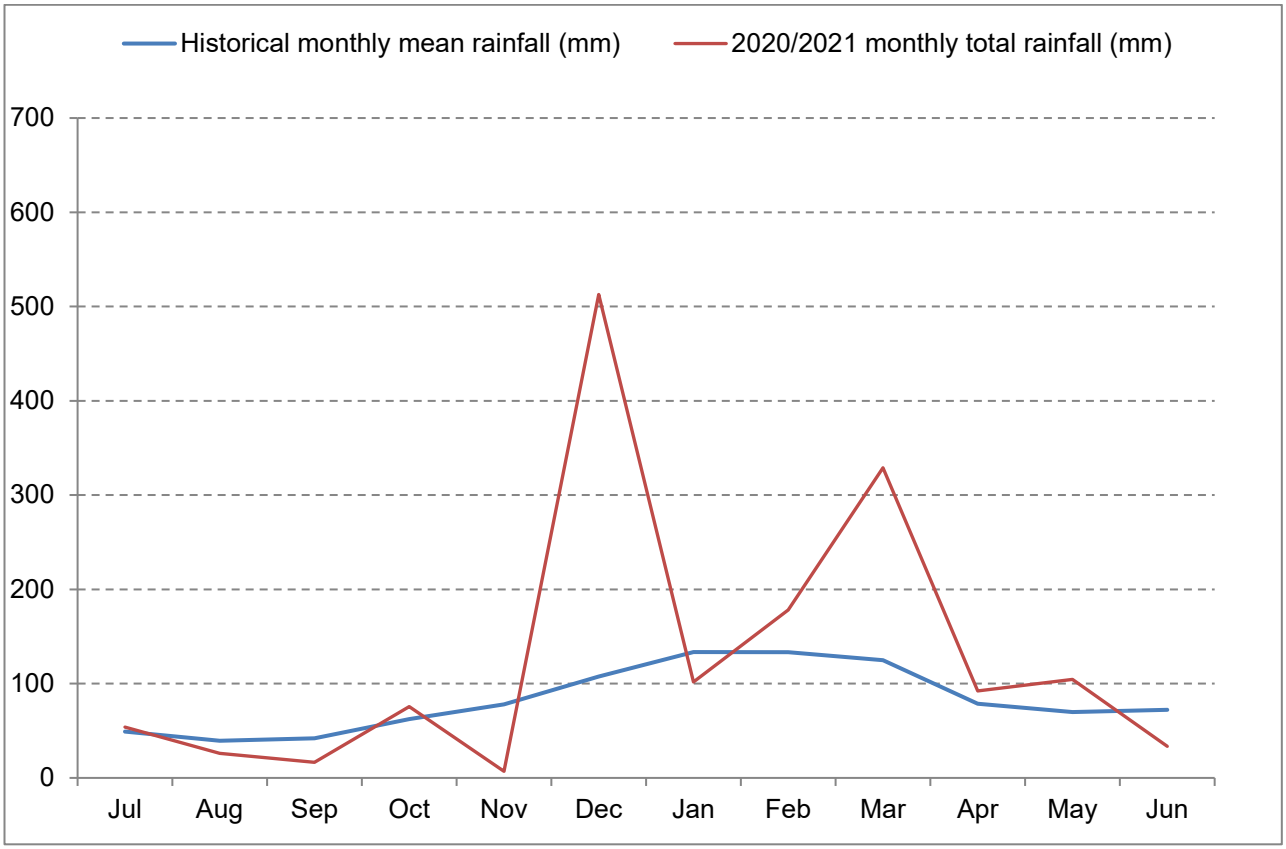


Figure 3.4 Grafton monthly rainfall over the reporting period versus long-term average

Table 3.1 Reporting Period Total Rainfall and Average Annual Rainfall

Station	Long-term average annual rainfall (mm)	Rainfall for 2019-2020 reporting period (mm)
Ballina	1740	2014
Evans Head	1483	2260
Yamba	1461	1894
Grafton (Airport)	991	1531

3.2 Data Analysis Approach

3.2.1 Surface Water Quality

The WQMP proposes that surface water quality monitoring results be assessed by comparing sampling results to the corresponding 80th percentile (P80) figure and/or 20th percentile (P20) figure (as relevant) from the baseline data.

The P80 is applicable to parameters where high values are potentially an issue (e.g. turbidity), while the P20 is applicable to parameters where low values are potentially an issue (e.g. dissolved oxygen), and both figures are relevant for parameters where either a high value or a low value are potentially an issue (e.g. pH).

Where a downstream result is greater than the P80 value (or is less than the P20 value, where relevant) then further comparison with the upstream result collected at the same time is undertaken. Where the downstream result is also greater than (or less than, where relevant) the corresponding upstream result by more than the tolerance listed in **Table 3.2**, it is considered to be a 'result of interest'. That is, the result has potentially been influenced by project activities and further investigation is undertaken.

Where the downstream result exceeds the upstream result by less than the tolerance listed in **Table 3.2**, it is considered unlikely to have been influenced by project activities. The tolerances listed in **Table 3.2** take into consideration spatial and temporal variation that is observed when taking water quality measurements in waterways that typically exhibit significant variance within short distances and timeframes. The tolerances also account for instrument error ranges.

Table 3.2 Tolerances for Comparing Upstream and Downstream Results

Parameter	Downstream result is considered to be a 'result of interest' if it exceeds the upstream result by more than:
Electrical Conductivity	The standard deviation from the baseline data
pH	The standard deviation from the baseline data
Dissolved Oxygen	0.5 mg/L
Turbidity	10 NTU
Total Suspended Solids	10 mg/L
Oil and grease	2 mg/L
Total Phosphorous	0.02 mg/L
Total Nitrogen	0.2 mg/L

The original baseline data set is the pre-construction data collected between February and December 2013. As per Section 7.1.2 of the WQMP, the baseline data is supplemented with the data collected from upstream monitoring sites during the construction and operational phases of the project. The upstream monitoring sites represent sites not impacted by the highway upgrade and therefore represent control sites. This process provides a more robust set of baseline data over the course of the project.

3.2.2 Groundwater Quality

The WQMP proposes that groundwater quality monitoring results be assessed using comparisons to the P80 and P20 values from the baseline data, similar to the surface water quality approach described above.

The baseline data set is the pre-construction data collected between February 2013 and January 2014.

During baseline monitoring in Sections 3 to 6, the bores were monitored for the in-situ parameters of pH, EC and temperature. In Sections 7 to 11, the bores were monitored for pH only, with the exception of three bores in Section 8 (GWB8-15, GWB8-16 and GWB8-17), which were monitored for pH, EC, TDS, hydrocarbons, nutrients, major cations and anions, and heavy metals.

Because there is no baseline data for some parameters and only limited baseline data for the remainder, each bore has been classified as either 'up gradient' or 'down gradient'. For a pair of bores, the 'down gradient' bore is the one that typically has the lower groundwater level, indicating that the direction of groundwater flow is from the 'up gradient' bore to the 'down gradient' bore. P80 values (and P20 values, where relevant) have been calculated using any available pre-construction data, as well as the construction and operational phase data for the 'up gradient' bore. These P80 and P20 values are then used to assess the groundwater quality results for the corresponding 'down gradient' bore.

Where the down gradient result is greater than the P80 value (or is less than the P20 value, where relevant), it is considered to be a 'result of interest'. That is, the result has potentially been influenced by project activities and further investigation is undertaken.

3.2.3 Groundwater Levels

The WQMP proposes that the operation phase groundwater level data be assessed by comparing the difference in groundwater level between a pair of bores to the P80 of the difference in groundwater level between the same pair of bores during the pre-construction monitoring period. This has been implemented in the following manner:

- The difference in the groundwater level between a pair of bores is calculated at each time interval for the pre-construction monitoring period.
- The P80 of these groundwater level differences is calculated to determine the baseline P80.
- During the operation phase, the difference in the groundwater level between a pair of bores is calculated at each time interval.
- If the difference in the groundwater level exceeds the baseline P80, it is considered to be a 'result of interest'. That is, the result has potentially been influenced by project activities and further investigation is undertaken.

It is noted that the groundwater levels could be impacted by other 'natural' factors, such as climatic conditions that are different to those experienced during the baseline period.

3.3 Surface Water Quality

The results from the surface water quality monitoring are progressively provided to Transport for NSW (TfNSW) during the monitoring program. Results of interest are highlighted in bold red font in the spreadsheet and a tabulated summary of these results is also provided at the same time. These results trigger a review of site activities and potentially further investigation, as outlined in the WQMP.

A compilation of the results of interest for the reporting period is provided in **Appendix B** and a snapshot of the surface water quality monitoring results spreadsheet (as at July 2021) is provided in **Appendix C**.

The results of interest listed in **Appendix B** will not necessarily match the results that are highlighted in bold red font in the spreadsheet in **Appendix C**. This is because the P80 and P20 values are progressively updated as additional upstream data is collected and added to the baseline data set (refer to **Section 3.2.1** for discussion). The results of interest listed in **Appendix B** were determined based on the P80 and P20 values that were current at the time that the result was obtained, whereas the spreadsheet in **Appendix C** contains the P80 and P20 values as at 25 May 2021.

Appendix H presents a table of environmental incidents that occurred during the reporting period and have the potential to impact water quality. It is considered that there is a potential correlation between an incident and a surface water quality result if the incident occurred within 50 m of a waterway or drain (or more than 50 m if the incident involved a spill greater than five litres) and a result of interest for a relevant parameter was recorded within a month following the incident.

3.3.1 Discussion

All surface water sites had results of interest for at least one parameter during one or more monitoring rounds. Some results of interest may have been attributable to the project. The following observations can be made:

- **Rainfall:** As described in **Section 3.1**, monthly rainfall varied across the reporting period in comparison to the long-term averages. Despite the higher-than-average rainfall across the reporting period, there were a number of cases where water quality was tested and sampled at a downstream site that was not visibly connected by continuous water to the upstream site. Some waterways were a series of isolated pools and monitoring was undertaken within a pool of water that did not appear to be connected with the upstream site. These instances are noted in the field notes in **Appendix B** and **Appendix C**. As per **Section 4**, any assessment of the adequacy of environmental management controls should consider the lack of connectivity at the time of the monitoring event.
- **Electrical Conductivity (EC):** Aside from the influence of tidal water, EC in a waterway may be influenced by inputs such as fertiliser (i.e. TP and TN concentrations) and soils with high salt content. Fertiliser runoff and erosion associated with the project may cause increases in EC levels at monitoring sites.

  Electrical Conductivity results of interest were recorded at most sites on one or more occasions, including during both wet and dry sampling events. Significant results of interest include:

  - 15.40 mS/cm (P80 = 3.30 mS/cm) at SW3-23 on 05/11/20 during dry event monitoring
  - 0.37 mS/cm (P20 = 3.52 mS/cm, upstream = 0.41 mS/cm) at SW5-04 on 04/05/21 during dry event monitoring
  - 29.90 mS/cm (P80 = 4.86 mS/cm) at SW5-11 on 13/11/20 during dry event monitoring
  - 0.02 mS/cm (P20 = 0.39 mS/cm) at SW5-11 on 6/05/21 during wet event monitoring

  These results indicate variation both well above and well below the statistical range. No clear indication as to the reason for these exceedances was observed during the monitoring event.

  While the impacts from the recorded EC levels are considered likely to be negligible, management responses can include a review of the existing measures that relate to the management of erosion and sediment control and the use of fertilisers, should any controls remain or where revegetation works are ongoing.

- **Dissolved Oxygen (DO):** Low DO concentrations in a waterway may be a result of:

  - inputs of tannin leachates (which increases biological oxygen demand);
  - inputs of nutrients (which cause elevated algal growth that in turn depletes DO); or
  - a change in flow regime which can lead to stagnation and in turn depleted DO concentrations.

  Another potential cause of low DO concentrations, which is unrelated to project activities, is long periods of floodplain inundation due to flood events.

  Dissolved Oxygen results of interest were recorded at some sites on one or more occasions, including during both wet and dry sampling events. Noteworthy results include:

- 1.94 mg/L (P20 = 5.38 mg/L) at SW5-11 on 16/12/20 during wet event monitoring
- 0.32 mg/L (P20 = 1.90 mg/L) at SW8-08 on 15/02/21 during wet event monitoring
- 1.49 mg/L (P20 = 3.99 mg/L) at GDE07 on 04/02/21 during wet event monitoring
- 2.90 mg/L (P20 = 6.32 mg/L, upstream = 4.79 mg/L) at SW10-06 on 09/11/20 during wet event monitoring
- 1.87 mg/L (P20 = 6.28 mg/L, upstream = 5.06 mg/L) at SW10-06 on 04/02/21 during wet event monitoring

It is noted that all these events were recorded during wet event monitoring. Extensive speculation could be made as to the cause of these events. Given rainfall events typically result in connectivity between the sites and throughout the waterway it is suspected that these issues have arisen from either previously stagnant portions of the waterway or flushing of acid sulfate soils. Other than speculation no clear correlation can be draw from the information currently available.

Low DO concentrations, especially over a long-term, can result in unacceptable stress to the majority of aquatic fauna. Periods of extremely low DO levels typically result in fish kills and significant environmental imbalance. Management responses to low DO concentrations with regard to the operation of the project can include a review of:

- management of cleared vegetation and mulch stockpiles (with respect to tannin leachates), where these features are still present within the project site; and
- maintaining the flow regime of waterways.

- **Turbidity and Total Suspended Solids:** Elevated turbidity and/or suspended solids can result from the direct disturbance and subsequent mobilisation of sediments within waterways as well as inputs of sediment laden run-off during rain. Construction activities including clearing, grubbing and earthworks typically increase the area of exposed soil and, without appropriate management, can lead to erosion and transport of sediment into waterways. During the operational phase, impacts could include the failure of drainage lines or pollution control basins or the lack of sufficient permanent and stable vegetation cover across areas that were exposed during construction.

  Turbidity and suspended solids results of interest were recorded at most sites on one or more occasions, including during both wet and dry sampling events. Results of particular note include:

  - 934 NTU and 164 mg/L (P80 = 328 NTU and 98 mg/L, upstream = 588 NTU and 104 mg/L respectively) at SW3-02 on 16/12/20 during wet event monitoring
  - 1000 NTU (probe maximum) and 1558 mg/L (P80 = 395 NTU and 164 mg/L, upstream = 1000 NTU and 326 mg/L respectively) at SW3-04 on 16/12/20 during wet event monitoring
  - 232 NTU and 170mg/L (P80 = 40 NTU and 39 mg/L, upstream = 199 NTU and 146 mg/L respectively) at SW3-12 on 16/12/20 during wet event monitoring
  - 149 NTU (P80 = 37 NTU) at SW3-23 on 16/02/21 during wet event monitoring
  - 254 mg/L (P80 = 60 mg/L, upstream = 38 mg/L) at SW5-04 on 06/05/21 during wet event monitoring
  - 160 NTU (P80 = 96, upstream = 88 mg/L) at SW10-01 on 04/02/21 during wet event monitoring

  The result at SW3-04 on 16 December 2020 is of particular note. Inference as to the route course of these results is difficult. Field notes taken at the time do not provide detail sufficient to indicate why these results were so high. Management responses listed below should be enacted to ensure that these results are not project related.

  Elevated turbidity can attenuate light and subsequently stress photosynthetic aquatic flora. Suspended solids can stress fish via interfering with the function of fish gills and, when suspended

solids fall out of suspension, they can smother sessile aquatic biota. Potential management responses to address elevated turbidity/ suspended solid concentrations can include:

- ensure revegetation and stabilisation of the project site is progressing well and is effective; and
- review of erosion and sediment controls at relevant sites where revegetation has yet to achieve target ground cover to ensure they are installed in accordance with the Progressive Erosion and Sediment Control Plan and are functioning well, particularly during rainfall.

- **Hydrocarbons (including Oil and Grease):** Hydrocarbons are widely used in construction plant and equipment and in highway traffic vehicles in the form of fuels and oils. Spills and leaks from plant, equipment and storage vessels and during transport and refuelling or through traffic accidents can lead to contamination of waterways. Run-off from contaminated soil and asphalt works is also a potential pathway for hydrocarbons to enter aquatic systems.

  No results of interest for hydrocarbons were detected. Results of interest for oil and grease were reported at some sites. However, it should be noted that oil and grease were analysed using a hexane extractable analysis which measures for organic hydrocarbons (vegetable or animal origin) in addition to petroleum hydrocarbons. Given these oil and grease results did not coincide with hydrocarbon result of interest it can be inferred that sources of oil and grease where of animal or vegetable origin and not relevant to the project operation. Potential management responses to elevated hydrocarbon (including oil and grease) results can include:

  - review of the project incident register (to determine whether a spill has been reported in the area);
  - review of TfNSW spill and/or accident records;
  - review and audit of spill response procedures;
  - inspections of nearby areas that may be used for the storage or use of hydrocarbons (e.g., site compounds); and
  - inspection of operational pollution containment controls.

- **Nutrients (Total N and Total P):** Nutrients can enter waterways via:

  - soil erosion and off-site movement of eroded soils, particularly soils that have had fertiliser added; or
  - changes to flow regimes, which can change the volumes and flow rates of water, leading to stagnation and subsequent increases in nutrients.

  Elevated nutrient concentrations can result in algal blooms that in turn stress the aquatic system via reduced light attenuation and depressed DO concentrations.

  Nutrient results of interest were recorded at some sites on one or more occasions, including during both wet and dry sampling events. Some results of particular interest include:

  - Total Nitrogen reading of 1.09 mg/L (P80 = 0.51 mg/L, upstream = 0.29 mg/L) at SW9-01B on 17/11/20 during dry event monitoring
  - Total Nitrogen reading of 5.60 mg/L (P80 = 3.03 mg/L, upstream = 3.03 mg/L) at SW9-03 on 15/12/20 during wet event monitoring

Total Nitrogen reading of 1.54 mg/L (P80 = 0.08 mg/L, upstream = 1.05 mg/L) at SW10-04 on 15/12/20 during wet event monitoringDetermination of the route course of these results of particular interest is challenging in hindsight. Potential management responses to elevated nutrients can include:

- investigating the potential sources of nutrients (e.g. fertiliser);
- review of erosion and sediment controls where these are still in place; and

- confirming that the flow regime of the relevant waterway is being maintained appropriately.

- **pH:** The pH of a waterway can be affected by acidification due to exposure of acid sulphate soils, the leaching of tannins and from spills/run-off during concreting and lime stabilisation works.

  pH results of interest (both high and low) were recorded at most sites on one or more occasions, including during both wet and dry sampling events. Many of these results fall within the neutral pH range (6.5-8.5). Results of particular interest with a greater than one unit variation include:

  - 5.13 (P20 = 6.64) at SW3-04 on 08/08/20 during wet event monitoring
  - 7.36 (P80 = 6.19) at SW5-11 on 06/05/21 during wet event monitoring
  - 5.55 (P80 = 4.82, upstream = 3.24) at SW9-01B on 17/11/20 during wet event monitoring

  All three results were recorded during wet event monitoring, however no clear reason for why these results were recorded was noted during the monitoring or can be accurately inferred at this stage. Aquatic biota can become stressed when pH levels fall outside optimal ranges. Potential management responses to significant pH results can include:

  - for low pH levels, review acid sulphate soil management and cleared vegetation/mulch stockpile management (with respect to tannin leachates) where works/management are still ongoing; and
  - for high pH levels, review management of spills/leaching/runoff associated with concreting and/or lime stabilisation.

- **Metals:** Metals can enter waterways via:

  - soil erosion and off-site movement of eroded soils;
  - stormwater runoff from road surfaces and other pavement areas;
  - exposure and/or oxidation of acid sulphate soils; and
  - chemical spills.

  Metals can be toxic to aquatic organisms, with potential harmful effects including death or changes in morphology, physiology, biochemistry, behaviour, and reproduction. Organisms take up metals through food consumption, respiration and through body surfaces. As such, the toxicity of metals is affected by their bioavailability. Potential management responses to results of interest for metals can include:

  - review acid sulphate soil management in areas where there is ongoing management;
  - review of erosion and sediment controls where revegetation works are yet to reach targets; and
  - review and audit of spill response procedures.

  Metal results of interest were recorded at most sites however, it is noted that monitoring of metals only commenced at the start of the operational phase (in accordance with the WQMP), so the P80 values are calculated from a very limited set of upstream data. As such, the P80 values are unlikely to reflect the full range of natural variability of each parameter at each site.

Based on the information presented in **Appendix H**, there were no incidents that appeared to correlate with results of interest in one or more of the parameters being monitored. For some results of interest, consideration was given to providing comparison with default guideline values taken from the Australia and New Zealand Guidelines for Fresh and Marine Water Quality 2018. However as per the instruction from these guidelines the use of default guideline values is generally not appropriate where site specific data exists (ANZG, 2018).

3.4 Groundwater Quality

A spreadsheet containing the groundwater quality monitoring results is progressively updated and provided to TfNSW on a regular basis. Results of interest are highlighted in bold red font in the spreadsheet.

A compilation of the results of interest for the reporting period is provided in **Appendix D** and a snapshot of the groundwater quality monitoring results spreadsheet (as of 30 June 2021) is provided in **Appendix E**.

3.4.1 Discussion

The discussion provided in **Section 3.3.1** regarding potential impacts of project activities on specific surface water quality parameters and potential management responses is also applicable to groundwater quality.

During the reporting period, results of interest were identified at most sites.

- **Electrical Conductivity (EC):** Results of interest were recorded at some sites including:
  - 7.17 mS/cm (P20 = 9.16 mS/cm) at GWB3-06 on 01/03/21
  - 0.14 mS/cm (P20 = 0.46 mS/cm) at GWB3-51 on 01/03/21
  - 0.60 mS/cm (P20 = 2.13 mS/cm) at GW03 on 04/03/21

  In some locations and instances, it is considered likely that elevated EC was caused by saltwater intrusion into the groundwater from nearby tidal waterways. Conversely high rainfall periods have the potential to reduce EC values due to the influx of fresh water. Further inference as to the cause of these results cannot be provided at this stage.
- **pH:** Results of interest were recorded at most sites including:
  - 5.33 (P20 = 6.16) at GWB3-14 on 25/08/20
  - 6.32 (P80 = 4.07) at GWB3-32 on 02/03/21
  - 5.38 (P80 = 5.22) at GWB3-47 on 06/08/20
  - 6.59 (P80 = 5.22) at GWB3-51 on 01/03/21
  - 6.96 (P80 = 5.68) at GWB8-16 on 01/02/21

  It is noted that the baseline pH range for some bores is quite narrow; for example, GWB3-06 has a P20 of 6.65 and a P80 of 7.01. It is considered that pH levels slightly outside such a narrow range are not a cause for concern. The pH of groundwater can be affected by the disturbance of acid sulfate soils or as a result of the infiltration of chemicals or contaminants to groundwater. Uncontained runoff from concreting works or lime stabilisation may also impact pH levels. Potential responses to results of interest can include:
  - for low pH levels, review acid sulphate soil management where this is still being undertaken; and
  - for high pH levels, review management relating to the storage of chemicals and of leaching associated with concreting and/or lime stabilisation where these works may still be ongoing.
- **Nutrients (Total N and Total P)**: Results of interest were recorded at some sites including:
  - TP of 0.34 mg/L (P80 = 0.09 mg/L) at GWB8-16 on 24/08/20
  - TN of 2.73 mg/L (P80 = 0.40 mg/L) at GWB8-16 on 01/02/21
  - TN of 8.13 mg/L (P80 = 3.02 mg/L) at GWB8-22 on 26/02/21

Elevated nutrient levels can occur as a result of the infiltration of surface water runoff to groundwater. Management responses to elevated nutrients can include comparisons of the nutrient levels at nearby surface water monitoring sites and inspections to determine if there may be a relatively direct hydraulic pathway between surface water and groundwater, for example, in areas of relatively shallow groundwater or near cuttings or constructed rock platforms. Additionally, a review of revegetation activities coinciding with elevated results may indicate nutrient infiltration from fertiliser application.

- **Salts**: Results of interest were recorded at some sites. Results of particular intertest include:
  - Chloride at 92 mg/L (P80 = 50 mg/L) at GWB3-21 on 25/08/20
  - Calcium at 59 mg/L (P80 = 23.2 mg/L) at GWB4-02 on 25/08/20
  - Magnesium a 19 mg/L (P80 = 3.4 mg/L) at GWB4-02 on 25/08/20
  - Calcium at 62 mg/L (P80 = 23.2 mg/L) at GWB4-02 on 01/03/21
  - Magnesium at 20 mg/L (P80 = 3.4 mg/L) at GWB4-02 on 01/03/21
  - Sulfate at 3060 mg/L (P80 = 1039 mg/L) at GWB 5-01 on 24/08/20
  - Magnesium at 1120 mg/L (P80 = 1020 mg/L) at GWB 5-01 on 24/08/20
  - Calcium at 443.2 mg/L (P80 = 289.5 mg/L) at GWB 5-01 on 24/08/20
  - Sulfate at 2901 mg/L (P80 = 1041 mg/L) at GWB 5-01 on 01/02/21
  - Magnesium at 1097 mg/L (P80 = 1019 mg/L) at GWB 5-01 on 01/02/21
  - Calcium at 452 mg/L (P80 = 288.9 mg/L) at GWB 5-01 on 01/02/21
  - Sulfate at 145 mg/L (P80 = 9 mg/L) at GWB 8-22 on 24/08/20

  Salts are soluble and have the potential to infiltrate groundwater via the soil. Management responses to elevated salt levels can include the inspection of controls designed to avoid the seepage of water from pollution control basins and a review of revegetation activities. In some locations and instances, it is considered likely that elevated salt levels were caused by saltwater intrusion into the groundwater from nearby tidal waterways.

- **Metals**: Results of interest were recorded at some sites including:
  - Aluminium at 0.049 mg/L (P80 = 0.005 mg/L) at GWB3-14 on 02/03/21
  - Copper at 1.480 mg/L (P80 = 0.001 mg/L) at GWB 5-01 on 24/08/20
  - Zinc at 0.083 mg/L (P80 = 0.008 mg/L) at GWB 5-01 on 24/08/20

Metals can become mobilised in the environment via the exposure of acid sulfate soils and subsequent acidification of groundwater sources. Potential responses to results of interest for metals can include a review of acid sulphate soil management (where still undertaken) and spill containment infrastructure.

- **Hydrocarbons**: Results of interest were detected at GWB5-01, GWB8-16, GWB8-22, GW03 and GWB10-05. Examples of hydrocarbons include diesel, engine oils, lubricating oils, waxes, asphalts and pitch. Management responses to elevated hydrocarbon results can include comparisons of the hydrocarbon levels at nearby surface water monitoring sites and inspections to determine if there may be a relatively direct hydraulic pathway between surface water and groundwater. Additionally, the TfNSW incident register should be reviewed for potential spill incidents.

3.5 Groundwater Levels

A compilation of the results of interest for the reporting period is provided in **Appendix F** and charts of the groundwater levels are presented in **Appendix G**.

3.5.1 Discussion

Results of interest were recorded at some sites. Investigations to determine the likelihood of project activities being a contributing factor to these results consider:

- The timing of the cutting and/or excavation works at the specific site.
- Site observations that indicate interception of groundwater levels.

Potential management responses can include measures to collect and transfer groundwater seepage from the up-gradient side of the cut to the down gradient side of the cut.

4. Project Response to Results

As discussed in **Section 3**, the updated monitoring data is provided to TfNSW on a regular basis. The project responds to the water monitoring results as follows:

1. The water monitoring data is reviewed, with particular focus on the results of interest that have been identified.
2. The results assist with setting the focus for the project's environmental management inspections.
3. During these inspections, environmental controls are checked and reviewed against the relevant environmental plans (e.g. Progressive Erosion and Sediment Control Plans) for adequacy and any required actions (e.g. maintenance, replacement or upgrade) are identified.
4. The aforementioned actions are tracked and implemented.

When reviewing a result of interest, the first step is to determine whether project activities with the potential to influence the result were underway at the time of (or prior to) the monitoring event. Where project activities are considered a potential contributor to the result of interest, existing management measures are reviewed and, where appropriate, additional management measures are considered. If it is determined that additional management measures are warranted, they are implemented and monitored for efficacy.

With regard to surface water monitoring, sometimes the downstream monitoring site is not connected by continuous water to the upstream monitoring site. In such instances, the waterway may be a series of isolated pools. The review of a result of interest and consideration of the adequacy of the management measures takes into account the lack of connectivity at the time of the monitoring event.

5. Recommendations

5.1 Monitoring Program

It is recommended that the monitoring program continue in accordance with Sections 4.2.2.2, 4.3.1.3 and 4.3.2.3 of the WQMP for the operational phase of the project.

References

ANZECC ARMCANZ (1995). *Guidelines for groundwater protection in Australia.* Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).

ANZECC ARMCANZ (2000a). *Australian and New Zealand guidelines for fresh and marine water quality. Volume 1, The Guidelines.* Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).

ANZECC ARMCANZ (2000b). *Australian guidelines for water quality monitoring and reporting.* Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).

ANZG (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia. Available at www.waterquality.gov.au/anz-guidelines

GeoLINK, (2019). *Pacific Highway Upgrade – Woolgoolga to Ballina Sections 3 to 11 – Water Quality Monitoring Program*. 26/06/2019 for NSW Road and Maritime Service.

RMS, Aurecon, SKM, (2012a). *Upgrading the Pacific Highway. Woolgoolga to Ballina. Working Paper – Water Quality. November 2012.*

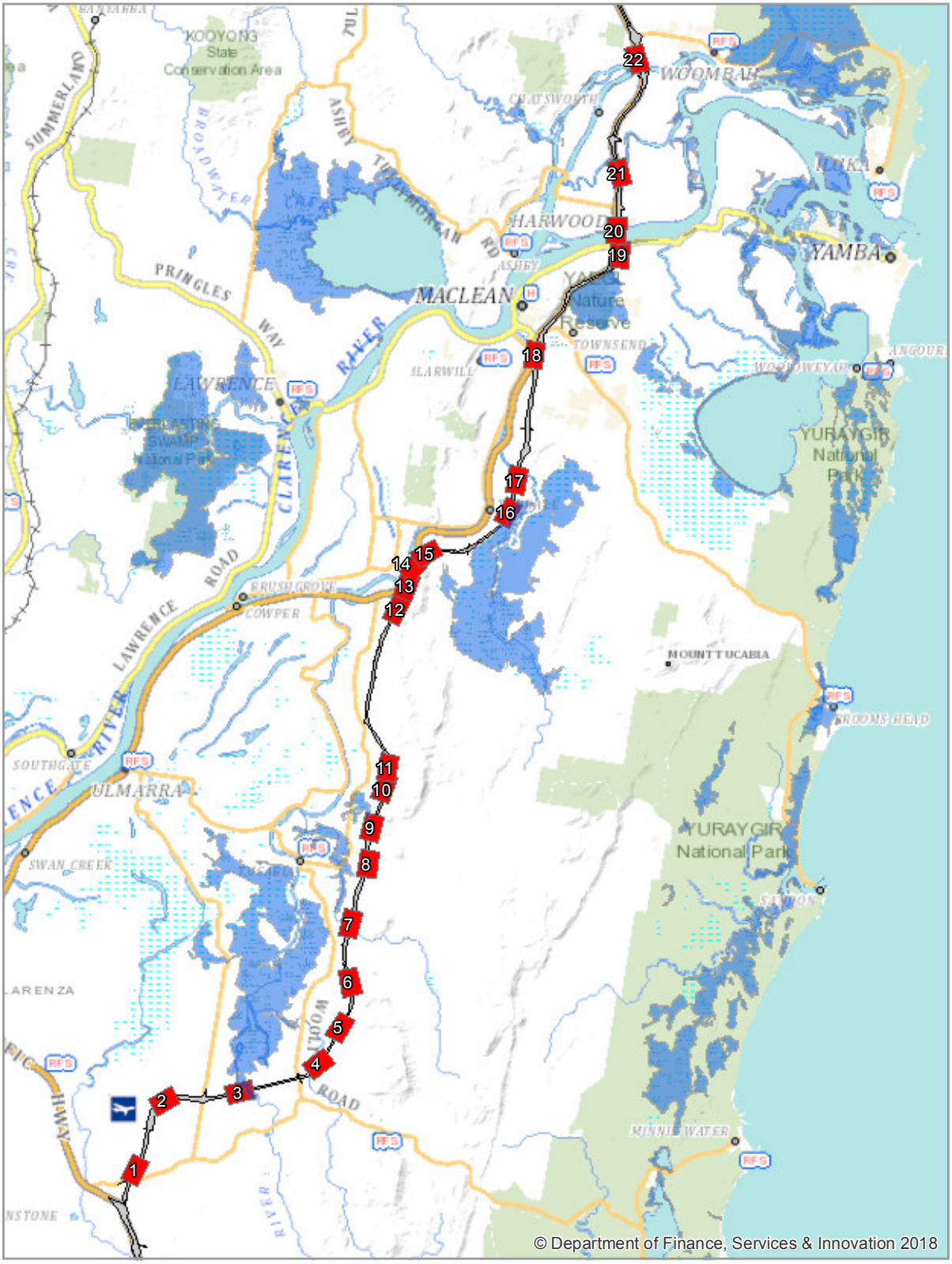
RMS, Aurecon, SKM, (2012b). *Upgrading the Pacific Highway. Woolgoolga to Ballina. Working Paper – Groundwater. November 2012.*

Appendix A

Monitoring Locations Maps

Information shown is for illustrative purposes only

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Source of base data: DFS&I and Pacific Complete



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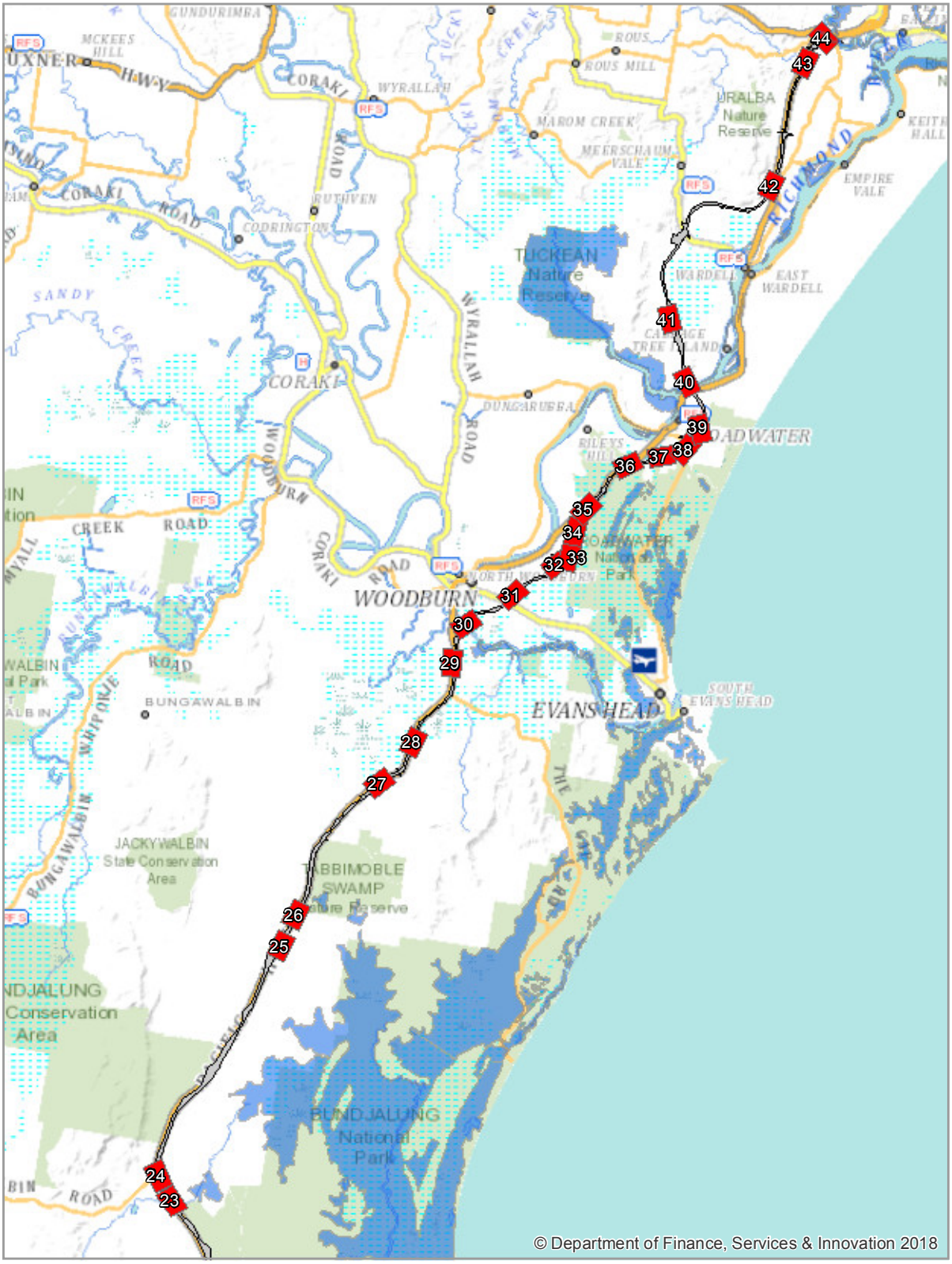
- Approved Project Boundary
- Map sheet
- Coastal wetland

0 5 Km

Map Key
Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

Information shown is for illustrative purposes only

Drawn by: AB Checked by: RE Reviewed by: JC Date: 23/05/2019
Source of base data: DFS&I and Pacific Complete



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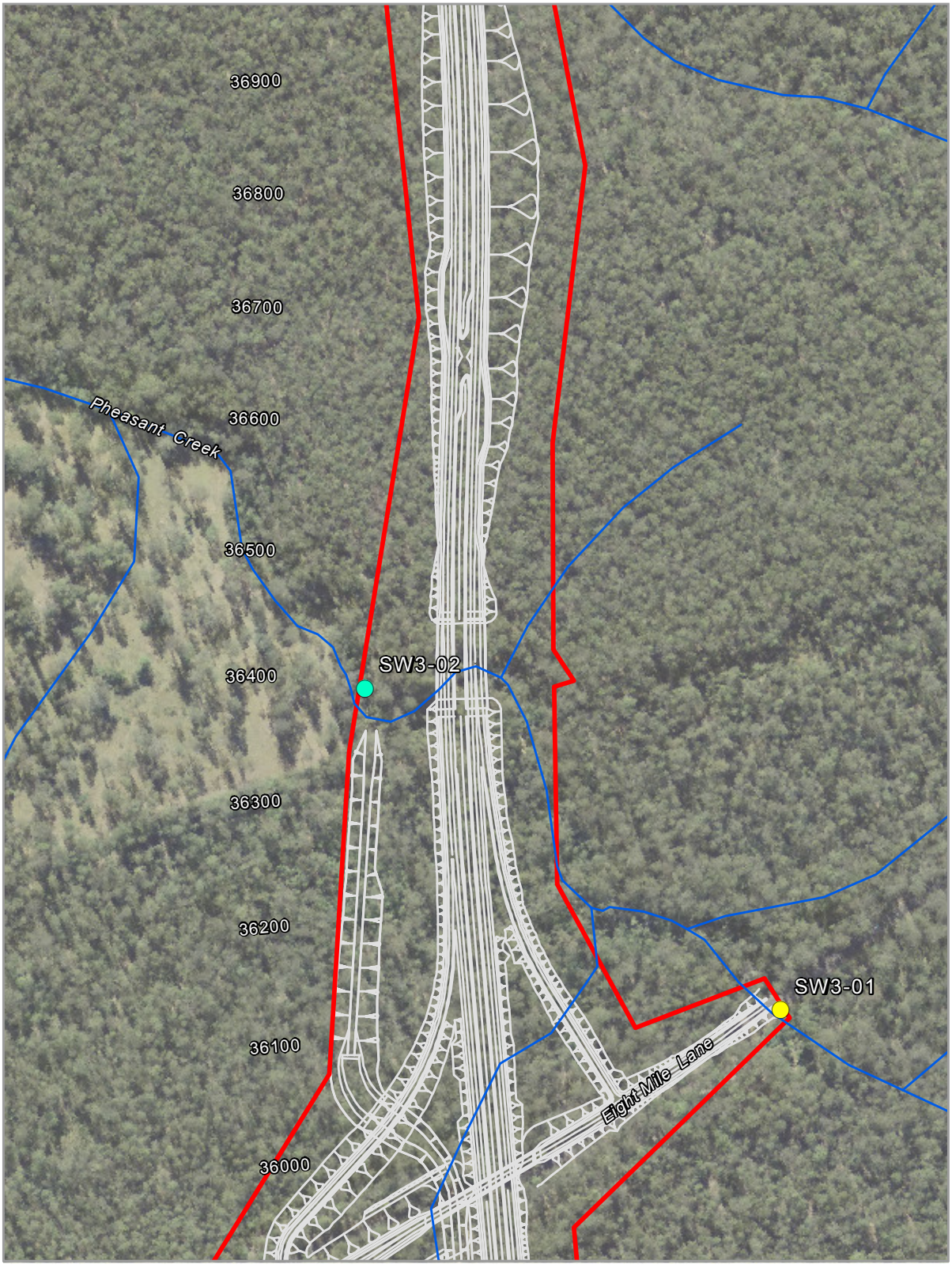
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- Map sheet
- Coastal wetland

Map Key
Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

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Information shown is for illustrative purposes only

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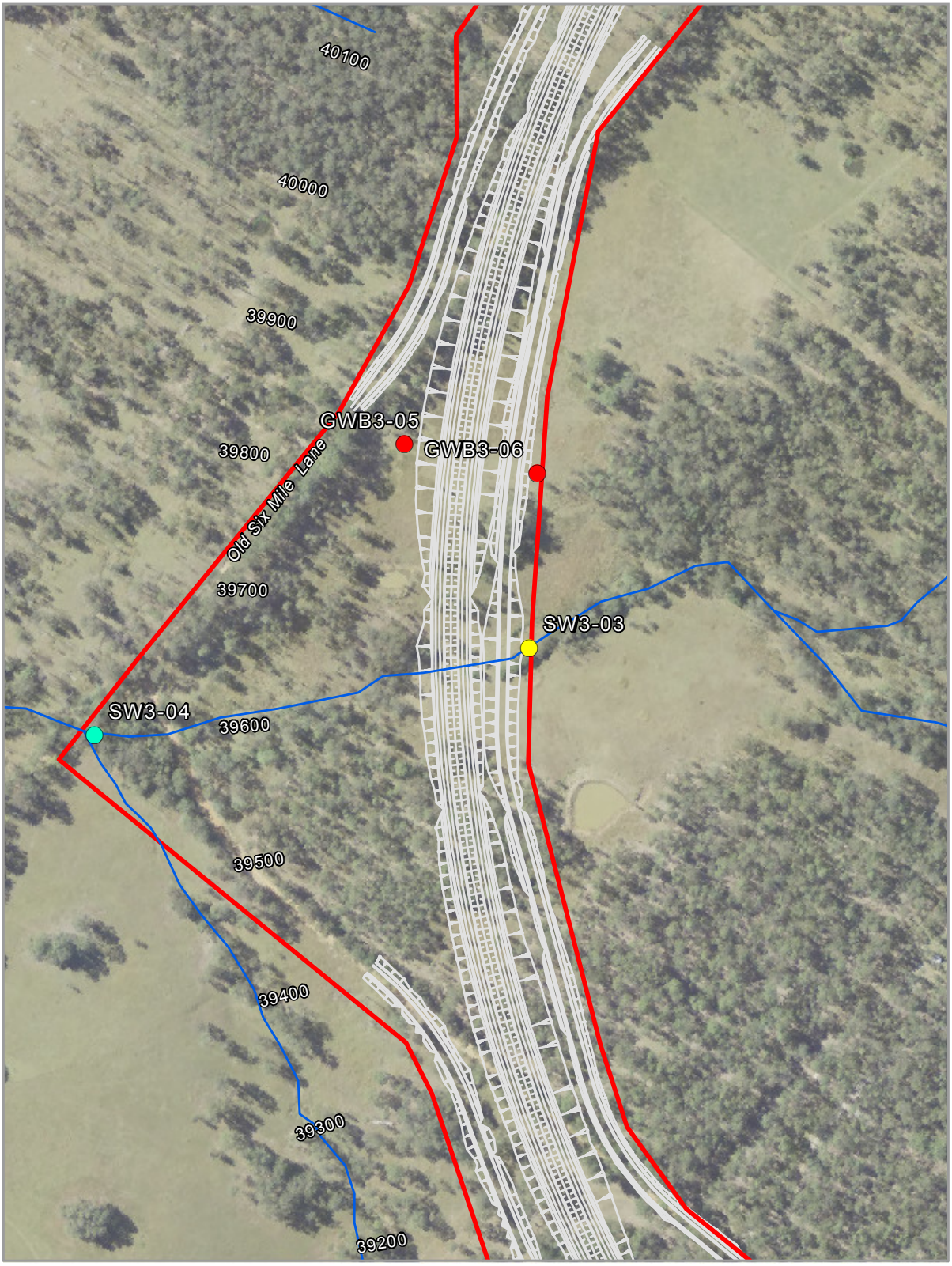


LEGEND

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- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

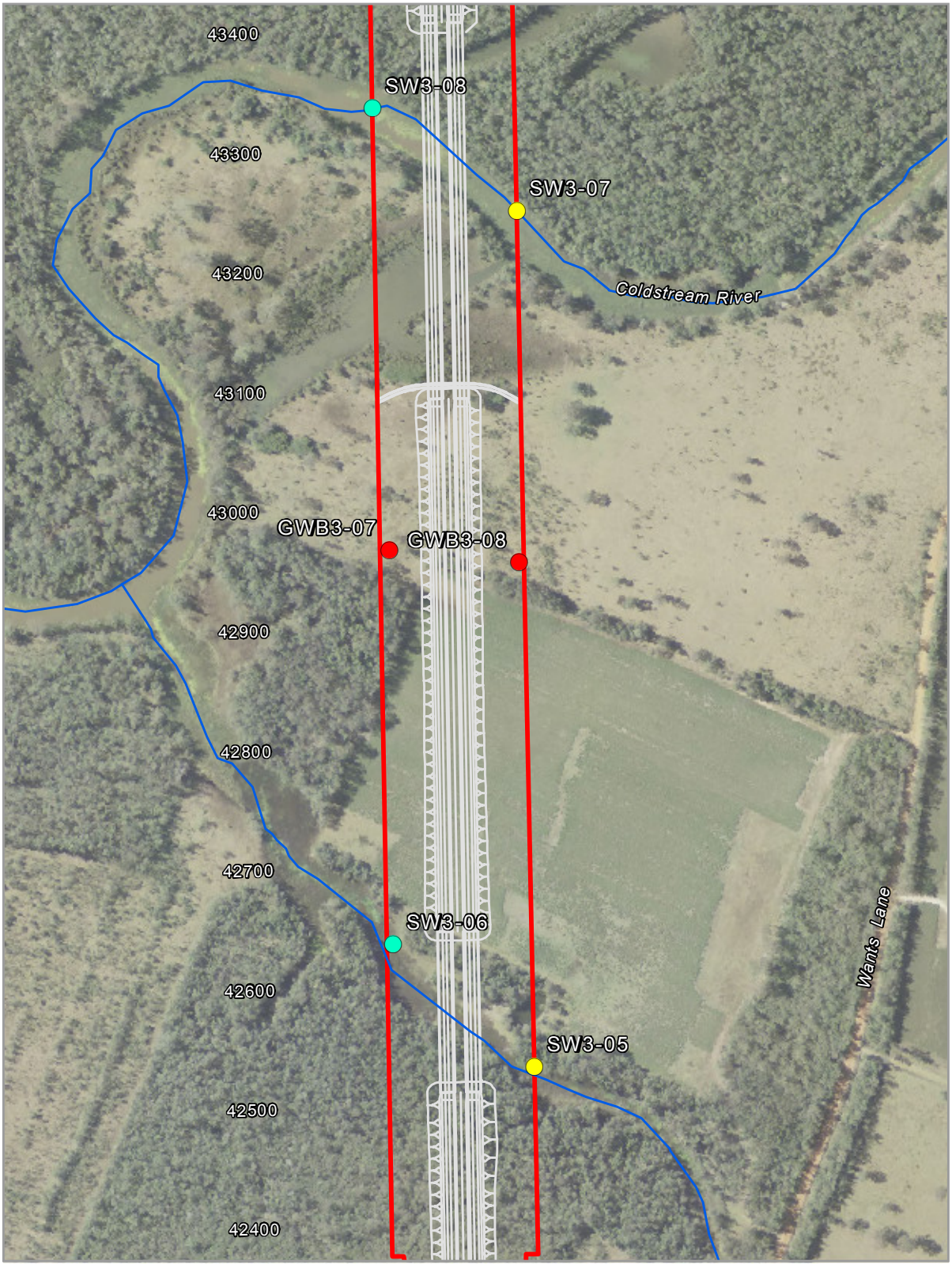


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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations



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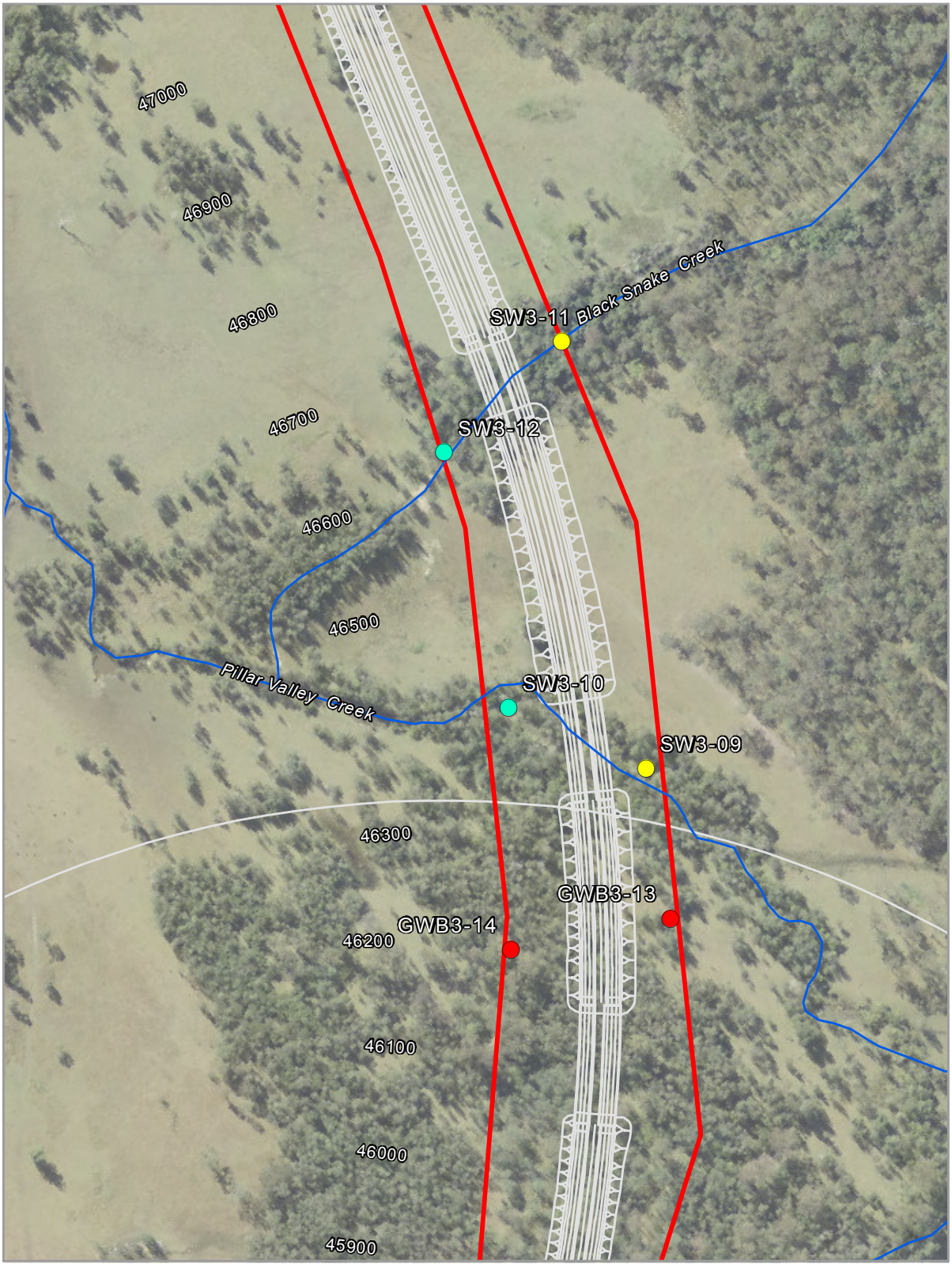
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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

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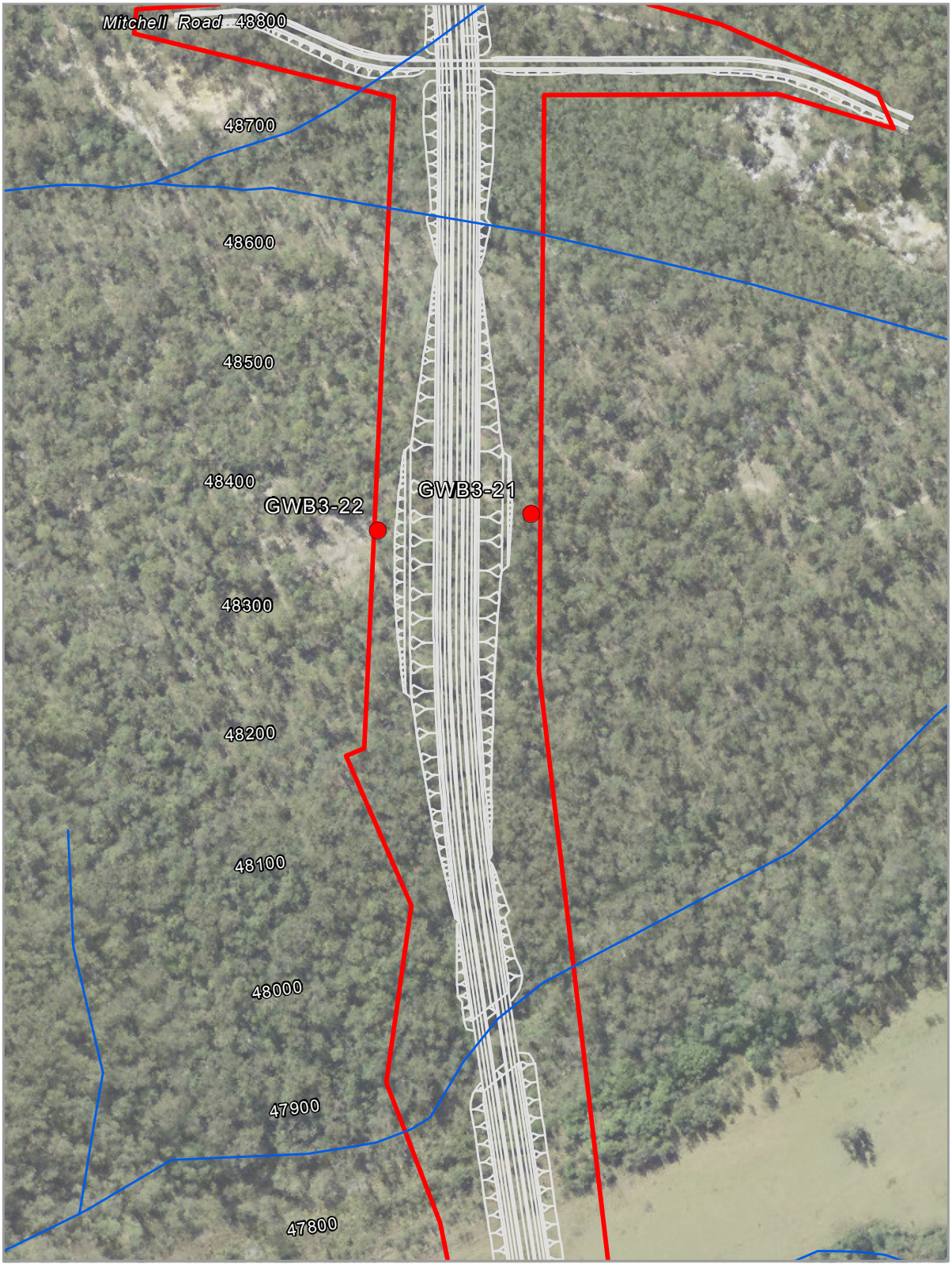


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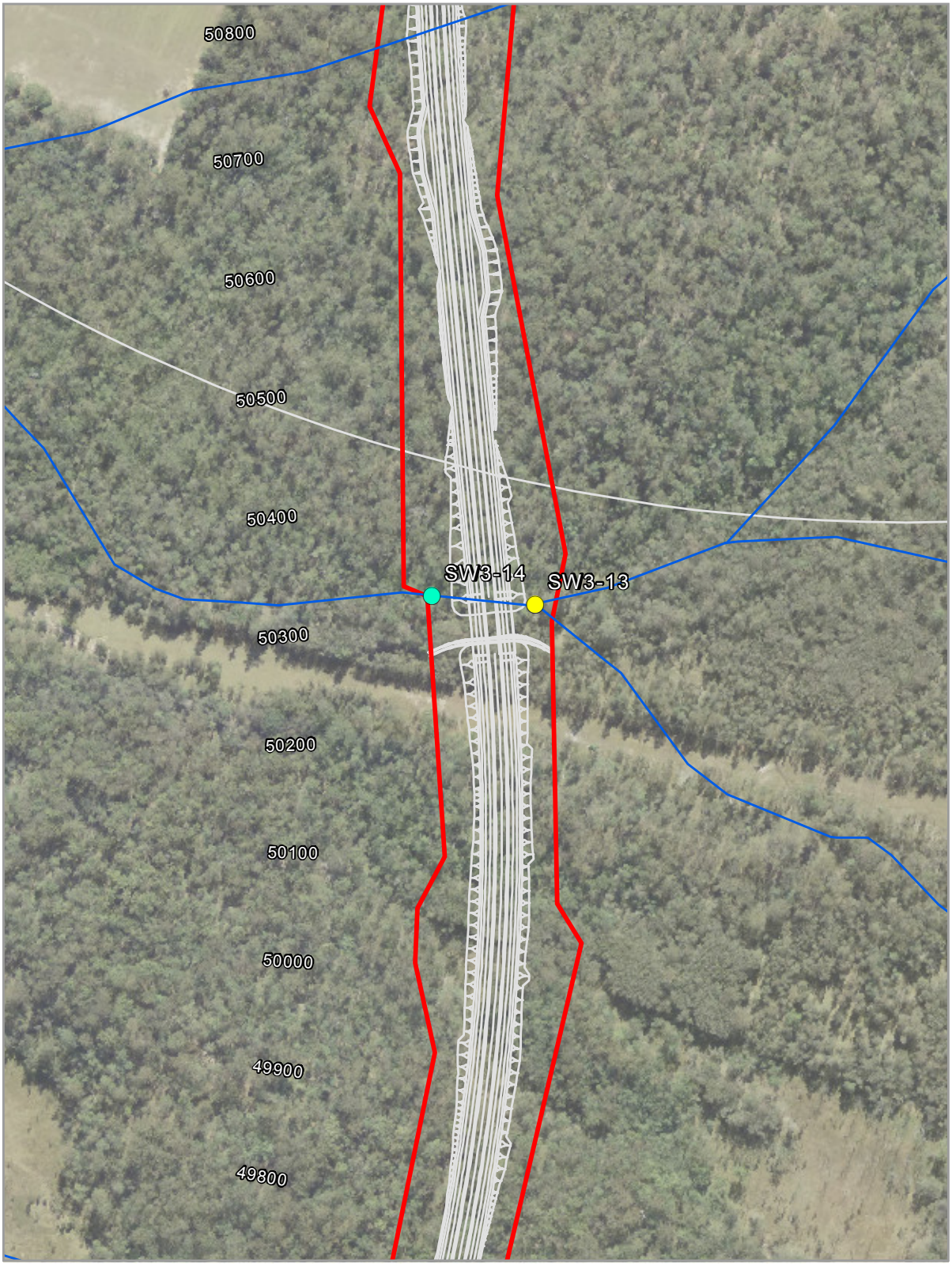


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- Groundwater monitoring - levels and quality

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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

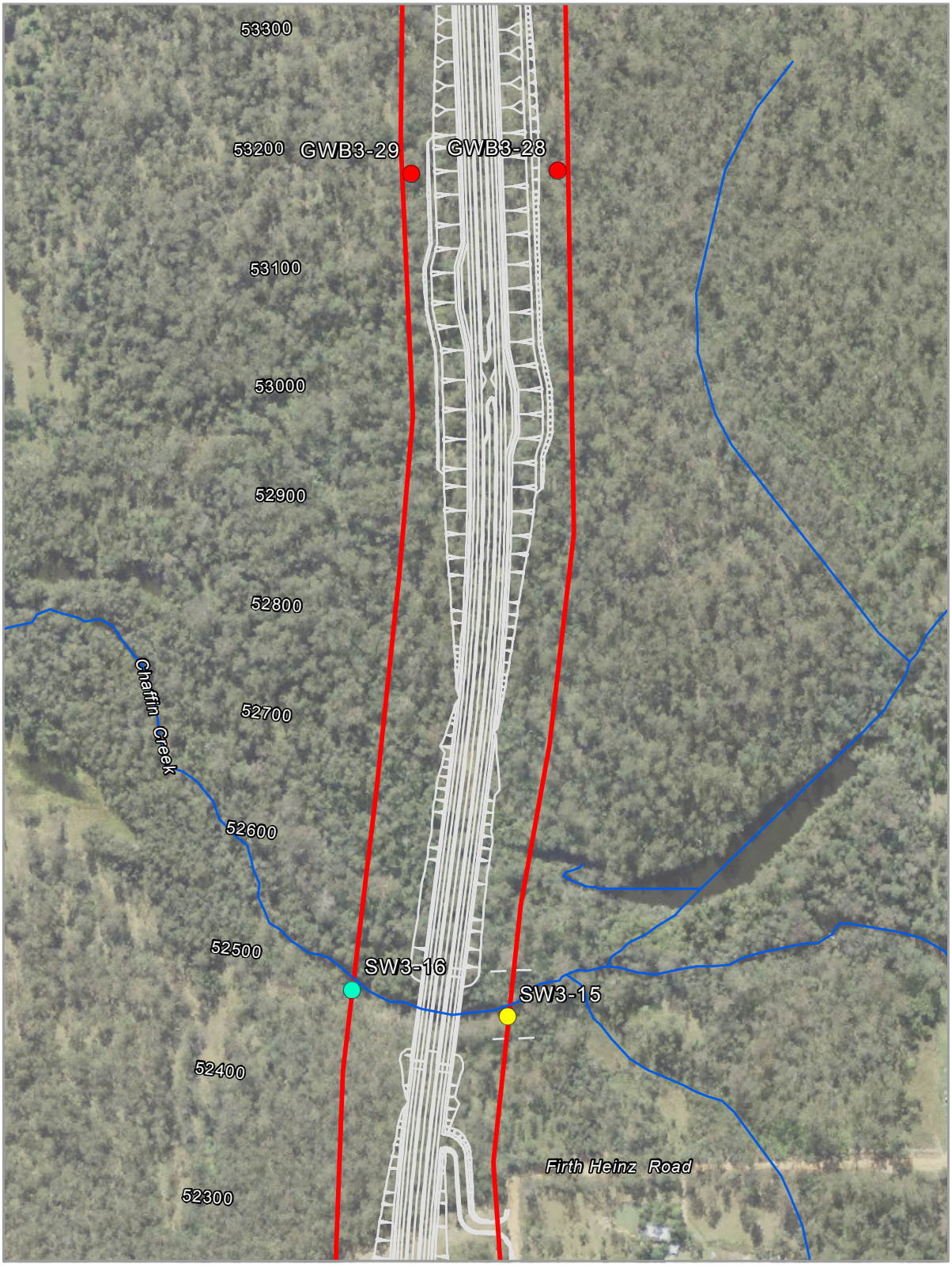


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- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

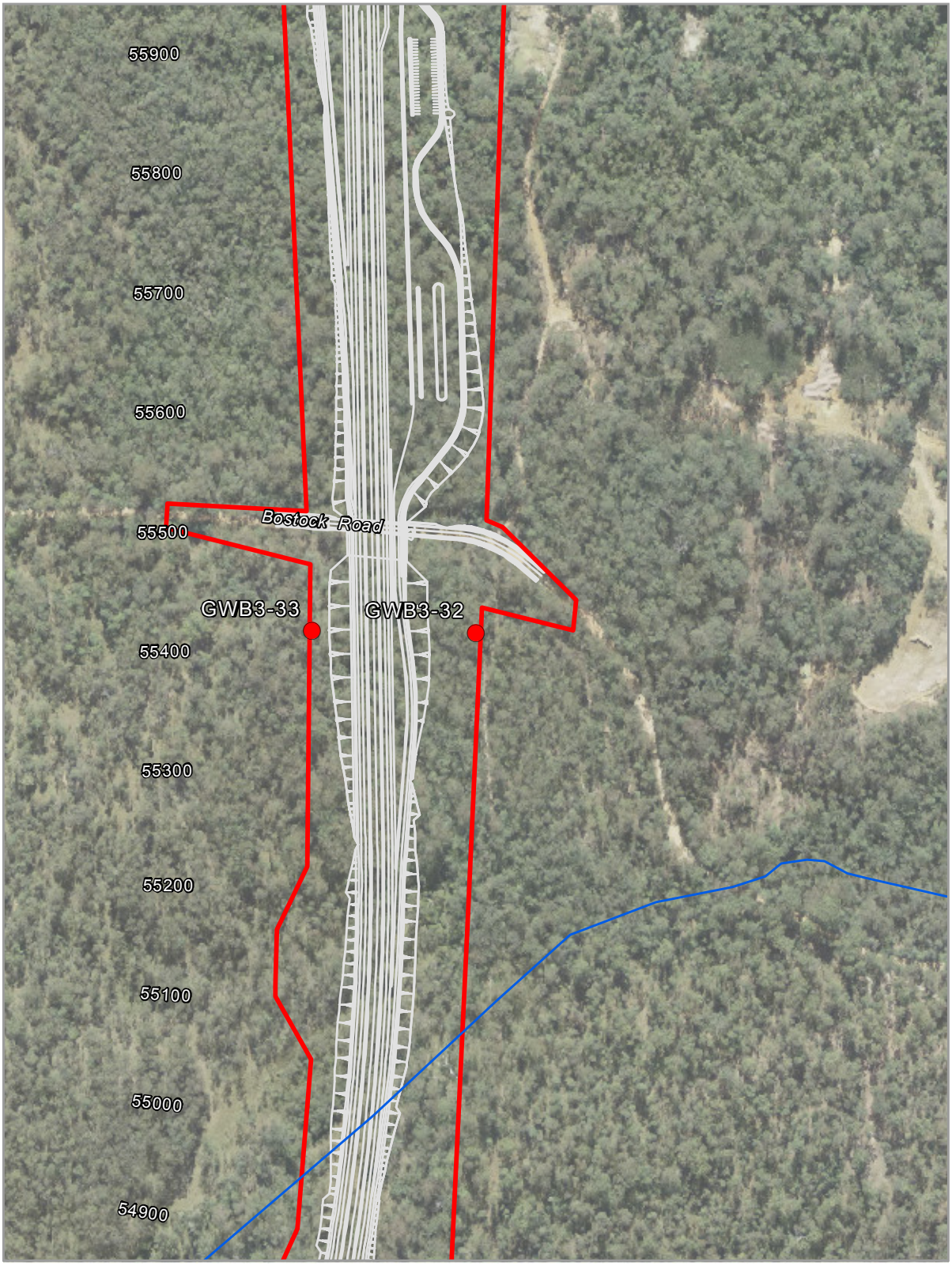


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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations



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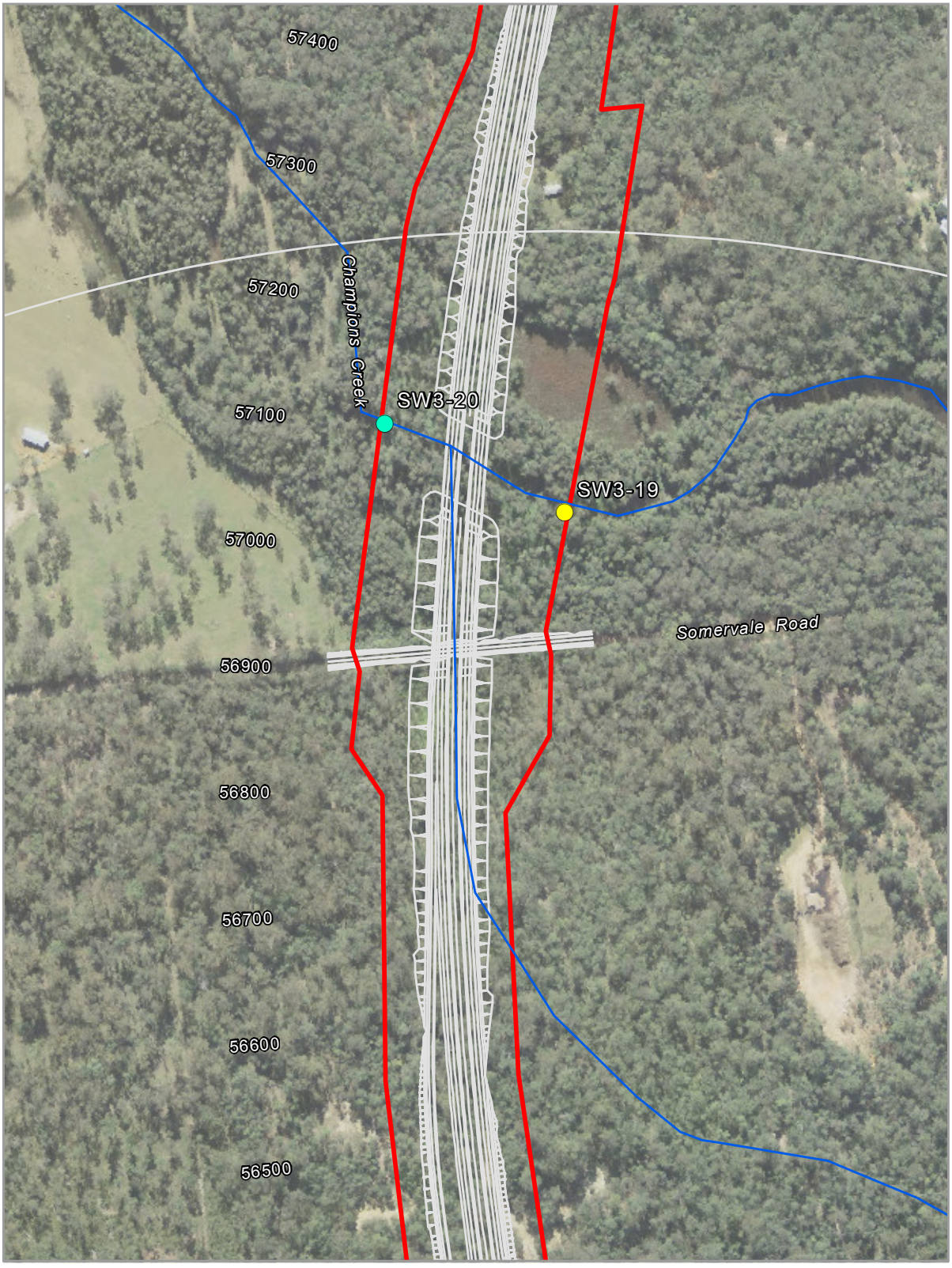
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Watercourse
Groundwater monitoring - levels and quality

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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

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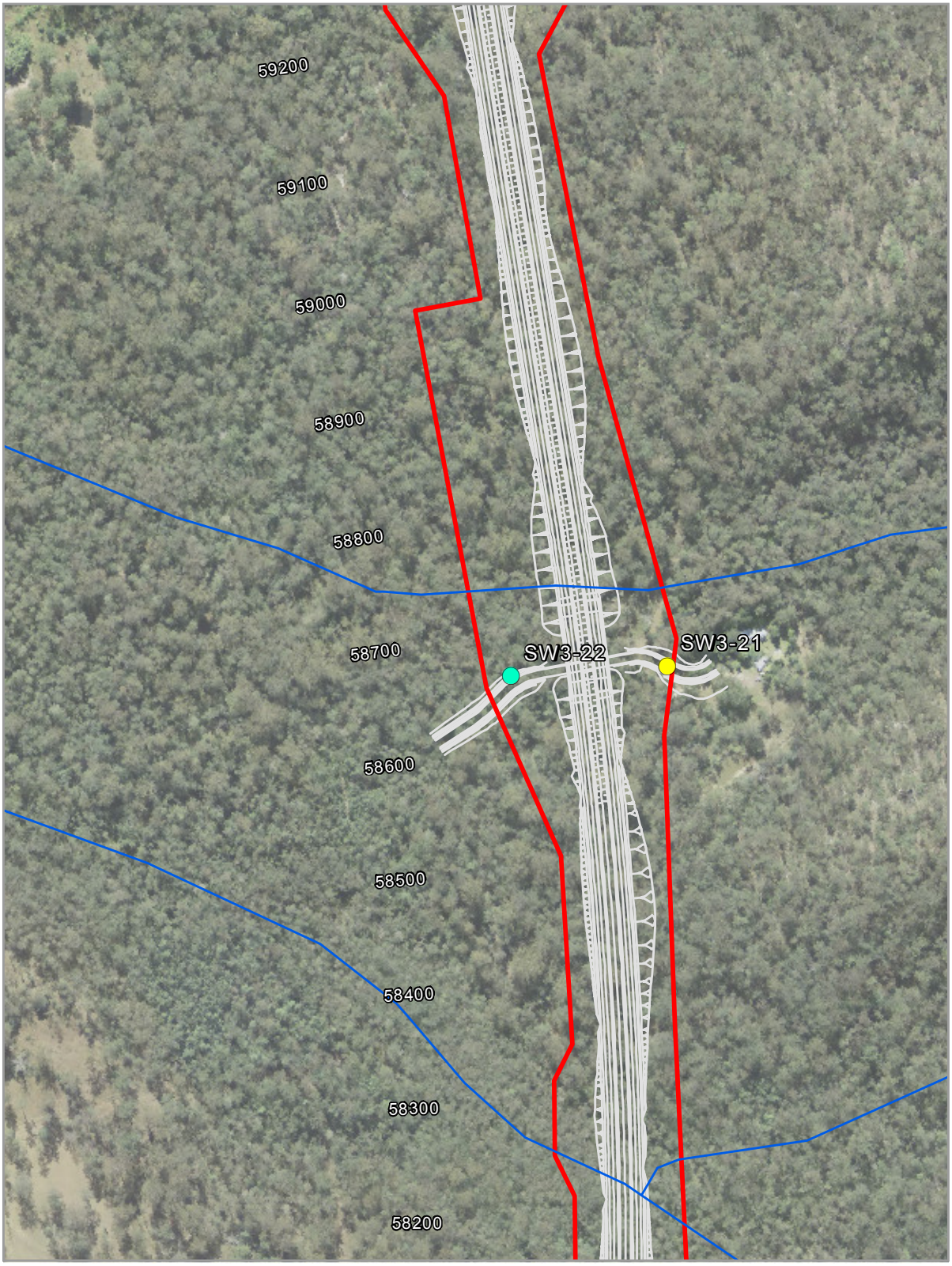


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- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



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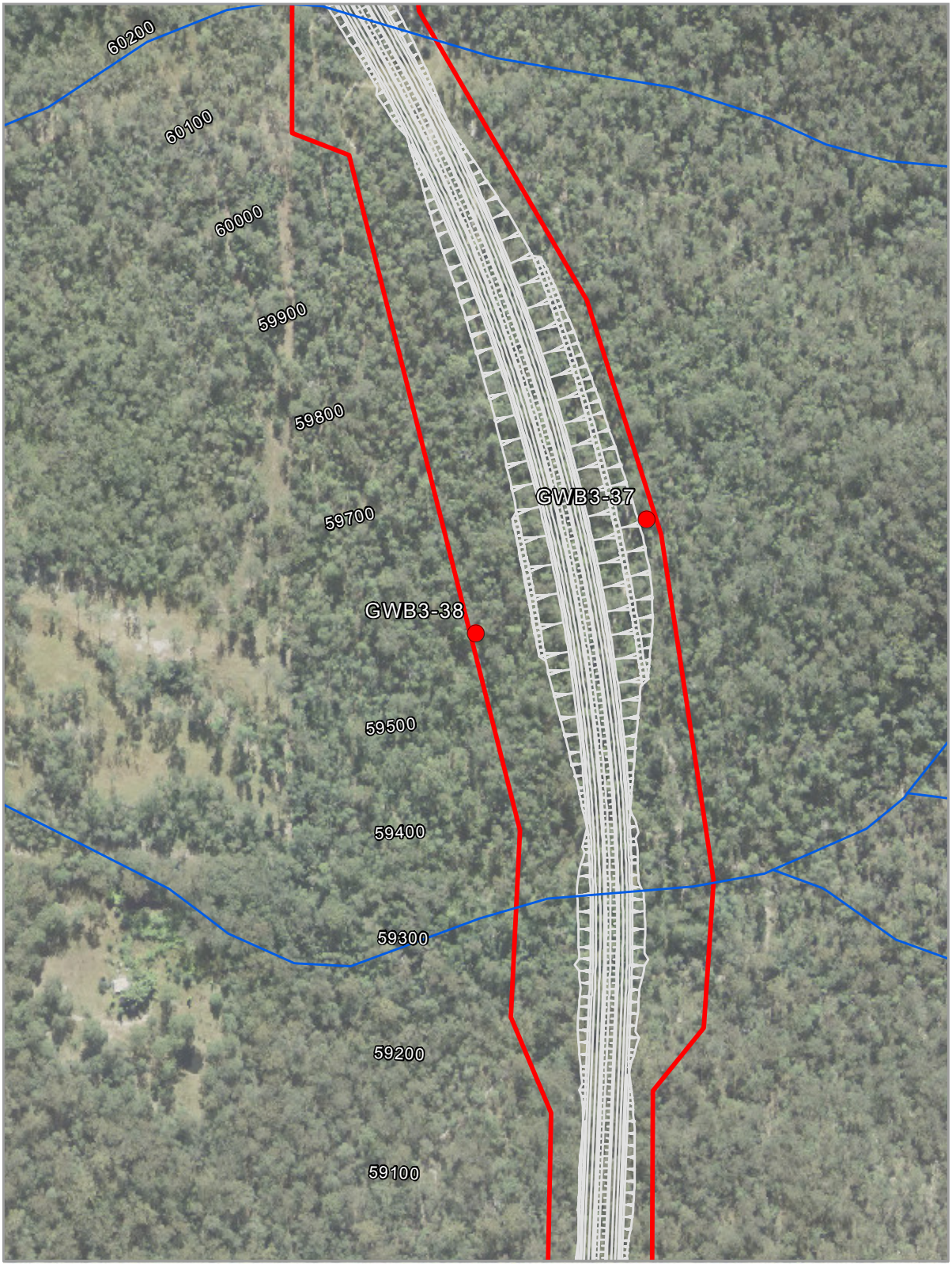
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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

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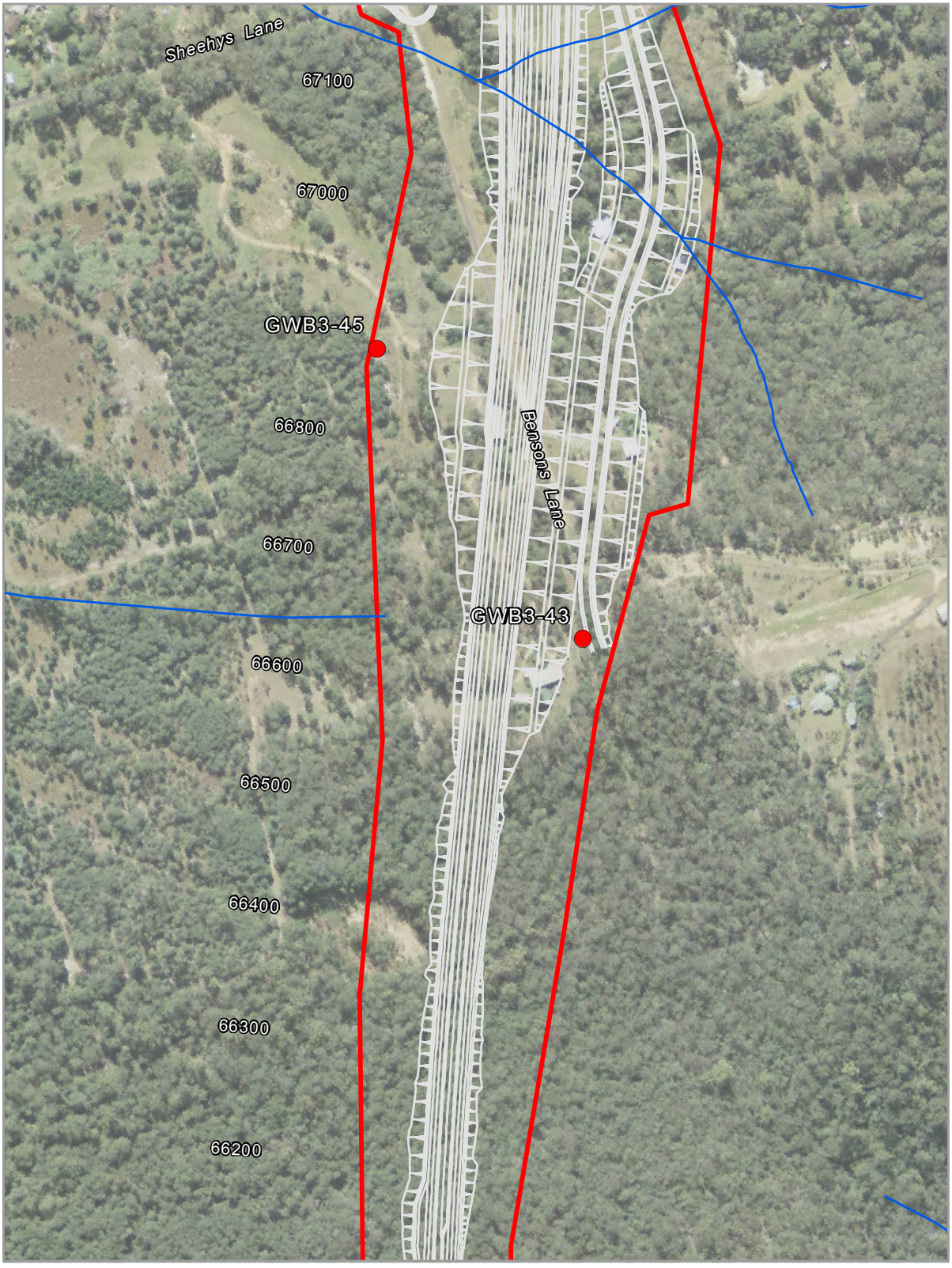


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- Groundwater monitoring - levels and quality

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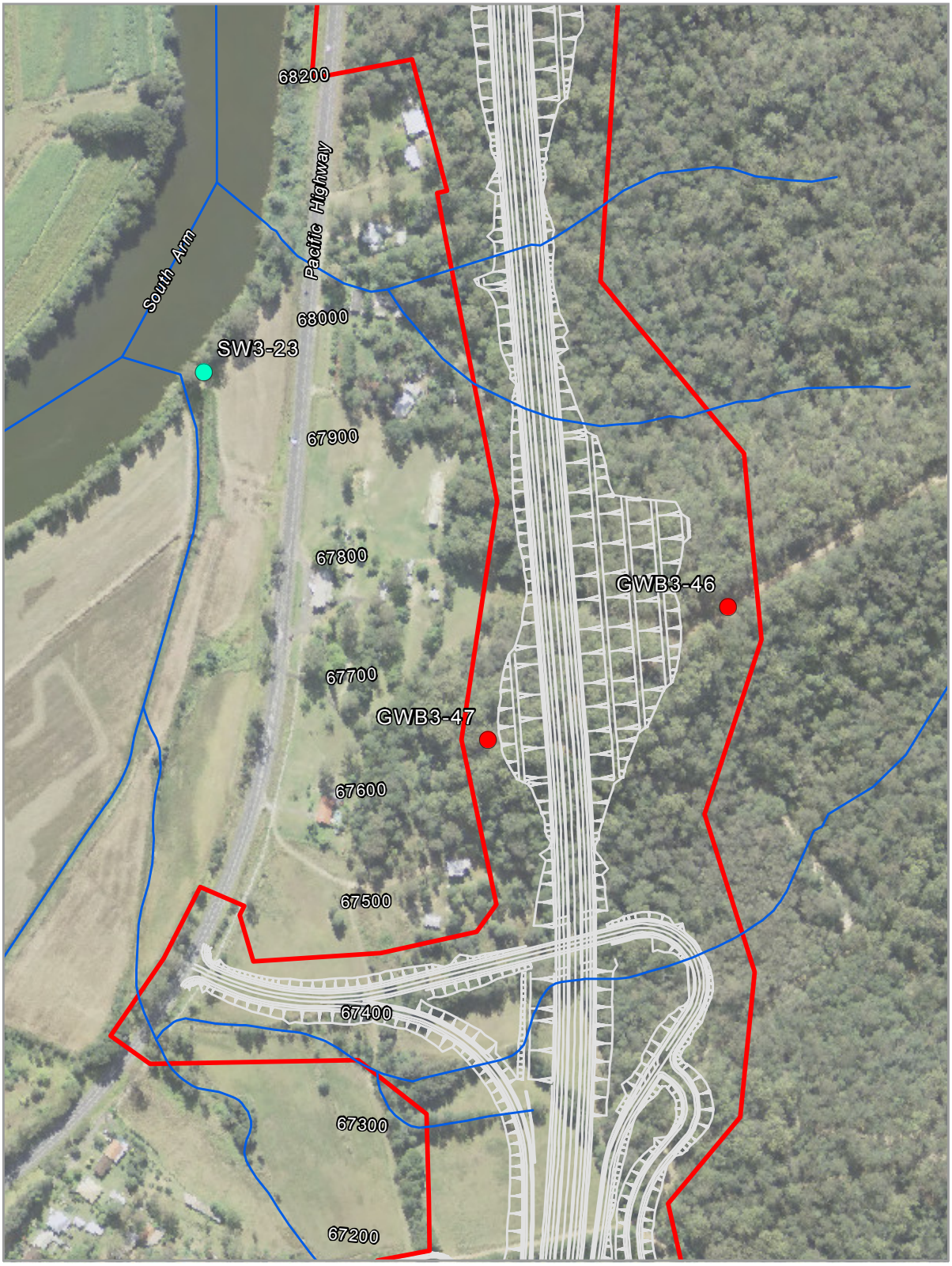


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Groundwater monitoring - levels and quality

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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

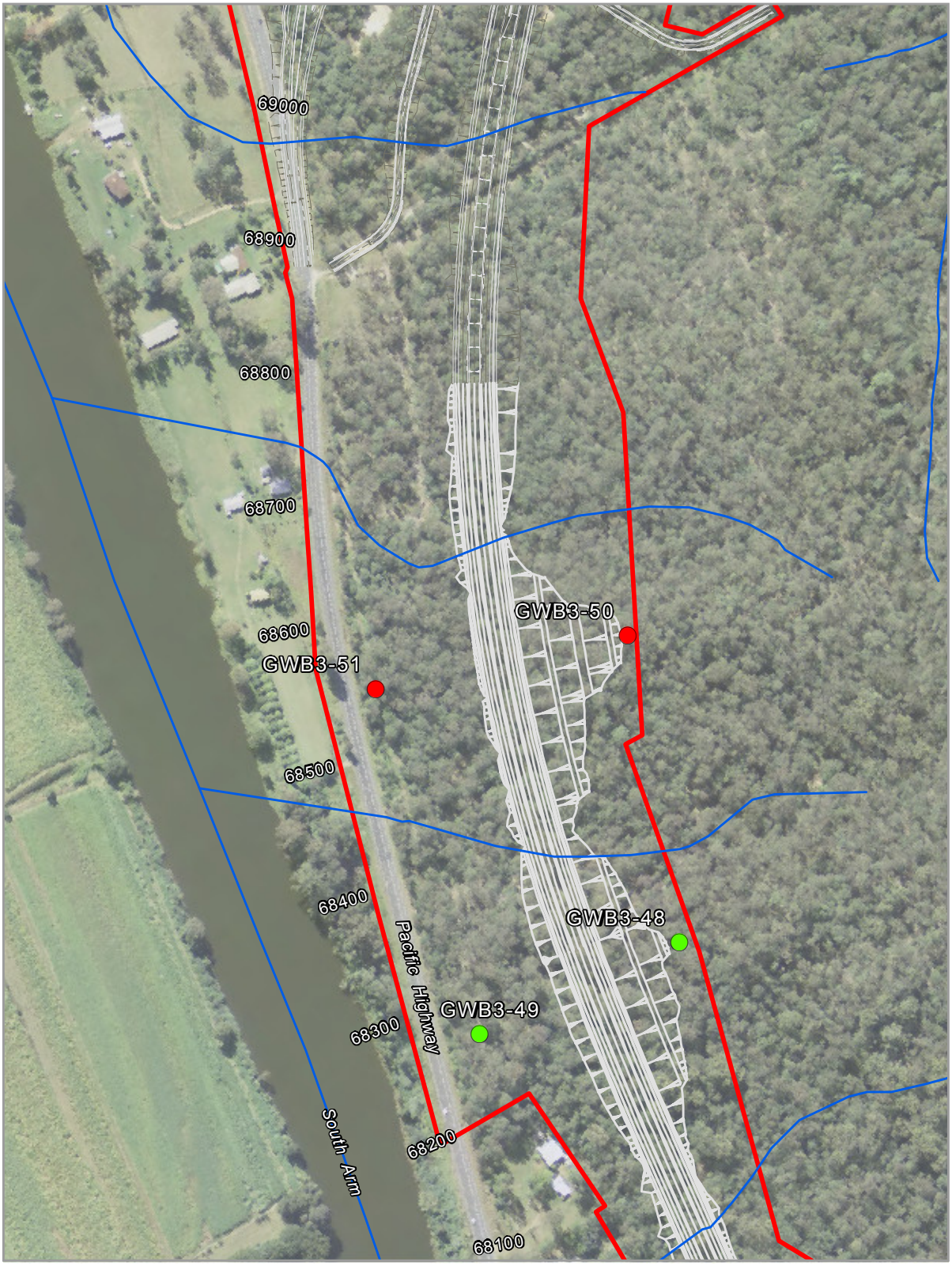


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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations



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- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

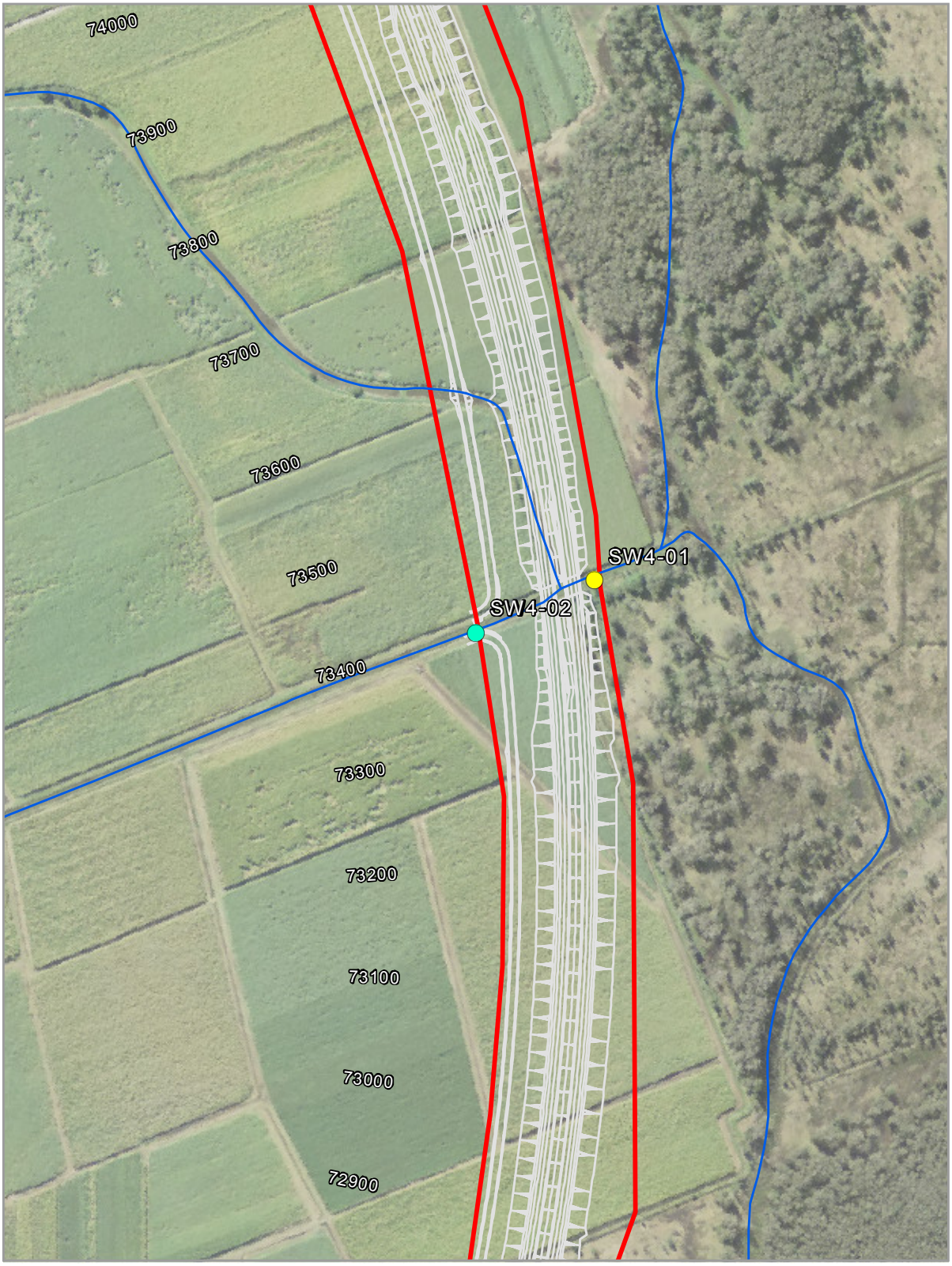


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SW and GW Monitoring Locations

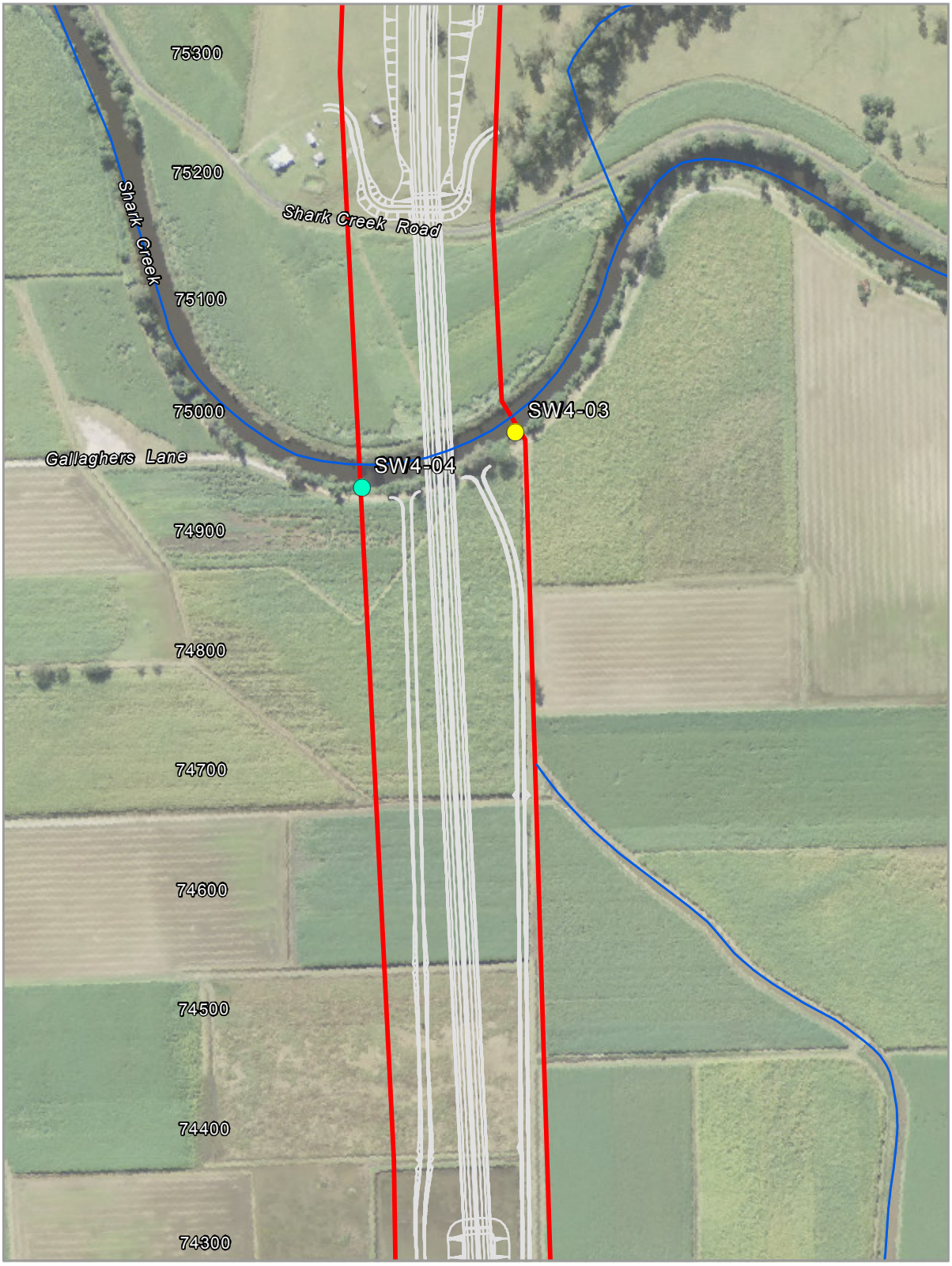


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- Downstream surface water monitoring point
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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

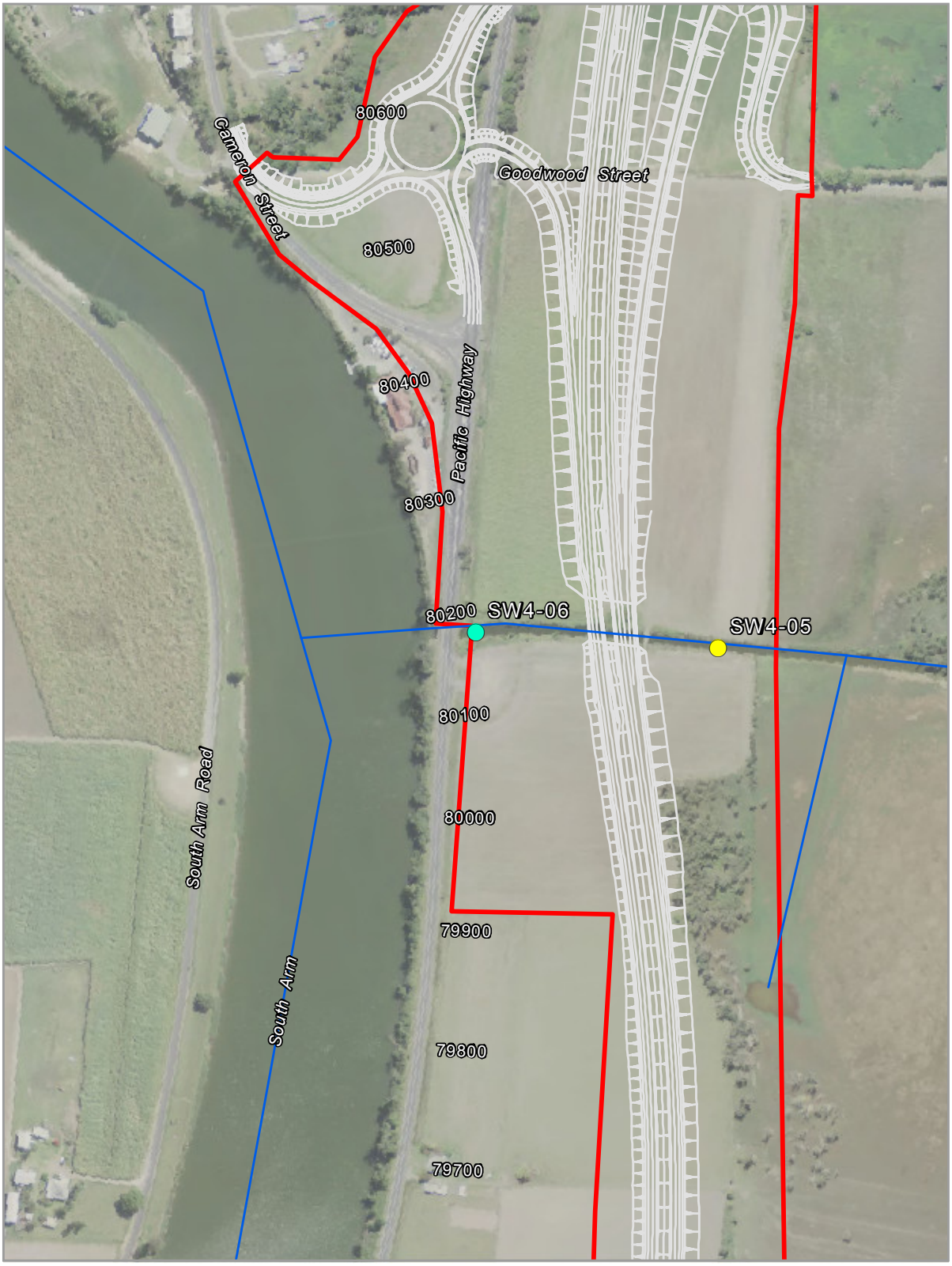


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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

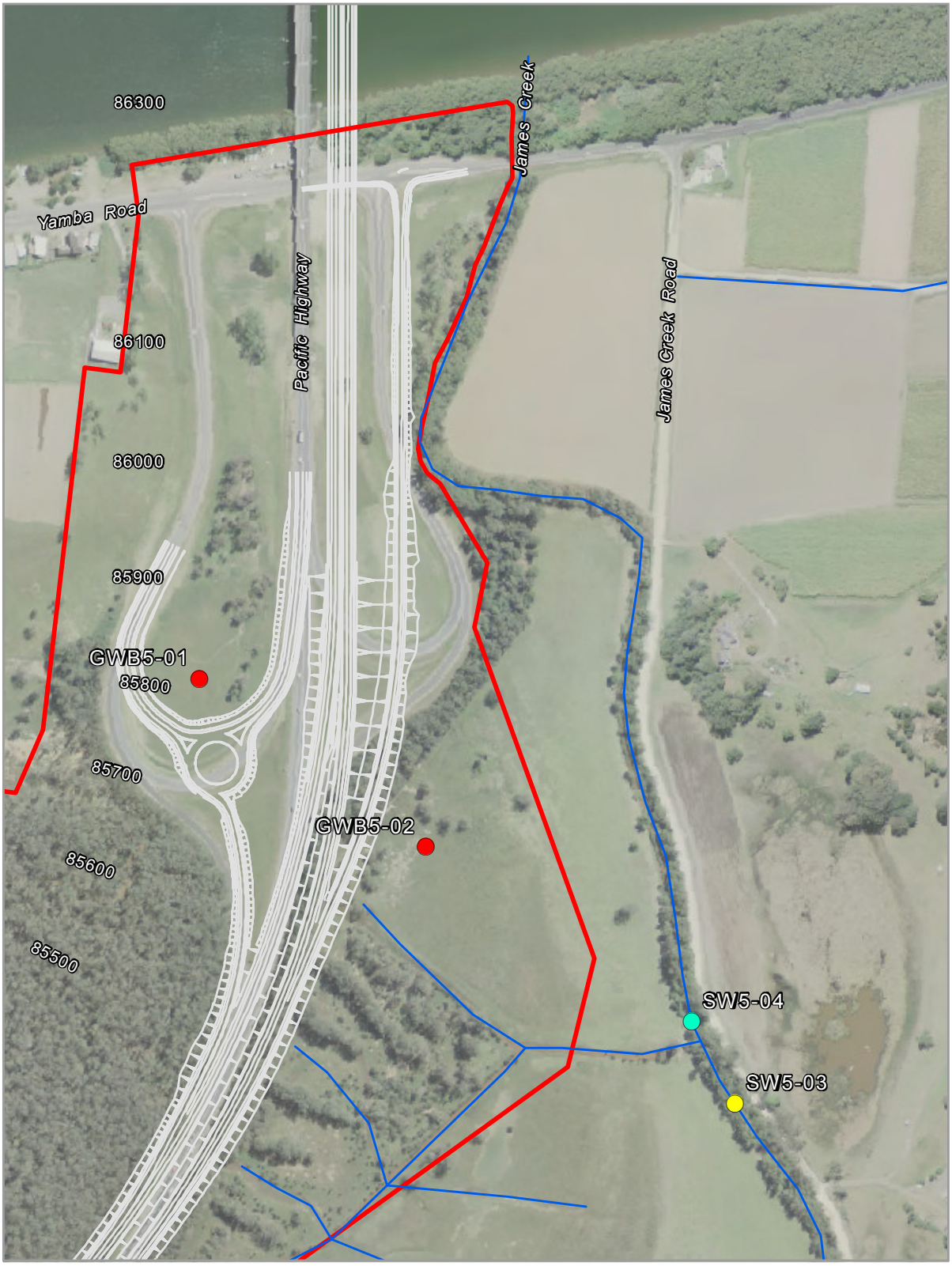


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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

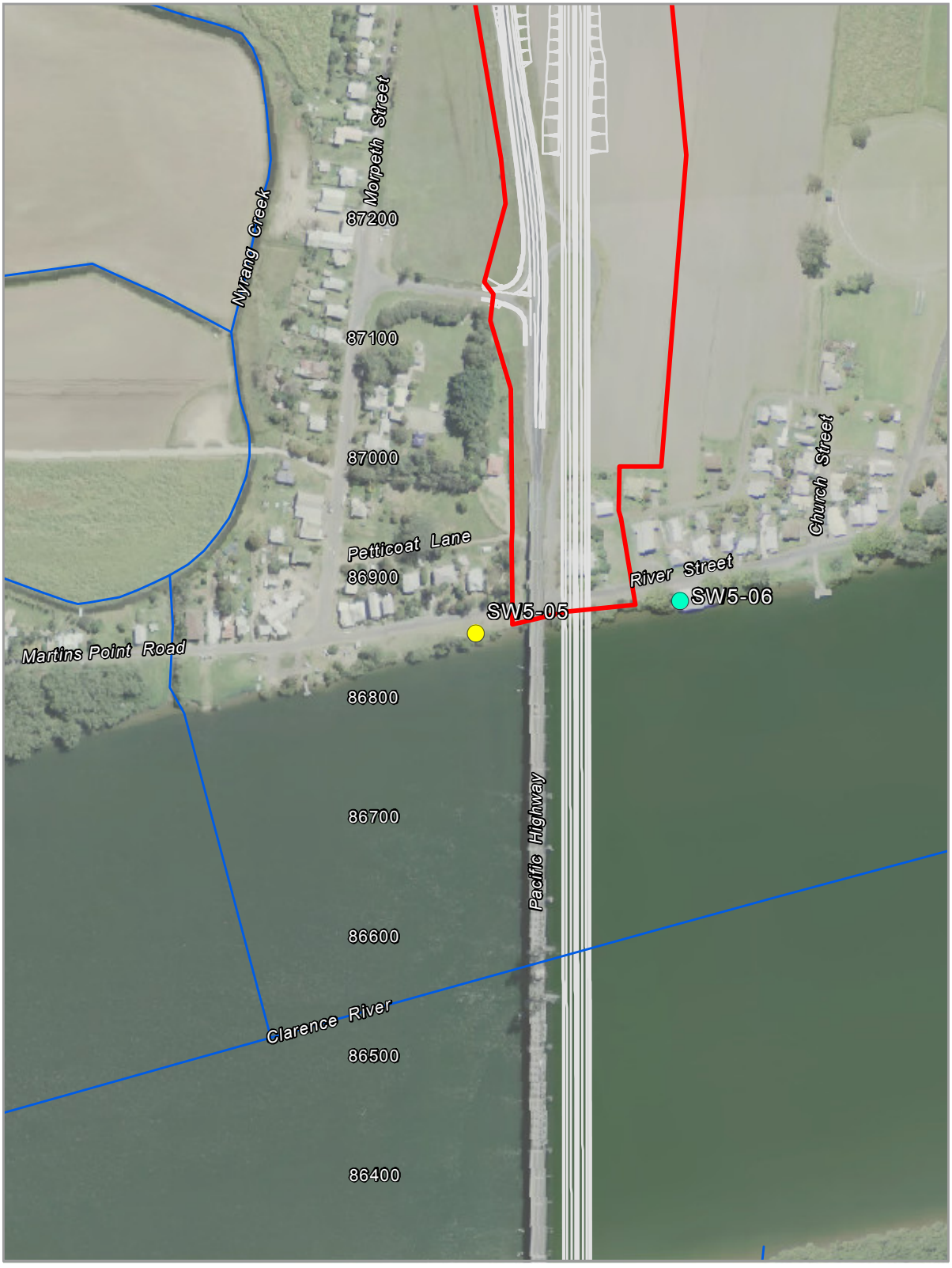


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- Downstream surface water monitoring point
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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

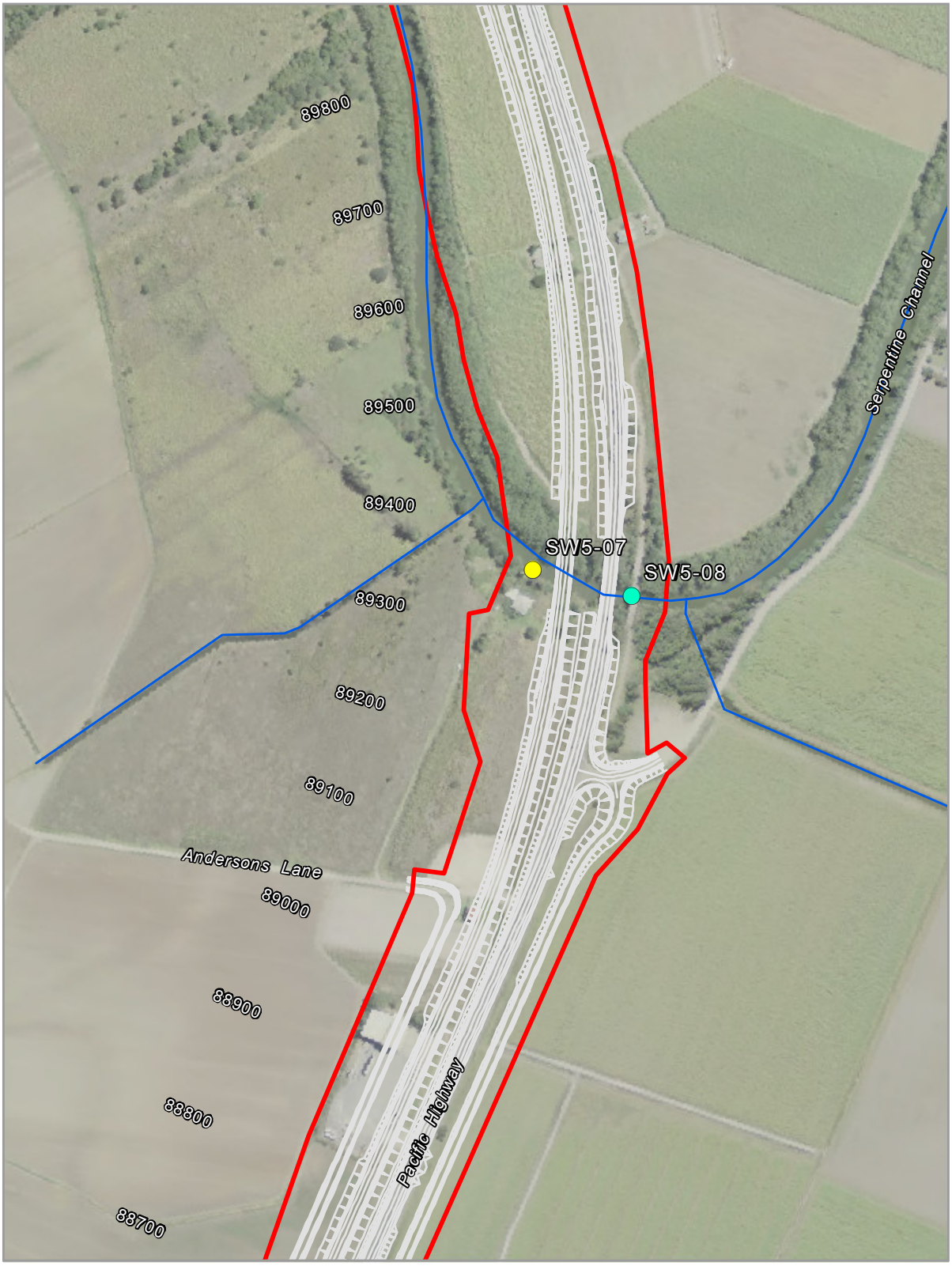


LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

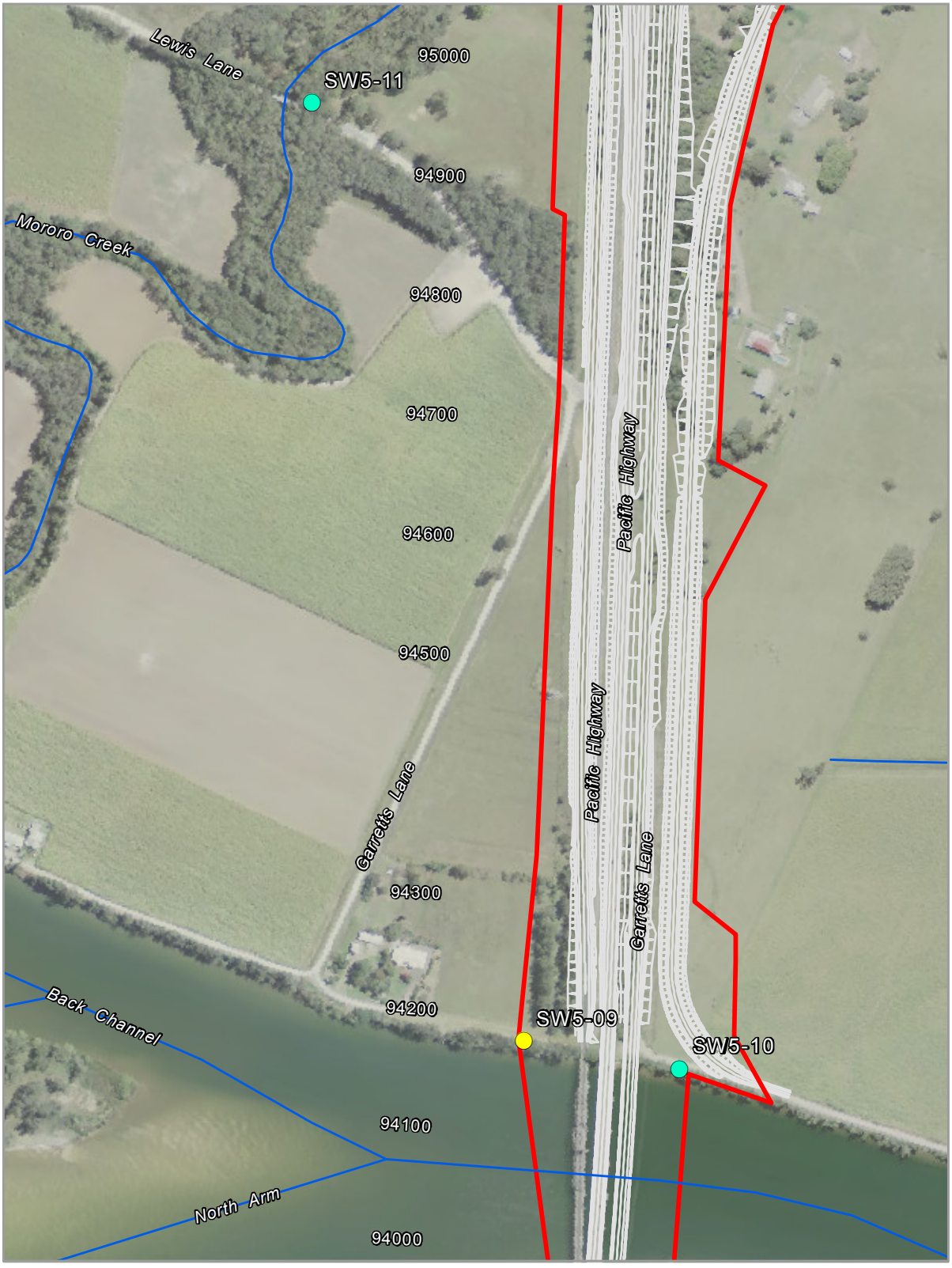


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- Watercourse
- Downstream surface water monitoring point
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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations



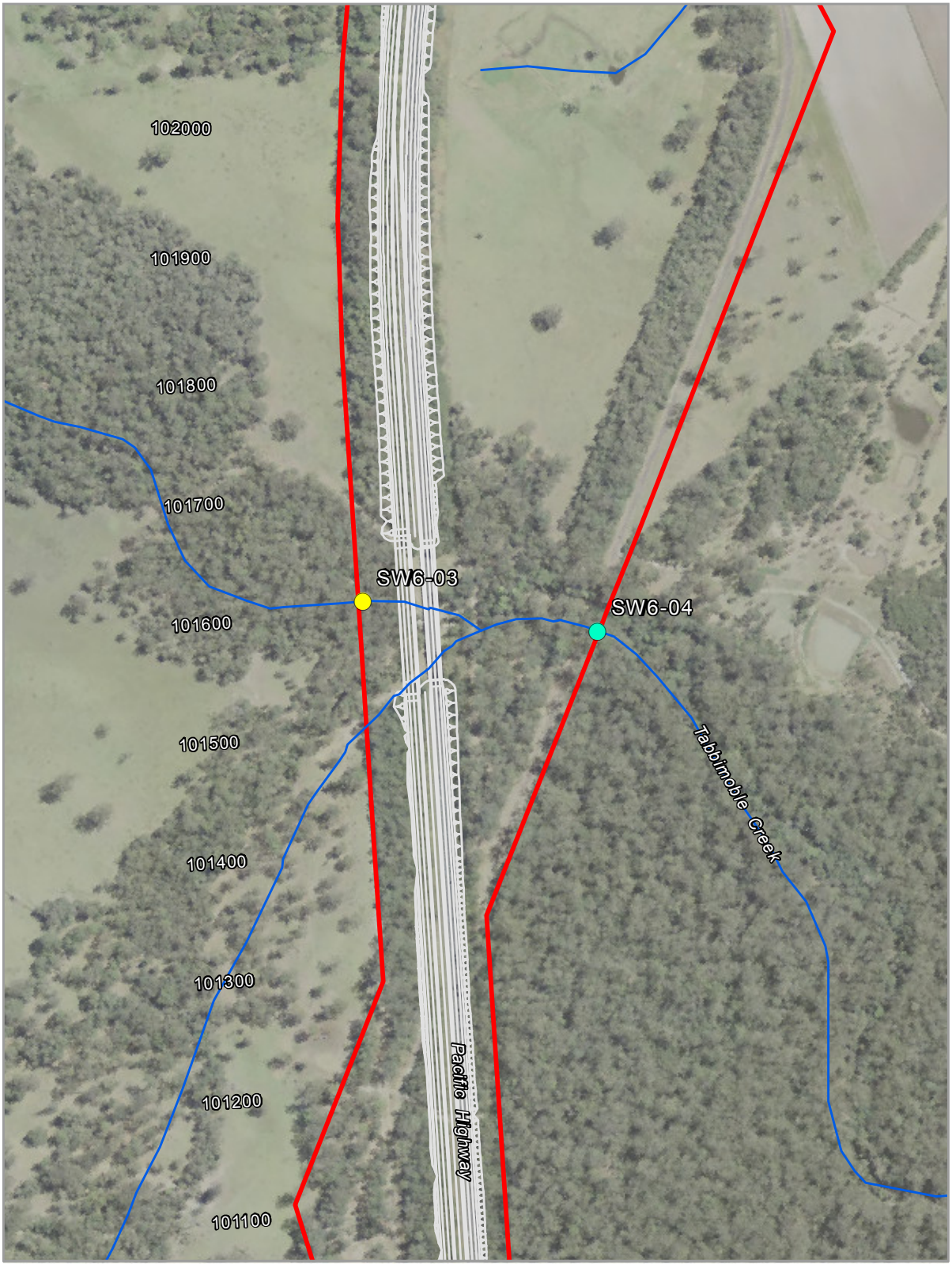
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- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

Information shown is for illustrative purposes only

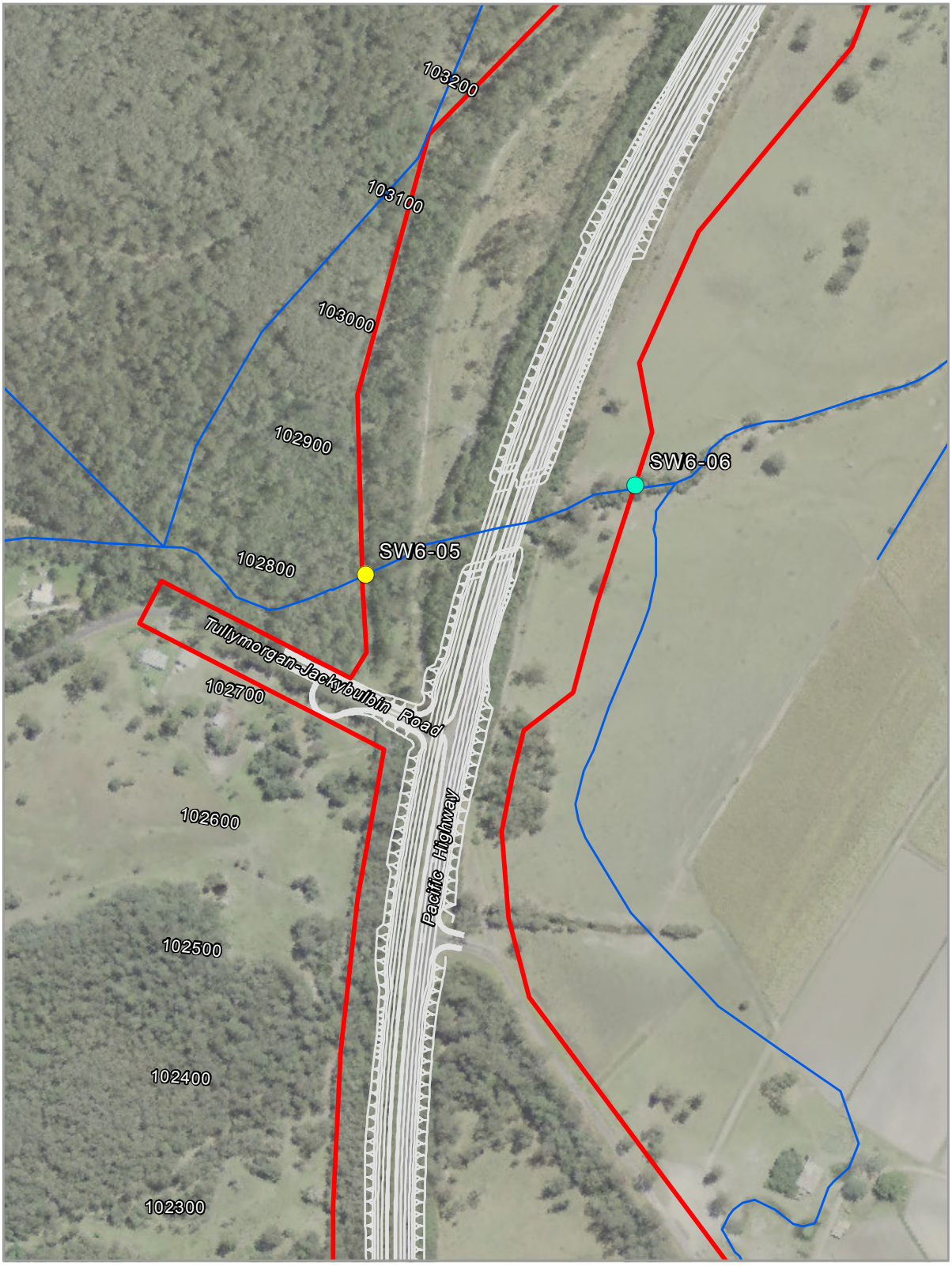


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- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

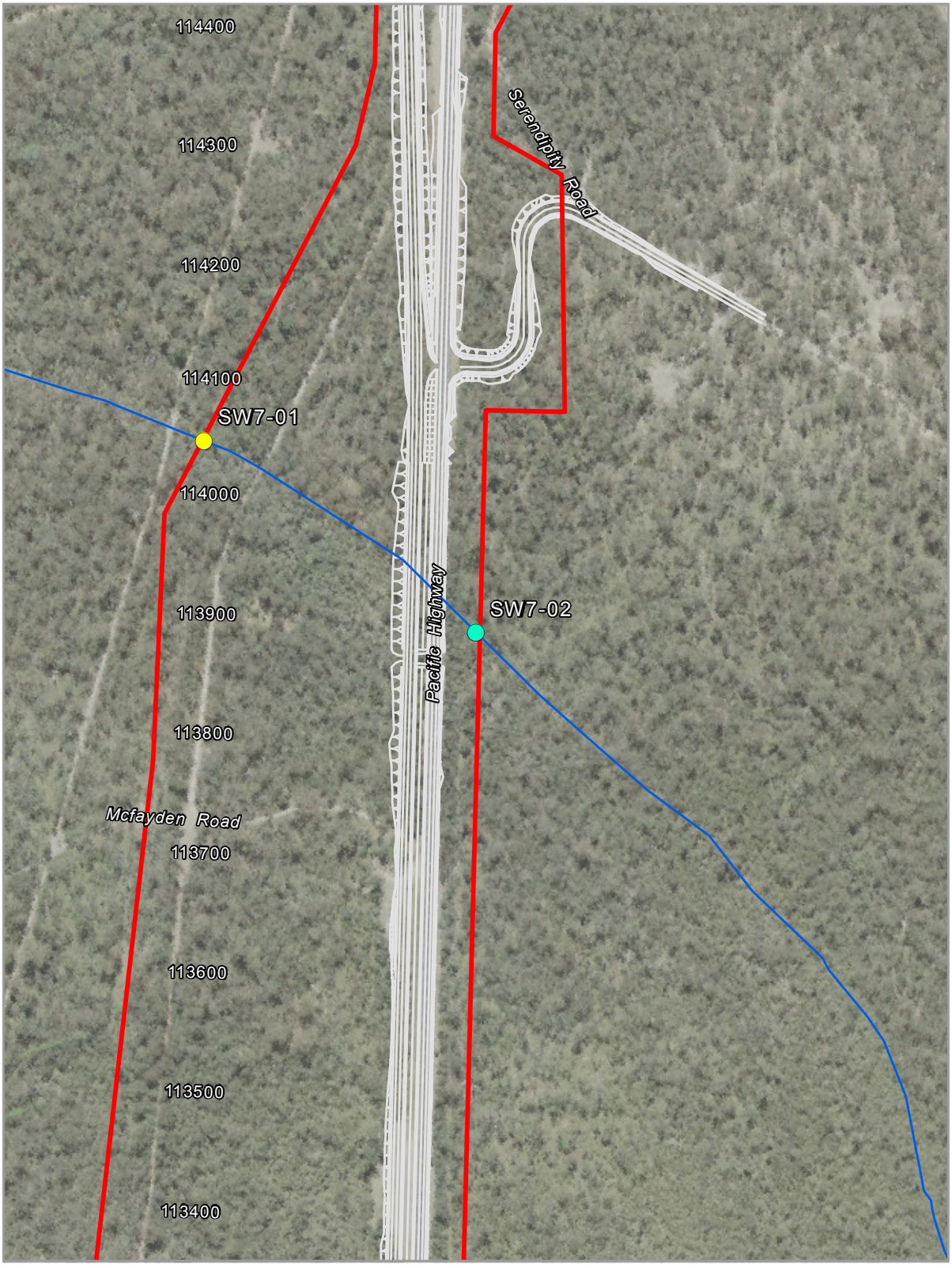


LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations



LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

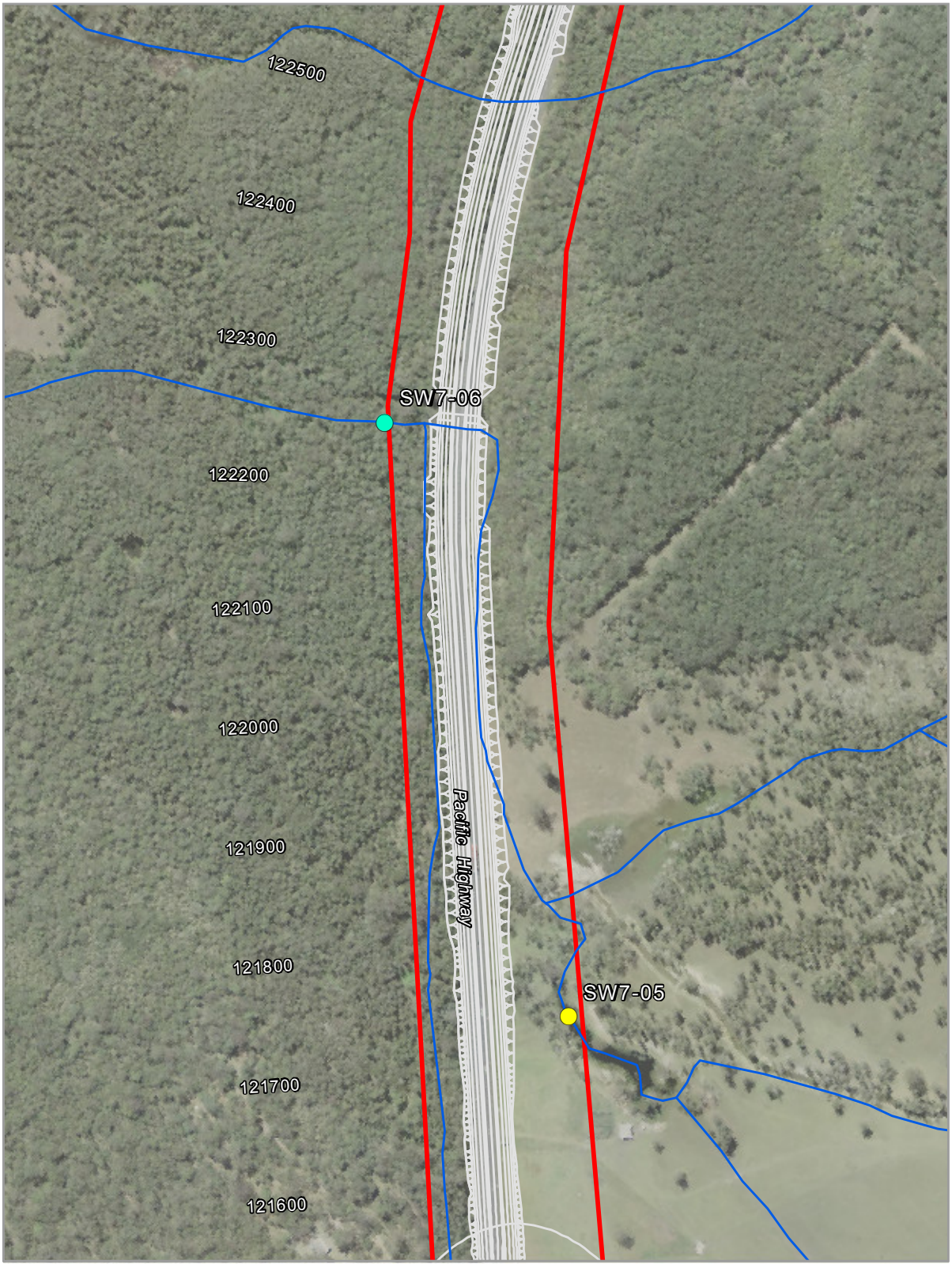


LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

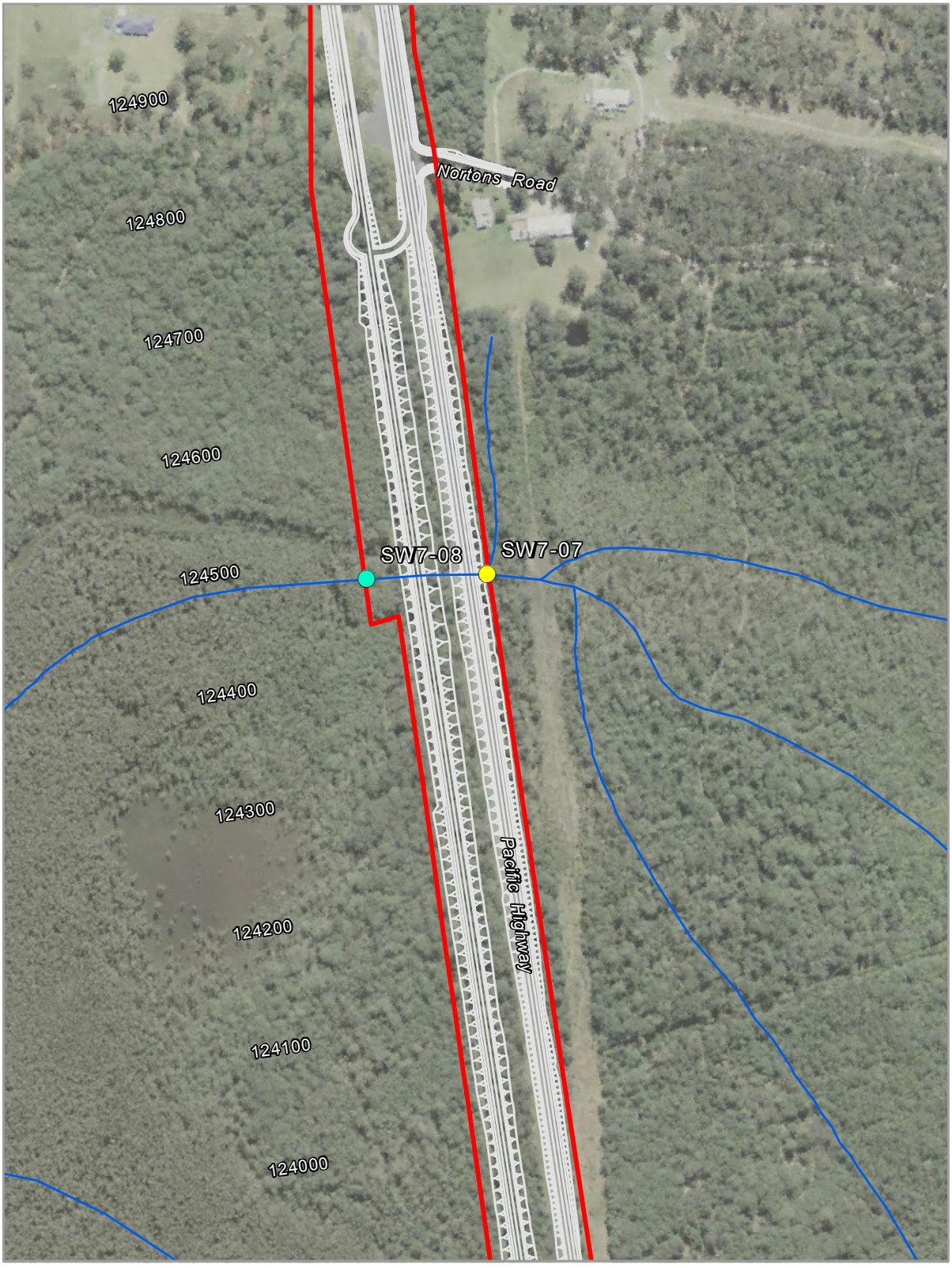


LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

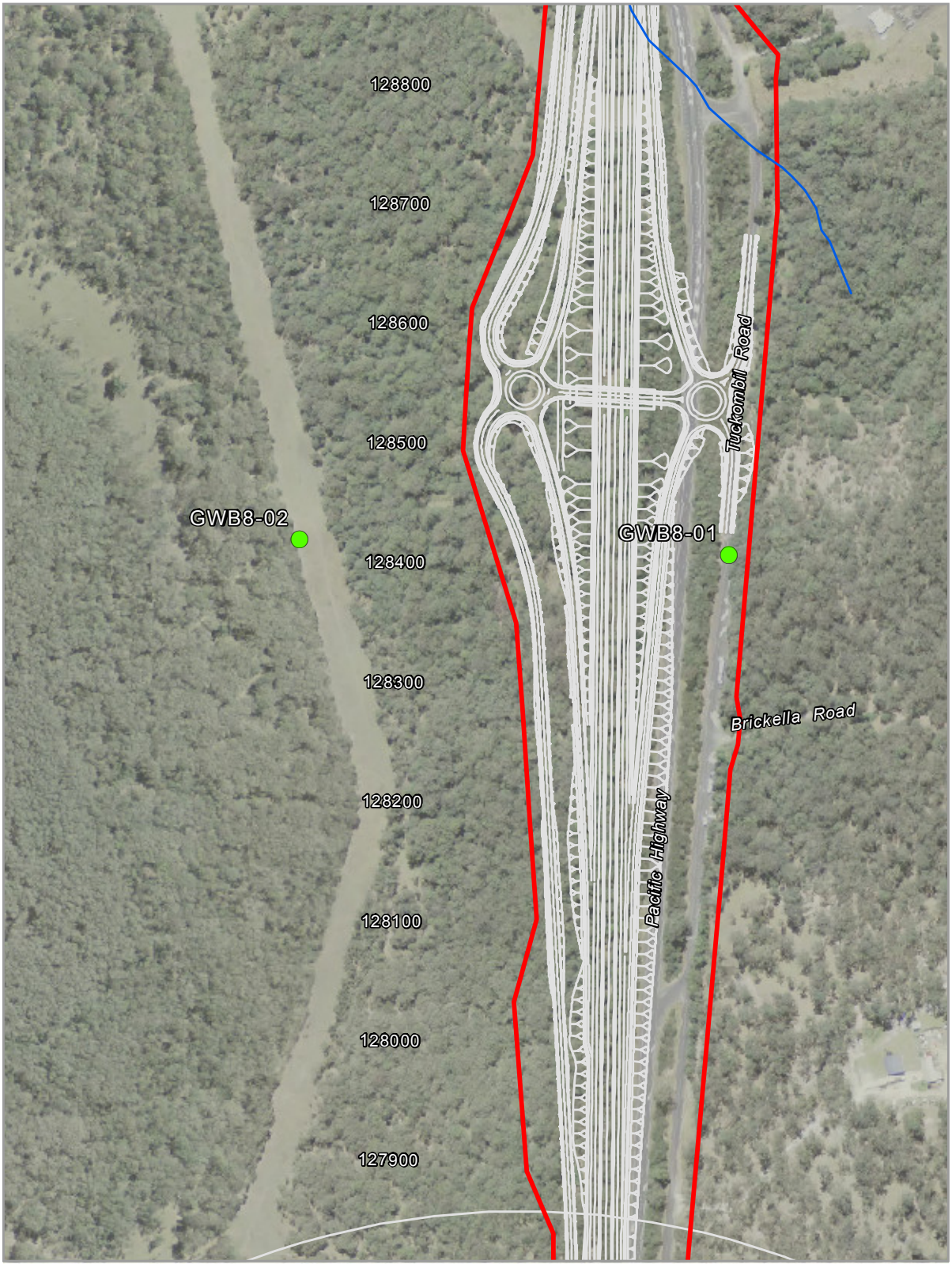


LEGEND

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- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

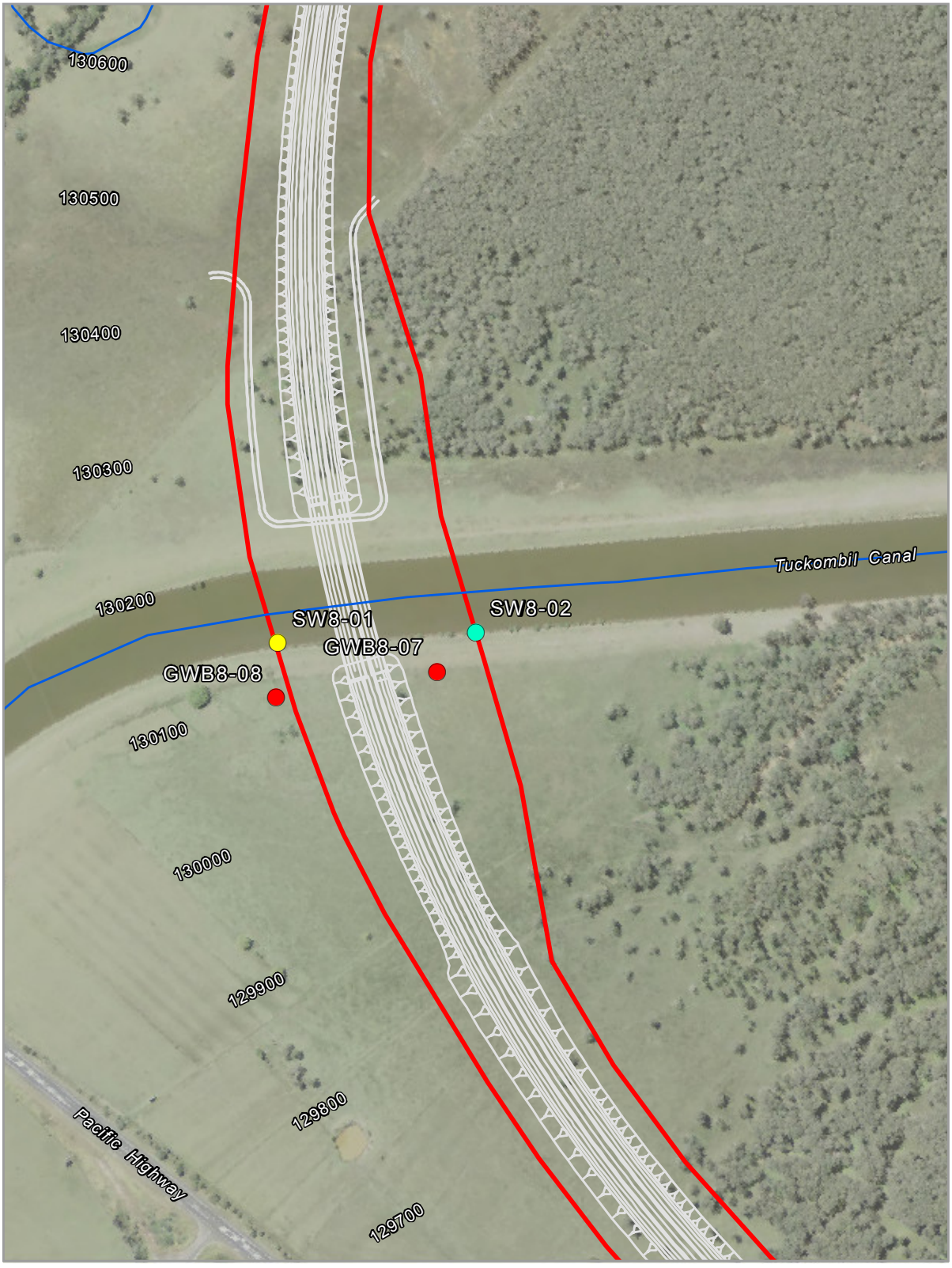


LEGEND

Approved Project Boundary
Watercourse
Groundwater monitoring - levels only

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

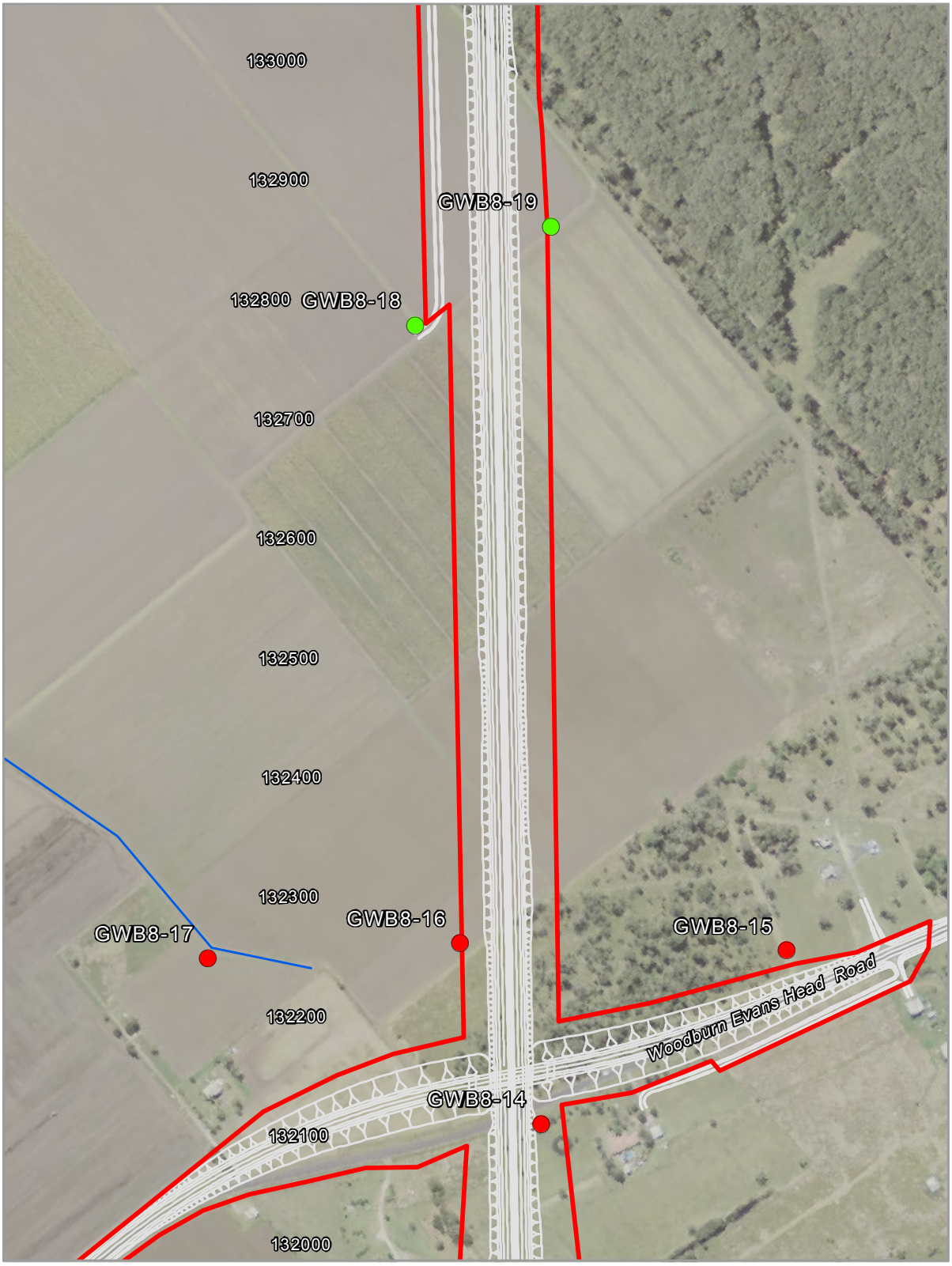


LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

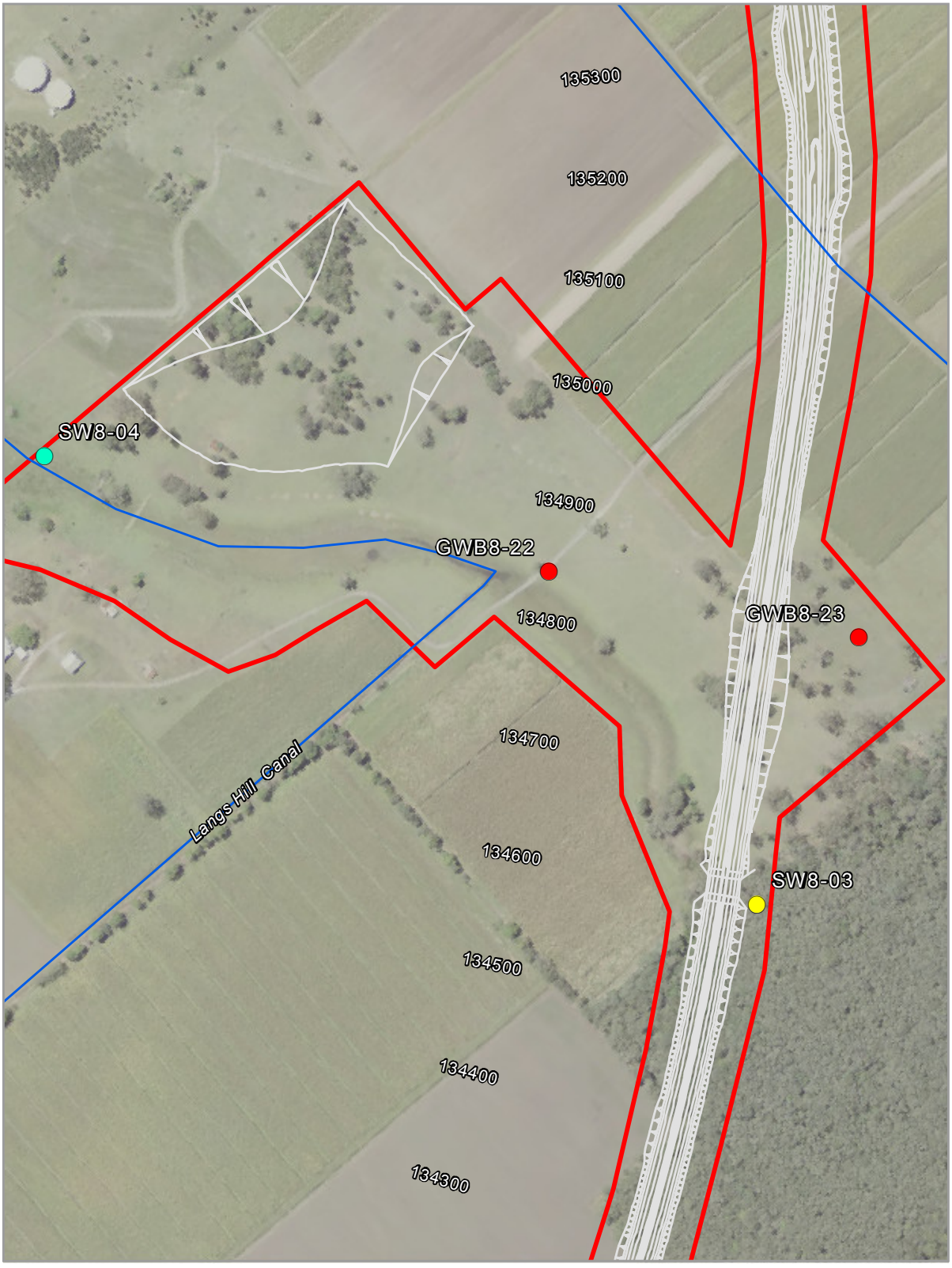


LEGEND

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- Watercourse
- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

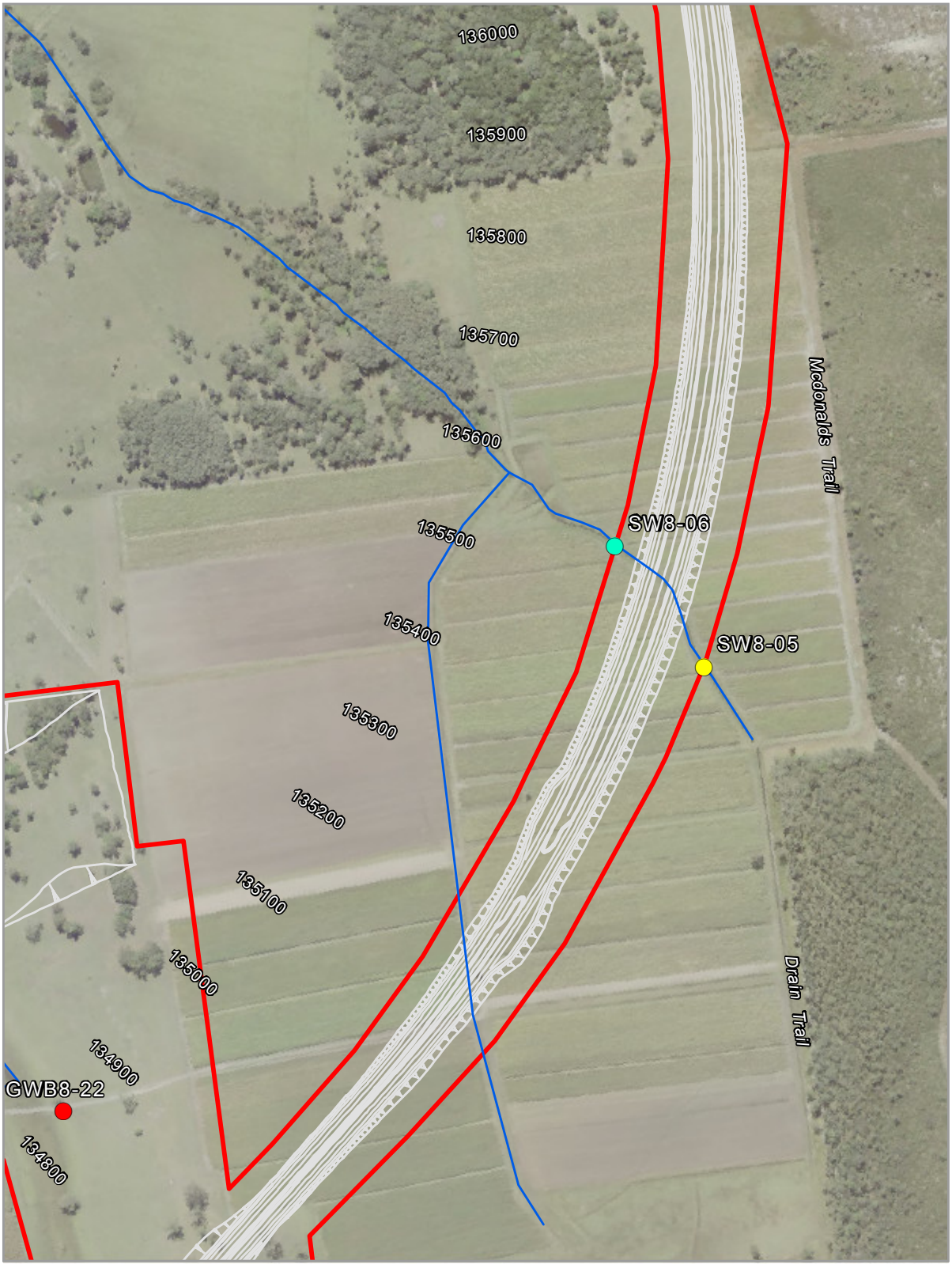


LEGEND

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- Downstream surface water monitoring point
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0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

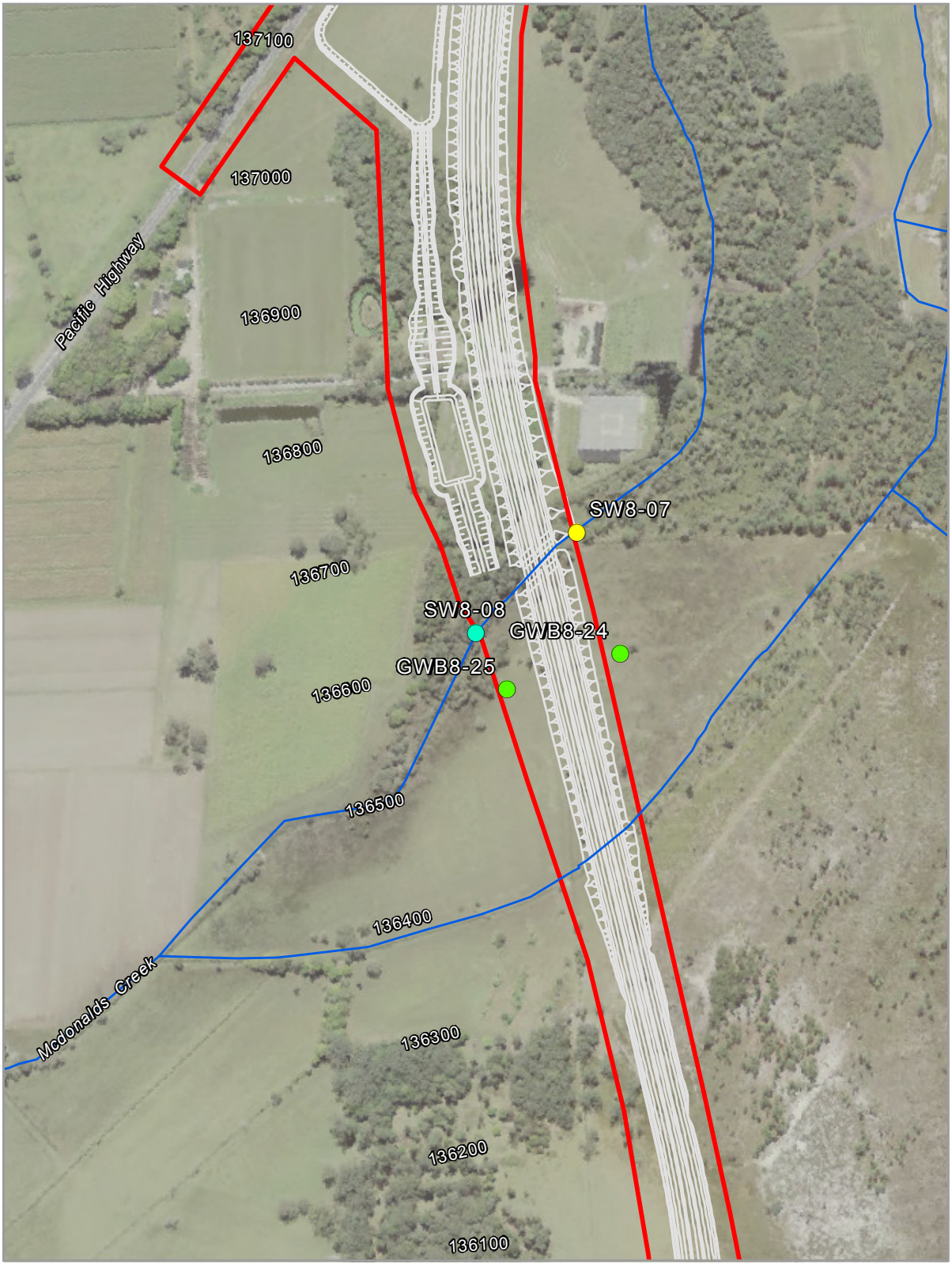


LEGEND

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- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

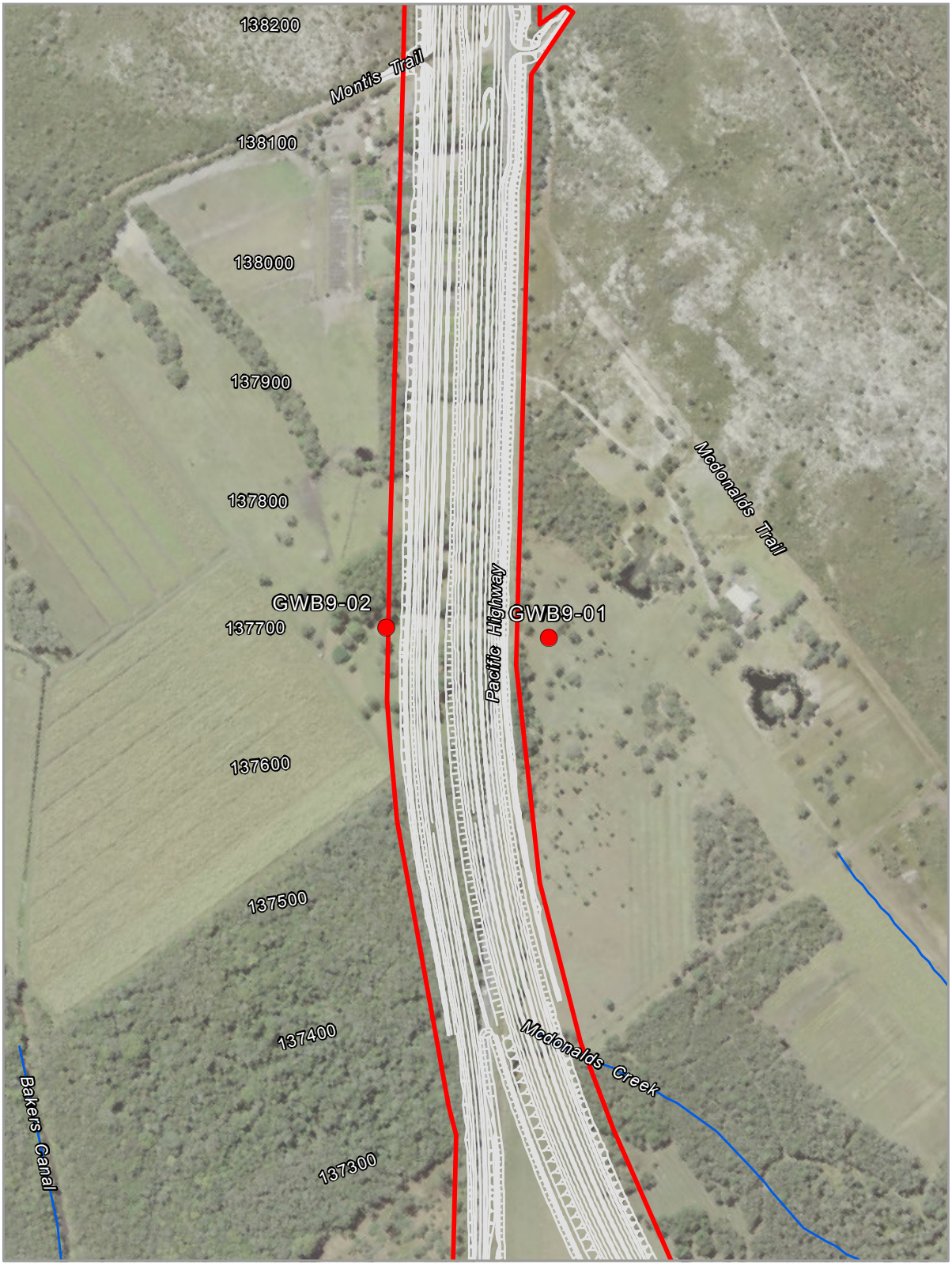


LEGEND

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Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

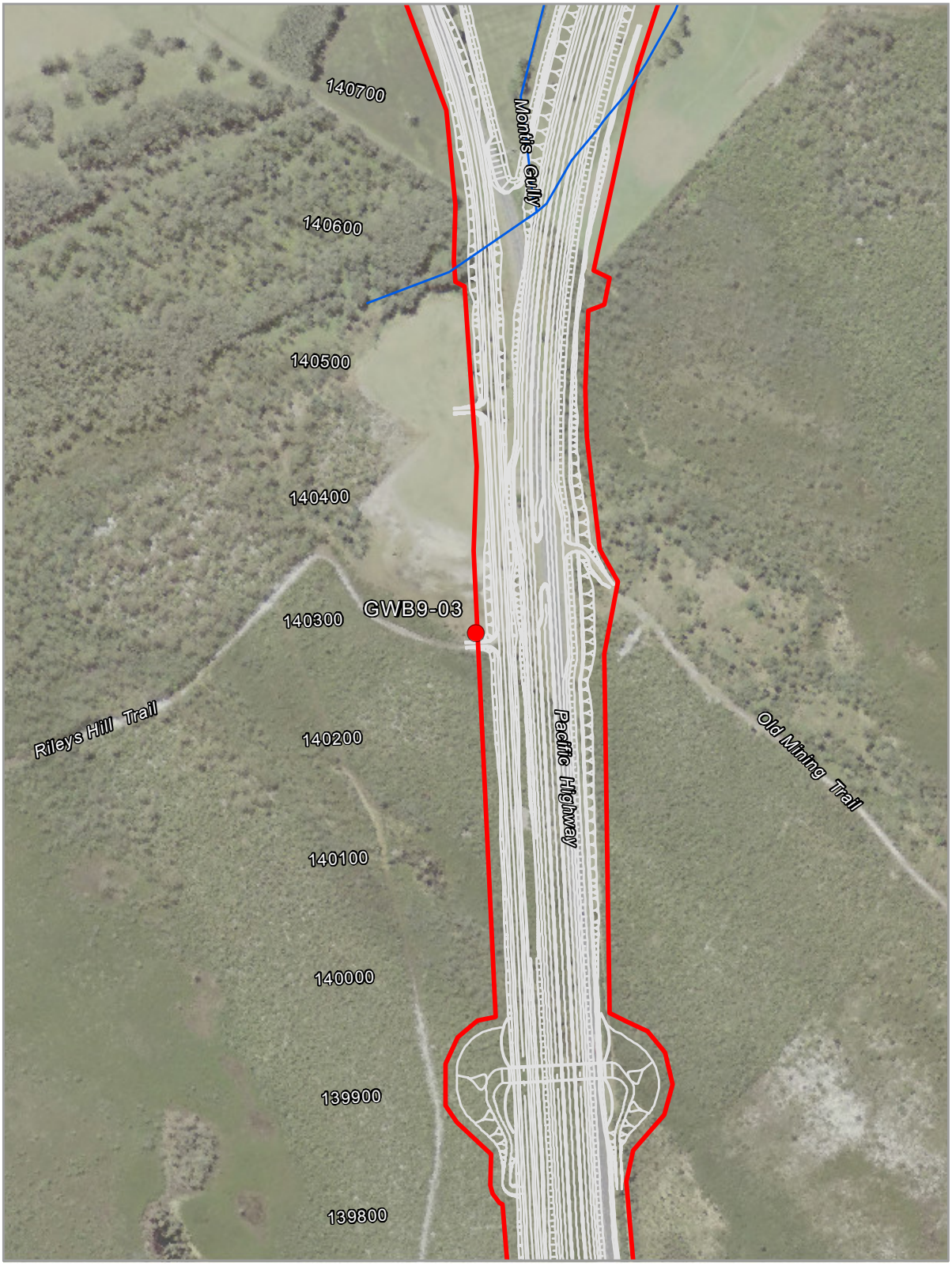


LEGEND

Approved Project Boundary
Groundwater monitoring - levels and quality
Watercourse

0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

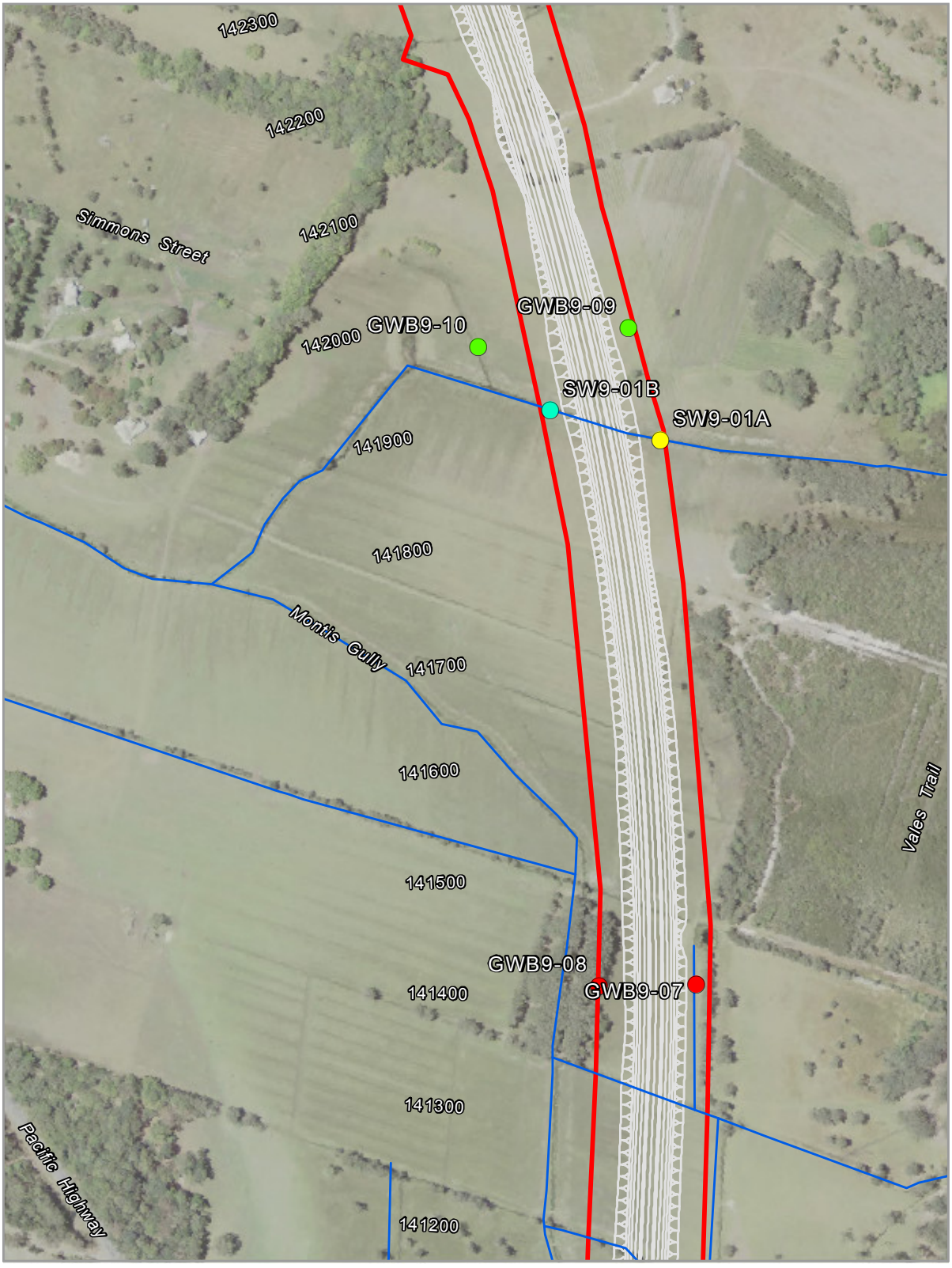


LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

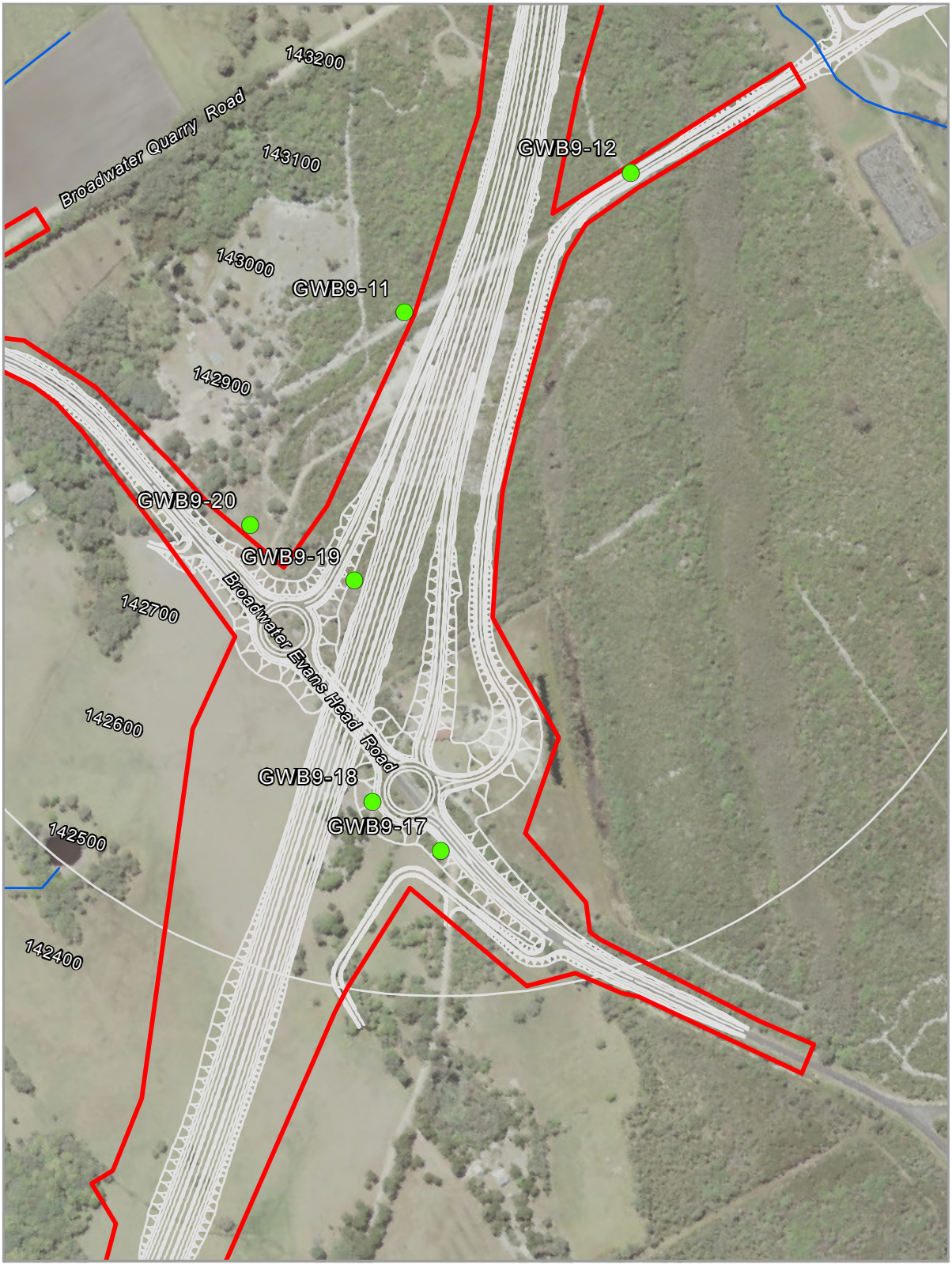


LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

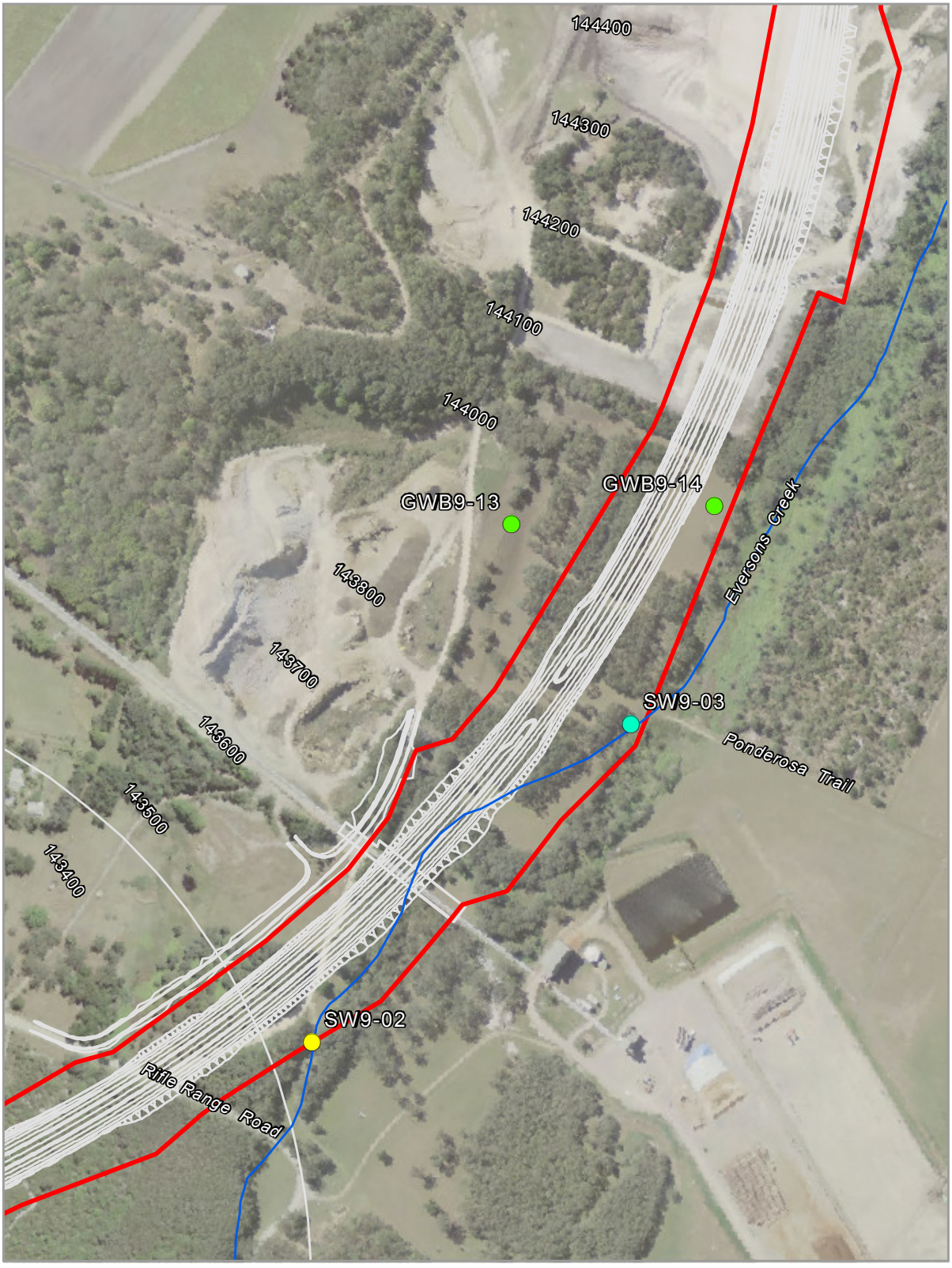


LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels only

0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

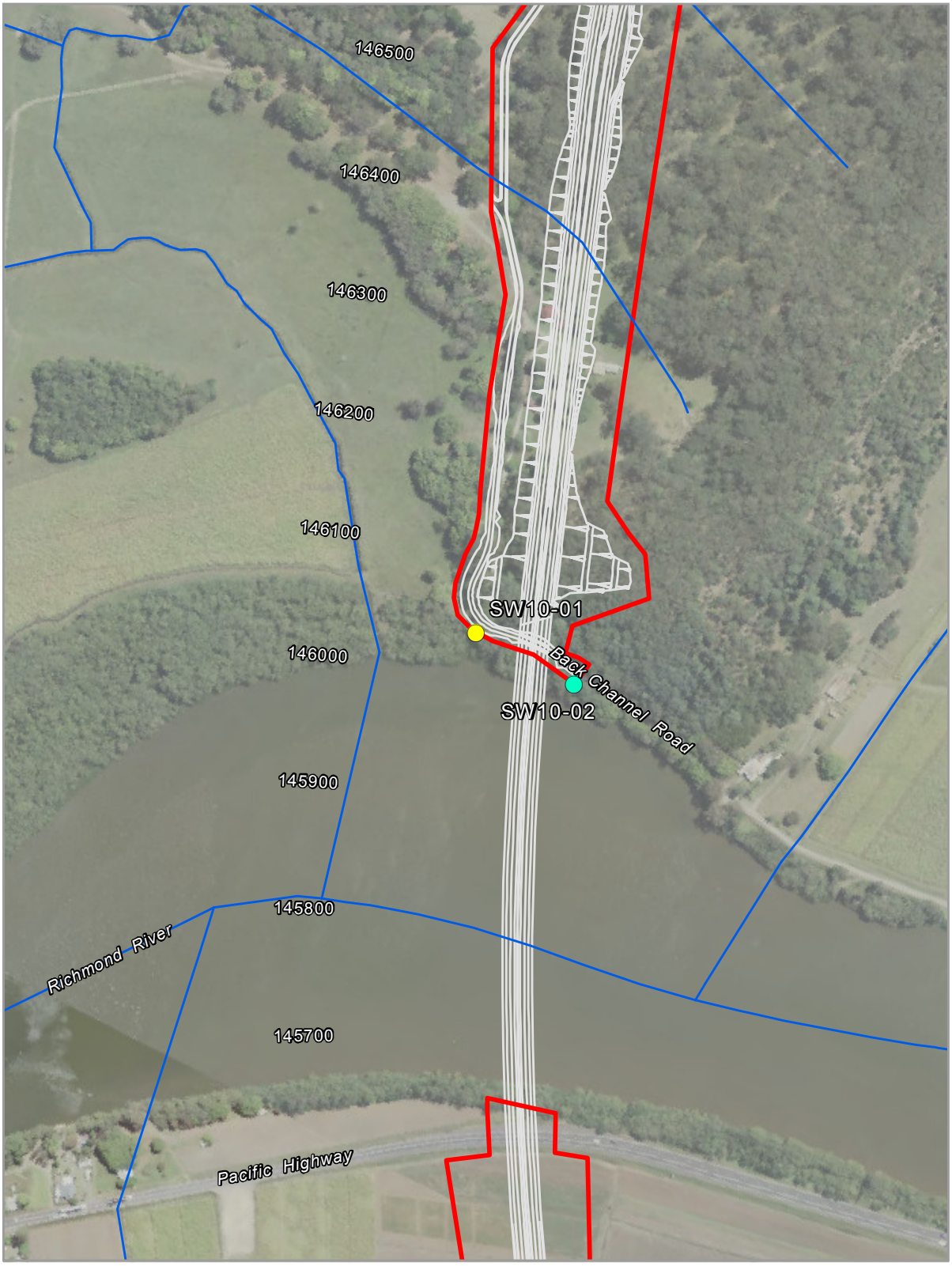


LEGEND

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- Watercourse
- Groundwater monitoring - levels only
- Downstream surface water monitoring point
- Upstream surface water monitoring point

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Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

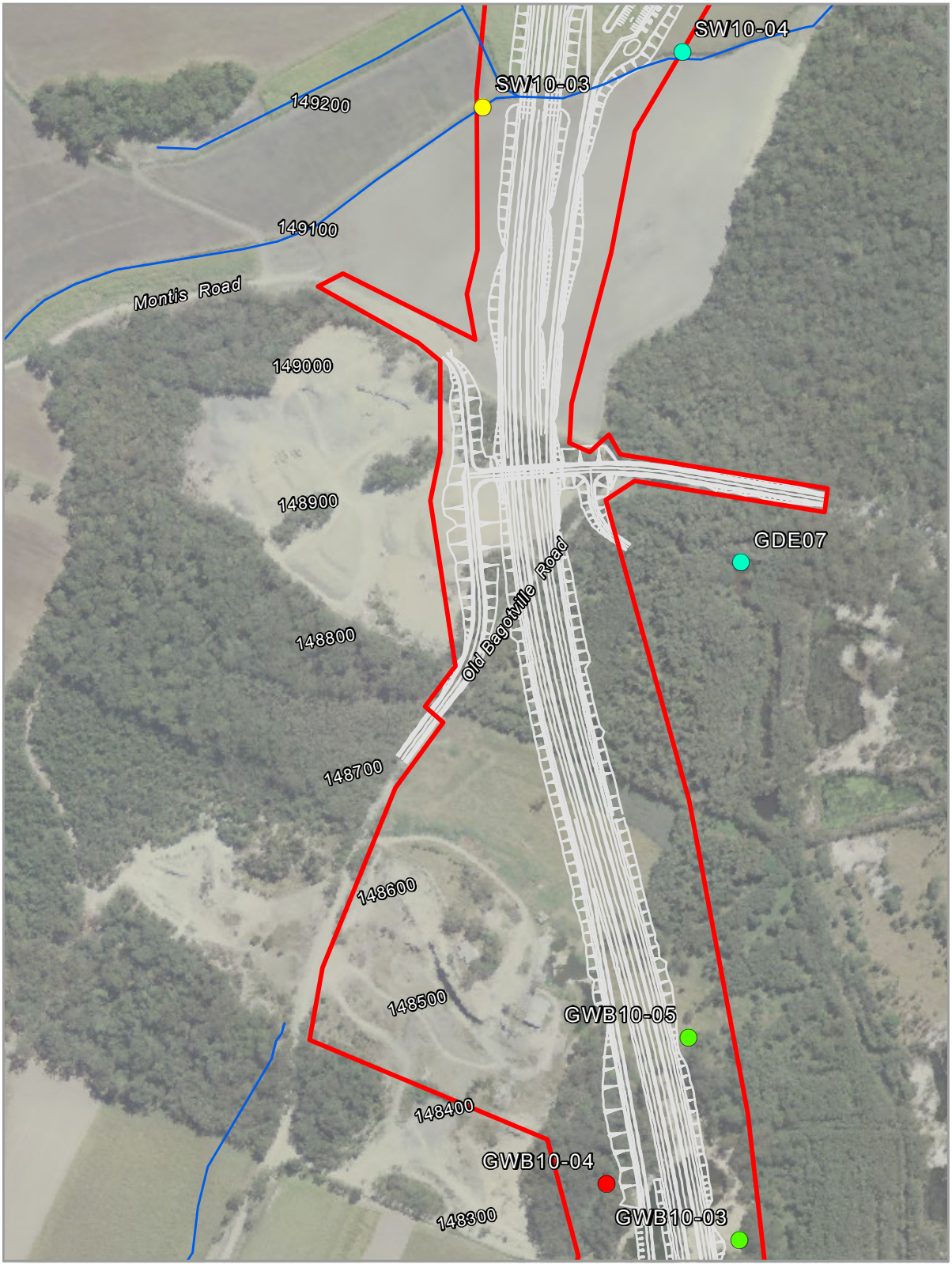


LEGEND

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- Watercourse
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0 100

Woolgoolga to Ballina Sections 3-11
SW and GW Monitoring Locations

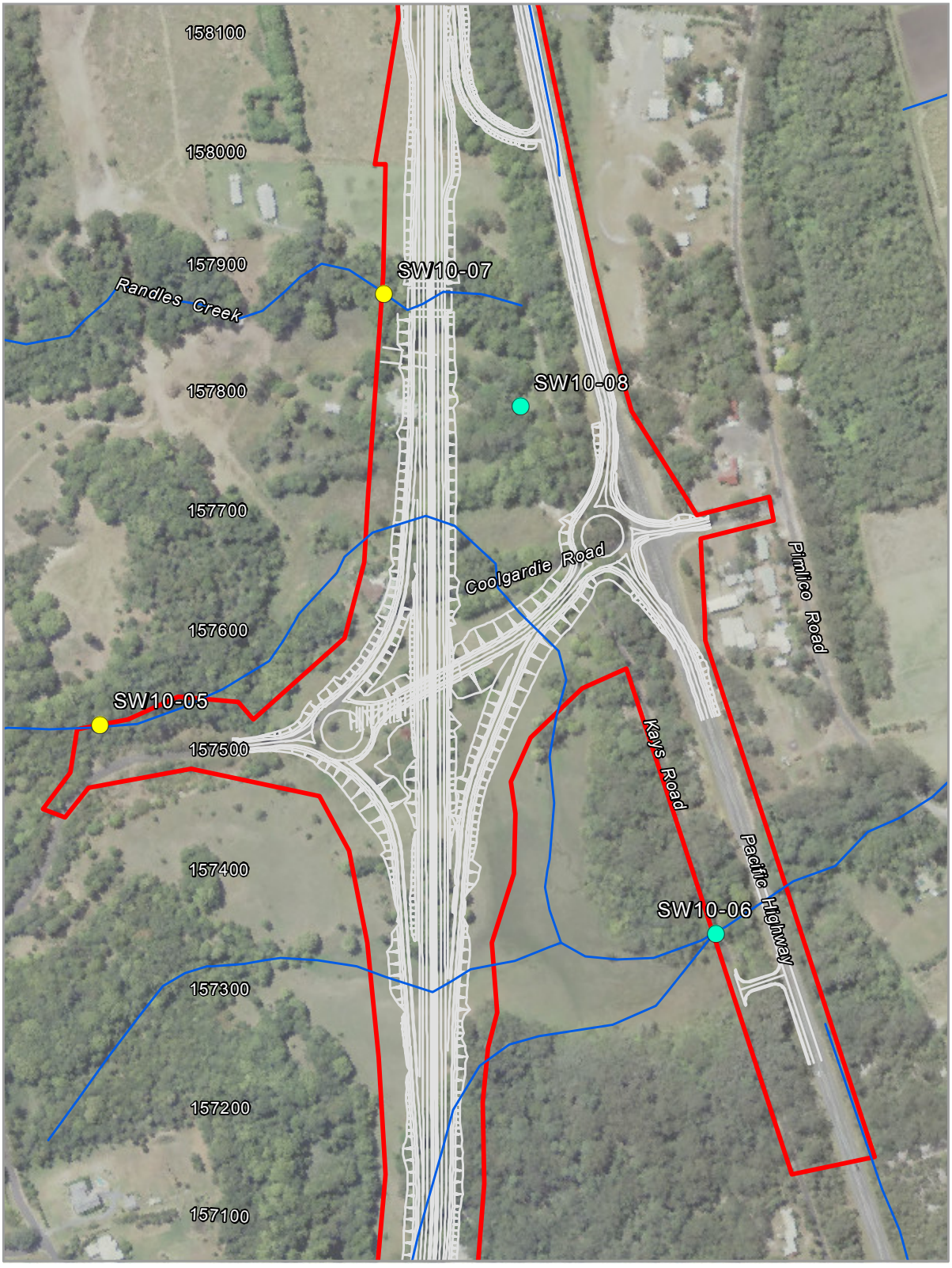


LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

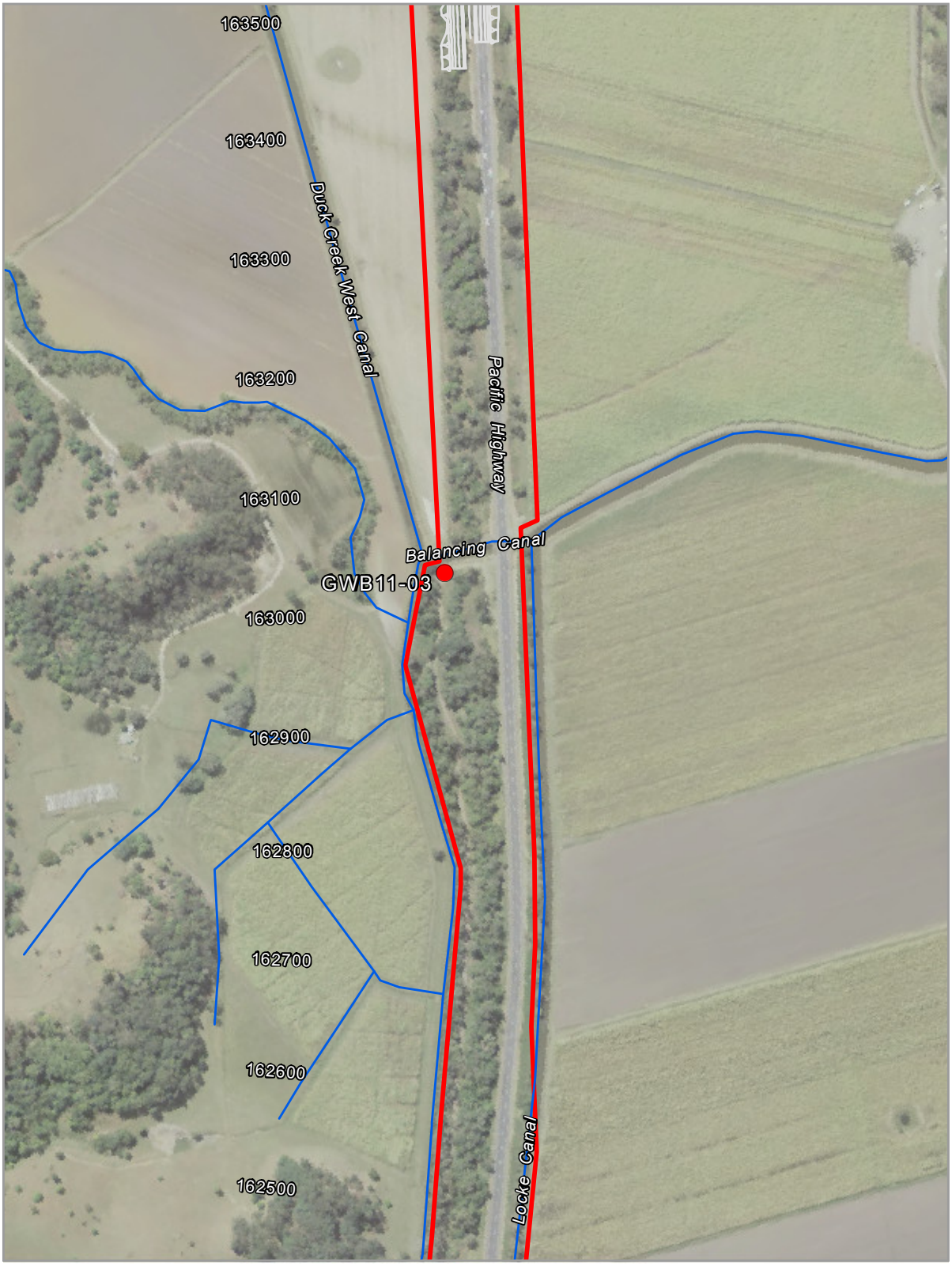


LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



LEGEND

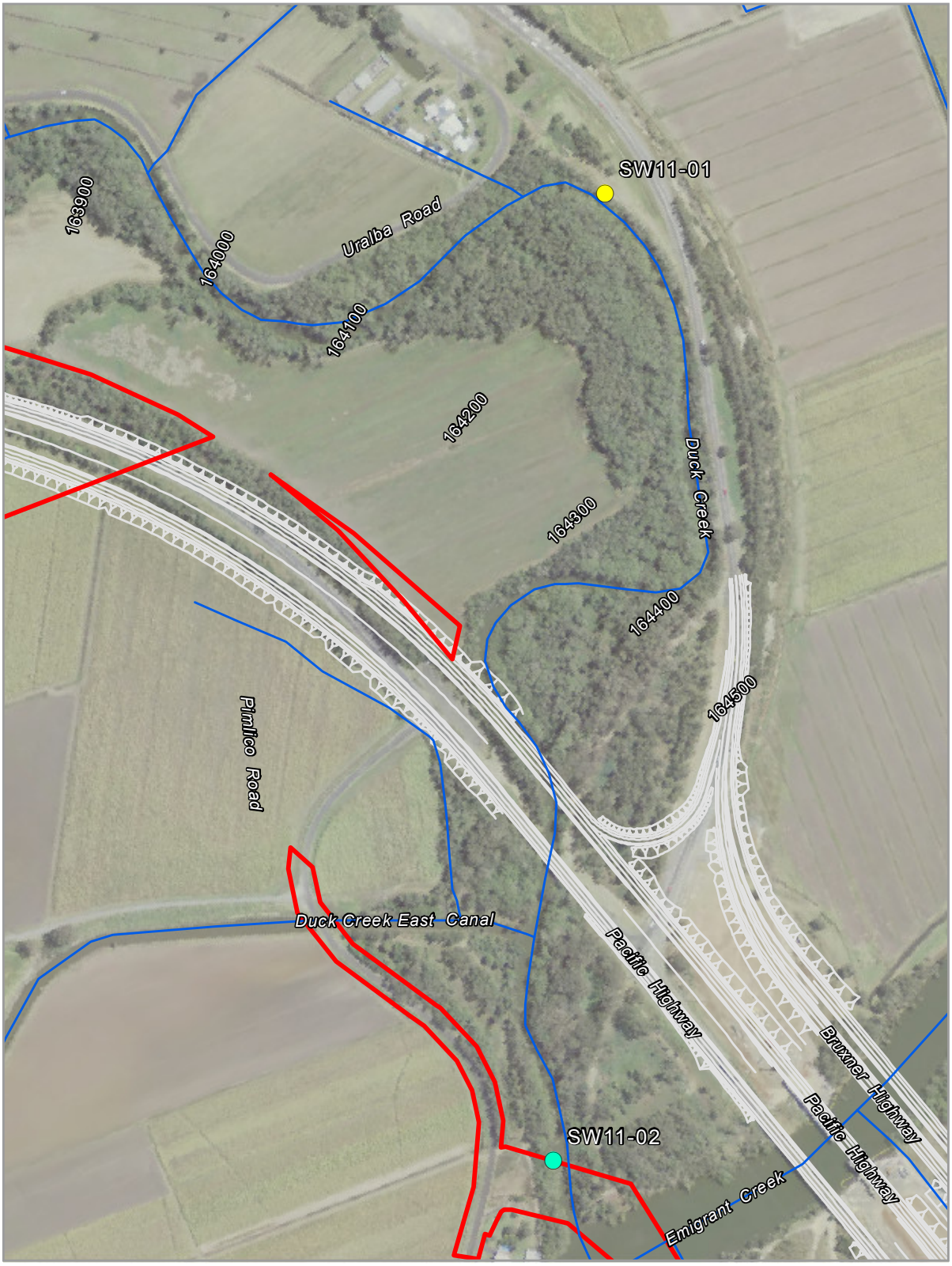
- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

Information shown is for illustrative purposes only

Drawn by: AB Checked by: RE Reviewed by: JC Date: 20/06/2019
Source of base data: DFS&I and Pacific Complete



LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

Appendix B

Surface Water Quality: Results of Interest

Surface Water Quality Table of Results of Interest

Portion	*Site*	*Date*	*Time*	*Wet or Dry Event*	*Results of Interest*	*U/S Results*	*P20 / P80*	*Field Notes / Comments*
A	SW3-02	8/08/2020	12:32	Wet	EC = 0.28 mS/cm	0.07	0.27	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.
A	SW3-02	5/11/2020	10:57	Dry	EC = 0.86 mS/cm	0.24	0.27	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.
A	SW3-02	16/12/2020	11:00	Wet	Turbidity = 934 NTU SS = 164 mg/L Aluminium = 21.400 mg/L Chromium = 0.004 mg/L Copper = 0.012 mg/L Iron = 9.780 mg/L Manganese = 0.060 mg/L Mercury = 0.0002 mg/L Zinc = 0.022 mg/L	588 104 6.410 0.002 0.008 4.450 0.035 0.0001 0.009	328 98 6.410 0.002 0.008 4.450 0.035 0.0001 0.009	Upstream and downstream sites connected. Very high flow, very high water level. Rain.
A	SW3-02	16/02/2021	13:48	Wet	EC = 0.29 mS/cm	0.18	0.27	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.
A	SW3-02	3/05/2021	12:53	Wet	EC = 0.35 mS/cm	0.15	0.27	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.
A	SW3-02	25/05/2021	11:50	Dry	TP = 0.51 mg/L Zinc = 0.073 mg/L	0.07 0.054	0.07 0.072	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.
A	SW3-04	8/08/2020	12:03	Wet	pH = 5.13	N/A	6.64	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine. No comparison can be made to upstream site, which had insufficient water to monitor.
A	SW3-04	16/12/2020	10:46	Wet	pH = 6.39 SS = 1558 mg/L Arsenic = 0.002 mg/L Manganese = 0.078 mg/L	7.46 326 0.001 0.072	6.68 164 0.001 0.072	Upstream and downstream sites connected. Very high flow, very high water level. Turbidity exceeded maximum measuring range. Rain.
A	SW3-04	16/02/2021	14:14	Wet	DO = 3.48 mg/L	4.96	4.3	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.
A	SW3-04	3/05/2021	12:38	Wet	Zinc = 0.064 mg/L	0.01	0.016	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.
A	SW3-06	5/11/2020	11:13	Dry	pH = 7.70	N/A	7.27	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine. No comparison can be made to upstream site, which had insufficient water to sample.
A	SW3-06	17/02/2021	11:15	Wet	DO = 2.62 mg/L	4.75	3.8	Upstream and downstream sites connected. Low flow, medium water level. Rain.
A	SW3-06	3/05/2021	13:03	Wet	Manganese = 0.120 mg/L	0.110	0.106	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.
A	SW3-06	25/05/2021	12:05	Dry	Aluminium = 2.590 mg/L Copper = 0.004 mg/L Iron = 4.720 mg/L Zinc = 0.037 mg/L	2.470 0.002 4.590 0.004	2.470 0.002 4.590 0.004	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.
A	SW3-08	5/11/2020	11:29	Dry	pH = 7.95 Aluminium = 0.190 mg/L	7.25 0.140	7.08 0.140	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.
A	SW3-08	16/12/2020	11:37	Wet	Aluminium = 5.260 mg/L	5.170	5.170	Upstream and downstream sites connected. Medium flow, very high water level. Rain.
A	SW3-08	25/05/2021	12:22	Dry	Aluminium = 2.740 mg/L Iron = 2.870 mg/L	2.640 2.830	2.140 2.464	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.
A	SW3-10	5/11/2020	11:58	Dry	Turbidity = 34 NTU Aluminium = 0.310 mg/L Iron = 4.910 mg/L	13 0.230 3.860	18 0.230 3.860	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.
A	SW3-10	16/12/2020	11:56	Wet	Aluminium = 5.640 mg/L Iron = 2.650 mg/L Manganese = 0.071 mg/L Zinc = 0.018 mg/L	4.100 1.960 0.055 0.009	4.100 1.960 0.055 0.009	Upstream and downstream sites connected. High flow, very high water level. Rain.
A	SW3-10	3/05/2021	13:34	Wet	Aluminium = 4.880 mg/L Iron = 3.040 mg/L Zinc = 0.009 mg/L	4.290 2.870 0.006	4.252 2.688 0.008	Upstream and downstream sites connected. Very low flow, high water level. Overcast.
A	SW3-10	25/05/2021	12:40	Dry	Aluminium = 1.920 mg/L	1.900	1.566	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.
A	SW3-12	16/12/2020	12:12	Wet	Turbidity = 232 NTU SS = 170 mg/L Aluminium = 9.480mg/L Chromium = 0.005 mg/L Iron = 5.030 mg/L Zinc = 0.013 mg/L	199 146 8.690 0.004 4.450 0.009	40 39 8.690 0.004 4.450 0.009	Upstream and downstream sites connected. Very high flow, very high water level. Rain.
A	SW3-12	3/05/2021	13:47	Wet	Zinc = 0.011 mg/L	0.01	0.01	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.
A	SW3-12	25/05/2021	12:57	Dry	Zinc = 0.006 mg/L	0.004	0.004	Upstream and downstream sites connected. Low flow, low water level. Weather fine.
A	SW3-14	16/12/2020	12:46	Wet	Manganese = 0.048 mg/L Zinc = 0.008 mg/L	0.039 0.005	0.039 0.005	Upstream and downstream sites connected. Very high flow, very high water level. Rain.
A	SW3-16	5/11/2020	12:19	Dry	Nickel = 0.013 mg/L	0.003	0.003	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.
A	SW3-16	16/12/2020	13:02	Wet	Aluminium = 4.870 mg/L Iron = 1.990 mg/L Manganese = 0.037 mg/L	4.640 1.950 0.035	4.640 1.950 0.035	Upstream and downstream sites connected. High flow, very high water level. Rain.
A	SW3-16	3/05/2021	14:17	Wet	Aluminium = 5.470 mg/L	5.13	5.032	Upstream and downstream sites connected. Low flow, high water level. Drizzle.
A	SW3-16	25/05/2021	13:36	Dry	Iron = 3.320 mg/L	3.3	2.902	Upstream and downstream sites connected. Low flow, low water level. Weather fine.
A	SW3-20	16/12/2020	13:21	Wet	Manganese = 0.035 mg/L	0.033	0.033	Upstream and downstream sites connected. High flow, very high water level. Rain.
A	SW3-20	3/05/2021	14:36	Wet	EC = 0.12 mS/cm Aluminium = 1.900 mg/L Iron = 2.600 mg/L Manganese = 0.130 mg/L	0.11 1.650 2.620 0.130	0.13 1.648 2.234 0.111	Upstream and downstream sites connected. Low flow, high water level. Overcast.

Portion	Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
A	SW3-20	25/05/2021	13:57	Dry	Aluminium = 2.080 mg/L Iron = 3.730 mg/L Zinc = 0.120 mg/ L	0.420 2.830 0.006	0.420 2.830 0.006	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.
A	SW3-22	5/11/2020	12:49	Dry	pH = 6.87 Aluminium = 0.260 mg/L	5.57 0.170	6.26 0.170	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.
A	SW3-22	16/12/2020	13:39	Wet	Aluminium = 5.930 mg/L Iron = 2.260 mg/L Manganese = 0.038 mg/L	5.450 2.080 0.036	5.450 2.080 0.036	Upstream and downstream sites connected. Very high flow, very low water level. Rain.
A	SW3-22	3/05/2021	14:50	Wet	Turbidity = 32 NTU Oil & Grease = 8 mg/L Iron = 2.730 mg/L Zinc = 0.130 mg/L	14 1 2.290 0.006	19 1 2.248 0.008	Upstream and downstream sites connected. Low flow, medium water level. Overcast.
A	SW3-22	25/05/2021	14:16	Dry	Aluminium = 1.880 mg/L	1.59	1.306	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.
A	SW3-23	8/08/2020	10:34	Wet	EC = 1.09 mS/cm	N/A	0.65	Low flow, low water level. Outgoing tide. Weather fine. There is no upstream monitoring site for comparison.
A	SW3-23	5/11/2020	9:49	Dry	EC = 15.40 mS/cm	N/A	3.30	Very low flow, medium water level. Incoming tide. Weather fine. There is no upstream monitoring site for comparison.
A	SW3-23	16/12/2020	8:28	Wet	EC = 0.08 mS/cm pH = 7.56 Turbidity = 149 NTU SS = 39 mg/L	N/A	0.24 6.78 37 31	High flow, very high water level. Outflowing flood waters. Rain. There is no upstream monitoring site for comparison.
A	SW3-23	16/02/2021	13:10	Wet	pH = 7.07	N/A	6.78	Very low flow, medium water level. Incoming tide. Weather fine. There is no upstream monitoring site for comparison.
A	SW3-23	3/05/2021	10:49	Wet	EC = 0.17 mS/cm	N/A	0.24	Low flow, medium water level. Weather fine. No upstream.
A	SW3-23	25/05/2021	14:40	Dry	DO = 5.55 mg/L EC = 0.16 mS/cm pH = 6.19	N/A	5.88 0.17 6.57	Low flow, medium water level. Incoming tide. Weather fine. No Upstream
A	SW4-01	26/05/2021	11:01	Dry	DO = 2.20 mg/L Iron = 5.320 mg/L	2.86 2.640	2.76 2.244	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.
A	SW4-02	12/11/2020	10:04	Dry	Aluminium = 0.074 mg/L Iron = 0.690 mg/L Manganese = 0.260 mg/L	0.047 0.660 0.180	0.047 0.660 0.180	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.
A	SW4-02	16/12/2020	8:46	Wet	Aluminium = 2.420 mg/L Manganese = 0.054 mg/L Zinc = 0.014 mg/L	2.390 0.052 0.013	2.390 0.052 0.013	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Drizzle.
A	SW4-04	12/11/2020	10:51	Dry	Aluminium = 0.270 mg/L Manganese = 0.500 mg/L Nickel = 0.006 mg/L	0.250 0.480 0.003	0.250 0.480 0.003	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.
A	SW4-04	16/12/2020	9:46	Wet	Manganese = 0.250 mg/L	0.240	0.240	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Rain.
A	SW4-05	26/05/2021	10:02	Dry	Aluminium = 0.550 mg/L	0.48	0.404	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.
A	SW4-06	12/11/2020	10:23	Dry	Lead = 0.010 mg/L	0.005	0.005	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.
A	SW4-06	16/12/2020	9:19	Wet	Aluminium = 2.480 mg/L Iron = 1.750 mg/L	2.360 1.560	2.360 1.560	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Rain.
A	SW4-06	3/05/2021	10:27	Wet	Nickel = 0.009 mg/L	0.003	0.003	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.
B	SW5-04	13/11/2020	9:12	Dry	Chromium = 0.005 mg/L Copper = 0.005 mg/L Nickel = 0.017 mg/L	0.001 0.001 0.001	0.001 0.001 0.001	Upstream and downstream sites not connected. No visible flow, medium water level. Outgoing tide. Overcast.
B	SW5-04	3/02/2021	10:01	Wet	Turbidity = 145 NTU	114	116	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.
B	SW5-04	4/05/2021	10:59	Dry	EC = 0.37 mS/cm Cadmium = 0.0010 mg/L Chromium = 0.002 mg/L Lead = 0.005 mg/L Nickel = 0.003 mg/L	0.41 0.0010 0.002 0.005 0.003	3.52 0.0009 0.001 0.004 0.002	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.
B	SW5-04	6/05/2021	9:07	Wet	EC = 0.28 mS/cm SS = 254 mg/L Aluminium = 8.060 mg/L Arsenic = 0.003 mg/L Chromium = 0.006 mg/L Copper = 0.007 mg/L Iron = 13.100 mg/L Zinc = 0.035 mg/L	0.22 38 2.720 0.001 0.003 0.002 3.790 0.005	1.80 60 2.209 0.001 0.002 0.002 3.055 0.007	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.
B	SW5-06	13/11/2020	10:44	Dry	Aluminium = 0.217 mg/L Arsenic = 0.002 mg/L Iron = 0.243 mg/L Manganese = 0.036 mg/L Selenium = 0.002 mg/L	0.073 0.001 0.116 0.023 0.001	0.073 0.001 0.116 0.023 0.001	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.
B	SW5-06	16/12/2020	10:24	Wet	Iron = 0.566 mg/L	0.551	0.551	Upstream and downstream sites connected. Medium flow, very high water level. Tide rising, however flow is outgoing due to freshwater flows from storm event. Overcast.
B	SW5-06	4/05/2021	11:16	Dry	Zinc = 0.320	0.006	0.005	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.
B	SW5-06	6/05/2021	9:26	Wet	Zinc = 0.210 mg/L	0.2	0.161	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Rain.
B	SW5-07	16/12/2020	10:51	Wet	Iron = 0.289 mg/L Manganese = 0.204 mg/L	0.267 0.167	0.267 0.167	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.
B	SW5-08	13/11/2020	11:12	Dry	Iron = 0.410 mg/L Zinc = 0.003 mg/L	0.238 0.002	0.238 0.002	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.

Portion	Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
B	SW5-08	4/05/2021	11:27	Dry	DO = 3.21 mg/L TP = 0.23 mg/L Iron = 4.370 mg/L Manganese = 0.350 mg/L Nickel = 0.006 mg/L Zinc = 0.260 mg/L	3.77 0.17 4.000 0.280 0.003 0.240	3.93 0.10 3.248 0.237 0.002 0.192	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.
B	SW5-08	6/05/2021	9:37	Wet	Copper = 0.039 mg/L Zinc = 0.180 mg/L	0.006 0.140	0.005 0.113	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.
B	SW5-10	16/12/2020	11:31	Wet	Manganese = 0.068 mg/L	0.063	0.063	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.
B	SW5-10	4/05/2021	12:17	Dry	Turbidity = 69 NTU SS = 52 mg/L Aluminium = 2.980 mg/L Arsenic = 0.002 mg/L Copper = 0.027 mg/L Iron = 2.850 mg/L Manganese = 0.250 mg/L Zinc = 0.750 mg/L	33 15 1.620 0.001 0.002 1.620 0.200 0.560	22 27 1.320 0.001 0.002 1.344 0.168 0.449	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.
B	SW5-10	6/05/2021	10:37	Wet	Aluminium = 2.880 mg/L Iron = 2.030 mg/L Zinc = 0.660 mg/L	2.740 1.990 0.072	2.030 1.617 0.058	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Rain.
B	SW5-11	8/08/2020	10:46	Wet	pH = 6.59	N/A	6.19	No visible flow, low water level. Weather fine. There is no upstream monitoring site for comparison.
B	SW5-11	13/11/2020	11:54	Dry	DO = 1.41 mg/L EC = 29.90 mS/cm pH = 6.80 Cadmium = 0.001 mg/L Iron = 0.732 mg/L Manganese = 0.201 mg/L Silver = 0.005 mg/L	N/A	4.75 4.86 6.80 0.000 0.290 0.120 0.000	No visible flow, medium water level. Outgoing tide. Drizzle. There is no upstream monitoring site for comparison.
B	SW5-11	16/12/2020	11:05	Wet	DO = 1.94 mg/L EC = 0.21 mS/cm Turbidity = 33 NTU Oil & grease = 5 mg/L Aluminium = 2.345 mg/L Cadmium = 0.0005 mg/L Copper = 0.002 mg/L Iron = 0.945 mg/L Mercury 0.0003 mg/L Silver = 0.0050 mg/L	N/A	5.38 0.39 31 3 0.100 0.0001 0.001 0.300 0.0001 0.0001	Medium flow, medium water level. Outgoing tide. Overcast. There is no upstream monitoring site for comparison.
B	SW5-11	3/02/2021	10:56	Wet	DO = 3.50 mg/L pH = 6.96	N/A	5.38 6.19	No visible flow, low water level. Weather fine. There is no upstream monitoring site for comparison.
B	SW5-11	4/05/2021	11:56	Dry	DO = 3.96 mg/L EC = 0.32 mS/cm pH = 7.05 Aluminium = 3.050 mg/L Iron = 2.620 mg/L Zinc = 0.077 mg/L	N/A	4.75 0.36 6.660 0.090 0.290 0.007	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast. No upstream site
B	SW5-11	6/05/2021	10:15	Wet	EC = 0.02 mS/cm pH = 7.36 Turbidity = 166 NTU SS = 24 mg/L Aluminium = 7.640 mg/L Iron = 3.910 mg/L	N/A	0.39 6.19 31 18 0.100 0.300	High flow, medium water level. Rain. No upstream.
C	SW6-04	8/08/2020	11:16	Wet	pH = 7.02	N/A	6.58	High flow, medium water level. Weather fine. No comparison can be made to upstream site due to access issues.
C	SW6-04	13/11/2020	13:12	Dry	DO = 1.11 mg/L Aluminium = 0.050 mg/L Zinc = 0.011 mg/L	5.14 0.049 0.003	1.77 0.047 0.003	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.
C	SW6-04	16/12/2020	12:02	Wet	Aluminium = 1.225 mg/L Iron = 0.592 mg/L Manganese = 0.020 mg/L	1.130 0.001 0.552 0.019	0.914 0.001 0.500 0.018	Upstream and downstream sites connected. Very high flow, very high water level. Rain.
C	SW6-04	6/05/2021	10:55	Wet	Aluminium = 3.080 mg/L	2.680	2.060	Upstream and downstream sites connected. Very high flow, very high water level. Rain.
C	SW6-06	8/08/2020	11:32	Wet	EC = 0.25 mS/cm Turbidity = 42 NTU	N/A	0.18 38	No visible flow, medium water level. Weather fine. No comparison can be made to upstream site due to access issues.
C	SW6-06	13/11/2020	13:37	Dry	EC = 0.44 mS/cm Zinc = 0.002 mg/L	0.2 0.001	0.31 0.001	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.
C	SW6-06	16/12/2020	12:26	Wet	Copper = 0.002 mg/L Manganese = 0.044 mg/L Zinc = 0.010 mg/L	0.001 0.036 0.002	0.001 0.036 0.002	Upstream and downstream sites connected. Medium flow, high water level. Rain.
C	SW6-06	3/02/2021	12:05	Wet	Turbidity = 89 NTU	25	39	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.
C	SW7-02	17/08/2020	10:47	Wet	EC = 0.31 mS/cm	N/A	0.12	No visible flow, low water level. Weather fine. No comparison can be made to upstream site due to access issues.
C	SW7-02	4/05/2021	10:42	Dry	EC = 0.30 mS/cm pH = 6.67	0.10 5.98	0.11 6.51	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.
C	SW7-02	6/05/2021	13:57	Wet	EC = 0.15 mS/cm	0.07	0.12	Unable to determine if upstream and downstream sites were connected. Medium flow, high water level. Weather fine.
C	SW7-04	17/08/2020	10:58	Wet	Turbidity = 42 NTU	N/A	38	No visible flow, medium water level. Weather fine. No comparison can be made to upstream site due to access issues.
C	SW7-04	15/12/2020	13:32	Wet	Turbidity = 51 NTU SS = 20 mg/L TP = 0.06 mg/L Aluminium = 2.498 mg/L Iron = 0.910 mg/L Zinc = 0.020 mg/L	36 5 0.03 1.372 0.496 0.008	37 16 0.05 1.594 0.707 0.010	Upstream and downstream sites connected. Very high flow, very high water level. Rain.
C	SW7-04	4/05/2021	11:36	Dry	Oil & grease = 5 mg/L Iron = 1.384 mg/L	1 0.737	3 1.267	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.

Portion	Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
C	SW7-06	17/08/2020	11:53	Wet	EC = 0.30 mS/cm	0.15	0.18	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.
C	SW7-06	17/11/2020	9:57	Dry	EC = 0.50 mS/cm pH = 7.45	0.20 6.51	0.20 6.77	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.
C	SW7-06	3/02/2021	14:14	Wet	EC = 0.23 mS/cm	0.13	0.18	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Weather fine.
C	SW7-06	4/05/2021	12:01	Dry	EC = 0.24 mS/cm Iron = 1.486 mg/L Zinc = 0.013 mg/L	0.12 1.243 0.002	0.20 1.198 0.002	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Overcast.
C	SW7-08	17/08/2020	12:25	Wet	Turbidity = 55 NTU	8	16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.
C	SW7-08	15/12/2020	14:33	Wet	Turbidity = 29 NTU Aluminium = 1.793 mg/L	14 1.351	15 1.327	Upstream and downstream sites connected. Very high flow, very high water level. Weather fine.
C	SW7-08	3/02/2021	13:29	Wet	pH = 7.65 Turbidity = 17 NTU	N/A	7.19 15	No visible flow, medium water level. Weather fine. No comparison can be made to upstream site, which was dry.
C	SW7-08	4/05/2021	12:28	Dry	SS = 65 mg/L Iron = 2.916 mg/L Lead = 0.002 mg/L Manganese = 0.169 mg/L Zinc = 0.42 mg/L	6 1.893 0.001 0.032 0.003	61.743 0.001 0.031 0.003	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.
C	SW7-08	6/05/2021	15:17	Wet	Zinc = 0.014 mg/L	0.002	0.006	Upstream and downstream sites connected. No visible flow, high water level. Overcast.
C	SW8-01	17/11/2020	11:37	Dry	DO = 4.82 mg/L	5.89	5.63	Upstream and downstream sites connected. Low flow, very high water level. Incoming tide. Overcast.
C	SW8-01	6/05/2021	15:01	Wet	Manganese = 0.551 mg/L	0.516	0.347	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.
C	SW8-01	4/05/2021	13:14	Dry	Aluminium = 0.333 mg/L Iron = 1.304 mg/L Zinc = 0.013 mg/L	0.331 1.216 0.010	0.261 0.962 0.009	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.
C	SW8-02	16/12/2020	13:08	Wet	TP = 0.55 mg/L Aluminium = 2.901 mg/L Iron = 2.572 mg/L Nickel = 0.004 mg/L	0.48 2.873 2.560 0.004	0.22 2.372 2.142 0.003	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Rain.
C	SW8-04	15/12/2020	11:16	Wet	Oil & grease = 6 mg/L	2	3	Upstream and downstream sites connected. Medium flow, very high water level. Rain.
C	SW8-04	15/02/2021	15:32	Wet	DO = 1.42 mg/L Turbidity = 36 NTU	N/A	2.35 17	No visible flow, very low water level. Weather fine. No comparison can be made to upstream site, which had insufficient water to monitor.
C	SW8-04	4/05/2021	14:23	Dry	Aluminium = 0.828 mg/L Cadmium = 0.0005 mg/L Iron = 1.455 mg/L Zinc = 0.007 mg/L	0.807 0.0005 1.310 0.003	0.730 0.0001 1.254 0.003	Upstream and downstream sites connected. High flow, high water level. Weather fine.
C	SW8-06	15/12/2020	10:34	Wet	Aluminium = 0.699 mg/L	0.576	0.552	Upstream and downstream sites connected. High flow, very high water level. Drizzle.
C	SW8-06	4/05/2021	9:26	Dry	Aluminium = 0.748 mg/L Zinc = 0.004 mg/L	0.709 0.002	0.653 0.002	Upstream and downstream sites connected. High flow, medium water level. Weather fine.
C	SW8-08	17/08/2020	13:57	Wet	pH = 4.87	4.40	4.82	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.
C	SW8-08	17/11/2020	15:02	Dry	pH = 5.74 Turbidity = 30 NTU Aluminium = 0.959 mg/L Cadmium = 0.001 mg/L Iron = 3.426 mg/L Manganese = 0.165 mg/L Nickel = 0.003 mg/L Silver = 0.005 mg/L	N/A	4.84 12 0.620 0.000 0.900 0.015 0.002 0.001	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast. No comparison can be made to the upstream site, which was dry.
C	SW8-08	15/12/2020	10:10	Wet	Manganese = 0.054 mg/L	0.040	0.035	Upstream and downstream sites connected. High flow, very high water level. Drizzle.
C	SW8-08	15/02/2021	14:50	Wet	DO = 0.32 mg/L pH = 5.46	9.07 4.37	1.90 4.75	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.
C	SW8-08	6/05/2021	15:43	Dry	Oil & grease = 5 mg/L Iron = 1.132 mg/L Manganese = 0.025 mg/L	2 0.869 0.009	3 0.894 0.014	Upstream and downstream sites connected. High flow, high water level. Weather fine.
C	SW9-01B	17/11/2020	13:55	Dry	pH = 5.55 TN = 1.09 mg/L Chromium = 0.002 mg/L Manganese = 0.587 mg/L	3.24 0.29 0.001 0.256	4.82 0.51 0.001 0.256	Upstream and downstream sites connected. No visible flow, low water level. Overcast.
C	SW9-01B	15/12/2020	9:49	Wet	Oil & grease = 5 mg/L Aluminium = 2.352 mg/L Iron = 3.336 mg/L Manganese = 0.089 mg/L	1 2.256 3.227 0.084	3 2.256 3.227 0.084	Upstream and downstream sites connected. High flow, very high water level. Drizzle.
C	SW9-01B	4/02/2021	10:27	Wet	pH = 5.77	4.82	5	Upstream and downstream sites connected. No visible flow, medium water level. Surface scum layer. Weather fine.
C	SW9-01B	3/05/2021	14:56	Wet	DO = 1.42 mg/L Oil & Grease = 4 mg/L	2.14 1	1.48 3	Upstream and downstream sites connected. High flow, high water level. Weather fine.
C	SW9-01B	18/05/2021	13:05	Dry	DO = 0.55 mg/L	1.46	0.68	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.
C	SW9-03	8/07/2020	9:38	Dry	pH = 5.19	4.24	4.84	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.
C	SW9-03	8/08/2020	13:23	Wet	pH = 5.84	4.99	5.10	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.
C	SW9-03	15/12/2020	9:27	Wet	EC = 0.85 mS/cm TN = 5.60 mg/L Copper = 0.002 mg/L Manganese = 3.943 mg/L Nickel = 0.037 mg/L Zinc = 0.170 mg/L	0.44 1.09 0.001 0.089 0.002 0.019	0.42 3.03 0.001 0.089 0.002 0.019	Upstream and downstream sites connected. High flow, very high water level. Drizzle.
C	SW9-03	4/02/2021	9:38	Wet	DO = 0.62 mg/L pH = 5.85	1.58 4.86	0.98 5.21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.

Portion	Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
C	SW9-03	3/05/2021	14:21	Wet	pH = 5.97 Iron = 1.363 mg/L Manganese = 0.431 mg/L	5.37 1.099 0.051	5.34 1.086 0.081	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.
C	SW9-03	18/05/2021	12:45	Dry	pH = 5.80 TP = 0.74 mg/L Iron = 1.685 mg/L Manganese = 0.666 mg/L Nickel = 0.005 mg/L Zinc = 0.011 mg/L	5.25 0.36 1.250 0.048 0.001 0.005	4.91 0.72 1.250 0.048 0.001 0.005	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.
D	GDE07	8/07/2020	10:50	Dry	EC = 0.27 mS/cm pH = 6.23	N/A	0.19 6.30	No visible flow, high water level. Rain. There is no upstream site for comparison.
D	GDE07	10/09/2020	12:01	Wet	EC = 0.25 mS/cm	N/A	0.23	No visible flow, high water level. Rain. There is no upstream site for comparison.
D	GDE07	9/11/2020	11:49	Wet	DO = 3.39 mg/L EC = 0.44 mS/cm	N/A	3.99 0.23	No visible flow, very low water level. Overcast. There is no upstream monitoring site for comparison.
D	GDE07	4/02/2021	11:35	Wet	DO = 1.49 mg/L EC = 0.25 mS/cm	N/A	3.99 0.23	No visible flow, medium water level. Weather fine. There is no upstream site for comparison.
D	GDE07	3/05/2021	12:19	Wet	DO = 2.06 mg/L	N/A	3.99	No visible flow, very low water level. Drizzle. No upstream.
D	GDE07	18/05/2021	10:32	Dry	DO = 1.63 mg/L pH = 6.08 Oil & Grease = 6	N/A	2.46 6.30 3	No visible flow, medium flow. Overcast. No upstream.
D	SW10-01	19/11/2020	11:26	Dry	Aluminium = 0.113 mg/L Iron = 0.211 mg/L Manganese = 0.102 mg/L	0.065 0.127 0.087	0.065 0.127 0.087	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.
D	SW10-01	9/11/2020	10:40	Wet	Aluminium = 0.172 mg/L Nickel = 0.001 mg/L	0.147 0.001	0.147 0.001	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.
D	SW10-01	4/02/2021	11:02	Wet	Turbidity = 160 NTU	88	96	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.
D	SW10-01	3/05/2021	13:29	Wet	DO = 4.93 mg/L Aluminium = 0.784 mg/L Iron = 1.637 mg/L Manganese = 1.85 mg/L Nickel = 0.004 mg/L	6.57 0.565 1.007 0.132 0.003	5.08 0.482 0.857 0.128 0.002	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.
D	SW10-02	18/05/2021	11:32	Dry	Aluminium = 0.316 mg/L Iron = 0.747 mg/L Zinc = 0.004 mg/L	0.291 0.745 0.003	0.246 0.622 0.003	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.
D	SW10-04	19/11/2020	11:00	Dry	TN = 1.54 mg/L Aluminium = 0.045 mg/L Manganese = 0.860 mg/L Zinc = 0.006 mg/L	1.05 0.023 0.749 0.005	0.08 0.023 0.749 0.005	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.
D	SW10-04	9/11/2020	11:33	Wet	DO = 2.29 mg/L TN = 2.63 mg/L Aluminium = 0.040 mg/L	3.84 0.42 0.036	2.70 1.50 0.036	Upstream and downstream sites connected. No visible flow, low water level. Overcast.
D	SW10-04	3/05/2021	12:45	Wet	Zinc = 0.007 mg/L	0.004	0.004	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.
D	SW10-04	18/05/2021	11:01	Dry	Aluminium = 0.305 mg/L	0.119	0.100	Upstream and downstream sites connected. No visible flow, low water level. Overcast.
D	SW10-06	10/09/2020	11:17	Wet	DO = 4.38 mg/L	11.15	6.41	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Rain.
D	SW10-06	19/11/2020	12:38	Dry	DO = 2.23 mg/L pH = 6.17 TP = 0.10 mg/L	N/A	3.77 6.36 0.07	Unable to determine if upstream and downstream sites were connected. Very low flow, very low water level. Weather fine. No comparison can be made to the upstream site, which was dry.
D	SW10-06	9/11/2020	12:11	Wet	DO = 2.90 mg/L SS = 43 mg/L Aluminium = 0.196 mg/L Iron = 4.095 mg/L Manganese = 0.073 mg/L	4.79 1 0.117 0.112 0.006	6.32 19 0.117 0.112 0.006	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Overcast.
D	SW10-06	4/02/2021	12:14	Wet	DO = 1.87 mg/L	5.06	6.28	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Weather fine.
D	SW10-06	3/05/2021	11:48	Wet	DO = 3.33 mg/L pH = 6.17 Manganese = 0.039 mg/L Zinc = 0.008 mg/L	7.55 6.72 0.019 0.003	6.29 6.42 0.016 0.003	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Drizzle.
D	SW10-06	18/05/2021	10:04	Dry	DO = 2.03 mg/L Turbidity = 40 NTU SS = 20 mg/L TP = 0.13 mg/L Aluminium = 0.323 mg/L Arsenic = 0.002 mg/L Iron = 9.123 mg/L Manganese = 0.219 mg/L	8.17 12 5 0.04 0.140 0.000 0.603 0.024	3.85 30 16 0.07 0.140 0.000 0.603 0.024	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Overcast.
D	SW10-08	9/11/2020	12:47	Wet	DO = 2.65 mg/L Iron = 1.22 mg/L Manganese = 0.033 mg/L	3.87 0.958 0.021	4.46 0.958 0.021	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Overcast.
D	SW10-08	4/02/2021	12:46	Wet	DO = 3.26 mg/L	5.1	4.51	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.
D	SW10-08	3/05/2021	11:27	Wet	Iron = 1.468 mg/L Manganese = 0.044 mg/L Zinc = 0.005 mg/L	1.274 0.031 0.002	1.211 0.029 0.002	Upstream and downstream sites connected. High flow, medium water level. Drizzle.
D	SW10-08	18/05/2021	9:36	Dry	Aluminium = 0.158 mg/L	0.145	0.135	Upstream and downstream sites connected. Low flow, low water level. Sampled approx. 100 m NW due to access issues Overcast.
D	SW11-02	13/11/2020	14:41	Dry	SS = 32 mg/L Aluminium = 0.385 mg/L Iron = 1.377 mg/L Manganese = 0.271 mg/L Nickel = 0.002 mg/L Zinc = 0.005 mg/L	15 0.071 0.640 0.218 0.001 0.003	25 0.071 0.640 0.218 0.001 0.003	Upstream and downstream sites connected. Low flow, very low water level. Outgoing tide. Weather fine.
D	SW11-02	18/05/2021	9:08	Dry	Aluminium = 0.104 mg/L Zinc = 0.004 mg/L	0.094 0.003	0.089 0.003	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Drizzle.

Appendix C

Surface Water Quality: Data

(Note: Italicised values in the following tables are below the practical quantification limit and have been halved to enable the calculation of statistics)

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-02	Not flowing	3/08/2016		7.02	0.22	6.50	14.3	57																					
SW3-02	Intermediate flow	8/09/2016		5.54	0.32	7.47	15.8	67	2	20	0.04	1.51	*50*	*50*	*50*														
SW3-02	Not flowing	6/10/2016		3.51	0.29	6.40	15.2	272																					
SW3-02		1/11/2016		3.57	0.35	7.28	20.7	4	*1*	9	0.03	0.79	*50*	*50*	*50*														
SW3-02		8/12/2016		3.56	0.30	6.91	23.3	10																					
SW3-02	Very low water level and not flowing. Not connected with SW3-01.	13/01/2017		2.54	0.28	6.93	26.0	13	*1*	11	0.03	1.62	*50*	170	*50*														
SW3-02	Very low water level and not flowing. Not connected with SW3-01.	1/02/2017		1.21	0.29	7.57	27.3	1																					
SW3-02	No visible flow, no connection between u/s and d/s sites.	23/03/2017		4.20	0.19	6.32	25.2	64	*1*	17	0.03	1.21	*50*	*50*	*50*														
SW3-02	No visible flow.	24/04/2017		0.34	0.16	6.77	18.3	15																					
SW3-02	Upstream and downstream sites not connected. No visible flow. Moderate water level. Weather fine.	11/05/2017		1.45	0.16	6.62	15.8	9	*1*	5	*0.02*	0.81	*50*	*50*	*50*														
SW3-02	Weather fine. Not connected. Water level moderate.	8/06/2017		2.23	0.14	6.98	12.8	41																					
SW3-02	Upstream and downstream sites not connected. No visible flow. Water level low to moderate. Weather fine.	24/07/2017		1.45	0.16	6.57	10.1	32	*1*	3	0.04	1.20	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. Minimal flow. Low - moderate water level. Weather fine.	3/08/2017		2.32	0.16	6.63	10.2	22																					
SW3-02	Weather fine. U/S and D/S not connected. Water level low. No flow. Sample taken in isolated pool	4/09/2017		7.20	0.29	7.06	18.5	5	*1*	10	0.03	1.17	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. Low water level. Overcast.	5/10/2017		3.16	0.20	6.99	17.9	13																					
SW3-02	Upstream and downstream not connected. Slight flow. Moderate water level.	2/11/2017		2.08	0.25	6.20	19.6	92	*1*	21	0.03	0.89	*13*	*50*	*50*														
SW3-02	Upstream and downstream not connected. Minimal flow, moderate water level. Weather fine.	6/12/2017		2.75	0.14	6.35	21.3	133																					
SW3-02	Upstream and downstream not connected. No visible flow. Low water level. Weather fine.	23/01/2018		2.43	0.18	6.85	27.3	37	*1*	8	0.04	1.57	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	13/02/2018		1.14	0.19	6.98	25.1	20																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	20/03/2018		0.93	0.23	6.61	24.3	95	*1*	38	0.03	0.87	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	11/04/2018		1.15	0.22	6.93	21.8	44																					

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-02	Upstream and downstream not connected. No visible flow. Low water level. Weather fine.	8/05/2018		3.33	0.39	6.47	18.7	18	*1*	10	*0.02*	0.64	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	25/06/2018	13:19	4.02	0.21	6.98	13.3	143																					
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	24/07/2018	17:54	3.56	0.29	7.21	9.7	70	*1*	32	*0.02*	0.81	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/08/2018	10:11	3.96	0.30	7.13	10.6	53																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	17/09/2018	15:03	2.44	0.51	7.62	17.2	235	*1*	211	0.05	0.66	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	26/10/2018	14:54	3.12	0.59	6.50	24.7	113																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2018	15:11	4.10	0.68	6.94	27.5	71	*1*	19	*0.02*	0.98	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/12/2018	10:43	6.50	0.94	7.30	23.5	34																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/01/2019	14:07	2.41	0.49	7.17	27.1	49	*1*	33	0.03	1.44	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	7/02/2019	9:29	8.14	0.60	7.30	25.4	23																					
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	22/03/2019	8:38	4.29	0.61	8.15	22.4	36	*1*	6	*0.02*	1.06	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	24/04/2019	15:10	4.59	0.55	7.34	20.7	800																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather overcast.	2/05/2019	14:52	2.66	0.54	7.64	20.7	164	*1*	88	0.04	1.01	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/06/2019	12:22	5.32	0.80	7.73	14.9	95																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	9:56	5.09	0.83	7.11	16.2	150	*1*	24	0.03	1.68	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	19/08/2019	8:31	11.04	1.15	8.15	15.1	9																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/09/2019	10:21	4.38	0.87	6.46	21.2	71	*1*	36	0.09	2.84	*13*	*50*	*50*														
SW3-02	No visible flow, low water level. Weather fine.	3/10/2019	11:04	7.37	1.14	7.06	22.9	8																					
SW3-02	No visible flow, low water level. Weather fine.	5/11/2019	8:49	2.61	1.24	6.81	23.3	5	*1*	6	*0.02*	0.88	*50*	*50*	*50*														
SW3-02	No visible flow, very low water level. Weather fine.	4/12/2019	13:24	10.47	1.46	8.45	28.1	21																					

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-02	No visible flow, very low water level. Weather fine.	8/01/2020	13:50	13.07	1.24	9.95	33.8	63	*1*	58	*0.02*	1.13	*13*	*13*	*50*														
SW3-02	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	18/02/2020	11:56	5.40	0.31	5.66	28.0	85																					
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	4/03/2020	11:12	3.29	0.39	6.21	25.3	53	*1*	27	0.04	1.33	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	15/04/2020	11:49	4.51	0.41	6.88	25.5	145																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/05/2020	9:40	5.85	0.64	7.43	16.9	22	*1*	10	0.03	0.73	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	15/06/2020	9:20	7.38	0.56	7.55	15.9	70																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	10:57	7.77	0.86	8.38	23.1	12	*1*	6	0.03	0.80	*13*	*50*	*50*	0.440	*0.001*	*0.0010*	*0.002*	*0.002*	0.750	*0.005*	0.130	*0.0001*	*0.003*	*0.001*	*0.0005*	0.066
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	25/05/2021	11:50	5.99	0.24	6.27	16.9	71	*1*	17	**0.51**	1.43	*13*	*50*	*50*	6.160	0.001	*0.0010*	*0.002*	0.008	5.180	*0.005*	0.150	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.073**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.27	7.40		107	3	32	0.07	1.41	50	50	50	12.860	0.002	0.0010	0.003	0.015	13.202	0.005	0.313	0.0001	0.003	0.001	0.0005	0.072
P20				2.70	0.15	6.53																							
St Dev					0.07	0.75																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW02		27/02/2013		8.09	0.17	7.01	22.6	121	*3*	84	0.06	1.30																	
Section3 SW02		22/03/2013		8.97	0.15	7.18	19.6	40	*3*	17	0.06	1.20																	
Section3 SW02		18/04/2013		6.79	0.13	6.91	21.5	117	*3*	28	0.09	1.40																	
Section3 SW02		23/05/2013		6.26	0.26	7.02	14.2	95	*3*	30	0.02	1.30																	
Section3 SW02		28/06/2013		7.31	0.13	6.89	14.3	117	*3*	23	0.04	0.92																	
Section3 SW02		25/07/2013		8.05	0.19	6.66	15.0	63	*3*	21	0.04	0.54																	
Section3 SW02		22/08/2013		7.37	0.24	7.24	8.9	53	*3*	16	0.11	0.21																	
Section3 SW02		26/09/2013		4.12	0.36	3.27	21.9	125	*3*	80	*0.01*	0.95																	
Section3 SW02		24/10/2013		4.68	0.22	6.54	23.7	58	*3*	33	0.04	0.73																	
Section3 SW02		26/11/2013		6.97	0.15	6.23	23.6	112	*3*	55	0.03	0.90																	
Section3 SW02		19/12/2013		4.76	0.14	6.27	22.8	81	*3*	23	*0.25*	0.30																	

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW3-01	Not flowing	3/08/2016		6.98	0.34	6.52	14.9	14																					
SW3-01	Not flowing/intermediate flow	8/09/2016		6.48	0.26	7.31	16.3	52	*1*	12	0.03	0.83	*50*	*50*	*50*														
SW3-01	Not flowing/stagnant water	6/10/2016		10.08	0.26	6.89	15.1	59																					
SW3-01		1/11/2016		3.45	0.30	7.50	19.9	63	*1*	28	0.07	1.57	*50*	160	50														
SW3-01		8/12/2016		3.56	0.39	7.07	21.7	104																					
SW3-01	Very low, not flowing and not connected to SW3-02. Stagnant.	13/01/2017		2.89	0.41	7.22	24.7	207	*1*	98	0.13	3.79	100	400	*50*														
SW3-01	Dry	1/02/2017																											
SW3-01	No visible flow, no connection between u/s and d/s sites.	23/03/2017		4.71	0.24	6.53	25.1	75	*1*	15	*0.02*	1.08	*50*	*50*	*50*														
SW3-01	Insufficient water to monitor.	24/04/2017																											
SW3-01	Upstream and downstream sites not connected. No visible flow. Low water level - isolated pools. Weather fine.	11/05/2017		2.28	0.30	7.13	15.1	10	*1*	5	*0.02*	0.62	*50*	*50*	*50*														
SW3-01	Dry	8/06/2017																											
SW3-01	Upstream and downstream sites not connected. No visible flow / stagnant. Water level low. Weather fine.	24/07/2017		2.53	0.27	6.86	10.5	35	*1*	17	*0.02*	0.74	*13*	*50*	*50*														
SW3-01	Upstream and downstream sites not connected. Isolated pool with no visible flow. Low water level. Weather fine.	3/08/2017		4.86	0.25	7.20	10.8	13																					
SW3-01	Weather fine. U/S and D/S not connected. Water level low. No flow. Sample taken in isolated pool.	4/09/2017		10.46	0.18	6.91	18.2	11	*1*	5	*0.02*	0.97	*13*	*50*	*50*														
SW3-01	Upstream and downstream sites not connected. Low water level. Overcast.	5/10/2017		2.78	0.34	7.29	17.5	33																					
SW3-01	Dry	2/11/2017																											
SW3-01	Upstream and downstream not connected. No visible flow, moderate water level. Weather fine.	6/12/2017		8.37	0.13	6.38	21.9	398																					
SW3-01	Dry	23/01/2018																											
SW3-01	Dry - not sampled. Overcast.	13/02/2018																											
SW3-01	Dry - not sampled. Overcast.	20/03/2018																											
SW3-01	Dry - not sampled. Weather fine.	11/04/2018																											
SW3-01	Dry - not sampled. Weather fine.	8/05/2018																											
SW3-01	Dry - not sampled. Weather fine.	25/06/2018	12:11																										

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-01	Dry - not sampled.	24/07/2018																											
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/08/2018	9:13	7.59	0.21	7.42	10.4	30																					
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:54	6.16	0.31	7.92	20.4	31	*1*	16	0.04	0.83	*13*	*50*	*50*														
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/10/2018	15:03	4.16	0.16	6.54	26.7	34																					
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2018	15:21	5.47	0.18	6.96	32.2	33	*1*	9	0.03	1.28	*13*	*50*	*50*														
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	4/12/2018	10:54	1.24	0.20	7.38	22.4	7																					
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	14:20	2.57	0.19	7.51	27.8	45	*1*	22	0.04	1.62	*13*	*50*	*50*														
SW3-01	Sampled within isolated pool of water with no visible flow and very low water level. Drizzle.	7/02/2019	9:39	1.37	0.23	6.33	24.5	23																					
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	22/03/2019	8:13	1.47	0.26	7.52	22.5	40	*1*	17	0.06	1.72	*13*	*50*	*50*														
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/04/2019	15:17	2.10	0.19	7.47	21.6	40																					
SW3-01	Monitoring site relocated to new location approx. 400 m north-east. Upstream and downstream sites not connected. No visible flow, very low water level. Weather overcast.	2/05/2019	15:00	2.53	0.20	7.51	20.9	10	*1*	13	0.13	1.74	*13*	*50*	*50*														
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	12:30	3.32	0.19	7.31	16.5	36																					
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/07/2019	10:21	3.30	0.21	6.75	15.5	54	*1*	11	0.03	1.30	*13*	*50*	*50*														
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/08/2019	8:41	1.76	0.17	7.52	14.1	14																					
SW3-01	Insufficient water to sample.	19/09/2019	10:21																										
SW3-01	Dry, not sampled.	3/10/2019	11:23																										
SW3-01	Dry, not sampled.	5/11/2019	8:37																										
SW3-01	Dry, not sampled.	4/12/2019	14:19																										
SW3-01	Dry, not sampled.	8/01/2020	13:43																										
SW3-01	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	11:48	5.19	0.13	5.87	25.4	114																					
SW3-01	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	4/03/2020	11:02	3.36	0.18	5.64	25.1	85	*1*	53	0.04	1.18	*13*	*50*	*50*														

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-01	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	15/04/2020	11:55	3.84	0.15	7.03	21.0	144																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/05/2020	9:21	4.05	0.19	7.19	16.2	72	*1*	9	0.03	0.92	*13*	*50*	*50*													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	15/06/2020	13:35	3.94	0.17	6.79	18.6	71																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	10:19	2.85	0.24	8.01	20.6	53	*1*	13	0.03	1.23	*13*	*50*	*50*	12.700	0.002	*0.0010*	0.003	0.005	14.300	*0.005*	0.370	*0.0001*	*0.003*	*0.001*	*0.0005*	0.077
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	25/05/2021	11:37	11.45	0.12	6.46	16.7	104	*1*	25	0.07	1.41	*13*	*50*	*50*	12.900	0.001	*0.0010*	0.003	0.017	8.810	*0.005*	0.084	*0.0001*	*0.003*	*0.001*	*0.0005*	0.054

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-02	Very turbid water, fast flowing	4/08/2016		9.50	0.17	6.65	13.1	670																					
SW3-02		10/11/2016		3.43	0.30	7.30	22.0	3	*1*	7	*0.02*	0.68	*50*	*50*	*50*														
SW3-02		6/12/2016		9.16	0.30	7.25	24.2	7																					
SW3-02	No flow - not connected to SW3-01	7/01/2017		2.16	0.27	6.98	23.0	13	*1*	7	*0.02*	1.21	*50*	140	*50*														
SW3-02	Very low water level and not flowing. Not connected with SW3-01.	28/02/2017		2.48	0.34	6.62	21.3	6																					
SW3-02	Very low water level. No flow. Upstream and downstream sites not connected	7/03/2017		9.35	0.30	6.89	23.3	3	2	9	*0.02*	0.90	50	150	*50*														
SW3-02	Weather showers. Connection likely, unable to confirm if connected due to distance between sites. Water level high, slight flow.	14/06/2017		8.55	0.11	6.71	16.2	169																					
SW3-02	Upstream and downstream sites not connected. Water level very low. Weather fine.	10/10/2017		3.87	0.20	7.55	21.7	63	*1*	9	0.06	1.46	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. Water level very low. Weather fine.	6/11/2017		4.39	0.26	7.65	20.6	46																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.86	0.12	7.28	26.1	362	*1*	40	0.04	1.06	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites connected. Very low flow, moderate water level. Weather fine.	4/01/2018		4.19	0.13	6.36	26.1	155																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/02/2018		1.25	0.19	6.63	23.5	21	*1*	44	0.04	1.46	*13*	*50*	*50*														
SW3-02	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Weather fine.	7/03/2018		5.85	0.18	6.84	22.8	460																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	20/04/2018		1.94	0.30	6.74	21.9	23	*1*	19	*0.02*	0.88	*13*	*50*	*50*														
SW3-02	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Turbidity exceeded maximum range of probe. Weather fine.	8/06/2018	13:33	6.49	0.14	6.49	16.9	800																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/08/2018	14:58	4.81	0.31	7.02	16.2	72	*1*	31	*0.02*	0.57	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	7/09/2018	12:58	3.24	0.37	6.97	16.3	65																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	6/10/2018	13:34	2.91	0.60	6.74	20.0	293	*1*	64	0.16	2.38	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. Very low flow, low water level. Weather fine.	14/12/2018	14:11	4.81	1.08	8.07	28.5	71																					

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	23/02/2019	12:03	2.34	0.55	7.74	23.5	12	*1*	8	*0.02*	1.03	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	13:03	4.57	0.67	8.29	23.0	39																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	20/04/2019	11:12	3.48	0.68	7.14	22.7	269	*1*	111	0.04	1.71	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/05/2019	16:41	5.46	0.71	6.89	17.6	229																					
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	24/06/2019	10:14	6.30	0.82	7.27	11.5	88	*1*	12	*0.02*	0.95	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	13:42	4.79	0.73	6.98	15.0	148																					
SW3-02	Very low flow, low water level. Drizzle.	12/10/2019	8:14	7.66	1.10	7.92	17.2	19	*1*	13	0.10	0.77	*13*	*50*	*50*														
SW3-02	No visible flow, low water level. Overcast.	24/12/2019	11:57	5.06	1.03	7.60	25.8	448																					
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	8:43	6.06	1.36	8.93	24.6	17	*1*	10	*0.02*	0.83	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	7/02/2020	9:47	8.38	0.14	7.23	22.5	517																					
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	27/03/2020	14:41	7.62	0.50	7.23	24.5	370	*1*	148	0.07	1.10	*13*	*50*	*50*														
SW3-02	Upstream and downstream sites not connected. Very low flow, medium water level. Overcast.	4/04/2020	12:16	5.49	0.32	7.15	23.9	615																					
SW3-02	Upstream and downstream sites not connected. Low flow, medium water level. Weather fine.	11/06/2020	9:23	5.53	0.43	7.22	17.1	186	*1*	75	0.08	1.18	*13*	*50*	*50*														
SW3-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	8/08/2020	12:32	8.05	0.28	5.53	16.6	100																					
SW3-02	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	11:00	13.22	0.07	6.56	22.8	934	*1*	164	0.03	1.08	*15*	*5*	*50*	21.400	0.001	*0.0010*	0.004	0.012	9.780	*0.005*	0.060	0.0002	*0.003*	*0.001*	*0.0005*	0.022
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	16/02/2021	13:48	4.79	0.29	6.88	25.6	23																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	3/05/2021	12:53	6.44	0.35	6.46	18.8	40	*1*	10	0.02	0.65	*13*	*50*	*50*	8.190	*0.001*	*0.0010*	0.002	0.007	4.530	*0.005*	0.081	*0.0001*	*0.003*	*0.001*	*0.0005*	0.011
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.27	7.36		300	3	96	0.04	1.32	15	50	50	13.842	0.001	0.0010	0.002	0.010	7.986	0.005	0.085	0.0001	0.003	0.001	0.0005	0.050
P20				3.22	0.15	6.63																							
St Dev					0.08	0.58																							

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW02		8/02/2013		6.89	0.18	6.96	24.2	55	*3*	20	0.04	0.40																
Section3 SW02		30/05/2013		8.34	0.16	7.17	18.3	94	*3*	54	0.05	0.80																
Section3 SW02		4/07/2013		8.65	0.19	6.86	15.6	97	*3*	*3*	0.04	0.86																
Section3 SW02		15/11/2013		7.00	0.13	5.45	25.7	140	*3*	96	*0.01*	0.57																
Upstream Monitoring																												
SW3-01	Very turbid water, fast flowing	4/08/2016		8.98	0.28	6.63	13.4	370																				
SW3-01		10/11/2016		1.29	0.27	7.21	22.0	54	*1*	18	0.03	2.55	*50*	150	*50*													
SW3-01		6/12/2016		10.84	0.40	6.67	23.2	151																				
SW3-01	No flow - not connected to SW3-02	7/01/2017		1.35	0.35	6.99	21.0	399	*1*	134	0.06	2.39	*50*	260	*50*													
SW3-01	Dry	28/02/2017																										
SW3-01	Dry	7/03/2017																										
SW3-01	Weather showers. Connection likely, unable to confirm if connected due to distance between sites. Water level high, slight flow.	14/06/2017		8.01	0.15	6.79	16.3	147																				
SW3-01	Dry	10/10/2017																										
SW3-01	Not connected. Low water level, slight flow.	6/11/2017		4.42	0.27	7.40	20.6	287																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.69	0.20	7.15	25.8	74	*1*	179	0.04	1.21	*13*	*50*	*50*													
SW3-01	Unable to determine whether upstream and downstream sites were connected. No visible flow, low to mid water level. Weather fine.	4/01/2018		4.48	0.17	6.56	26.0	141																				
SW3-01	Dry, not sampled.	5/02/2018																										
SW3-01	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Weather fine.	7/03/2018		6.60	0.20	6.88	23.4	531																				
SW3-01	Dry	20/04/2018																										
SW3-01	Insufficient water to sample. Upstream and downstream sites not connected. No visible flow. Weather fine.	8/06/2018	12:33																									

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	15:07	4.72	0.22	7.00	18.2	127	*1*	64	0.10	1.17	*13*	*50*	*50*													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	7/09/2018	13:05	5.75	0.32	7.50	18.6	70																				
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/10/2018	13:39	3.06	0.19	7.21	20.8	30	*1*	12	0.03	1.07	*13*	*50*	*50*													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/12/2018	14:18	3.73	0.30	7.92	32.3	233																				
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	23/02/2019	12:12	7.08	0.22	7.36	23.1	15	*1*	27	0.04	1.71	*13*	*50*	*50*													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	13:13	0.83	0.26	7.42	22.9	37																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	20/04/2019	11:28	2.23	0.11	7.69	22.9	22	*1*	20	0.03	1.32	*13*	*50*	*50*													
SW3-01	Monitoring site relocated to new location approx. 400 m north-east. Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/05/2019	16:50	3.22	0.18	7.17	17.0	83																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	24/06/2019	10:34	4.29	0.19	6.79	12.3	55	*1*	12	*0.02*	1.14	*13*	*50*	*50*													
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	13:53	3.51	0.19	6.96	16.3	50																				
SW3-01	Dry, not sampled.	12/10/2019	9:16																									
SW3-01	Dry, not sampled.	24/12/2019	11:47																									
SW3-01	Dry, not sampled.	16/01/2020	8:45																									
SW3-01	Upstream and downstream sites connected. Very high flow, high water level. Overcast.	7/02/2020	9:12	9.52	0.11	7.48	22.4	479																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/03/2020	14:51	2.72	0.23	6.80	22.7	28	*1*	14	*0.02*	1.28	*13*	*50*	*50*													
SW3-01	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	4/04/2020	12:28	4.09	0.15	6.38	21.8	405																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	11/06/2020	13:53	5.69	0.18	7.24	19.0	41	*1*	15	0.04	0.87	*13*	*50*	*50*													
SW3-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	8/08/2020	12:22	3.42	0.07	5.27	13.9	300																				
SW3-01	Upstream and downstream sites connected. Very high flow, very high water level. Drizzle.	16/12/2020	10:20	12.70	0.07	6.39	22.7	588	*1*	104	*0.02*	1.08	*15*	*5*	*50*	6.410	*0.001*	*0.0010*	*0.002*	0.008	4.450	*0.005*	0.035	0.0001	*0.003*	*0.001*	*0.0005*	0.009
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	16/02/2021	13:54	3.91	0.18	7.04	25.0	22																				

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	3/05/2021	12:11	4.29	0.15	6.01	20.6	62	*1*	31	0.03	1.20	*13*	*50*	*50*	15.700	0.001	*0.0010*	*0.002*	0.010	8.870	*0.005*	0.098	*0.0001*	*0.003*	*0.001*	*0.0005*	0.060

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-04	Intermittent watercourse - not flowing	3/08/2016		7.81	0.31	6.59	14.5	14																					
SW3-04	Not flowing	8/09/2016		2.00	0.28	6.73	14.3	140	2	30	0.05	1.02	*50*	*50*	*50*														
SW3-04	Stagnant water, not flowing. Isolated water hole.	6/10/2016		1.86	0.32	6.98	13.6	79																					
SW3-04		1/11/2016		0.92	0.40	7.17	18.8	278	*1*	16	0.10	2.21	*50*	130	*50*														
SW3-04	Accurate turbidity reading could not be obtained	8/12/2016		1.43	0.31	7.23	22.2																						
SW3-04	Very low water level, no flow. Sample taken from isolated pool. Not connected with SW3-03	13/01/2017		1.74	0.28	6.97	24.5		*1*	10	0.16	2.47	140	640	110														
SW3-04	Very low water level, no flow and stagant. Sample taken from isolated pool. Not connected with SW3-03	1/02/2017		0.66	0.45	7.65	26.8	7																					
SW3-04	Slight visible flow, no connection between u/s and d/s sites.	23/03/2017		4.48	0.27	6.50	25.5	102	*1*	23	0.03	0.84	*50*	*50*	*50*														
SW3-04	No visible flow.	24/04/2017		2.64	0.48	6.80	18.2	1																					
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Isolated pools. Weather fine.	11/05/2017		2.31	0.13	6.53	15.8	6	*1*	2	0.04	0.77	*50*	*50*	*50*														
SW3-04	Weather fine. Not connected. Water level very low. Stagnant	8/06/2017		3.35	0.66	6.58	13.8	29																					
SW3-04	Upstream and downstream site not connected. No visible flow. Low to moderate water level. Weather fine	24/07/2017		3.38	0.71	6.53	10.5	7	*1*	5	*0.02*	0.37	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. Isolated pool with no visible flow. Low water level. Weather fine.	3/08/2017		5.06	0.72	6.80	10.7	2																					
SW3-04	Weather fine. U/S and D/S not connected. Water level low. No flow. Sample taken in islolated pool	4/09/2017		6.39	0.90	6.84	16.3	4	3	5	*0.02*	0.53	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. Low water level. Overcast.	5/10/2017		2.50	10.10	7.50	17.8	2																					
SW3-04	Upstream and downstream sites not connected. Low water level.	2/11/2017		1.71	0.57	6.47	18.9	123	*1*	24	0.04	1.41	*13*	*50*	*50*														
SW3-04	Upstream and downstream not connected. Light flow, moderate water level. Weather fine.	6/12/2017		5.06	0.62	6.75	21.2	412																					
SW3-04	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		3.14	0.46	7.16	25.6	80	*1*	23	0.04	1.39	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	13/02/2018		1.39	0.45	6.94	25.6	67																					
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		3.43	0.75	6.77	24.5	41	*1*	24	0.03	0.64	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	11/04/2018		1.34	0.57	6.69	21.8	190																					

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	8/05/2018		2.51	0.60	6.58	18.2	75	*1*	38	0.03	0.61	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. Very low flow, very low water level. Weather fine.	25/06/2018	13:03	6.78	0.87	6.72	11.6	70																					
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	17:02	4.08	0.96	7.33	11.8	9	*1*	9	*0.02*	0.21	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. Isolated pool of water with no visible flow and very low water level. Weather fine.	10/08/2018	8:35	7.91	1.03	6.91	10.6	10																					
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	17/09/2018	14:31	3.01	0.81	7.50	17.1	53	*1*	17	*0.02*	1.42	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	26/10/2018	14:41	4.63	0.59	6.37	22.7	54																					
SW3-04	No visible flow, low water level. Weather fine.	5/11/2018	14:53	3.92	1.51	7.31	24.2	38	*1*	15	0.03	2.07	*13*	*50*	*50*														
SW3-04	No visible flow, very low water level. Weather fine.	4/12/2018	11:30	0.12	1.00	7.44	20.7	18																					
SW3-04	No visible flow, low water level. Overcast.	9/01/2019	13:50	1.99	0.52	7.11	24.6	17	*1*	14	0.08	1.40	*13*	*50*	*50*														
SW3-04	No visible flow, very low water level. Drizzle.	7/02/2019	10:10	1.24	0.59	7.13	23.6	24																					
SW3-04	Insufficient water to sample.	20/03/2019	12:14																										
SW3-04	Low flow, medium water level. Weather fine.	24/04/2019	14:55	4.30	0.67	7.61	21.5	216																					
SW3-04	No visible flow, low water level, weather overcast.	2/05/2019	14:33	4.16	0.70	7.29	20.3	28	*1*	15	*0.02*	0.60	*13*	*50*	*50*														
SW3-04	No visible flow, very low water level. Weather fine.	14/06/2019	12:09	2.45	1.16	7.32	16.5	27																					
SW3-04	No visible flow, low water level. Overcast.	4/07/2019	10:41	3.73	0.97	6.81	15.7	59	*1*	6	*0.02*	1.30	*13*	*50*	*50*														
SW3-04	No visible flow, very low water level. Weather fine.	19/08/2019	9:01	0.59	1.15	7.06	13.3	7																					
SW3-04	Dry, not sampled.	19/09/2019	10:37																										
SW3-04	Dry, not sampled.	3/10/2019	11:26																										
SW3-04	Dry, not sampled.	5/11/2019	8:54																										
SW3-04	Dry, not sampled.	4/12/2019	14:13																										
SW3-04	Dry, not sampled.	8/01/2020	13:39																										
SW3-04	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	16:02	8.73	0.28	6.28	28.1	53																					
SW3-04	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/03/2020	13:58	3.01	0.34	6.11	25.5	37	*1*	12	0.05	1.28	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	15/04/2020	12:09	2.96	0.31	6.87	19.5	113																					
SW3-04	Insufficient water to sample.	14/05/2020	9:51																										

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-04	Very low flow, low water level. Overcast.	15/06/2020	13:49	6.26	0.57	6.90	17.2	100																				
SW3-04	Dry, not sampled.	5/11/2020																										
SW3-04	Insufficient water to sample	25/05/2021																										
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					1.50	7.33		137	3	49	0.06	1.07	50	50	50	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				3.15	0.27	6.75																						
St Dev					1.58	0.34																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW03		27/02/2013		7.84	0.20	6.96	23.1	145	*3*	63	0.08	1.00																
Section3 SW03		22/03/2013		3.30	1.02	7.01	22.0	28	*3*	15	0.03	0.90																
Section3 SW03		23/04/2013		6.66	0.75	6.76	20.6	87	*3*	42	0.06	1.40																
Section3 SW03		23/05/2013		5.04	2.33	7.12	12.3	12	*3*	9	0.02	0.70																
Section3 SW03		28/06/2013		7.78	1.77	7.32	15.4	75	*3*	54	*0.01*	0.60																
Section3 SW03		25/07/2013		6.00	1.44	6.81	14.0	56	*3*	54	0.03	0.62																
Section3 SW03		22/08/2013		6.76	5.06	7.53	13.3	6	*3*	12	*0.01*	0.32																
Section3 SW03		26/09/2013		3.87	4.95	7.50	19.2	5	*3*	14	0.01	0.72																
Section3 SW03		24/10/2013		3.62	5.37	7.57	22.6	6	*3*	13	*0.01*	0.82																
Section3 SW03		26/11/2013		7.75	0.74	7.00	24.9	105	*3*	43	0.01	0.80																
Section3 SW03		19/12/2013		2.36	1.29	6.62	23.5	21	*3*	7	0.25	0.10																
Upstream Monitoring																												
SW3-03	Intermittent watercourse, not flowing	3/08/216		6.51	0.36	6.77	13.5	41																				
SW3-03	Sample was not taken at 'actual location'. Sample taken in medium/large lagoon adjacent to Old Six Mile Ln. Not flowing.	8/09/2016		3.77	0.34	7.23	14.8	171	*1*	39	0.05	1.30	*50*	*50*	*50*													
SW3-03	Stagnant water, not flowing. Isolated water hole	6/10/2016		3.25	0.39	6.99	13.9	142																				
SW3-03		1/11/2016		1.21	0.70	7.24	19.4	67	*1*	19	0.06	1.17	*50*	*50*	*50*													
SW3-03	Dry	8/12/2016																										

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-03	Dry	13/01/2017																											
SW3-03	Dry	1/02/2017																											
SW3-03	Slight visible flow, no connection between u/s and d/s sites.	23/03/2017		3.77	0.27	6.36	25.4	28	*1*	6	*0.02*	0.71	*50*	*50*	*50*														
SW3-03	Insufficient water to monitor	24/04/2017																											
SW3-03	Upstream and downstream sites not connected. No visible flow, low water level. Isolated pools. Weather fine.	11/05/2017		6.18	0.46	7.67	17.6	5	*1*	3	*0.02*	0.34	*50*	110	*50*														
SW3-03	Dry	8/06/2017																											
SW3-03	Upstream and downstream site not connected. No visible flow. Low to moderate water level. Weather fine	24/07/2017		3.42	0.41	7.13	10.6	28	*1*	58	*0.02*	0.45	*13*	*50*	*50*														
SW3-03	Upstream and downstream sites not connected. Isolated pool with no visible flow. Low water level. Weather fine.	3/08/2017		5.52	0.40	7.39	11.0	14																					
SW3-03	Dry	4/09/2017																											
SW3-03	Dry	5/10/2017																											
SW3-03	Low Water level. No flow.	2/11/2017		2.76	0.28	6.73	20.5	136	*1*	22	0.04	0.95	*13*	*50*	*50*														
SW3-03	Upstream and downstream not connected. No visibe flow, low water level. Weather fine.	6/12/2017		4.32	0.24	6.84	20.2	324																					
SW3-03	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		1.15	0.35	7.00	31.2	25	*1*	45	0.03	1.26	*13*	*50*	*50*														
SW3-03	Dry - not sampled. Overcast.	13/02/2018																											
SW3-03	Dry - not sampled.	20/03/2018																											
SW3-03	Dry - not sampled. Weather fine.	11/04/2018																											
SW3-03	Dry - not sampled. Weather fine.	8/05/2018																											
SW3-03	Waterway dry. Weather fine.	25/06/2018	11:52																										
SW3-03	Dry, not sampled. Weather fine.	24/07/2018	17:02																										
SW3-03	Dry, not sampled. Weather fine.	10/08/2018	8:38																										
SW3-03	Dry - not monitored.	17/09/2018	14:27																										
SW3-03	Insufficient water to sample.	26/10/2018	14:42																										
SW3-03	Dry, not sampled.	5/11/2018	13:54																										
SW3-03	Dry, not sampled.	4/12/2018	11:20																										
SW3-03	Dry, not sampled.	9/01/2019	13:51																										
SW3-03	Dry, not sampled.	7/02/2019	9:59																										

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-03	Dry, not sampled.	20/03/2019	12:22																										
SW3-03	Dry, not sampled.	24/04/2019	13:47																										
SW3-03	Dry, not sampled.	2/05/2019																											
SW3-03	Dry, not sampled.	14/06/2019	12:12																										
SW3-03	Dry, not sampled.	4/07/2019	10:43																										
SW3-03	Dry, not sampled	19/08/2019	10:01																										
SW3-03	Dry, not sampled.	19/09/2019	10:39																										
SW3-03	Dry, not sampled.	3/10/2019	11:27																										
SW3-03	Dry, not sampled.	5/11/2019	8:55																										
SW3-03	Dry, not sampled.	4/12/2019	14:14																										
SW3-03	Insufficient water to sample.	8/01/2020	13:37																										
SW3-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	18/02/2020	12:06	2.73	0.16	6.76	27.2	51																					
SW3-03	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	4/03/2020	11:23	3.83	0.24	6.54	26.7	38	*1*	19	0.06	0.73	*13*	*50*	*50*														
SW3-03	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	15/04/2020	11:35	3.82	0.27	6.70	23.4	532																					
SW3-03	Insufficient water to sample.	14/05/2020	9:51																										
SW3-03	Dry, not sampled.	15/06/2020	9:30																										
SW3-03	Dry, not sampled.	5/11/2020																											
SW3-03	Insufficient water to sample	25/05/2021																											

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-04	Very turbid water, fast flowing. Water over road.	4/08/2016		8.08	0.09	6.50	13.3	359																					
SW3-04		10/11/2016		0.26	0.39	7.56	23.0	125	*1*	26	0.08	3.44	*50*	180	*50*														
SW3-04	Accurate turbidity reading could not be obtained	6/12/2016		9.52	0.20	7.42	22.8																						
SW3-04	Very low water level, stagnant and no flow. Not connected with SW3-03	7/01/2017		1.27	0.24	6.79	22.0	294	*1*	103	0.21	2.78	*50*	320	*50*														
SW3-04	Dry	28/02/2017																											
SW3-04	Dry	7/03/2017																											
SW3-04	Weather showers. Connected. Water level low, slight flow.	14/06/2017		8.49	0.13	6.72	17.8	112																					
SW3-04	Dry	10/10/2017																											
SW3-04	Not connected. Slight flow, low water level.	6/11/2017		3.43	0.57	7.03	19.9	87																					
SW3-04	Upstream and downstream sites connected. Slight flow, medium water level. Weather, fine. Turbidity exceeded maximum range of probe.	2/12/2017		3.34	0.44	6.70	27.2	800	*1*	574	0.06	1.12	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	4/01/2018		4.89	0.19	6.46	25.3	219																					
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2018		2.48	0.47	6.81	23.6	16	*1*	24	0.03	1.03	*13*	*50*	*50*														
SW3-04	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	7/03/2018		4.37	0.47	6.49	24.0	687																					
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/04/2018		1.24	0.58	6.89	22.1	10	*1*	6	*0.02*	0.90	*13*	*50*	*50*														
SW3-04	Upstream and downstream sites not connected. Low flow, medium water level. Weather fine.	8/06/2018	13:13	5.71	0.49	6.21	15.6	536																					
SW3-04	No visible flow, very low water level. Turbidity reading exceeded maximum measuring range of probe. Weather fine.	27/08/2018	14:42	5.08	0.48	6.79	15.3	800	*1*	752	0.15	1.52	*13*	*50*	*50*														
SW3-04	Very low flow, medium water level. Overcast.	7/09/2018	12:45	4.12	0.45	6.70	17.4	316																					
SW3-04	No visible flow, very low water level. Weather fine.	6/10/2018	13:15	5.03	0.92	7.05	19.5	100	*1*	28	*0.02*	2.42	*13*	*50*	*50*														
SW3-04	No visible flow, very low water level. Weather fine.	14/12/2018	13:56	0.83	0.93	7.82	24.3	30																					
SW3-04	Sampled in an isolated pool of water with no visible flow and very low water level. Weather fine.	23/02/2019	11:33	0.38	0.62	7.46	20.2	12	*1*	9	0.03	1.43	*13*	*50*	*50*														
SW3-04	No visible flow, very low water level. Rain.	16/03/2019	12:42	1.32	7.15	7.88	22.0	32																					
SW3-04	Very low flow, medium water level. Overcast.	20/04/2019	11:59	4.22	0.82	7.41	20.3	214	*1*	97	0.07	1.61	*13*	*50*	*50*														
SW3-04	No visible flow, low water level. Drizzle.	16/05/2019	16:21	2.42	0.79	6.96	16.4	12																					

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	24/06/2019	10:52	3.31	1.15	6.91	11.7	23	*1*	*1*	*0.02*	0.39	*13*	*50*	*50*													
SW3-04	No visible flow, low water level. Overcast.	5/07/2019	13:13	3.23	0.98	6.83	15.6	50																				
SW3-04	Dry, not sampled.	12/10/2019	9:26																									
SW3-04	Dry, not sampled.	24/12/2019	11:46																									
SW3-04	Dry, not sampled.	16/01/2020	9:00																									
SW3-04	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	7/02/2020	9:30	8.22	0.16	7.45	22.8	899																				
SW3-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	27/03/2020	14:25	7.53	0.61	7.67	24.7	67	*1*	24	0.10	1.70	*13*	*50*	*50*													
SW3-04	Upstream and downstream sites connected. Low flow, very low water level. Overcast.	4/04/2020	11:57	7.04	0.28	7.18	22.9	253																				
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. In-situ data error. EC, pH and turbidity sampled as lab parameters. Weather fine.	11/06/2020	14:44		0.40	6.86		160	*1*	63	0.10	1.44	*13*	*50*	*50*													
SW3-04	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	8/08/2020	12:03	7.58	0.32	5.13	13.7	126																				
SW3-04	Upstream and downstream sites connected. Very high flow, very high water level. Turbidity exceeded maximum measuring range. Rain.	16/12/2020	10:46	14.28	0.05	6.39	22.8	1000	*1*	1558	0.06	1.23	*15*	*5*	*50*	12.300	0.002	*0.0010*	0.003	0.012	9.100	*0.005*	0.078	0.0001	*0.003*	*0.001*	*0.0005*	0.018
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/02/2021	14:14	3.48	0.37	6.98	24.1	21																				
SW3-04	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	3/05/2021	12:38	5.36	0.40	6.37	19.6	119	*1*	59	*0.02*	0.70	*13*	*50*	*50*	7.530	*0.001*	*0.0010*	*0.002*	0.005	4.900	*0.005*	0.096	*0.0001*	*0.003*	*0.001*	*0.0005*	0.064
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.37	7.46		395	3	152	0.06	1.59	96	134	66	20.508	0.001	0.0010	0.004	0.013	9.818	0.005	0.118	0.0002	0.003	0.001	0.0005	0.016
P20				4.43	0.15	6.56																						
St Dev					0.24	0.55																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW03		8/02/2013		5.37	0.47	7.15	23.7	103	*3*	130	0.04	0.40																
Section3 SW03		30/05/2013		8.06	0.54	7.22	17.9	144	*3*	130	*0.01*	0.60																

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Section3 SW03		4/07/2013		9.40	0.28	6.98	15.6	128	*3*	10	0.06	1.00																	
Section3 SW03		15/11/2013		6.97	0.22	5.84	24.8	122	*3*	87	*0.01*	0.43																	
Upstream Monitoring																													
SW3-03	Very turbid water, fast flowing.	4/08/2016		9.32	0.09	6.76	13.3	395																					
SW3-03	Not flowing. Sample taken from isolated pool. Harvesting operations occuring nearby.	10/11/2016		2.51	0.15	7.62	23.6	182	*1*	48	0.06	2.09	420	470	130														
SW3-03	Dry	6/12/2016																											
SW3-03	Dry	7/01/2017																											
SW3-03	Dry	28/02/2017																											
SW3-03	Dry	7/03/2017																											
SW3-03	Weather showers. Connected. Water level low, slight flow.	14/06/2017		7.99	0.12	6.56	17.4	94																					
SW3-03	Dry	10/10/2017																											
SW3-03	Not connected. Slight flow, low water level.	6/11/2017		4.43	0.28	7.45	20.0	150																					
SW3-03	Upstream and downstream sites connected. Slight flow, medium water level. Weather, fine.	2/12/2017		4.97	0.26	7.02	29.0	484	*1*	186	0.05	1.21	*13*	*50*	*50*														
SW3-03	Upstream and downstream sites connected. Very low flow, moderate water level. Weather fine.	4/01/2018		3.25	0.15	6.23	23.2	83																					
SW3-03	Dry, not sampled.	5/02/2018																											
SW3-03	Unable to access. Old access off old six mile road unable to be used due to change in traffic management plan. No access on alignment.	7/03/2018																											
SW3-03	Dry	20/04/2018																											
SW3-03	Insufficient water to sample. Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	12:06																										
SW3-03	Dry	27/08/2018	14:44																										
SW3-03	Dry, not sampled.	7/09/2018	12:43																										
SW3-03	Dry, not sampled.	6/10/2018	13:11																										
SW3-03	Dry, not sampled.	14/12/2018	14:01																										
SW3-03	Dry, not sampled.	23/02/2019	11:21																										
SW3-03	Dry, not sampled.	16/03/2019	12:38																										
SW3-03	Dry, not sampled.	20/04/2019	10:38																										

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-03	Dry, not sampled.	16/05/2019	16:30																									
SW3-03	Dry, not sampled.	24/06/2019	10:47																									
SW3-03	Dry, not sampled.	5/07/2019	14:01																									
SW3-03	Dry, not sampled.	12/10/2019	9:28																									
SW3-03	Dry, not sampled.	24/12/2019	11:45																									
SW3-03	Dry, not sampled.	16/01/2020	9:13																									
SW3-03	Upstream and downstream sites connected. High flow, high water level. Turbidity exceeded maximum measurement range. Rain.	7/02/2020	9:39	8.89	0.16	7.60	22.9	1000																				
SW3-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	27/03/2020	14:17	7.36	1.05	7.20	24.4	196	*1*	46	0.12	11.00	*13*	*50*	*50*													
SW3-03	Upstream and downstream sites connected. Low flow, very low water level. Overcast.	4/04/2020	12:00	3.77	0.37	7.66	22.6	264																				
SW3-03	Insufficient water to sample.	11/06/2020	14:12																									
SW3-03	Insufficient water to sample.	8/08/2020	12:10																									
SW3-03	Upstream and downstream sites connected. Very high flow, very high water level. Turbidity exceeded maximum measuring range. Rain.	16/12/2020	10:38	11.74	0.05	7.46	22.9	1000	*1*	326	0.06	1.26	*15*	*5*	*50*	23.700	0.001	*0.0010*	0.004	0.015	11.400	*0.005*	0.072	0.0002	*0.003*	*0.001*	*0.0005*	0.018
SW3-03	Upstream and downstream sites not connected. Very low flow, low water level. Drizzle.	16/02/2021	14:07	4.96	0.24	6.96	24.1	46																				
SW3-03	Upstream and downstream sites not connected. Very low flow, very low water level. Overcast.	3/05/2021	12:28	4.70	0.22	6.21	21.3	62	*1*	43	*0.02*	0.84	*13*	*50*	*50*	7.740	*0.001*	*0.0010*	*0.002*	0.006	3.490	*0.005*	0.130	*0.0001*	*0.003*	*0.001*	*0.0005*	0.010

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-06		3/08/2016		6.08	0.31	6.20	15.6	17																					
SW3-06	Not flowing	8/09/2016		1.85	0.28	6.39	17.9	5	2	23	0.08	1.55	*50*	*50*	*50*														
SW3-06	Stagnant, not flowing	6/10/2016		1.82	0.33	6.06	17.8	293																					
SW3-06		1/11/2016		2.90	0.33	6.89	24.6	28	*1*	13	0.08	1.76	*50*	190	*50*														
SW3-06		8/12/2016		3.64	0.50	6.06	23.4	75																					
SW3-06	Very low water level, no flow. Sample taken from isolated pool. Not connected with SW3-05. Strong odour.	13/01/2017		0.00	0.43	6.09	27.5		3	13100	1.77	9.33	270	1780	310														
SW3-06	Dry	1/02/2017																											
SW3-06	U/s and d/s sites connected	23/03/2017		0.08	0.18	6.02	27.4	69	*1*	127	0.10	2.73	*50*	*50*	*50*														
SW3-06	No visible flow.	24/04/2017		1.51	0.42	7.06	19.2	137																					
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Odour (sulfur?) apparent. Weather fine.	11/05/2017		4.31	0.28	6.80	21.1	12	*1*	14	0.07	1.25	*50*	*50*	*50*														
SW3-06	Weather fine. Connected by slight trickle. Water level low. Stagnant water.	8/06/2017		3.59	0.28	6.61	14.2	465																					
SW3-06	Upstream and downstream sites not connected. No visible flow. Water level low. Weather fine.	24/07/2017		6.43	0.35	7.15	9.7	0	*1*	39	0.04	1.03	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites not connected. Minimal flow. Low water level. Weather fine.	3/08/2017		7.17	0.33	7.28	12.1	27																					
SW3-06	Weather fine. U/S and D/S not connected. No observed flow. Low water level.	4/09/2017		8.43	0.36	7.24	24.5	37	*1*	31	0.05	1.36	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites not connected. Very low water level. Abundant macrophytes present. Weather fine.	5/10/2017		10.18	0.46	8.33	20.9	56																					
SW3-06	Upstream and downstream sites not connected. Very low water level.	2/11/2017		7.61	0.48	7.00	24.2	29	*1*	9	*0.02*	1.05	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	6/12/2017		2.01	0.60	6.71	25.3	586																					
SW3-06	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		6.62	0.35	7.63	34.9	166	*1*	256	0.03	1.19	*13*	*50*	*50*														
SW3-06	Unable to access site due to crane lifting girders. Water levels observed from a distance to be very low. Upstream and downstream sites not connected. No visible flow. Overcast.	13/02/2018																											
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		6.45	0.49	7.06	31.7	109	*1*	80	0.03	0.84	*13*	*50*	*50*														

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	11/04/2018		5.72	0.36	7.16	25.6	292																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	8/05/2018		9.55	0.47	8.53	22.2	156	*1*	87	0.06	0.77	*13*	*50*	*50*													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine. Technical error, no Type A parameters recorded.	25/06/2018	12:50																									
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. High amount of suspended algae. Water is a murky green colour. Weather fine.	24/07/2018	16:49	11.27	0.48	7.50	14.4	33	*1*	19	0.03	0.68	*13*	*50*	*50*													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/08/2018	10:52	8.07	0.50	8.06	14.4	11																				
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:19	7.88	0.37	8.27	22.8	61	*1*	60	0.14	3.25	*13*	*50*	*50*													
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	26/10/2018	14:32	2.48	0.93	6.29	24.6	31																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	5/11/2018	14:39	5.24	0.89	7.02	23.8	35	4	11	*0.02*	0.73	*13*	*50*	*50*													
SW3-06	Insufficient water to sample.	4/12/2018	11:41																									
SW3-06	Insufficient water to sample.	9/01/2019	13:38																									
SW3-06	Insufficient water to monitor.	7/02/2019	10:37																									
SW3-06	Dry, not sampled.	20/03/2019	11:55																									
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	24/04/2019	14:29	1.49	0.72	7.27	21.3	125																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather overcast.	2/05/2019	14:12	3.45	0.77	7.52	21.0	11	*1*	6	*0.02*	0.33	*13*	*50*	*50*													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	11:46	6.86	1.08	7.98	18.2	6																				
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	11:09	3.72	0.83	6.98	16.0	130	*1*	7	*0.02*	0.69	*13*	*50*	*50*													
SW3-06	No visible flow, very low water level. Weather fine.	19/08/2019	9:16	9.14	1.06	7.74	15.8	4																				
SW3-06	Dry, not sampled.	19/09/2019	10:59																									
SW3-06	No visible flow, low water level. Weather fine.	3/10/2019	11:36	7.43	1.12	7.61	20.7	3																				
SW3-06	No visible flow, very low water level. Rain.	5/11/2019	9:16	5.30	1.25	7.61	21.9	3	*1*	2	*0.02*	0.48	50	*50*	*50*													
SW3-06	Dry, not sampled.	4/12/2019	13:58																									
SW3-06	Insufficient water to sample.	8/01/2020	13:33																									

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-06	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	18/02/2020	12:20	5.49	0.11	5.88	30.1	36																					
SW3-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/03/2020	11:39	2.27	0.33	6.44	26.2	24	*1*	18	0.06	1.52	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/04/2020	11:21	3.34	0.20	6.57	18.7	51																					
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/05/2020	10:07	3.88	0.31	6.95	18.8	12	*1*	4	*0.02*	0.88	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	9:39	3.46	0.54	7.20	15.8	75																					
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	11:13	7.65	0.53	**7.70**	23.6	11	*1*	3	*0.02*	0.76	*13*	*50*	*50*	0.250	*0.001*	*0.0010*	*0.002*	*0.002*	0.640	*0.005*	0.092	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.044**
SW3-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	25/05/2021	12:05	10.79	0.20	6.60	17.1	33	*1*	19	*0.04*	1.05	*13*	*50*	*50*	**2.590**	*0.001*	*0.0010*	*0.002*	**0.004**	**4.720**	*0.005*	0.094	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.037**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.95	7.26		91	3	25	0.05	1.46	43	50	50	2.470	0.001	0.0010	0.002	0.002	4.590	0.005	0.094	0.0001	0.003	0.001	0.0005	0.004
P20				3.28	0.31	6.20																							
St Dev					0.49	0.77																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW04		6/03/2013		2.17	0.29	6.15	23.7	35	*3*	30	0.05	1.50																	
Section3 SW04		22/03/2013		5.00	0.78	6.72	25.3	16	*3*	20	0.05	2.20																	
Section3 SW04		23/04/2013		3.89	0.40	6.49	17.7	19	*3*	15	0.04	1.60																	
Section3 SW04		23/05/2013		9.01	1.22	6.78	13.1	15	*3*	9	0.02	0.80																	
Section3 SW04		28/06/2013		6.86	1.05	6.29	14.3	21	*3*	10	0.02	0.61																	
Section3 SW04		25/07/2013		6.64	1.02	6.01	12.8	18	*3*	16	0.04	0.82																	
Section3 SW04		22/08/2013		11.99	1.81	5.85	15.8	9	*3*	7	0.05	0.30																	
Section3 SW04		26/09/2013		6.43	1.78	5.72	20.4	8	*3*	12	0.03	0.71																	
Section3 SW04		24/10/2013		6.44	2.34	5.75	26.0	7	*3*	9	0.02	1.10																	
Section3 SW04		26/11/2013		5.70	0.41	6.41	26.0	17	*3*	8	0.03	1.40																	
Section3 SW04		19/12/2013		7.07	0.01	5.93	23.9	16	*3*	9	0.03	0.80																	

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW3-05	Intermittent watercourse	3/08/2016		4.47	0.59	6.00	15.2	31																					
SW3-05	Not flowing	8/09/2016		3.94	0.30	6.41	19.4	9	*1*	25	0.09	1.66	*50*	*50*	*50*														
SW3-05	Stagnant water	6/10/2016		1.06	0.33	6.47	18.1	113																					
SW3-05		1/11/2016		3.03	0.35	6.94	24.5	7	*1*	8	0.06	1.73	*50*	*50*	*50*														
SW3-05	Dry	8/12/2016																											
SW3-05	Dry	13/01/2017																											
SW3-05	Dry	1/02/2017																											
SW3-05	U/s and d/s sites connected	23/03/2017		0.09	0.20	5.91	26.2	26	*1*	25	0.08	2.49	*50*	*50*	*50*														
SW3-05	No visible flow.	24/04/2017		0.00	0.43	6.48	17.3	13																					
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Channel has abundant aquatic macrophytes. Weather fine.	11/05/2017		7.59	0.24	8.04	19.3	3	*1*	*1*	*0.02*	0.60	*50*	*50*	*50*														
SW3-05	Weather fine. Connected by slight trickle. Water level low.	8/06/2017		6.22	0.29	6.69	17.7	163																					
SW3-05	Insufficient water to sample	24/07/2017																											
SW3-05	Insufficient water to sample	3/08/2017																											
SW3-05	Dry	4/09/2017																											
SW3-05	Dry	5/10/2017																											
SW3-05	Dry	2/11/2017																											
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Turbidity exceeded maximum range of probe. Weather fine.	6/12/2017		7.89	0.67	6.25	22.0	800																					
SW3-05	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		4.73	0.40	6.78	35.3	742	*1*	40	0.03	1.17	*13*	*50*	*50*														
SW3-05	Unable to access site due to crane lifting girders. Water levels observed from a distance to be very low. Upstream and downstream sites not connected. No visible flow. Overcast.	13/02/2018																											
SW3-05	Dry - not sampled.	20/03/2018																											
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	11/04/2018		4.41	0.55	7.02	20.9	108																					
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	8/05/2018		3.43	0.51	7.10	19.0	59	*1*	33	*0.02*	0.61	*13*	*50*	*50*														

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	12:53	6.99	0.45	6.99	12.9	134																				
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	16:42	11.09	0.70	6.89	8.3	12	*1*	5	*0.02*	0.24	*13*	*50*	*50*													
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/08/2018	10:49	8.65	0.68	7.49	9.9	8																				
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:13	6.02	0.32	7.12	19.7	50	*1*	26	0.05	1.20	*13*	*50*	*50*													
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	26/10/2018	14:29	5.41	0.66	6.23	26.1	15																				
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	5/11/2018	14:33	7.10	0.90	7.34	24.6	47	*1*	13	*0.02*	0.75	*13*	*50*	*50*													
SW3-05	No visible flow, very low water level. Weather fine.	4/12/2018	11:47	11.00	1.30	9.22	24.5	88																				
SW3-05	No visible flow, very low water level. Weather fine.	9/01/2019	13:38	5.15	0.39	7.25	26.4	47	*1*	22	0.07	1.18	*13*	*50*	*50*													
SW3-05	Dry, not sampled.	7/02/2019	10:39																									
SW3-05	Sampled in an isolated pool of water with no visible flow, very low water level. Weather fine.	20/03/2019	11:55	8.07	0.59	8.56	25.5	96	*1*	34	0.06	1.32	*13*	*50*	*50*													
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	24/04/2019	14:32	3.05	0.75	7.28	21.1	275																				
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather overcast.	2/05/2019	14:15	3.79	0.84	6.87	20.4	30	*1*	10	*0.02*	0.37	*13*	*50*	*50*													
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	11:50	9.92	1.14	8.20	15.4	18																				
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	11:14	4.84	0.90	6.76	14.1	97	*1*	16	0.03	0.72	*13*	*50*	*50*													
SW3-05	Dry, not sampled	19/08/2019	10:16																									
SW3-05	No visible flow, low water level. Weather fine.	19/09/2019	10:55	4.71	0.82	7.00	20.8	30	*1*	21	*0.02*	0.99	*13*	*50*	*50*													
SW3-05	Dry, not sampled.	3/10/2019	11:36																									
SW3-05	Dry, not sampled.	5/11/2019	9:11																									
SW3-05	No visible flow, very low water level. Weather fine.	4/12/2019	13:07	7.31	1.45	8.21	28.4	14																				
SW3-05	Dry, not sampled.	8/01/2020	13:32																									
SW3-05	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	18/02/2020	12:16	0.79	0.11	6.02	29.5	47																				
SW3-05	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/03/2020	11:44	2.00	0.37	6.29	26.1	14	*1*	15	0.05	1.36	*13*	*50*	*50*													
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/04/2020	11:25	2.65	0.21	6.36	17.6	40																				
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/05/2020	10:10	6.79	0.40	7.35	14.3	17	*1*	7	*0.02*	0.88	*13*	*50*	*50*													

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	9:42	4.86	0.68	7.12	14.4	65																				
SW3-05	Insufficient water to sample.	5/11/2020																										
SW3-05	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	25/05/2021	12:08	9.48	0.20	6.39	19.0	25	*1*	12	0.05	0.81	*13*	*50*	*50*	2.470	0.001	*0.0010*	*0.002*	*0.002*	4.590	*0.005*	0.094	*0.0001*	*0.003*	*0.001*	*0.0005*	0.004

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-06	Access road blocked by flood water	4/08/2016																											
SW3-06	Not flowing	25/08/2016		5.86	0.15	5.54	19.9	55	2	20	0.09	1.52	50	50	50														
SW3-06		10/11/2016		6.71	0.34	7.00	28.9	33	1	18	0.07	1.57	50	50	50														
SW3-06		6/12/2016		8.28	0.48	7.42	25.5	149																					
SW3-06	Very low water level, no flow and very turbid water. Turbidity reading exceeded maximum range of probe. No connection with SW3-05	7/01/2017		2.48	0.39	5.76	26.4	800	1	212	0.17	3.93	50	170	50														
SW3-06	Dry	28/02/2017																											
SW3-06	Dry	7/03/2017																											
SW3-06	Low flow. Turbidity reading exceeded maximum range of probe. No connection between upstream and downstream monitoring sites.	14/03/2017		3.13	0.52	6.08	22.0	800	2	1625	0.51	3.40	50	50	50														
SW3-06	Weather showers. Connected. Water level high, slight flow.	14/06/2017		5.60	0.09	6.23	17.9	143																					
SW3-06	Upstream and downstream sites not connected. Water level very low, stagnant water. Weather fine.	10/10/2017		9.19	0.44	7.83	26.3	48	1	18	0.07	1.25	13	50	50														
SW3-06	Upstream and downstream sites connected. Slight flow. Low water level. Turbidity reading exceeded maximum range of probe. Rain.	16/10/2017		6.40	0.40	8.34	20.2	800																					
SW3-06	Not connected. Moderate water level, no flow.	6/11/2017		3.72	0.48	7.13	23.2	88																					
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine. Turbidity exceeded maximum range of probe.	2/12/2017		4.15	0.59	6.54	28.2	800	1	398	0.05	1.65	13	50	50														
SW3-06	Upstream and downstream sites connected. Moderate to high flow, high water level. Overcast.	22/12/2017		5.52	0.42	6.07	24.4	310																					
SW3-06	Upstream and downstream sites connected. Low flow, moderate to high water level. Weather fine.	4/01/2018		2.52	0.13	6.23	26.8	79																					
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		4.58	0.42	6.84	26.9	19	1	20	0.02	1.01	13	50	50														
SW3-06	Upstream and downstream sites connected. Low flow, low water level. Turbididty reading exceeded maximum range of probe. Overcast.	21/02/2018		3.37	0.70	6.60	23.4	800	1	255	0.03	1.23	13	50	50														
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Turbidity reading exceeded maximum range of probe. Weather fine.	7/03/2018		4.45	0.40	6.18	23.1	800																					
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Rain.	22/03/2018		3.50	0.51	6.81	23.2	652	1	770	0.04	1.02	13	50	50														

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/04/2018		6.39	0.33	7.27	26.6	14	*1*	135	0.04	1.24	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/04/2018		**3.25**	0.44	7.20	21.0	281																				
SW3-06	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/06/2018	13:04	4.91	0.35	6.37	15.6	362																				
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	9:52	**2.79**	0.53	6.66	13.6	60	*1*	30	**0.24**	**1.89**	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	14:30	4.85	0.62	6.98	15.7	190	*1*	116	0.05	1.29	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	7/09/2018	12:32	7.53	0.44	6.89	18.6	155																				
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	13:01	**3.74**	0.93	6.86	20.2	219	*1*	106	0.07	**3.09**	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	12/10/2018	11:15	**3.63**	0.52	7.32	18.1	214																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	14/12/2018	13:42	3.70	1.14	7.81	26.2	64																				
SW3-06	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	17/12/2018	15:19	4.60	0.10	6.61	24.9	89	*1*	48	0.04	1.27	*13*	*50*	*50*														
SW3-06	Dry, not sampled.	23/02/2019	11:09																										
SW3-06	Dry, not sampled.	16/03/2019	12:19																										
SW3-06	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	20/04/2019	12:24	7.29	0.60	7.42	21.1	505	*1*	224	0.08	1.22	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	16/05/2019	16:06	6.94	0.91	7.04	18.0	13																				
SW3-06	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	24/06/2019	11:09	5.79	**1.11**	7.19	13.0	92	*1*	9	*0.02*	0.38	*13*	*50*	*50*														
SW3-06	Upstream and downstream sites connected. Medium flow, medium water level. Turbidity reading exceeded maximum measuring range of probe. Weather fine.	28/06/2019	10:44	7.51	0.56	6.98	15.6	**800**																				
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	12:59	4.12	0.83	6.94	16.1	110																				
SW3-06	No visible flow, low water level. Rain.	12/10/2019	8:45	4.11	**1.10**	**7.42**	18.0	2	*1*	7	*0.02*	0.38	*13*	*50*	*50*														
SW3-06	No visible flow, very low water level. Overcast.	24/12/2019	12:10	7.43	**1.64**	**7.64**	26.7	127																				
SW3-06	Dry, not sampled.	16/01/2020	9:20																										
SW3-06	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	12:51	6.57	0.09	6.48	21.6	**>1000**	*1*	**492**	0.15	1.36	*13*	*50*	*50*														

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-06	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	7/02/2020	10:00	5.51	0.08	6.55	22.4	126																				
SW3-06	Upstream and downstream sites connected. Low flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	11:02	5.64	0.08	6.55	25.2	34																				
SW3-06	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	27/03/2020	13:56	2.37	0.55	6.65	24.3	224	*1*	86	0.08	1.09	*13*	*50*	*50*													
SW3-06	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	31/03/2020	9:54	4.42	0.41	6.45	21.3	140	*1*	65	0.06	1.14	*13*	*50*	*50*													
SW3-06	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/04/2020	11:46	3.68	0.17	6.40	22.8	201																				
SW3-06	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	11/06/2020	9:35	4.66	0.41	7.16	16.7	320	*1*	162	0.09	1.59	*13*	*50*	*50*													
SW3-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	12:50	6.32	0.29	5.62	16.9	81																				
SW3-06	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	16/12/2020	11:19	8.86	0.04	6.47	23.3	79	*1*	25	*0.02*	0.74	*15*	*5*	*50*	5.700	*0.001*	*0.0010*	*0.002*	*0.002*	2.290	*0.005*	0.080	*0.0001*	*0.003*	*0.001*	*0.0005*	0.012
SW3-06	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	11:15	2.62	0.40	6.97	23.9	54																				
SW3-06	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	3/05/2021	13:03	6.54	0.36	6.50	20.3	35	*1*	22	*0.02*	0.69	*13*	*50*	*50*	1.960	*0.001*	*0.0010*	*0.002*	*0.002*	2.430	*0.005*	0.120	*0.0001*	*0.003*	*0.001*	*0.0005*	0.010
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.74	6.92		531	1	414	0.08	1.50	13	50	50	6.002	0.001	0.0010	0.002	0.002	2.926	0.005	0.106	0.0001	0.003	0.001	0.0005	0.013
P20				3.78	0.25	6.24																						
St Dev					0.29	0.58																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW04		8/02/2013		3.20	0.56	6.48	22.2	16	*3*	50	0.21	2.50																
Section3 SW04		30/05/2013		6.55	0.43	6.43	17.4	17	*3*	10	0.02	0.70																
Section3 SW04		4/07/2013		8.06	0.30	5.89	14.4	19	*3*	*3*	0.03	0.80																
Section3 SW04		15/11/2013		3.93	0.26	5.41	24.7	19	*3*	6	0.03	1.10																
Upstream Monitoring																												
SW3-05	Access road blocked by flood water	4/08/2016																										

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-05	Not flowing	25/08/2016		6.27	0.19	5.81	18.1	43	*1*	9	0.06	1.29	*50*	*50*	*50*														
SW3-05	Dry	10/11/2016																											
SW3-05	Dry	6/12/2016																											
SW3-05	Very low water level, no flow. Turbidity reading exceeded maximum range of probe.	7/01/2017		2.45	0.84	5.57	25.2	800	*1*	272	0.08	1.12	*50*	*50*	*50*														
SW3-05	Dry	28/02/2017																											
SW3-05	Dry	7/03/2017																											
SW3-05	Low flow. Overnight rainfall. No connection between upstream and downstream monitoring sites. Turbidity reading exceeded maximum range of probe.	14/03/2017		1.90	0.60	5.94	22.0	800	2	578	0.22	1.80	*50*	*50*	*50*														
SW3-05	Weather showers. Connected. Water level high, slight flow.	14/06/2017		6.25	0.10	6.21	16.6	58																					
SW3-05	Dry	10/10/2017																											
SW3-05	Upstream and downstream sites connected. Slight flow. Low water level. Turbidity reading exceeded maximum range of probe. Rain.	16/10/2017		4.81	0.47	8.38	20.9	800																					
SW3-05	Not connected, moderate water level, no flow. Turbidity reading exceeded maximum range of probe.	6/11/2017		2.63	0.54	6.92	21.6	800																					
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.37	0.58	6.91	26.9	658	*1*	822	0.07	0.94	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. Moderate to high flow, high water level. Overcast.	22/12/2017		4.25	0.45	5.94	24.8	262																					
SW3-05	Upstream and downstream sites connected. Low flow, moderate to high water level. Weather fine.	4/01/2018		2.13	0.13	6.08	26.3	75																					
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		6.08	1.12	6.28	28.8	189	*1*	243	0.09	0.86	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		3.78	0.81	6.30	25.1	220	*1*	700	0.04	1.68	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	7/03/2018		6.46	0.41	6.32	21.7	504																					
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Rain. Turbidity reading exceeded maximum range of probe.	22/03/2018		5.06	0.45	6.75	27.0	800	*1*	2020	0.04	1.21	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/04/2018		5.23	0.64	6.96	23.5	18	*1*	*1*	*0.02*	0.46	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/04/2018		4.99	0.45	6.94	19.7	77																					
SW3-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/06/2018	13:00	5.54	0.36	6.30	14.1	549																					

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	9:46	4.87	0.82	6.29	13.1	120	*1*	37	0.15	0.82	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	14:26	4.42	0.57	6.85	18.7	105	*1*	53	0.04	0.86	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	7/09/2018	12:29	4.81	0.43	6.77	19.7	124																					
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	12:59	4.75	0.83	6.64	21.8	151	*1*	57	0.04	2.31	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	12/10/2018	11:12	6.76	0.53	7.37	19.0	205																					
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	14/12/2018	13:38	3.63	1.12	7.71	26.6	63																					
SW3-05	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	17/12/2018	15:26	4.62	0.13	6.73	25.2	209	*1*	130	0.05	1.45	*13*	*50*	*50*														
SW3-05	Dry, not sampled.	23/02/2019	11:09																										
SW3-05	Dry, not sampled.	16/03/2019	12:20																										
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	20/04/2019	12:32	4.02	0.63	7.44	22.0	505	*1*	181	0.07	1.46	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	16/05/2019	16:10	6.79	1.07	6.87	17.9	148																					
SW3-05	Upstream and downstream sites connected. Very low flow, low water level. Rain.	24/06/2019	11:15	8.08	0.81	7.58	12.1	0	*1*	972	0.06	0.29	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	28/06/2019	10:50	5.58	0.58	6.72	14.5	628																					
SW3-05	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	5/07/2019	13:02	5.16	0.94	6.67	14.3	96																					
SW3-05	Dry, not sampled.	12/10/2019	9:40																										
SW3-05	Dry, not sampled.	24/12/2019	12:07																										
SW3-05	Dry, not sampled.	16/01/2020	9:24																										
SW3-05	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	12:45	6.26	0.09	6.45	21.6	825	*1*	304	0.20	1.56	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	9:58	5.72	0.08	6.31	22.5	125																					
SW3-05	Upstream and downstream sites connected. Low flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	10:59	8.12	0.08	6.55	25.3	28																					
SW3-05	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	27/03/2020	14:01	3.09	0.59	6.50	21.4	169	*1*	60	0.06	0.87	*13*	*50*	*50*														
SW3-05	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	31/03/2020	9:58	5.05	0.42	6.43	21.3	110	*1*	34	0.06	1.28	*13*	*50*	*50*														

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/04/2020	11:43	3.89	0.24	6.68	23.0	191																				
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	9:40	4.59	0.41	6.93	16.5	253	*1*	84	0.08	1.36	*13*	*50*	*50*													
SW3-05	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	12:52	7.89	0.29	5.63	15.8	68																				
SW3-05	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	16/12/2020	11:23	6.37	0.04	6.43	23.2	82	*1*	27	0.03	0.78	*15*	*5*	*50*	6.680	*0.001*	*0.0010*	*0.002*	*0.002*	2.630	*0.005*	0.089	*0.0001*	*0.003*	*0.001*	*0.0005*	0.015
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	11:19	4.75	0.35	6.88	23.2	76																				
SW3-05	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	3/05/2021	13:07	3.79	0.37	6.41	20.4	26	*1*	14	*0.02*	0.69	*13*	*50*	*50*	3.290	*0.001*	*0.0010*	*0.002*	*0.002*	3.000	*0.005*	0.110	*0.0001*	*0.003*	*0.001*	*0.0005*	0.007

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-08		3/08/2016		5.12	0.17	6.05	15.8	4																					
SW3-08	Flowing	8/09/2016		4.15	0.17	6.58	17.8	37	2	40	0.05	0.87	*50*	*50*	*50*														
SW3-08		6/10/2016		2.28	0.19	6.31	16.8	**98**																					
SW3-08	Accurate turbidity reading could not be obtained	1/11/2016		1.70	0.20	6.66	22.9		*1*	18	0.03	0.59	*50*	*50*	*50*														
SW3-08		8/12/2016		4.01	**0.21**	6.46	25.2	19																					
SW3-08	Very low water level, no flow and not connected with SW3-07	13/01/2017		**2.62**	**0.22**	6.28	29.9	**102**	*1*	**37**	**0.11**	**1.65**	**50**	**160**	*50*														
SW3-08	Very low water level, no flow and not connected with SW3-07	1/02/2017		**2.46**	**0.22**	6.86	33.0	**34**																					
SW3-08	Visible flow	24/03/2017		**1.23**	0.12	5.93	25.1	5	*1*	3	0.03	1.06	*50*	*50*	*50*														
SW3-08	U/s and d/s sites connected.	24/04/2017		2.51	0.14	6.41	19.8	1																					
SW3-08	Upstream and downstream sites connected. No visible flow. Low water level. Samples taken amongst aquatic macrophytes. Weather fine.	11/05/2017		3.93	0.12	6.87	21.4	2	*1*	11	0.03	0.50	*50*	*50*	*50*														
SW3-08	Weather fine. Connected. Water level low	8/06/2017		5.08	0.15	6.28	13.9	3																					
SW3-08	Upstream and downstream sites connected. Low flow. Low to moderate water level. Weather fine.	24/07/2017		7.47	0.14	7.18	13.8	43	*1*	2	*0.02*	0.50	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	3/08/2017		5.65	0.14	6.85	11.9	3																					
SW3-08	Weather fine. U/S and D/S connected. No observed flow. Low water level. Replicate 1 taken.	4/09/2017		6.85	0.17	7.00	22.7	2	*1*	3	*0.02*	0.35	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		5.16	0.22	7.39	22.4	7																					
SW3-08	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		3.13	0.18	6.80	25.3	8	*1*	7	*0.02*	0.44	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Minimal flow, low to moderate water level. Temporary rock blocking approx. 80% of waterway. Weather fine.	6/12/2017		3.09	0.18	6.63	25.9	**52**																					
SW3-08	Upstream and downstream connected. No visible flow, low water level. Weather fine.	23/01/2018		3.88	0.14	6.08	34.7	**67**	*1*	**50**	0.05	1.28	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Very low flow, very low water level. Overcast.	13/02/2018		1.00	0.14	6.35	27.1	9																					
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2018		1.69	0.12	6.52	29.4	12	*1*	24	0.03	0.74	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	11/04/2018		0.65	0.14	6.37	23.4	**85**																					

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/05/2018		1.43	0.13	5.95	19.6	5	*1*	25	0.04	0.84	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	25/06/2018	12:41	2.62	0.15	6.40	11.8	6																				
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Sampled using bucket due to distance to water, unable to obtain turbidity or oxygen reading. Weather fine.	24/07/2018	16:30		0.01	6.17	16.2		*1*	56	0.07	1.08	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	10/08/2018	10:42	5.78	0.17	6.54	14.5	4																				
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:05	5.50	0.17	6.71	20.4	5	*1*	7	0.03	0.61	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	26/10/2018	14:22	2.63	0.37	6.17	25.0	88																				
SW3-08	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	5/11/2018	14:18	6.32	0.17	6.33	31.2	27	*1*	24	0.06	1.37	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	4/12/2018	12:00	2.22	0.20	7.81	25.1	15																				
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	9/01/2019	13:22	3.10	0.15	6.49	29.2	27	*1*	38	0.12	2.06	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	7/02/2019	10:25	3.61	0.16	6.70	25.7	12																				
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2019	11:42	4.13	0.17	7.11	24.3	73	*1*	17	0.06	1.37	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Weather drizzle.	24/04/2019	14:16	4.29	0.18	7.16	24.2	15																				
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	2/05/2019	13:51	4.67	0.15	7.05	22.6	27	*1*	71	0.32	2.48	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/06/2019	11:27	3.89	0.17	6.89	17.8	11																				
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	11:35	3.59	0.18	6.16	16.2	76	*1*	26	0.07	1.20	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/08/2019	9:29	5.07	0.18	7.65	15.5	2																				
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	19/09/2019	11:10	2.35	0.15	6.70	20.4	6	*1*	10	0.07	1.16	*13*	*50*	*50*														
SW3-08	No visible flow, very low water level. Weather fine.	3/10/2019	11:49	2.05	0.20	6.83	19.1	10																				
SW3-08	No visible flow, very low water level. Overcast.	5/11/2019	9:30	4.35	0.28	6.50	22.3	27	*1*	42	0.21	2.18	50	*50*	*50*														

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-08	No visible flow, very low water level. Sampled approx. 50 m downstream, usual monitoring point was dry. Weather fine.	4/12/2019	12:51	6.58	0.21	7.84	29.8	7																					
SW3-08	No visible flow, very low water level. Weather fine.	8/01/2020	13:31	5.41	0.25	7.85	32.9	7	*1*	9	*0.02*	1.45	*13*	*13*	*50*														
SW3-08	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	18/02/2020	12:28	1.84	0.12	6.41	29.0	20																					
SW3-08	Upstream and downstream sites connected. Low flow, high water level. Overcast.	4/03/2020	11:58	3.76	0.11	6.56	26.5	19	*1*	9	0.07	1.19	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/04/2020	11:10	7.61	0.15	6.43	22.2	9																					
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	14/05/2020	10:20	7.07	0.14	7.15	17.8	8	*1*	11	0.03	1.04	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	9:50	7.65	0.16	7.23	15.9	0																					
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/11/2020	11:29	8.83	0.19	7.95	23.9	6	*1*	*1*	*0.02*	0.48	*13*	*50*	*50*	0.190	*0.001*	*0.0010*	*0.002*	*0.002*	0.990	*0.005*	0.043	*0.0001*	*0.003*	*0.001*	*0.0005*	0.005
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	25/05/2021	12:22	4.91	0.10	6.23	18.3	28	*1*	*7*	*0.03*	0.64	*13*	*50*	*50*	2.740	*0.001*	*0.0010*	*0.002*	*0.002*	2.870	*0.005*	0.085	*0.0001*	*0.003*	*0.001*	*0.0005*	0.006
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.20	7.05		24	3	18	0.05	1.01	20	50	50	2.140	0.001	0.0010	0.002	0.002	2.464	0.005	0.078	0.0001	0.003	0.001	0.0005	0.018
P20				2.62	0.15	6.27																							
St Dev					0.12	0.54																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW05		6/03/2013		5.74	0.19	6.29	25.2	26	*3*	35	0.01	0.90																	
Section3 SW05		22/03/2013		5.15	0.12	6.77	22.8	11	*3*	*3*	0.03	0.90																	
Section3 SW05		23/04/2013		7.34	0.31	6.57	20.3	15	*3*	*3*	0.05	0.70																	
Section3 SW05		23/05/2013		7.11	0.20	6.98	14.3	9	*3*	*3*	*0.01*	0.60																	
Section3 SW05		28/06/2013		8.37	0.36	6.64	12.9	17	*3*	*3*	0.03	0.52																	
Section3 SW05		25/07/2013		8.18	0.16	6.20	13.6	12	*3*	6	0.03	0.37																	
Section3 SW05		22/08/2013		8.24	0.19	7.27	15.4	6	*3*	*3*	0.11	0.24																	
Section3 SW05		26/09/2013		7.54	0.17	6.92	19.0	5	*3*	*3*	0.05	0.35																	

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Section3 SW05		24/10/2013		6.09	0.21	6.45	24.9	7	*3*	*3*	0.02	0.63																
Section3 SW05		26/11/2013		6.00	0.94	6.40	24.0	17	*3*	10	*0.01*	0.70																
Section3 SW05		19/12/2013		5.57	0.16	5.81	23.7	6	*3*	*3*	0.25	0.50																
Upstream Monitoring																												
SW3-07		3/08/2016		5.19	0.17	5.95	14.3	4																				
SW3-07	Flowing	8/09/2016		5.47	0.17	6.78	17.3	112	*1*	33	0.05	1.01	*50*	*50*	*50*													
SW3-07	Slight flow	6/10/2016		1.35	0.20	6.61	16.7	2																				
SW3-07		1/11/2016		1.31	0.22	6.77	21.5	395		31	0.10	1.59	*50*	200	*50*													
SW3-07	Dry	8/12/2016																										
SW3-07	Dry	13/01/2016																										
SW3-07	Dry	1/02/2017																										
SW3-07	Visible flow	24/03/2017		1.84	0.12	5.99	25.2	4	*1*	6	0.03	1.07	*50*	*50*	*50*													
SW3-07	U/s and d/s sites connected.	24/04/2017		2.44	0.14	6.39	20.5	1																				
SW3-07	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/05/2017		5.85	0.14	6.39	19.3	0	*1*	5	*0.02*	0.27	*50*	*50*	*50*													
SW3-07	Weather fine. Connected. Water level low.	8/06/2017		8.01	0.15	6.57	16.1	2																				
SW3-07	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		6.45	0.14	6.82	11.9	169	*1*	10	*0.02*	0.60	*13*	*50*	*50*													
SW3-07	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	3/08/2017		6.78	0.16	6.75	11.3	4																				
SW3-07	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		6.32	0.17	6.43	18.2	20	*1*	9	*0.02*	0.49	*13*	*50*	*50*													
SW3-07	Upstream and downstream sites not connected. Low water level. Abundant macrophytes present. Weather fine.	5/10/2017		4.27	0.21	7.62	22.1	5																				
SW3-07	Upstream and downstream sites not connected. Low water level.	2/11/2017		5.95	0.21	7.15	26.0	20	*1*	8	*0.02*	0.57	*13*	*50*	*50*													
SW3-07	Upstream and downstream sites connected. Minimal flow, low to moderate water level. Temporary rock blocking approx. 80% of waterway. Weather fine.	6/12/2017		3.23	0.17	6.56	26.7	4																				
SW3-07	Upstream and downstreamconnected. No visible flow, low water level. Weather fine.	23/01/2018		3.47	0.16	6.24	28.9	23	*1*	34	0.05	1.45	*13*	*50*	*50*													
SW3-07	Upstream and downstream sites connected. Very low flow, very low water level. Overcast.	13/02/2018		1.40	0.16	6.58	27.0	14																				

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2018		0.60	0.15	6.48	25.8	24	*1*	38	0.04	1.03	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	11/04/2018		0.29	0.12	6.08	23.5	12																				
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine. Probe error no in-situ data.	8/05/2018							*1*	18	0.03	0.77	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	25/06/2018	12:44	5.06	0.15	6.53	11.8	42																				
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	24/07/2018	16:21	5.35	0.15	6.24	13.2	0	*1*	3	*0.02*	0.30	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	10/08/2018	10:39	2.05	0.15	6.64	12.2	0																				
SW3-07	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:01	4.84	0.17	6.60	21.6	14	*1*	15	0.03	0.65	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	26/10/2018	14:20	3.08	0.46	6.28	23.1	39																				
SW3-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	5/11/2018	14:13	2.25	0.17	6.30	29.3	9	*1*	13	0.03	0.96	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2018	12:04	5.26	0.23	7.72	26.4	9																				
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	9/01/2019	13:26	2.45	0.18	6.66	28.2	20	*1*	37	0.08	1.97	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	7/02/2019	10:28	2.77	0.18	6.55	24.8	85																				
SW3-07	Insufficient water to sample.	20/03/2019	11:44																									
SW3-07	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	24/04/2019	14:18	7.50	0.20	7.85	19.8	53																				
SW3-07	Upstream and downstream sites connected. No visible flow, very low water level. Drizzle.	2/05/2019	13:56	6.44	0.20	8.21	20.9	2	*1*	6	0.04	0.86	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	11:35	9.91	0.24	7.92	14.4	10																				
SW3-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	11:42	8.55	0.18	7.36	14.5	24	*1*	13	0.04	0.98	*13*	*50*	*50*														
SW3-07	Insufficient water to sample.	19/08/2019	10:29																									
SW3-07	Insufficient water to sample.	19/09/2019	10:58																									
SW3-07	Dry, not sampled.	3/10/2019	11:49																									
SW3-07	Dry, not sampled.	5/11/2019	9:20																									
SW3-07	Dry, not sampled.	4/12/2019	13:53																									

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-07	Dry, not sampled.	8/01/2020	13:21																										
SW3-07	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	18/02/2020	12:32	2.74	0.09	6.26	26.9	15																					
SW3-07	Upstream and downstream sites connected. Low flow, high water level. Overcast.	4/03/2020	12:02	3.22	0.11	6.16	26.9	14	*1*	12	0.07	1.38	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/04/2020	11:12	7.14	0.16	6.41	20.0	7																					
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	14/05/2020	10:24	6.55	0.13	6.88	17.2	10	*1*	2	*0.02*	0.93	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	9:52	7.70	0.16	7.17	15.7	0																					
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/11/2020	11:33	5.97	0.19	7.25	21.9	8	*1*	2	*0.02*	0.54	*13*	*50*	*50*	0.140	*0.001*	*0.0010*	*0.002*	*0.002*	1.000	*0.005*	0.043	*0.0001*	*0.003*	*0.001*	*0.0005*	0.019
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	25/05/2021	12:26	4.91	0.10	5.88	18.7	28	*1*	11	0.03	0.66	*13*	*50*	*50*	2.640	*0.001*	*0.0010*	*0.002*	*0.002*	2.830	*0.005*	0.087	*0.0001*	*0.003*	*0.001*	*0.0005*	0.013

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-08	Access road blocked by flood water	4/08/2016																											
SW3-08	Not flowing	25/08/2016		4.67	0.15	6.05	17.4	2	2	3	0.02	0.45	*50*	*50*	*50*														
SW3-08		10/11/2016		**1.47**	0.22	6.96	28.4	2	*1*	15	0.03	0.74	*50*	*50*	*50*														
SW3-08		6/12/2016		8.26	**0.22**	**7.34**	26.5	**192**																					
SW3-08	Water level low, no flow and no connection to SW3-07	7/01/2017		4.14	**0.21**	6.44	27.4	22	*1*	**767**	**0.43**	**4.19**	**50**	**620**	**210**														
SW3-08	Water level low, no flow and no connection to SW3-07	27/01/2017		**1.56**	**0.25**	**6.10**	27.6	56																					
SW3-08	Water level low, no flow and no connection to SW3-07	28/02/2017		3.51	**0.30**	6.26	22.0	41																					
SW3-08	Very low water level. No flow. Upstream and downstream sites not connected	7/03/2017		5.23	**0.24**	6.26	25.9	11	*1*	13	**0.06**	1.00	**50**	**120**	*50*														
SW3-08	Water level low, no visible flow. No connection between upstream and downstream monitoring sites.	14/03/2017		**2.91**	**0.24**	6.21	22.6	6	*1*	15	**0.06**	0.80	**50**	**100**	*50*														
SW3-08	Weather showers. Connected. Water level very high, fast flow.	14/06/2017		5.74	0.07	5.81	16.8	31																					
SW3-08	No safe access to work site	10/10/2017																											
SW3-08	Upstream and downstream sites connected. Slight flow. High water level	16/10/2017		6.79	0.23	8.44	20.9	150																					
SW3-08	Upstream and downstream sites connected. Slight flow. High water level.	6/11/2017		**2.78**	0.18	7.02	23.5	9																					
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather, fine.	2/12/2017		**2.95**	0.19	6.93	28.1	5	*1*	7	*0.02*	0.64	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	22/12/2017		**1.89**	0.17	6.27	26.2	82																					
SW3-08	Upstream and downstream sites connected. High flow, high water level. Weather fine.	4/01/2018		1.32	0.10	5.79	25.3	15																					
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	5/02/2018		**2.60**	0.14	6.06	24.7	0	*1*	17	*0.05*	1.13	*13*	*50*	*50*														
SW3-08	Unable to access site due to crane lifting beams.	21/02/2018																											
SW3-08	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/03/2018		**1.36**	0.16	6.35	24.4	34																					
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	22/03/2018		0.51	0.13	6.32	25.4	15	*1*	18	0.03	0.85	*13*	*50*	*50*														
SW3-08	No access - crane lifting	20/04/2018																											
SW3-08	No access - crane lifting works	27/04/2018																											
SW3-08	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	8/06/2018	12:39	**3.14**	0.13	6.01	14.9	20																					

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	28/06/2018	9:33	2.53	0.15	6.03	13.6	3	*1*	9	0.28	0.79	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	13:56	3.55	0.17	6.97	17.1	14	*1*	13	0.03	0.54	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	7/09/2018	12:23	4.11	0.16	6.71	21.3	15																					
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	12:50	4.70	0.17	6.44	22.9	15	2	65	0.10	1.08	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	11:05	4.60	0.18	7.29	19.7	13																					
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	14/12/2018	13:28	4.84	0.20	7.58	29.1	6																					
SW3-08	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	17/12/2018	15:09	3.45	0.11	6.71	26.1	157	*1*	101	0.04	1.75	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	23/02/2019	11:05	3.29	0.15	7.03	24.0	1	*1*	9	0.03	0.96	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	16/03/2019	12:22	4.41	0.18	6.98	24.1	20																					
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	20/04/2019	12:55	2.42	0.14	6.79	21.7	6	*1*	13	0.08	1.45	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/05/2019	15:49	4.58	0.15	6.38	17.6	13																					
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	24/06/2019	11:46	6.04	0.17	6.48	11.7	49	*1*	29	0.07	1.16	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	28/06/2019	11:01	5.47	0.16	6.49	17.1	33																					
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	12:46	5.00	0.17	6.32	17.5	29																					
SW3-08	No visible flow, very low water level. Rain.	12/10/2019	8:58	0.00	0.21	6.72	16.2	47	*1*	37	0.19	1.93	*13*	*50*	*50*														
SW3-08	No visible flow, very low water level. Overcast.	24/12/2019	12:19	4.79	0.23	7.16	26.3	7																					
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	9:32	8.02	0.26	7.41	25.5	8	*1*	11	0.07	1.20	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:32	5.56	0.07	6.33	21.6	351	*1*	74	0.07	1.36	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Medium flow, very high water level. Drizzle.	7/02/2020	10:11	5.49	0.07	6.55	22.2	123																					
SW3-08	Upstream and downstream sites connected. Medium flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	11:12	4.09	0.07	6.52	24.0	61																					
SW3-08	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:38	7.79	0.16	6.47	23.9	16	*1*	7	0.03	0.78	*13*	*50*	*50*														

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-08	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	31/03/2020	10:14	6.99	0.15	6.58	23.7	30	*1*	8	*0.02*	0.68	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	4/04/2020	11:33	4.24	0.15	6.13	23.9	64																					
SW3-08	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	9:50	7.63	0.14	7.22	17.0	42	*1*	17	0.03	2.06	*13*	*50*	*50*														
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	13:04	6.18	0.08	5.73	16.0	18																					
SW3-08	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	16/12/2020	11:37	7.02	0.03	6.64	22.8	78	*1*	20	*0.02*	0.86	*15*	*5*	*50*	**5.260**	*0.001*	*0.0010*	*0.002*	*0.002*	2.290	*0.005*	0.100	*0.0001*	*0.003*	*0.001*	*0.0005*	0.037
SW3-08	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	17/02/2021	11:28	7.53	0.12	7.06	24.2	11																					
SW3-08	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	3/05/2021	13:17	5.33	0.12	6.45	20.4	8	*1*	6	*0.02*	0.48	*13*	*50*	*50*	1.680	*0.001*	*0.0010*	*0.002*	*0.002*	2.140	*0.005*	0.081	*0.0001*	*0.003*	*0.001*	*0.0005*	0.011
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.20	7.22		67	1	27	0.04	1.14	13	50	50	4.466	0.001	0.0010	0.002	0.002	2.338	0.005	0.127	0.0001	0.003	0.001	0.0005	0.042
P20				3.29	0.12	6.18																							
St Dev					0.07	0.65																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW05		7/02/2013		4.03	0.18	6.22	27.0	13	*3*	14	0.09	1.60																	
Section3 SW05		29/05/2013		8.14	0.34	6.63	15.6	18	*3*	10	0.02	0.50																	
Section3 SW05		4/07/2013		8.14	0.34	6.63	15.6	18	*3*	*3*	0.02	0.42																	
Section3 SW05		16/11/2013		3.15	0.12	5.36	23.5	44	*3*	27	0.02	0.63																	
Upstream Monitoring																													
SW3-07	Access road blocked by flood water	4/08/2016																											
SW3-07	Moderate flow	25/08/2016		7.15	0.15	6.04	16.5	1	*1*	2	*0.02*	0.42	*50*	*50*	*50*														
SW3-07		10/11/2016		4.13	0.21	7.34	29.6	7	*1*	36	0.05	3.15	*50*	140	*50*														
SW3-07	Dry	6/12/2016																											
SW3-07	Dry	7/01/2017																											

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-07	Dry	27/01/2017																											
SW3-07	Dry	28/02/2017																											
SW3-07	Dry	7/03/2017																											
SW3-07	Dry	14/03/2017																											
SW3-07	Weather showers. Connected. Water level very high, fast flow.	14/06/2017		5.99	0.07	5.91	16.7	30																					
SW3-07	No safe access to work site	10/10/2017																											
SW3-07	Upstream and downstream sites connected. Slight flow. High water level.	16/10/2017		7.11	0.16	8.39	21.8	230																					
SW3-07	Upstream and downstream sites connected. Slight flow. High water level.	6/11/2017		3.63	0.22	7.04	23.8	8																					
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather, fine.	2/12/2017		5.73	0.24	7.12	28.5	42	*1*	16	*0.02*	0.74	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	22/12/2017		2.82	0.18	6.39	26.8	120																					
SW3-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	4/01/2018		1.53	0.11	5.78	24.9	16																					
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/02/2018		6.33	0.17	6.48	25.9	0	*1*	15	0.03	0.89	*13*	*50*	*50*														
SW3-07	Unable to access site due to crane lifting beams.	21/02/2018																											
SW3-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/03/2018		3.12	0.14	6.38	24.3	80																					
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	22/03/2018		0.95	0.13	6.47	26.2	26	*1*	16	0.04	0.94	*13*	*50*	*50*														
SW3-07	No access - crane lifting	20/04/2018																											
SW3-07	No access - crane lifting works	27/04/2018																											
SW3-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	8/06/2018	12:41	5.94	0.13	6.18	17.0	104																					
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	28/06/2018	9:30	10.44	0.16	5.75	13.1	1	*1*	9	0.04	0.72	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	14:01	3.29	0.17	6.84	16.9	17	*1*	17	0.04	0.70	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	7/09/2018	12:20	4.12	0.16	6.50	20.9	15																					
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	12:46	2.98	0.17	6.19	22.1	7	*1*	16	0.03	0.73	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	11:01	3.01	0.19	7.47	19.2	15																					

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/12/2018	13:26	5.79	0.09	7.89	27.6	13																					
SW3-07	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	17/12/2018	15:11	2.82	0.13	6.57	25.8	49	*1*	19	0.03	0.90	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	23/02/2019	11:09	6.28	0.17	7.22	19.4	2	*1*	43	0.03	1.17	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	16/03/2019	12:26	7.79	0.27	7.65	22.5	67																					
SW3-07	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	20/04/2019	13:01	6.78	0.20	7.47	20.0	17	*1*	25	0.08	1.52	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/05/2019	15:52	10.34	0.22	6.98	16.3	14																					
SW3-07	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	24/06/2019	11:42	11.00	0.22	7.54	11.0	95	*1*	26	0.04	0.92	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites not connected. Sampled in a small pool of water with no visible flow and very low water level. Weather fine.	28/06/2019	11:04	7.26	0.17	6.91	14.3	50																					
SW3-07	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/07/2019	12:49	10.53	0.17	7.40	14.0	53																					
SW3-07	Dry, not sampled.	12/10/2019	10:08																										
SW3-07	Dry, not sampled.	24/12/2019	12:17																										
SW3-07	Dry, not sampled.	16/01/2020	9:25																										
SW3-07	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:27	8.60	0.06	6.24	21.6	502	*1*	182	0.09	0.98	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	10:08	5.56	0.07	6.43	22.2	120																					
SW3-07	Upstream and downstream sites connected. Medium flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	11:10	4.75	0.07	6.60	24.4	48																					
SW3-07	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:40	7.14	0.16	6.44	23.8	16	*1*	11	0.04	1.00	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	31/03/2020	10:17	5.66	0.15	6.42	22.6	28	*1*	7	*0.02*	0.72	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	4/04/2020	11:31	4.32	0.14	6.00	23.9	61																					
SW3-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	9:54	6.76	0.15	7.08	15.2	21	*1*	12	0.04	2.70	*13*	*50*	*50*														
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	13:06	7.74	0.08	5.68	14.1	20																					

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-07	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	16/12/2020	11:40	8.59	0.03	6.64	22.9	79	*1*	30	*0.02*	0.89	*15*	*5*	*50*	5.170	*0.001*	*0.0010*	*0.002*	*0.002*	2.390	*0.005*	0.140	*0.0001*	*0.003*	*0.001*	*0.0005*	0.051
SW3-07	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	11:30	9.42	0.12	6.94	23.4	17																				
SW3-07	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	3/05/2021	13:20	5.66	0.12	6.10	19.7	12	*1*	5	*0.02*	0.44	*13*	*50*	*50*	1.650	*0.001*	*0.0010*	*0.002*	*0.002*	2.130	*0.005*	0.077	*0.0001*	*0.003*	*0.001*	*0.0005*	0.007

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-10	On private property - no access to site	2/08/2016																											
SW3-10	On private property - no access to site	8/09/2016																											
SW3-10	Slight flow	6/10/2016		3.76	0.22	6.60	17.0	90																					
SW3-10		3/11/2016		2.71	0.24	6.55	23.7	18	*1*	16	0.04	1.01	50	*50*	*50*														
SW3-10	Accurate turbidity reading could not be obtained	8/12/2016		4.66	0.49	6.36	24.3																						
SW3-10	Very low water level, no flow. Not connected with SW3-09	13/01/2017		11.09	0.18	7.27	29.0		*1*	27	0.05	1.56	*50*	*50*	*50*														
SW3-10	Very low water level, no flow. Not connected with SW3-09	1/02/2017		4.97	0.25	7.18	28.8	34																					
SW3-10	Visible flow	24/03/2017		1.51	0.15	5.85	24.5	5	*1*	7	0.03	0.96	*50*	*50*	*50*														
SW3-10	U/s and d/s sites connected.	24/04/2017		5.32	0.16	6.63	19.8	1																					
SW3-10	Upstream and downstream sites connected. Low flow, low water level. Silt curtain / hydrocarbon boom upstream of site. Nearby cattle. Weather fine.	11/05/2017		5.28	0.16	6.57	17.8	2	*1*	2	0.02	0.36	*50*	*50*	*50*														
SW3-10	Weather fine. Connected. High flow. Water level low. Sample site adjacent to cattle crossing.	8/06/2017		4.05	0.16	6.50	14.5	3																					
SW3-10	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		6.94	0.14	6.71	11.3	4	*1*	*1*	*0.02*	0.40	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Moderate flow, moderate water level. Weather fine.	3/08/2017		7.48	0.14	6.86	11.5	4																					
SW3-10	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		7.51	0.17	6.32	17.5	5	*1*	11	*0.02*	0.49	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		4.23	0.23	6.73	19.9	5																					
SW3-10	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		4.13	0.22	6.68	25.7	26	*1*	11	*0.02*	0.90	160	2100	1400														
SW3-10	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	6/12/2017		1.70	0.19	6.54	22.5	22																					
SW3-10	Upstream and downstream connected. Low flow, low water level. Weather fine.	23/01/2018		5.42	0.20	6.42	30.2	10	*1*	21	0.03	1.01	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	13/02/2018		2.22	0.18	6.37	26.0	25																					
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/03/2018		4.55	0.21	6.74	27.9	12	*1*	8	*0.02*	0.83	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	11/04/2018		2.46	0.17	6.56	22.8	12																					
SW3-10	Unable to sample due to unsafe access (crane lifting bridge girders).	8/05/2018																											

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	25/06/2018	12:10	4.89	0.19	6.39	11.7	20																					
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	24/07/2018	15:38	8.10	0.20	6.28	11.8	7	*1*	4	0.03	0.48	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	10/08/2018	11:19	7.43	0.21	7.55	12.3	13																					
SW3-10	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	17/09/2018	13:40	4.73	0.32	6.63	17.6	6	*1*	4	0.04	0.67	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	26/10/2018	13:55	**2.70**	0.18	5.87	24.4	9																					
SW3-10	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	5/11/2018	13:41	4.17	0.19	6.57	26.5	6	*1*	5	0.03	0.92	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	4/12/2018	12:42	9.58	0.32	**8.53**	25.9	7																					
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	9/01/2019	12:55	5.06	0.20	6.98	26.3	**24**	*1*	**33**	**0.09**	**2.60**	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. No visible flow, very low water level. Drizzle.	7/02/2019	11:11	5.34	0.30	7.14	25.0	**69**																					
SW3-10	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	20/03/2019	11:26	6.65	0.37	7.23	24.9	**423**	*1*	**174**	0.09	**2.83**	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather drizzle.	24/04/2019	14:01	5.48	**0.41**	7.06	22.0	**43**																					
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/05/2019	13:21	5.14	**0.44**	6.94	20.9	**115**	*1*	5	*0.02*	0.46	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/06/2019	11:07	9.89	**0.45**	**8.78**	18.4	**27**																					
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	4/07/2019	12:14	5.73	**0.45**	6.54	16.3	87	*1*	17	*0.02*	**2.07**	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/08/2019	9:50	9.94	0.35	6.92	16.5	10																					
SW3-10	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	19/09/2019	11:33	8.73	0.31	7.09	19.3	**19**	*1*	**120**	**0.27**	**3.43**	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/10/2019	12:06	6.77	0.45	7.20	19.9	**25**																					
SW3-10	Upstream and downstream sites not connected. No visible flow, very low water level. Evidence of cattle disturbance. Overcast.	5/11/2019	9:54	4.32	0.46	7.37	21.0	**311**	*1*	**192**	**0.05**	0.94	*50*	*50*	*50*														
SW3-10	Upstream and downstream sites not connected. Very low flow, very low water level. Weather fine.	4/12/2019	12:30	9.29	0.53	**8.80**	25.1	12																					
SW3-10	Insufficient water to sample.	8/01/2020	13:15																										

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-10	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	18/02/2020	12:44	3.36	0.11	5.98	26.8	20																					
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/03/2020	12:25	3.12	0.12	5.98	25.9	22	*1*	23	0.06	**1.24**	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	15/04/2020	11:00	5.11	0.16	6.14	19.8	13																					
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	14/05/2020	10:39	5.73	0.18	**7.18**	17.5	16	*1*	10	*0.02*	0.69	*13*	*50*	*50*														
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/06/2020	10:04	7.14	0.17	6.93	15.9	8																					
SW3-10	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	11:58	4.52	0.25	6.91	22.0	**34**	*1*	10	*0.02*	0.56	*13*	*50*	*50*	0.310	*0.001*	*0.0010*	*0.002*	*0.002*	**4.910**	*0.005*	0.860	*0.0001*	*0.003*	*0.001*	*0.0005*	0.008
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	25/05/2021	12:40	6.74	0.12	5.84	17.3	26	*1*	4	*0.02*	0.36	*13*	*50*	*50*	**1.920**	*0.001*	*0.0010*	*0.002*	*0.002*	2.490	*0.005*	0.078	*0.0001*	*0.003*	*0.001*	*0.0005*	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.29	7.05		18	3	18	0.04	1.08	35	50	50	1.566	0.001	0.0010	0.002	0.002	3.578	0.005	0.769	0.0001	0.003	0.001	0.0005	0.063
P20				3.08	0.16	6.26																							
St Dev					0.13	0.68																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW06		14/03/2013		6.01	0.46	6.50	23.5	20	*3*	10	0.06	0.80																	
Section3 SW06		21/03/2013		6.16	0.52	3.11	23.6	16	*3*	5	0.04	0.60																	
Section3 SW06		23/04/2013		8.45	0.12	6.63	19.5	16	*3*	10	*0.01*	0.60																	
Section3 SW06		22/05/2013		9.82	0.26	6.98	14.8	12	*3*	7	0.03	0.50																	
Section3 SW06		27/06/2013		9.73	0.15	6.83	15.8	11	*3*	*3*	0.03	0.33																	
Section3 SW06		24/07/2013		9.64	0.18	6.28	16.3	10	*3*	5	0.01	0.44																	
Section3 SW06		21/08/2013		9.44	0.17	7.09	14.7	7	*3*	6	0.04	0.02																	
Section3 SW06		25/09/2013		8.63	0.18	6.40	23.1	18	*3*	16	0.01	0.42																	
Section3 SW06		23/10/2013		8.55	0.26	6.17	29.5	20	*3*	14	0.02	0.72																	
Section3 SW06		28/11/2013		6.08	0.20	5.68	25.7	17	*3*	15	0.02	0.74																	
Section3 SW06		18/12/2013		8.55	0.18	5.67	27.2	27	*3*	11	*0.25*	0.60																	

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW3-09	On private property - no access to site	2/08/2016																											
SW3-09	On private property - no access to site	8/09/2016																											
SW3-09	Slight flow	6/10/2016		3.67	0.22	6.67	16.4	7	*1*	12	0.03	1.75	*50*	170	*50*														
SW3-09	No flow	3/11/2016		7.08	0.24	6.76	21.4	2																					
SW3-09		8/12/2016		2.75	0.74	6.74	24.1	11																					
SW3-09	Very low, no flow. Not connected with SW3-10	13/01/2017		4.25	0.59	7.20	27.5	16	*1*	12	*0.02*	1.22	*50*	50	*50*														
SW3-09	Very low, no flow. Not connected with SW3-10	1/02/2017		4.52	0.61	7.84	28.2	4																					
SW3-09	Visible flow	24/03/2017		1.74	0.15	5.90	24.5	5	*1*	4	0.04	1.04	*50*	*50*	*50*														
SW3-09	U/s and d/s sites connected.	24/04/2017		9.16	0.16	6.64	19.2	1																					
SW3-09	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/05/2017		5.11	0.15	6.71	17.7	2	*1*	*1*	*0.02*	0.38	*50*	*50*	*50*														
SW3-09	Weather fine. Connected. High flow. Water level low.	8/06/2017		5.00	0.15	6.49	13.5	3																					
SW3-09	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		6.74	0.14	6.62	11.1	4	*1*	6	*0.02*	0.40	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Moderate flow, moderate water level. Weather fine.	3/08/2017		6.80	0.14	6.81	11.3	4																					
SW3-09	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		8.12	0.17	6.38	17.3	3	*1*	4	*0.02*	0.54	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		2.28	0.22	6.98	18.3	1																					
SW3-09	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		3.02	0.23	6.90	22.0	2	*1*	24	0.05	0.91	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	6/12/2017		3.69	0.20	6.54	24.7	21																					
SW3-09	Upstream and downstream connected. Low flow, low water level. Weather fine.	23/01/2018		1.86	0.20	6.26	27.5	9	*1*	36	0.04	1.21	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	13/02/2018		0.99	0.18	6.40	25.7	50																					
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/03/2018		2.00	0.20	6.72	27.2	9	*1*	21	0.03	1.06	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	11/04/2018		2.09	0.17	6.43	22.0	5																					
SW3-09	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	8/05/2018		4.97	0.19	6.04	19.4	6	*1*	4	*0.02*	0.70	*13*	*50*	*50*														

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	25/06/2018	12:13	5.09	0.18	6.44	10.7	7																					
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	24/07/2018	15:44	6.92	0.19	6.27	12.8	5	*1*	38	0.03	1.17	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	10/08/2018	11:24	4.05	0.20	7.00	12.5	33																					
SW3-09	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	17/09/2018	13:36	6.01	0.33	6.70	17.9	12	*1*	9	*0.02*	0.98	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	26/10/2018	13:52	3.31	0.18	5.80	24.9	8																					
SW3-09	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	5/11/2018	13:34	3.67	0.20	6.48	26.1	9	*1*	3	0.03	0.99	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	4/12/2018	12:47	2.05	0.25	7.75	24.3	18																					
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	9/01/2019	12:46	2.98	0.20	6.84	26.4	9	*1*	10	0.05	1.19	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	7/02/2019	11:06	2.99	0.28	7.06	25.0	15																					
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	20/03/2019	11:19	3.48	0.29	7.42	23.1	17	*1*	6	0.08	0.79	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/04/2019	13:56	4.14	0.25	7.26	21.4	0																					
SW3-09	Upstream and downstream sites connected.Very low flow, low water level. Weather drizzle.	2/05/2019	13:26	7.37	0.24	7.34	20.5	0	*1*	26	0.16	1.20	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/06/2019	11:01	3.99	0.29	7.28	15.5	4																					
SW3-09	Upstream and downstream sites not connected. No visible flow, low water level. Evidence of cattle disturbance. Overcast.	4/07/2019	12:04	3.46	0.27	6.63	15.3	141	*1*	77	0.05	1.11	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/08/2019	9:46	1.36	0.33	7.07	13.7	40																					
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	19/09/2019	11:26	4.14	0.31	6.74	20.6	4	*1*	4	0.03	0.41	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/10/2019	12:10	4.48	0.42	7.17	22.6	5																					
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/11/2019	9:48	4.71	0.44	7.01	22.2	5	*1*	5	*0.02*	0.40	*50*	*50*	*50*														
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	4/12/2019	12:27	7.43	0.47	7.43	28.2	6																					
SW3-09	Insufficient water to sample.	8/01/2020	13:16																										

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-09	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	18/02/2020	12:42	3.33	0.11	6.17	26.7	21																					
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/03/2020	12:21	3.45	0.12	6.15	26.0	23	*1*	14	0.04	0.86	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	15/04/2020	10:56	4.98	0.16	6.21	19.7	12																					
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	14/05/2020	10:43	5.58	0.18	6.41	16.4	14	*1*	5	*0.02*	0.45	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	10:06	6.79	0.17	6.81	15.5	7																					
SW3-09	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	12:01	7.91	0.25	6.87	23.1	13	*1*	25	0.03	0.68	*13*	*50*	*50*	0.230	*0.001*	*0.0010*	*0.002*	*0.002*	3.860	*0.005*	0.940	*0.0001*	*0.003*	*0.001*	*0.0005*	0.068
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	25/05/2021	12:45	10.32	0.12	5.51	16.4	37	*1*	9	*0.02*	0.57	*13*	*50*	*50*	1.900	*0.001*	*0.0010*	*0.002*	*0.002*	2.450	*0.005*	0.085	*0.0001*	*0.003*	*0.001*	*0.0005*	0.043

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW3-10	Private property - no access	4/08/2016																										
SW3-10	Private property - no access	25/08/2016																										
SW3-10		10/11/2016		3.38	0.25	6.95	26.8	3	*1*	15	0.03	0.76	*50*	*50*	*50*													
SW3-10		6/12/2016		8.04	0.45	7.37	27.5	65																				
SW3-10	No flow, very turbid water	7/01/2017		4.82	**0.13**	**5.53**	26.0	**583**	*1*	**290**	0.03	**4.01**	*50*	100	*50*													
SW3-10	Very low water level, no flow and not connected to SW3-09	27/01/2017		5.66	0.24	6.54	26.3	31																				
SW3-10	Very low water level, no flow and not connected to SW3-09. Turbidity reading exceeded maximum range of probe.	28/02/2017		4.38	0.33	**5.07**	22.8	**800**																				
SW3-10	Very turbid	7/03/2017		4.13	0.22	6.05	23.9	518	*1*	320	0.11	**4.80**	*50*	**100**	*50*													
SW3-10	Slight visible flow. Overnight rainfall.	14/03/2017		4.53	0.27	6.56	21.6	454	*1*	**242**	**0.10**	2.10	*50*	*50*	*50*													
SW3-10	Weather showers. Connected. Water level high. Strong flow.	14/06/2017		5.70	0.07	6.03	16.7	32																				
SW3-10	Upstream and downstream sites connected. Water level low. Weather fine.	10/10/2017		3.16	0.21	7.93	22.9	6	*1*	6	0.05	0.63	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Slight flow. High water level.	16/10/2017		4.31	0.19	8.36	20.4	**113**																				
SW3-10	Upstream and downstream sites connected. Slight flow. High water level.	6/11/2017		**2.71**	0.22	6.68	22.9	**800**																				
SW3-10	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		4.02	0.23	6.75	26.3	51	*1*	**34**	0.03	0.88	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected, moderate to high flow, high water level. Overcast.	22/12/2017		4.70	0.12	6.12	25.8	73																				
SW3-10	Upstream and downstream sites connected. Moderate to high flow, high water level. Weather fine.	4/01/2018		2.26	0.11	5.87	26.0	43																				
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	5/02/2018		**2.40**	0.19	6.48	25.0	0	*1*	8	0.03	0.83	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		4.36	0.21	6.64	25.1	**202**	*1*	**104**	0.03	1.15	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	7/03/2018		3.49	0.17	6.68	24.2	42																				
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	22/03/2018		3.73	0.20	6.67	24.8	**220**	*1*	**126**	0.03	0.87	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	20/04/2018		**2.57**	0.17	6.19	22.4	4	*1*	4	*0.02*	0.78	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	27/04/2018		3.50	0.17	6.80	19.8	6																				

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-10	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	8/06/2018	11:56	5.01	0.19	6.29	14.2	84																				
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	28/06/2018	10:17	5.09	0.18	6.37	13.5	6	*1*	5	0.03	0.69	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/08/2018	13:38	4.43	0.22	6.88	14.5	35	*1*	15	*0.02*	0.59	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	7/09/2018	12:02	5.40	0.19	6.71	16.2	11																				
SW3-10	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	6/10/2018	12:09	4.17	0.31	6.02	19.6	6	*1*	11	*0.02*	0.91	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	12/10/2018	11:52	5.83	0.30	7.00	18.9	8																				
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	14/12/2018	12:40	4.58	0.29	7.29	24.2	50																				
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	17/12/2018	14:37	3.32	0.18	6.65	24.5	28	*1*	17	0.03	0.97	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	23/02/2019	10:28	6.94	0.24	6.99	22.6	31	*1*	25	0.07	1.15	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. No visible flow, very low water level. Rain.	16/03/2019	12:06	5.36	0.36	7.09	23.5	**751**																				
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	20/04/2019	13:31	8.37	**0.43**	7.42	21.4	52	*1*	**34**	0.04	**1.63**	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	16/05/2019	15:29	9.25	**0.43**	6.46	17.4	24																				
SW3-10	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	24/06/2019	12:50	8.66	**0.44**	**7.85**	12.4	42	*1*	**31**	*0.02*	0.59	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	28/06/2019	11:21	6.18	0.36	6.28	16.0	**189**																				
SW3-10	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/07/2019	12:32	7.04	**0.55**	6.81	15.5	60																				
SW3-10	Upstream and downstream sites connected. Low flow, low water level. Overcast.	12/10/2019	9:19	9.33	**0.00**	**7.37**	15.5	261	*1*	**284**	0.06	**1.38**	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	24/12/2019	12:33	**3.14**	0.56	6.80	24.4	0																				
SW3-10	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	9:53	3.72	0.62	7.55	24.4	6	*1*	18	**0.07**	**1.55**	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:07	6.21	0.09	5.92	21.6	**411**	*1*	**126**	0.07	1.80	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. High flow, very high water level. Overcast.	7/02/2020	10:22	5.55	0.07	6.41	22.5	137																				

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-10	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to high water level. Overcast.	10/02/2020	11:25	9.44	0.07	6.47	24.9	75																				
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:18	4.98	0.17	6.26	22.9	17	*1*	6	*0.02*	0.71	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	10:38	5.24	0.16	6.27	22.3	16	*1*	4	*0.02*	0.71	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/04/2020	11:20	4.39	0.15	5.60	22.9	26																				
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/06/2020	10:07	5.27	0.14	6.75	15.6	6	*1*	9	*0.02*	0.53	*13*	*50*	*50*													
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	8/08/2020	13:15	7.31	0.10	5.81	14.0	21																				
SW3-10	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	11:56	8.45	0.03	6.56	23.3	135	*1*	41	0.05	0.81	*15*	*5*	*50*	**5.640**	*0.001*	*0.0010*	*0.002*	*0.002*	2.650	*0.005*	**0.071**	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.018**
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	11:41	4.75	0.17	6.69	23.0	33																				
SW3-10	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	3/05/2021	13:34	5.75	0.12	6.27	18.8	44	*1*	15	*0.02*	0.53	*13*	*50*	*50*	**4.880**	*0.001*	*0.0010*	*0.002*	*0.002*	**3.040**	*0.005*	0.058	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.009**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.27	7.23		87	1	28	0.06	1.23	13	50	50	4.252	0.001	0.0010	0.002	0.002	2.688	0.005	0.061	0.0001	0.003	0.001	0.0005	0.008
P20				3.21	0.15	6.21																						
St Dev					0.15	0.57																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW06		8/02/2013		7.62	0.17	6.53	26.0	14	*3*	*3*	0.05	2.10																
Section3 SW06		30/05/2013		9.79	0.25	6.74	17.0	12	*3*	10	0.03	0.50																
Section3 SW06		3/07/2013		7.89	0.23	6.04	17.1	28	*3*	*3*	0.03	0.63																
Section3 SW06		14/11/2013		8.59	0.18	5.99	22.2	17	*3*	8	*0.01*	0.40																
Upstream Monitoring																												
SW3-09	Private property - no access	4/08/2016																										
SW3-09	Private property - no access	25/08/2016																										

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-09		10/11/2016		3.80	0.25	7.31	26.1	0	*1*	6	*0.02*	0.87	*50*	*50*	*50*														
SW3-09		6/12/2016		8.72	0.76	7.24	25.7	32																				
SW3-09	Water level low, no flow	7/01/2017		3.43	0.58	6.83	24.3	166	*1*	34	0.03	1.06	*50*	130	*50*														
SW3-09	Water level low, no flow	27/01/2017		4.77	0.62	7.23	25.8	4																				
SW3-09	Water level low, no flow	28/02/2017		3.04	0.55	7.47	21.8	101																				
SW3-09	Turbidity excedeed maximum range for in-situ sampling.	7/03/2017		2.49	0.23	6.45	23.9	800	*1*	348	0.15	3.50	*50*	*50*	*50*														
SW3-09	Slight visible flow. Overnight rainfall	14/03/2017		8.56	0.24	6.31	21.5	506	*1*	219	0.07	2.50	*50*	*50*	*50*														
SW3-09	Weather showers. Connected. Water level high. Strong flow.	14/06/2017		5.88	0.07	6.03	16.6	32																				
SW3-09	Upstream and downstream sites connected. Water level low. Weather fine.	10/10/2017		3.62	0.20	7.89	23.3	6	*1*	8	0.07	0.77	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Slight flow. High water level.	16/10/2017		3.62	0.19	8.35	20.2	27																				
SW3-09	Upstream and downstream sites connected. Slight flow. High water level.	6/11/2017		8.65	0.20	6.99	22.6	5																				
SW3-09	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.73	0.21	6.71	25.1	4	*1*	9	0.03	0.73	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected, moderate to high flow, high water level. Overcast.	22/12/2017		4.67	0.15	6.13	25.9	25																				
SW3-09	Upstream and downstream sites connected. Moderate to high flow, high water level. Weather fine.	4/01/2018		2.13	0.11	5.84	26.0	30																				
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	5/02/2018		3.20	0.19	6.50	25.7	0	*1*	8	0.04	1.07	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		1.41	0.20	6.60	23.4	10	*1*	14	0.04	0.90	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	7/03/2018		3.23	0.17	6.65	23.8	166																				
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	22/03/2018		1.73	0.20	6.52	23.7	44	*1*	22	0.03	1.12	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/04/2018		3.61	0.17	6.08	22.6	27	*1*	13	0.03	0.88	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	27/04/2018		3.09	0.17	6.69	19.8	20																				
SW3-09	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	8/06/2018	12:00	5.59	0.19	6.19	13.8	13																				
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	28/06/2018	10:24	4.71	0.17	6.37	13.2	6	*1*	15	0.07	1.40	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/08/2018	13:33	5.41	0.20	7.05	14.5	21	*1*	14	0.03	0.67	*13*	*50*	*50*														

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	7/09/2018	11:58	4.41	0.20	6.94	17.5	26																					
SW3-09	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	6/10/2018	12:14	5.05	0.31	6.23	19.7	8	*1*	3	*0.02*	0.73	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	12/10/2018	11:49	5.52	0.29	7.32	18.6	7																					
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	14/12/2018	12:44	4.59	0.26	7.49	25.7	93																					
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	17/12/2018	14:41	3.17	0.18	6.74	24.5	42	*1*	26	0.03	0.99	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	23/02/2019	10:39	2.93	0.25	7.19	22.0	7	*1*	27	0.08	1.87	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Rain.	16/03/2019	11:59	7.03	0.22	7.22	20.7	27																					
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	20/04/2019	13:25	5.87	0.23	7.51	22.3	30	*1*	22	0.04	0.87	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	16/05/2019	15:25	5.72	0.25	7.39	16.9	7																					
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	24/06/2019	13:09	4.49	0.27	7.05	12.8	65	*1*	16	*0.02*	0.45	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Evidence of cattle disturbance. Weather fine.	28/06/2019	11:17	4.41	0.29	6.46	15.6	111																					
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	5/07/2019	12:28	4.04	0.27	6.92	16.3	85																					
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	12/10/2019	9:24	0.55	0.37	6.59	16.6	332	*1*	87	0.08	0.83	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	24/12/2019	12:31	4.02	0.48	6.93	26.0	6																					
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	9:48	2.85	0.52	7.42	24.9	5	*1*	7	0.03	0.92	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:02	6.13	0.09	5.73	21.4	88	*1*	30	0.06	1.91	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. High flow, very high water level. Overcast.	7/02/2020	10:20	5.90	0.07	6.44	22.5	132																					
SW3-09	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to high water level. Overcast.	10/02/2020	11:22	5.83	0.07	6.56	24.9	77																					
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:14	4.90	0.17	6.29	22.8	15	*1*	6	*0.02*	0.68	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	10:33	5.37	0.16	6.37	22.5	17	*1*	3	*0.02*	0.71	*13*	*50*	*50*														

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/04/2020	11:17	4.27	0.15	5.89	22.9	28																					
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/06/2020	10:11	6.07	0.14	6.59	15.3	7	*1*	7	*0.02*	0.54	*13*	*50*	*50*														
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	8/08/2020	13:18	7.24	0.10	5.71	13.7	21																					
SW3-09	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	12:00	12.81	0.00	6.33	23.1	143	*1*	75	0.06	0.74	*15*	*5*	*50*	4.100	*0.001*	*0.0010*	*0.002*	*0.002*	1.960	*0.005*	0.055	*0.0001*	*0.003*	*0.001*	*0.0005*	0.009
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	17/02/2021	11:44	4.42	0.13	6.76	23.0	13																					
SW3-09	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	3/05/2021	13:37	5.94	0.12	5.76	18.3	43	*1*	20	*0.02*	0.54	*13*	*50*	*50*	4.290	*0.001*	*0.0010*	*0.002*	*0.002*	2.870	*0.005*	0.062	*0.0001*	*0.003*	*0.001*	*0.0005*	0.006

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-12	On private property - no access to site	2/08/2016																											
SW3-12	On private property - no access to site	8/09/2016																											
SW3-12	Dry	6/10/2016																											
SW3-12	Dry	1/11/2016																											
SW3-12	Dry	8/12/2016																											
SW3-12	Dry	13/01/2017																											
SW3-12	Dry	1/02/2017																											
SW3-12	No access due to flood waters	24/03/2017																											
SW3-12	U/s and d/s sites connected.	24/04/2017		6.59	0.15	6.63	19.8	7																					
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Cattle nearby. Weather fine.	11/05/2017		8.45	0.14	6.66	19.5	10	*1*	3	*0.02*	0.12	*50*	*50*	*50*														
SW3-12	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level low.	8/06/2017		7.64	0.17	6.46	15.9	7																					
SW3-12	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		8.93	0.15	6.71	13.0	9	*1*	82	0.03	0.39	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites connected by a trickle. Low flow, low water level. Weather fine.	3/08/2017		7.85	0.16	6.56	13.2	9																					
SW3-12	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		8.32	0.20	6.36	21.7	8	*1*	4	*0.02*	0.18	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		6.43	0.22	6.33	19.3	2																					
SW3-12	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		4.15	0.23	6.38	25.2	7	*1*	14	*0.02*	0.39	*13*	*50*	110														
SW3-12	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		**1.89**	0.22	6.43	20.9	2																					
SW3-12	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		5.80	0.22	6.15	30.0	12	*1*	**51**	*0.02*	0.67	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	13/02/2018		3.53	0.21	6.14	26.4	7																					
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		9.40	0.21	6.51	27.8	12	*1*	12	*0.02*	0.31	*13*	*50*	*50*														
SW3-12	Unable to access site due to crane lifting girders for bridge.	11/04/2018																											
SW3-12	Unable to access site due to crane lifting girders for bridge.	8/05/2018																											
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	12:00	3.61	0.20	6.11	10.6	25																					

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-12	Dry, not sampled.	24/07/2018	15:22																										
SW3-12	Insufficient water to sample.	10/08/2018	11:31																										
SW3-12	Dry - not sampled.	17/09/2018	13:32																										
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	13:47	3.65	0.18	5.89	26.3	7																					
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	13:19	4.55	0.21	5.92	27.1	9	*1*	6	*0.02*	0.63	*13*	*50*	*50*														
SW3-12	Dry, not sampled.	4/12/2018	12:38																										
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	9/01/2019	12:32	6.45	0.20	6.61	28.5	28	*1*	**87**	0.05	0.87	*13*	*50*	*50*														
SW3-12	Dry, not sampled.	7/02/2019	11:16																										
SW3-12	Dry, not sampled.	20/03/2019	11:10																										
SW3-12	Dry, not sampled.	24/04/2019	12:33																										
SW3-12	Dry, not sampled.	2/05/2019																											
SW3-12	Dry, not sampled.	14/06/2019	10:54																										
SW3-12	Dry, not sampled.	4/07/2019	14:58																										
SW3-12	Dry, not sampled	19/08/2019	10:54																										
SW3-12	Insufficient water to sample.	19/09/2019	11:27																										
SW3-12	Dry, not sampled.	3/10/2019	12:03																										
SW3-12	Dry, not sampled.	5/11/2019	9:40																										
SW3-12	Dry, not sampled.	4/12/2019	13:16																										
SW3-12	Dry, not sampled.	8/01/2020	13:09																										
SW3-12	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	18/02/2020	12:54	7.25	0.12	5.61	24.6	18																					
SW3-12	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	4/03/2020	12:44	6.75	0.13	5.60	23.9	15	*1*	25	*0.02*	0.38	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	15/04/2020	10:48	7.85	0.17	5.92	20.2	34																					
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	14/05/2020	10:58	8.89	0.20	6.06	18.1	15	*1*	9	**0.04**	0.20	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2020	10:13	7.91	0.18	6.54	16.8	8																					
SW3-12	Dry, not sampled.	5/11/2020																											
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	25/05/2021	12:57	8.06	0.12	5.36	17.7	26	*1*	8	*0.02*	0.17	*13*	*50*	*50*	1.920	*0.001*	*0.0010*	*0.002*	*0.002*	2.690	*0.005*	0.110	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.006**

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.22	6.54		32	3	27	0.03	0.59	13	50	50	1.930	0.001	0.0010	0.002	0.002	2.790	0.005	0.110	0.0001	0.003	0.001	0.0005	0.004
P20				2.25	0.15	5.82																							
St Dev					0.05	0.58																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW07		14/03/2013		7.98	0.20	5.95	21.8	35	*3*	34	0.01	0.40																	
Section3 SW07		21/03/2013		8.22	0.11	6.08	22.6	33	*3*	16	0.03	0.30																	
Section3 SW07		23/04/2013		8.83	0.38	6.67	21.0	24	*3*	9	0.04	0.40																	
Section3 SW07		22/05/2013		10.15	0.13	7.11	14.5	45	*3*	27	0.03	0.30																	
Section3 SW07		27/06/2013		9.94	0.18	6.67	15.8	16	*3*	3	0.01	0.10																	
Section3 SW07		24/07/2013		9.85	0.15	6.20	16.9	12	*3*	3	0.03	*0.01*																	
Section3 SW07		21/08/2013		10.05	0.19	7.47	15.6	9	*3*	3	0.03	0.13																	
Section3 SW07		25/09/2013		7.74	0.16	6.57	27.0	6	*3*	3	*0.01*	0.32																	
Section3 SW07	Dry	23/10/2013																											
Section3 SW07		28/11/2013		8.06	0.16	5.56	24.4	12	*3*	24	*0.01*	0.39																	
Section3 SW07		18/12/2013		8.19	0.18	4.56	26.6	14	*3*	2	0.03	0.30																	
Upstream Monitoring																													
SW3-11	On private property - no access to site	2/08/2016																											
SW3-11	On private property - no access to site	8/09/2016																											
SW3-11	Dry	6/10/2016																											
SW3-11	Dry	1/11/2016																											
SW3-11	Dry	8/12/2016																											
SW3-11	Dry	13/01/2017																											
SW3-11	Dry	1/02/2017																											
SW3-11	No access due to flood waters	24/03/2017																											
SW3-11	U/s and d/s sites connected.	24/04/2017		6.89	0.15	6.53	17.6	7																					

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-11	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/05/2017		7.72	0.17	6.34	16.4	13	*1*	6	*0.02*	0.12	*50*	*50*	*50*														

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-11	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level low.	8/06/2017		7.82	0.17	6.13	13.1	10																				
SW3-11	Upstream and downstream sites connected. Low flow. Low water level. Silting of creek just inside of project boundary. Weather fine.	24/07/2017		7.66	0.15	6.43	11.5	10	*1*	141	0.04	0.59	*13*	*50*	*50*													
SW3-11	Upstream and downstream sites connected by a trickle. Low flow, low water level. Weather fine.	3/08/2017		7.63	0.16	6.41	11.6	11																				
SW3-11	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		7.45	0.20	5.66	18.5	15	3	4	*0.02*	0.17	*13*	*50*	*50*													
SW3-11	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		4.50	0.22	6.38	17.8	4																				
SW3-11	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		1.83	0.24	6.58	22.7	4	*1*	18	*0.02*	0.50	*13*	*50*	300													
SW3-11	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		4.04	0.19	6.25	25.2	32																				
SW3-11	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		0.83	0.24	6.16	26.5	21	*1*	12	*0.02*	0.65	*13*	*50*	*50*													
SW3-11	Upstream and downstream sites not connected. Very low flow, very low water level. Drizzle.	13/02/2018		0.59	0.22	6.36	25.2	25																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		0.93	0.22	6.35	26.1	2	*1*	12	*0.02*	0.58	*13*	*50*	*50*													
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather overcast.	11/04/2018		1.47	0.21	6.44	21.2	11																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2018		5.44	0.22	6.19	19.7	14	*1*	26	*0.02*	0.75	*13*	*50*	*50*													
SW3-11	Upstream and downstream sites not connected, sample point isolated. No visible flow, very low water level. Evidence of cattle intrusion. Weather fine.	25/06/2018	12:04	3.63	0.22	6.21	11.0	91																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	15:21	6.19	0.21	6.05	12.8	3	*1*	7	*0.02*	0.29	*13*	*50*	*50*													
SW3-11	Insufficient water to sample.	10/08/2018	11:30																									
SW3-11	Dry - not sampled.	17/09/2018	13:30																									
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	13:43	2.36	0.18	5.86	23.9	13																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	13:13	0.13	0.25	4.90	26.5	45	*1*	42	0.03	1.22	*13*	*50*	*50*													
SW3-11	Dry, not sampled.	4/12/2018	12:37																									
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	12:40	1.27	0.24	6.61	25.7	44	*1*	52	0.10	2.05	*13*	*50*	*50*													

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-11	Dry, not sampled.	7/02/2019	11:16																										
SW3-11	Dry, not sampled.	20/03/2019	11:10																										
SW3-11	Dry, not sampled.	24/04/2019	12:33																										
SW3-11	Dry, not sampled.	2/05/2019																											
SW3-11	Dry, not sampled.	14/06/2019	10:55																										
SW3-11	Dry, not sampled.	4/07/2019	14:59																										
SW3-11	Dry, not sampled	19/08/2019	10:55																										
SW3-11	Insufficient water to sample.	19/09/2019	11:27																										
SW3-11	Dry, not sampled.	3/10/2019	12:03																										
SW3-11	Dry, not sampled.	5/11/2019	9:39																										
SW3-11	Dry, not sampled.	4/12/2019	13:17																										
SW3-11	Dry, not sampled.	8/01/2020	13:10																										
SW3-11	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	18/02/2020	12:52	7.51	0.12	5.42	24.5	23																					
SW3-11	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	4/03/2020	12:39	7.46	0.13	5.25	23.6	19	*1*	23	*0.02*	0.33	*13*	*50*	*50*														

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-11	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	15/04/2020	10:44	7.35	0.17	5.88	19.8	33																				
SW3-11	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	14/05/2020	11:04	6.70	0.21	6.07	17.0	18	*1*	7	*0.02*	0.12	*13*	*50*	*50*													
SW3-11	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2020	10:15	6.96	0.18	6.37	16.8	6																				
SW3-11	Dry, not sampled.	5/11/2020																										
SW3-11	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	25/05/2021	13:02	8.05	0.12	5.18	17.4	27	*1*	5	*0.02*	0.16	*13*	*50*	*50*	1.930	*0.001*	*0.0010*	*0.002*	*0.002*	2.790	*0.005*	0.110	*0.0001*	*0.003*	*0.001*	*0.0005*	0.004

SW3-12 - Black Snake Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW3-12	Private property - no access	4/08/2016																										
SW3-12	Private property - no access	25/08/2016																										
SW3-12	Dry	10/11/2016																										
SW3-12	Dry	6/12/2016																										
SW3-12	Dry	7/01/2017																										
SW3-12	Dry	27/01/2017																										
SW3-12	Dry	28/02/2017																										
SW3-12	Dry	7/03/2017																										
SW3-12	Dry	14/03/2017																										
SW3-12	Weather showers. Connected. High water level, fast flow.	14/06/2017		9.03	0.08	6.44	16.7	7																				
SW3-12	Upstream and downstream sites connected. Water level low, no visible flow. Weather fine.	10/10/2017		5.06	0.21	7.93	22.6	7	*1*	6	0.03	0.30	*13*	*50*	*50*													
SW3-12	Upstream and downstream sites connected. Slight flow. Low water level.	16/10/2017		6.54	0.21	8.43	20.5	38																				
SW3-12	Upstream and downstream sites connected. Slight flow. Low water level.	6/11/2017		4.00	0.21	6.84	23.7	42																				
SW3-12	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		4.73	0.22	6.38	28.0	47	*1*	10	*0.02*	0.31	*13*	*50*	*50*													
SW3-12	Upstream and downstream sites connected. Slight flow, low to medium water level. Overcast.	22/12/2017		7.01	0.17	6.19	24.2	24																				
SW3-12	Upstream and downstream sites connected. Low to medium flow, moderate water level. Weather fine.	4/01/2018		6.00	0.14	6.17	23.3	0																				
SW3-12	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		5.47	0.19	6.18	28.3	30	*1*	8	*0.02*	0.46	*13*	*50*	*50*													
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Overcast.	21/02/2018		5.86	0.18	6.38	24.4	28	*1*	15	*0.02*	0.46	*13*	*50*	*50*													
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	7/03/2018		7.25	0.19	6.54	25.0	26																				
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Overcast.	22/03/2018		4.72	0.17	6.47	24.4	71	*1*	26	*0.02*	0.49	*13*	*50*	*50*													
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	20/04/2018		6.81	0.19	6.15	22.5	3	*1*	10	*0.02*	0.56	*13*	*50*	*50*													
SW3-12	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/04/2018		5.38	0.19	6.88	18.9	19																				
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	8/06/2018	11:49	5.96	0.18	6.34	15.4	23																				

SW3-12 - Black Snake Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	28/06/2018	10:33	5.97	0.20	6.31	14.7	13	*1*	7	**0.04**	0.35	*13*	*50*	*50*														
SW3-12	Dry, not sampled.	27/08/2018	13:27																										
SW3-12	Dry, not sampled.	7/09/2018	13:57																										
SW3-12	Dry, not sampled.	6/10/2018	11:34																										
SW3-12	Dry, not sampled.	12/10/2018	11:59																										
SW3-12	Dry, not sampled.	14/12/2018	12:36																										
SW3-12	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	17/12/2018	14:27	7.02	0.12	6.44	23.1	22	*1*	10	0.03	0.67	*13*	*50*	*50*														
SW3-12	Dry, not sampled.	23/02/2019	10:07																										
SW3-12	Dry, not sampled.	16/03/2019	11:51																										
SW3-12	Dry, not sampled.	20/04/2019	12:36																										
SW3-12	Dry, not sampled.	16/05/2019	14:13																										
SW3-12	Dry, not sampled.	24/06/2019	12:27																										
SW3-12	Dry, not sampled.	28/06/2019																											
SW3-12	Dry, not sampled.	5/07/2019	12:25																										
SW3-12	Dry, not sampled.	12/10/2019	10:09																										
SW3-12	Dry, not sampled.	24/12/2019	12:31																										
SW3-12	Insufficient water to sample.	16/01/2020	9:58																										
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Turbidity exceeded maximum measurement range. Rain.	18/01/2020	11:44	6.83	**0.05**	6.47	21.6	**>1000**	*1*	**1792**	**0.20**	**1.12**	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/02/2020	10:30	8.37	0.09	6.68	22.3	45																					
SW3-12	Upstream and downstream sites connected. High flow, medium water level. Overcast.	10/02/2020	11:35	8.13	0.10	6.27	22.7	25																					
SW3-12	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	27/03/2020	13:00	8.29	0.17	6.21	22.2	30	*1*	10	*0.02*	0.27	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	10:57	9.24	0.15	6.33	21.4	23	*1*	10	*0.02*	0.34	*13*	*50*	*50*														
SW3-12	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	4/04/2020	11:09	7.66	0.15	5.69	21.5	40																					
SW3-12	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	11/06/2020	10:22	8.14	0.16	6.38	16.4	26	*1*	11	*0.02*	0.21	*13*	*50*	*50*														

SW3-12 - Black Snake Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	8/08/2020	13:26	8.57	0.10	5.69	16.0	16																				
SW3-12	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	12:12	14.75	0.02	6.30	21.5	232	*1*	170	*0.02*	0.57	*15*	*5*	*50*	9.480	*0.001*	*0.0010*	0.005	*0.002*	5.030	*0.005*	0.047	*0.0001*	*0.003*	*0.001*	*0.0005*	0.013
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Rain.	17/02/2021	11:50	8.14	0.14	6.79	21.4	34																				
SW3-12	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	3/05/2021	13:47	8.03	0.12	6.03	19.0	28	*1*	22	*0.02*	0.24	*13*	*50*	*50*	5.080	*0.001*	*0.0010*	0.002	*0.002*	5.520	*0.005*	0.120	*0.0001*	*0.003*	*0.001*	*0.0005*	0.011
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.20	6.69		38	2	38	0.03	0.64	13	50	50	7.972	0.001	0.0010	0.004	0.002	5.722	0.005	0.114	0.0001	0.003	0.001	0.0005	0.010
P20				4.54	0.12	6.14																						
St Dev					0.05	0.59																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW07		8/02/2013		8.34	0.13	6.75	24.4	12	*3*	9	0.02	0.20																
Section3 SW07		30/05/2013		10.04	0.15	6.89	17.1	18	*3*	39	0.01	0.30																
Section3 SW07		3/07/2013		9.29	0.17	6.44	17.1	14	*3*	3	0.01	0.20																
Section3 SW07		14/11/2013		8.22	0.12	5.27	22.4	84	*3*	56	0.04	0.33																
Upstream Monitoring																												
SW3-11	Private property - no access	4/08/2016																										
SW3-11	Private property - no access	25/08/2016																										
SW3-11	Dry	10/11/2016																										
SW3-11	Dry	6/12/2016																										
SW3-11	Dry	7/01/2017																										
SW3-11	Dry	27/01/2017																										
SW3-11	Dry	28/02/2017																										
SW3-11	Dry	7/03/2017																										
SW3-11	Dry	14/03/2017																										
SW3-11	Weather showers. Connected. High water level, fast flow.	14/06/2017		8.81	0.08	6.41	16.8	8																				

SW3-12 - Black Snake Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-11	Upstream and downstream sites connected. Water level low, no visible flow. Weather fine.	10/10/2017		4.39	0.22	7.91	21.4	7	*1*	8	0.04	0.26	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Slight flow. Low water level	16/10/2017		5.65	0.21	8.43	19.0	80																				
SW3-11	Upstream and downstream sites connected. Slight flow. Low water level	6/11/2017		3.02	0.21	6.54	22.3	17																				
SW3-11	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		4.61	0.23	6.45	23.6	4	*1*	13	*0.02*	0.66	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Slight flow, low to medium water level. Overcast.	22/12/2017		7.40	0.15	6.00	23.4	35																				
SW3-11	Upstream and downstream sites connected. Low to medium flow, moderate water level. Weather fine.	4/01/2018		6.16	0.13	6.19	22.0	0																				
SW3-11	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		4.54	0.20	6.18	23.0	0	*1*	14	*0.02*	0.46	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Very low flow, very low water level. Overcast.	21/02/2018		7.33	0.19	6.32	22.0	38	*1*	13	*0.02*	0.32	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	7/03/2018		5.76	0.19	6.38	21.5	28																				
SW3-11	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	22/03/2018		4.10	0.18	6.40	22.4	57	*1*	23	*0.02*	0.66	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	20/04/2018		2.07	0.20	5.94	21.3	23	*1*	67	0.04	1.02	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/04/2018		2.14	0.20	6.78	18.9	28																				
SW3-11	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	8/06/2018	11:44	6.65	0.18	6.46	14.9	16																				
SW3-11	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	28/06/2018	10:39	4.52	0.19	6.24	14.5	16	*1*	9	*0.02*	0.27	*13*	*50*	*50*														
SW3-11	Dry, not sampled.	27/08/2018	13:27																									
SW3-11	Dry, not sampled.	7/09/2018	13:56																									
SW3-11	Dry, not sampled.	6/10/2018	11:35																									
SW3-11	Dry, not sampled.	12/10/2018	11:58																									
SW3-11	Dry, not sampled.	14/12/2018	12:35																									
SW3-11	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	17/12/2018	14:21	6.07	0.13	6.62	24.1	23	*1*	9	0.03	0.79	*13*	*50*	*50*														
SW3-11	Dry, not sampled.	23/02/2019	10:07																									
SW3-11	Dry, not sampled.	16/03/2019	11:50																									
SW3-11	Dry, not sampled.	20/04/2019	12:36																									

SW3-12 - Black Snake Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-11	Dry, not sampled.	16/05/2019	14:12																										
SW3-11	Dry, not sampled.	24/06/2019	12:26																										
SW3-11	Dry, not sampled.	28/06/2019																											
SW3-11	Dry, not sampled.	5/07/2019	12:23																										
SW3-11	Dry, not sampled.	12/10/2019	10:09																										
SW3-11	Dry, not sampled.	24/12/2019	12:30																										
SW3-11	Dry, not sampled.	16/01/2020	9:56																										
SW3-11	Insufficient water to sample.	18/01/2020																											
SW3-11	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/02/2020	10:28	8.63	0.09	6.67	22.3	41																					
SW3-11	Upstream and downstream sites connected. High flow, medium water level. Overcast.	10/02/2020	11:32	8.91	0.10	6.55	22.5	25																					
SW3-11	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	27/03/2020	12:56	8.57	0.17	6.20	22.0	25	*1*	11	*0.02*	0.27	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	10:51	8.68	0.15	6.37	21.4	23	*1*	10	*0.02*	0.30	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	4/04/2020	11:12	7.21	0.15	5.87	21.4	44																					
SW3-11	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/06/2020	10:27	7.85	0.16	6.18	15.8	26	*1*	10	*0.02*	0.22	*13*	*50*	*50*														
SW3-11	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	8/08/2020	13:29	8.68	0.10	5.68	14.7	16																					
SW3-11	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	12:15	14.99	0.02	6.21	21.5	199	*1*	146	0.03	0.57	*15*	*5*	*50*	8.690	*0.001*	*0.0010*	0.004	*0.002*	4.450	*0.005*	0.052	*0.0001*	*0.003*	*0.001*	*0.0005*	0.009
SW3-11	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	11:53	7.37	0.14	6.75	20.7	28																					
SW3-11	Upstream and downstream sites connected. High flow, medium water level. Overcast.	3/05/2021	13:50	8.43	0.12	5.85	18.8	28	*1*	34	*0.02*	0.26	*13*	*50*	*50*	5.100	*0.001*	*0.0010*	*0.002*	*0.002*	6.040	*0.005*	0.130	*0.0001*	*0.003*	*0.001*	*0.0005*	0.010

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-14	Intermittent watercourse, sample collected in small waterbody	2/08/2016		7.12	0.29	5.66	15.7	6																					
SW3-14	Flowing	8/09/2016		5.28	0.24	5.85	16.3	6	2	17	0.03	0.99	*50*	*50*	*50*														
SW3-14	Not flowing	6/10/2016		3.15	0.24	5.77	15.3	56																					
SW3-14		1/11/2016		**2.52**	0.27	6.07	20.1	7	*1*	23	0.03	1.01	*50*	270	*50*														
SW3-14		8/12/2016		**0.80**	0.30	6.40	22.6	61																					
SW3-14	Very low water level, no flow and not connected with SW3-13	13/01/2017		**1.80**	0.21	6.61	27.5	34	*1*	29	0.04	1.29	*50*	**370**	*50*														
SW3-14	Very low water level, no flow and not connected with SW3-13	1/02/2017		**1.22**	0.28	6.86	28.2	4																					
SW3-14	u/s and d/s sites not connected	24/03/2017		8.04	0.14	5.59	24.0	17	*1*	7	0.03	1.41	*50*	*50*	*50*														
SW3-14	U/s and d/s sites connected.	24/04/2017		5.25	0.18	6.17	20.3	3																					
SW3-14	Dry	11/05/2017																											
SW3-14	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level very low. Slightly stagnant.	8/06/2017		6.02	0.18	6.12	14.7	**106**																					
SW3-14	Upstream and downstream sites connected. Low water level, low flow. Weather fine.	24/07/2017		7.82	0.15	5.88	11.6	14	*1*	4	*0.02*	0.45	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	3/08/2017		6.61	0.16	5.96	12.6	12																					
SW3-14	Weather fine. U/S and D/S not connected. Water level low. No observed flow.	5/09/2017		6.51	0.20	5.89	14.4	16	*1*	10	*0.02*	0.57	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	5/10/2017		6.63	0.29	6.39	21.3	27																					
SW3-14	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	2/11/2017		5.61	0.31	6.11	20.7	**290**	*1*	8	*0.02*	**1.42**	*13*	*50*	*50*														
SW3-14	No connection between upstream and downstream sites due to heavy silt. No visible flow, low water level. Weather fine.	6/12/2017		4.07	0.30	6.22	21.2	**198**																					
SW3-14	Dry	23/01/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		7.58	**0.51**	6.61	27.6	7																					
SW3-14	Dry - not sampled.	20/03/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine. Probe error - no in-situ data.	11/04/2018																											
SW3-14	Dry - not sampled.	8/05/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	11:47	4.90	0.27	5.66	10.6	**165**																					

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	15:05	7.37	0.37	5.30	18.7	11	*1*	7	*0.02*	0.20	*13*	*50*	*50*														
SW3-14	Insufficient water to sample.	10/08/2018	11:43																										
SW3-14	Dry - not sampled.	17/09/2018	13:31																										
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Isolated pool of water, heavy silt. Weather fine.	26/10/2018	13:31	6.61	**0.44**	6.05	23.6	12																					
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	12:51	5.66	**0.53**	6.64	25.1	5	*1*	3	*0.02*	1.09	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	4/12/2018	13:18	7.61	0.70	7.70	23.7	5																					
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	12:10	5.20	0.45	7.28	26.2	38	*1*	25	0.03	0.84	*13*	*50*	*50*														
SW3-14	No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	7/02/2019	12:15	4.64	**0.33**	**6.76**	28.8	**800**																					
SW3-14	Sampled in an isolated pool of water with no visible flow, very low water level. Weather fine.	20/03/2019	10:58	6.98	**0.36**	**7.14**	22.5	**136**	*1*	**31**	*0.02*	1.02	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/04/2019	13:39	2.96	0.27	6.79	22.1	74																					
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	2/05/2019	12:58	5.73	**0.38**	7.38	21.0	29	*1*	11	*0.02*	0.42	*13*	*50*	*50*														
SW3-14	No visible flow, very low water level. Weather fine.	14/06/2019	10:42	4.66	**0.33**	**7.01**	18.3	19																					
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/07/2019	14:46	7.40	0.28	**7.37**	18.3	**115**	*1*	**66**	0.03	0.52	*13*	*50*	*50*														
SW3-14	Dry, not sampled	19/08/2019	11:08																										
SW3-14	Insufficient water to sample.	19/09/2019	11:42																										
SW3-14	Dry, not sampled.	3/10/2019	12:20																										
SW3-14	Dry, not sampled.	5/11/2019	10:02																										
SW3-14	Dry, not sampled.	4/12/2019	13:14																										
SW3-14	Dry, not sampled.	8/01/2020	13:04																										
SW3-14	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	18/02/2020	13:07	5.04	0.12	5.65	28.4	9																					
SW3-14	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/03/2020	13:04	5.33	0.13	6.27	26.5	**43**	*1*	28	0.03	1.38	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	15/04/2020	10:17	7.35	0.07	6.37	20.8	**105**																					

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-14	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	14/05/2020	11:19	7.53	0.15	6.48	18.2	8	*1*	8	0.04	0.46	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2020	10:23	6.63	0.17	6.60	17.0	9																				
SW3-14	Insufficient water to sample.	5/11/2020																										
SW3-14	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	25/05/2021	13:17	7.24	0.09	5.45	18.7	21	*1*	*1*	*0.02*	0.47	*13*	*50*	*50*	2.140	*0.001*	*0.0010*	*0.002*	*0.002*	2.160	*0.005*	0.023	*0.0001*	*0.003*	*0.001*	*0.0005*	0.008
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.30	6.44		32	3	28	0.04	1.18	35	50	50	2.180	0.001	0.0010	0.002	0.002	2.170	0.005	0.024	0.0001	0.003	0.001	0.0005	0.008
P20				2.54	0.14	5.48																						
St Dev					0.10	0.58																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW22		27/02/2013		7.73	0.12	6.39	22.1	21	*3*	8	0.03	1.10																
Section3 SW22		21/03/2013		6.81	0.11	6.35	22.6	9	*3*	*3*	0.01	0.90																
Section3 SW22		18/04/2013		7.63	0.11	6.45	23.5	8	*3*	*3*	0.04	1.00																
Section3 SW22		22/05/2013		6.11	0.19	6.61	13.6	7	*3*	16	0.02	0.40																
Section3 SW22		27/06/2013		9.70	0.30	6.38	16.4	8	*3*	*3*	0.02	0.40																
Section3 SW22		24/07/2013		5.79	0.18	5.52	13.4	7	*3*	9	0.02	0.52																
Section3 SW22		21/08/2013		4.20	0.18	6.79	12.5	10	*3*	15	0.07	0.50																
Section3 SW22		25/09/2013		1.89	0.20	6.28	18.7	36	*3*	40	0.08	0.59																
Section3 SW22	Dry	23/10/2013																										
Section3 SW22		28/11/2013		2.55	0.17	5.36	25.5	9	*3*	22	0.02	1.71																
Section3 SW22		18/12/2013		3.04	0.17	5.32	25.5	7	6	13	*0.25*	0.30																
Upstream Monitoring																												
SW3-13	Intermittent watercourse, sample collected in small waterbody	2/08/2016		7.91	0.32	4.89	16.0	34																				
SW3-13	Flowing	8/09/2016		5.79	0.25	6.30	16.7	24	*1*	18	0.03	1.12	*50*	*50*	*50*													
SW3-13	Not flowing	6/10/2016		6.07	0.25	6.08	16.0	145																				
SW3-13		1/11/2016		3.65	0.30	5.32	22.2	32	*1*	47	*0.02*	0.88	*50*	270	*50*													

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-13		8/12/2016		1.36	0.37	6.17	23.2	800																				
SW3-13	Very low, no flow and not connected with SW3-14	13/01/2017		6.75	0.26	6.99	28.5	49	*1*	30	0.03	1.49	*50*	180	*50*													
SW3-13	Very low, no flow and not connected with SW3-14	1/02/2017		2.54	0.39	6.92	32.4	206																				
SW3-13	Slight visible flow but no connection between u/s and d/s sites.	24/03/2017		7.97	0.14	5.48	23.7	7	*1*	4	0.03	1.50	*50*	*50*	*50*													
SW3-13	U/s and d/s sites connected.	24/04/2017		2.33	0.16	5.84	18.7	2																				
SW3-13	Dry	11/05/2017																										
SW3-13	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level very low. Slightly stagnant	8/06/2017		0.66	0.14	5.62	14.3	6																				
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	24/07/2017		5.37	0.14	5.89	11.0	4	*1*	33	0.03	0.67	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites connected. Low flow, low - moderate water level. Weather fine.	3/08/2017		4.08	0.15	5.76	11.2	4																				
SW3-13	Weather fine. U/S and D/S not connected. Water level low. No observed flow. Sample taken in isolated pool.	5/09/2017		3.94	0.20	5.48	14.4	3	*1*	8	*0.02*	0.35	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	5/10/2017		5.20	0.24	5.71	19.0	10																				
SW3-13	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	2/11/2017		3.63	0.25	6.03	22.4	6	*1*	22	*0.02*	0.84	*13*	*50*	*50*													
SW3-13	No connection between upstream and downstream sites due to heavy silt. No visible flow, low water level. Weather fine.	6/12/2017		7.70	0.28	6.06	22.6	4																				
SW3-13	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		1.55	0.26	5.94	26.7	12	*1*	14	*0.02*	0.96	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		0.81	0.27	6.13	25.1	21																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		3.28	0.23	5.98	24.8	32	*1*	29	*0.02*	0.55	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	11/04/2018		3.35	0.22	6.22	22.3	70																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2018		3.88	0.28	5.23	18.8	5	*1*	6	*0.02*	0.94	*13*	*50*	*50*													
SW3-13	Waterway dry. Weather fine.	25/06/2018	11:06																									
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	14:57	5.84	0.29	4.87	20.4	3	*1*	12	*0.02*	0.69	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/08/2018	11:40	8.15	0.34	5.96	9.8	5																				

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-13	Isolated pool of water with no visible flow and very low water level. Weather fine.	17/09/2018	13:20	6.58	0.29	6.44	18.8	26	*1*	17	0.04	0.35	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	13:28	3.50	0.31	5.39	26.0	24																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	12:42	4.59	0.36	6.07	27.2	24	*1*	19	0.03	1.22	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	4/12/2018	13:13	7.58	0.62	7.27	24.5	81																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	12:18	0.98	0.37	6.74	25.6	28	*1*	42	0.05	1.38	*13*	*50*	*50*														
SW3-13	Dry, not sampled.	7/02/2019	12:18																										
SW3-13	Insufficient water to sample.	20/03/2019	10:56																										
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/04/2019	13:35	2.54	0.20	7.20	21.5	154																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	2/05/2019	12:50	2.25	0.18	7.02	20.9	19	*1*	15	0.03	0.65	*13*	*50*	*50*														
SW3-13	Dry, not sampled.	14/06/2019	10:38																										
SW3-13	Insufficient water to monitor.	4/07/2019																											
SW3-13	Dry, not sampled	19/08/2019	11:07																										
SW3-13	Dry, not sampled.	19/09/2019	11:43																										
SW3-13	Dry, not sampled.	3/10/2019	12:20																										
SW3-13	Dry, not sampled.	5/11/2019	10:01																										
SW3-13	Dry, not sampled.	4/12/2019	13:15																										
SW3-13	Dry, not sampled.	8/01/2020	13:03																										
SW3-13	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	18/02/2020	13:05	6.06	0.11	5.97	27.9	8																				
SW3-13	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/03/2020	13:09	4.06	0.12	6.28	25.8	17	*1*	15	0.03	1.43	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/04/2020	10:21	9.77	0.12	5.97	18.0	13																				
SW3-13	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	14/05/2020	11:22	3.83	0.13	6.03	17.8	21	*1*	27	0.05	0.55	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2020	10:25	5.60	0.16	6.25	15.8	8																				
SW3-13	Dry, not sampled.	5/11/2020																											
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	25/05/2021	13:23	6.15	0.09	5.25	18.4	21	*1*	3	*0.02*	0.54	*13*	*50*	*50*	2.180	*0.001*	*0.0010*	*0.002*	*0.002*	2.170	*0.005*	0.024	*0.0001*	*0.003*	*0.001*	*0.0005*	0.008

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-14	Very turbid water, fast flowing.	4/08/2016		8.53	0.13	5.82	13.9	133																					
SW3-14	Very low flow, surface scum present.	25/08/2016		9.03	0.17	4.70	15.3	23	2	6	0.03	0.92	*50*	*50*	*50*														
SW3-14		10/11/2016		**1.75**	0.29	**7.16**	25.1	6	*1*	29	*0.02*	1.19	*50*	**210**	*50*														
SW3-14	Accurate turbidity reading could not be obtained	6/12/2016		8.62	0.27	7.18	24.4																						
SW3-14	Water level very low, no flow.	7/01/2017		1.37	0.17	5.99	23.4	455	*1*	61	0.05	1.45	**100**	**470**	*50*														
SW3-14	Very low water level, no flow and not connected with SW3-13	27/01/2017		5.89	0.29	6.78	24.1	20																					
SW3-14	Very low water level, no flow and not connected with SW3-13.	28/02/2017		3.83	0.22	6.11	21.1	452																					
SW3-14	No visible flow. No connection between upstream and downstream sites	7/03/2017		1.07	0.19	6.16	23.2	130	3	**66**	0.06	1.20	*50*	**190**	*50*														
SW3-14	Very low visible flow. No connection between upstream and downstream sites.	14/03/2017		8.46	0.20	6.32	21.1	66	*1*	**66**	0.05	1.10	*50*	**170**	*50*														
SW3-14	Weather showers. Connected. Strong flow	14/06/2017		8.65	0.09	6.08	16.8	14																					
SW3-14	Upstream and downstream sites not connected. Water level very low. Weather fine.	10/10/2017		3.95	0.25	7.86	20.6	**185**	*1*	31	0.03	0.71	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Slight flow. Low water level. Rain.	16/10/2017		5.92	0.22	8.28	19.7	**678**																					
SW3-14	Upstream and downstream sites connected. Slight flow. Low water level.	6/11/2017		6.19	0.29	5.95	21.5	**460**																					
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	2/12/2017		3.38	0.28	6.40	23.7	**418**	*1*	**188**	*0.02*	1.01	*13*	*50*	*50*														
SW3-14	No access	22/12/2017																											
SW3-14	No access	4/01/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		6.51	**0.48**	6.01	26.2	**182**	*1*	**172**	*0.02*	**5.51**	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	21/02/2018		5.44	**0.45**	6.02	25.7	**183**	*1*	**144**	*0.02*	**4.34**	*13*	*50*	*50*														
SW3-14	Unable to sample due to access issues - overhead crane working, unsafe.	7/03/2018																											
SW3-14	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	22/03/2018		3.98	0.28	6.13	24.9	**699**	*1*	**195**	*0.02*	**1.96**	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites not connected. No visible flow, isolated pool, very low water level. Weather fine.	20/04/2018		4.75	**0.36**	6.09	24.0	**745**	*1*	**294**	*0.02*	**2.21**	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/04/2018		6.18	**0.38**	6.55	21.1	**498**																					

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	12:17	5.84	**0.48**	5.67	16.5	55																					
SW3-14	Upstream and downstream sites not connected, no visible flow. Sampled within isolated, very shallow pool. Unable to obtain turbidity reading. Weather fine.	28/06/2018	11:19	4.96	0.22	6.08	15.2		*1*	29	*0.02*	0.78	*13*	*50*	*50*															
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	13:02	5.46	**0.48**	6.61	16.6	86	*1*	40	*0.02*	**4.22**	*13*	*50*	*50*															
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	7/09/2018	11:45	5.39	**0.55**	6.71	19.4	130																					
SW3-14	Dry, not sampled.	6/10/2018	11:28																										
SW3-14	Site access closed due to wet weather.	12/10/2018	12:00																										
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	14/12/2018	12:11	3.17	0.42	7.16	25.6	232																					
SW3-14	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	17/12/2018	13:33	5.92	0.21	6.73	26.0	94	*1*	**53**	0.04	1.31	*13*	*50*	*50*															
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	22/02/2019	15:06	5.17	**0.32**	6.99	27.1	800	*1*	**672**	0.29	**2.90**	*13*	*50*	*50*															
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	11:19	6.44	0.36	6.46	22.1	114																					
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	20/04/2019	14:22	4.02	0.22	6.70	23.2	92	*1*	52	0.03	0.76	*13*	*50*	*50*															
SW3-14	Upstream and downstream sites not connected. Low flow, low water level. Drizzle.	16/05/2019	15:02	6.87	0.25	8.60	18.3	**276**																					
SW3-14	Low flow, low water level. Rain.	24/06/2019	12:45	6.81	**0.39**	**7.38**	13.0	**168**	*1*	**72**	**0.07**	1.15	*13*	*50*	*50*															
SW3-14	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	28/06/2019	11:38	5.63	0.25	6.41	17.6	**192**																					
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	12:07	5.64	0.27	**6.73**	17.1	**162**																					
SW3-14	Low flow, low water level. Drizzle.	12/10/2019	9:48	4.14	0.26	**6.90**	16.4	**673**	*1*	**282**	**0.26**	**2.99**	*13*	*50*	*50*															
SW3-14	Dry, not sampled.	24/12/2019	12:39																										
SW3-14	Insufficient water to sample.	16/01/2020	10:06																										
SW3-14	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	11:16	7.52	0.09	5.63	21.2	**228**	*1*	**226**	**0.09**	0.95	*13*	*50*	*50*															
SW3-14	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/02/2020	10:43	7.75	0.13	6.29	23.0	26																					
SW3-14	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	10/02/2020	11:49	7.59	0.10	6.47	25.0	14																					

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-14	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	12:37	8.49	0.14	6.29	23.0	24	*1*	8	*0.02*	1.05	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	11:17	7.84	0.13	6.29	22.2	29	*1*	16	*0.02*	1.03	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	4/04/2020	10:58	8.59	0.13	5.83	22.2	65																					
SW3-14	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	10:40	6.76	0.15	6.41	17.1	19	*1*	9	0.03	0.83	*13*	*50*	*50*														
SW3-14	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	8/08/2020	13:38	8.51	0.11	5.72	16.8	28																					
SW3-14	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	12:46	12.98	0.02	6.02	22.5	113	*1*	66	*0.02*	0.61	*15*	*5*	*50*	5.410	*0.001*	*0.0010*	*0.002*	*0.002*	2.260	*0.005*	**0.048**	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.008**
SW3-14	Upstream and downstream sites connected. Medium flow, low water level. Rain.	17/02/2021	12:10	6.81	0.12	6.78	23.8	40																					
SW3-14	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	3/05/2021	14:02	8.39	0.08	6.13	19.8	26	*1*	9	*0.02*	0.72	*13*	*50*	*50*	5.190	*0.001*	*0.0010*	*0.002*	*0.002*	2.990	*0.005*	0.037	*0.0001*	*0.003*	*0.001*	*0.0005*	0.004
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.29	6.45		158	1	52	0.05	1.45	36	50	50	5.782	0.001	0.0010	0.002	0.002	2.918	0.005	0.039	0.0001	0.003	0.001	0.0005	0.005
P20				2.95	0.13	5.65																							
St Dev					0.09	0.85																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW22		7/02/2013		7.47	0.16	6.00	22.3	10	*3*	6	0.03	0.50																	
Section3 SW22		29/05/2013		8.76	0.24	6.69	17.4	8	*3*	18	0.03	0.50																	
Section3 SW22		2/07/2013		8.16	0.14	5.44	17.9	11	*3*	*3*	0.02	0.60																	
Section3 SW22		14/11/2013		4.96	0.21	3.54	25.0	17	*3*	11	0.02	1.00																	
Upstream Monitoring																													
SW3-13	fast flowing	4/08/2016		9.58	0.13	5.42	14.0	27																					
SW3-13	Very low flow	25/08/2016		9.18	0.19	5.51	15.3	23	*1*	5	0.03	1.03	*50*	*50*	*50*														
SW3-13		10/11/2016		3.23	0.37	6.26	24.1	6	*1*	19	*0.02*	0.54	*50*	*50*	*50*														
SW3-13		6/12/2016		8.49	0.33	7.13	26.3	155																					

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-13	Water level low and no flow.	7/01/2017		1.38	0.23	5.92	24.7	619	*1*	53	0.06	1.86	*50*	340	*50*														
SW3-13	Water level low and no flow.	27/01/2017		2.59	0.33	7.41	26.3	16																				
SW3-13	Water level low and no flow.	28/02/2017		5.06	0.15	5.64	21.8	800																				
SW3-13	No flow. No connection between upstream and downstream sites.	7/03/2017		1.42	0.32	5.70	24.1	46	3	29	0.04	1.10	*50*	160	*50*													
SW3-13	Very low visible flow. No connection between upstream and downstream sites.	14/03/2017		2.19	0.32	5.89	21.4	34	*1*	26	0.03	0.80	*50*	120	*50*													
SW3-13	Weather showers. Connected. Strong flow	14/06/2017		7.46	0.09	5.95	16.8	10																				
SW3-13	Upstream and downstream sites not connected. Water level very low. Weather fine.	10/10/2017		1.09	0.31	7.89	21.2	30	*1*	11	0.04	0.51	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites connected. Slight flow. Low water level. Rain.	16/10/2017		5.02	0.20	8.42	19.5	239																				
SW3-13	Upstream and downstream sites connected. Slight flow. Low water level.	6/11/2017		1.80	0.25	6.24	22.1	8																				
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		1.76	0.29	6.19	24.4	4	*1*	18	*0.02*	0.48	*13*	*50*	*50*													
SW3-13	No access	22/12/2017																										
SW3-13	No access	4/01/2018																										
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		3.27	0.25	6.03	23.5	12	*1*	44	0.09	1.54	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	21/02/2018		4.45	0.25	6.17	23.3	54	*1*	48	0.10	1.52	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	7/03/2018		2.95	0.23	6.23	23.6	118																				
SW3-13	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	22/03/2018		3.31	0.22	6.33	24.2	69	*1*	49	*0.02*	0.61	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/04/2018		3.46	0.23	5.61	21.9	45	*1*	15	*0.02*	0.46	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	27/04/2018		3.25	0.25	6.17	19.2	34																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	12:14	5.70	0.19	5.78	14.6	186																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	11:22	5.11	0.23	5.43	14.1	52	*1*	27	*0.02*	0.50	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/08/2018	12:55	6.38	0.22	6.77	14.3	174	*1*	94	0.03	3.02	*13*	*50*	*50*													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	7/09/2018	11:42	5.79	0.27	5.98	17.5	104																				

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-13	Sampled in an isolated pool with no visible flow and very low water level. Weather fine.	6/10/2018	11:33	6.49	0.49	5.05	20.6	21	*1*	10	*0.02*	7.66	*13*	*50*	*50*														
SW3-13	Site access closed due to wet weather.	12/10/2018	12:03																										
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/12/2018	12:16	4.03	0.36	7.59	26.6	799																					
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	17/12/2018	13:40	3.78	0.22	6.16	25.3	43	*1*	15	0.03	1.17	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	22/02/2019	15:13	3.11	0.22	6.22	24.0	800	*1*	554	0.36	2.34	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	11:15	2.33	0.30	6.45	21.8	118																					
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	20/04/2019	14:13	2.59	0.16	7.93	23.0	317	*1*	166	0.08	0.90	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/05/2019	14:58	6.03	0.17	7.96	18.2	158																					
SW3-13	Dry, not sampled.	24/06/2019	12:39																										
SW3-13	Insufficient water to sample.	28/06/2019																											
SW3-13	Insufficient water to sample.	5/07/2019	12:04																										
SW3-13	Dry, not sampled.	12/10/2019	10:43																										
SW3-13	Dry, not sampled.	24/12/2019	12:40																										
SW3-13	Dry, not sampled.	16/01/2020	10:02																										
SW3-13	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	11:11	7.79	0.10	5.65	21.2	93	*1*	65	0.05	0.81	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/02/2020	10:41	7.86	0.13	6.34	23.0	26																					
SW3-13	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	10/02/2020	11:47	7.52	0.12	6.39	24.6	13																					
SW3-13	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	12:42	8.26	0.14	6.08	22.7	22	*1*	7	*0.02*	1.13	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	11:22	7.64	0.12	6.06	21.6	26	*1*	7	*0.02*	1.08	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	4/04/2020	10:56	6.93	0.13	5.68	22.0	40																					
SW3-13	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	10:45	6.15	0.14	6.17	16.6	16	*1*	10	0.03	0.94	*13*	*50*	*50*														
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	8/08/2020	13:41	8.85	0.10	5.51	15.0	26																					

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-13	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	12:49	13.66	0.02	5.92	22.5	183	*1*	118	*0.02*	0.62	*15*	*5*	*50*	5.930	*0.001*	*0.0010*	*0.002*	*0.002*	2.630	*0.005*	0.039	*0.0001*	*0.003*	*0.001*	*0.0005*	0.005
SW3-13	Upstream and downstream sites connected. Medium flow, low water level. Rain.	17/02/2021	12:13	6.39	0.11	6.33	21.9	24																				
SW3-13	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	3/05/2021	14:05	8.49	0.08	5.87	19.9	29	*1*	9	*0.02*	0.72	*13*	*50*	*50*	5.190	*0.001*	*0.0010*	*0.002*	*0.002*	2.990	*0.005*	0.037	*0.0001*	*0.003*	*0.001*	*0.0005*	0.004

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-16	Dry	2/08/2016																											
SW3-16	Intermittent watercourse	8/09/2016		4.62	0.22	6.01	15.9	3	2	10	0.03	0.60	*50*	*50*	*50*														
SW3-16	Flowing	6/10/2016		**2.16**	0.26	6.35	17.6	3																					
SW3-16		1/11/2016		**2.32**	0.28	6.57	22.5	2	*1*	6	*0.02*	**1.40**	*50*	**160**	*50*														
SW3-16		8/12/2016		**1.68**	0.27	6.17	25.4	10																					
SW3-16	Water level low, slight flow	13/01/2017		**2.84**	0.26	6.71	29.5	9	*1*	4	*0.02*	0.80	*50*	*50*	*50*														
SW3-16	Water level low, no flow	1/02/2017		3.33	0.30	6.92	31.0	0																					
SW3-16	U/s and d/s sites connected	24/03/2017		**2.33**	0.13	5.90	24.8	9	*1*	5	0.03	0.83	50	50	50														
SW3-16	U/s and d/s sites connected.	24/04/2017		1.57	0.15	6.29	20.6	1																					
SW3-16	Upstream and downstream sites connected. Low flow, water level low. Shady. Weather fine.	11/05/2017		**2.61**	0.17	6.32	17.9	2	*1*	*1*	*0.02*	0.45	*50*	*50*	*50*														
SW3-16	Weather fine. Connected. Water level low.	8/06/2017		4.05	0.15	6.01	14.7	3																					
SW3-16	Upstream and downstream sites connected. Low water level, low flow. Weather fine.	24/07/2017		4.07	0.16	6.18	11.5	3	*1*	8	*0.02*	0.50	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	3/08/2017		4.84	0.16	6.23	11.9	4																					
SW3-16	Weather fine. U/S and D/S connected. Water level low. No observed flow.	5/09/2017		7.31	0.20	6.19	16.0	0	*1*	*1*	*0.02*	0.49	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	5/10/2017		5.28	0.22	6.65	21.1	2																					
SW3-16	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	2/11/2017		3.76	0.22	6.70	25.1	2	*1*	8	*0.02*	0.55	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	6/12/2017		4.14	0.24	6.59	25.5	**38**																					
SW3-16	Upstream and downstream connected. Low flow, medium water level. Weather fine.	23/01/2018		**3.32**	0.19	6.49	29.1	0	*1*	9	0.03	1.18	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	13/02/2018		4.77	0.20	6.62	27.4	5																					
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/03/2018		4.02	0.22	6.67	26.8	3	*1*	9	*0.02*	0.68	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	11/04/2018		2.49	0.22	6.12	23.1	**31**																					
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/05/2018		2.39	0.23	6.14	19.4	17	*1*	**20**	*0.02*	0.92	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	25/06/2018	11:35	4.55	0.25	6.26	12.3	**25**																					

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	16/07/2018	15:28	4.86	0.24	6.35	11.8	6	*1*	5	*0.02*	0.58	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2018	13:47	4.28	0.25	6.49	13.3	0																					
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/09/2018	13:09	4.78	0.26	6.84	19.1	15	*1*	8	*0.02*	0.50	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	26/10/2018	13:14	3.54	0.17	5.80	28.2	15																					
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2018	12:28	5.89	0.18	6.21	27.9	9	*1*	5	0.04	1.09	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2018	13:29	3.66	0.22	7.86	25.5	5																					
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	9/01/2019	11:48	**3.12**	0.20	6.63	28.5	16	*1*	10	0.07	1.55	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	7/02/2019	11:44	2.72	0.20	7.11	27.8	8																					
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2019	10:34	5.12	0.41	7.12	24.0	19	*1*	6	0.03	**2.90**	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/04/2019	13:25	3.84	0.44	7.23	20.8	77																					
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/05/2019	12:39	4.24	0.43	6.87	21.2	10	*1*	9	*0.02*	1.37	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	14/06/2019	10:26	7.31	0.45	7.28	15.1	7																					
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	4/07/2019	14:30	6.62	**0.81**	**7.16**	17.3	80	*1*	15	*0.02*	**2.04**	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/08/2019	10:29	9.59	0.48	7.32	15.5	7																					
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	19/09/2019	11:58	7.42	0.34	7.34	18.8	6	*1*	7	0.04	0.56	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/10/2019	12:36	8.93	0.45	7.66	19.7	12																					
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2019	10:24	7.19	0.44	7.64	23.4	16	*1*	5	*0.02*	0.51	*50*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2019	12:07	7.43	0.61	7.36	26.5	5																					
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/01/2020	12:55	5.10	0.58	7.97	31.1	5	*1*	6	*0.02*	0.62	*13*	*13*	*50*														

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	13:17	3.30	0.13	5.74	28.5	16																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/03/2020	13:34	3.75	0.12	5.92	27.1	223	*1*	19	0.04	0.86	*13*	*50*	*50*													
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/04/2020	10:08	9.09	0.13	5.77	19.4	18																				
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	14/05/2020	11:34	3.05	0.17	6.10	17.6	9	*1*	2	*0.02*	0.52	*13*	*50*	*50*													
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	10:33	4.41	0.17	6.48	15.8	10																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2020	12:19	4.69	0.23	7.03	23.0	9	*1*	2	*0.02*	0.46	*13*	*50*	*50*	0.180	*0.001*	*0.0010*	*0.002*	*0.002*	1.120	*0.005*	0.090	*0.0001*	**0.013**	*0.001*	*0.0005*	0.004
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	25/05/2021	13:36	4.41	0.11	5.33	16.8	24	*1*	7	*0.02*	0.60	*13*	*50*	*50*	3.220	*0.001*	*0.0010*	*0.002*	*0.002*	**3.320**	*0.005*	0.071	*0.0001*	0.003	*0.001*	*0.0005*	0.006
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.32	6.81		18	3	12	0.05	1.21	50	50	50	2.754	0.001	0.0010	0.002	0.002	2.902	0.005	0.142	0.0001	0.003	0.001	0.0005	0.062
P20				3.42	0.16	6.12																						
St Dev					0.13	0.53																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW08		27/02/2013		5.48	0.19	6.44	23.7	24	*3*	12	0.03	0.80																
Section3 SW08		21/03/2013		4.35	0.14	6.34	23.8	14	*3*	7	0.06	0.70																
Section3 SW08		18/04/2013		6.85	0.10	6.52	22.9	21	*3*	5	0.05	0.80																
Section3 SW08		22/05/2013		5.63	0.24	6.72	14.8	10	*3*	6	0.08	0.60																
Section3 SW08		27/06/2013		7.94	0.15	6.22	15.8	19	*3*	6	0.03	0.62																
Section3 SW08		24/07/2013		7.87	0.23	5.94	15.0	18	*3*	6	0.03	0.44																
Section3 SW08		21/08/2013		7.17	0.21	6.82	14.8	9	*3*	5	0.04	1.50																
Section3 SW08		25/09/2013		6.43	0.23	6.31	23.2	5	*3*	6	*0.01*	0.41																
Section3 SW08		23/10/2013		6.51	0.34	6.74	28.5	4	*3*	*3*	0.02	0.72																
Section3 SW08		28/11/2013		6.23	0.17	5.51	30.3	19	*3*	10	0.02	0.83																
Section3 SW08		18/12/2013		3.04	0.17	5.32	25.5	7	5	5	*0.25*	0.30																

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW3-15	Dry	2/08/2016																											
SW3-15	Intermittent watercourse	8/09/2016		5.37	0.22	6.11	16.1	0	*1*	7	0.03	0.62	*50*	*50*	*50*														
SW3-15	Flowing	6/10/2016		2.70	0.26	6.19	17.5	5																					
SW3-15		1/11/2016		4.33	0.28	6.55	22.4	9	*1*	3	*0.02*	0.59	*50*	140	*50*														
SW3-15		8/12/2016		3.48	0.27	6.30	24.9	88																					
SW3-15	Water level low, slight flow	13/01/2017		3.70	0.26	6.75	29.3	8	*1*	2	*0.02*	1.21	*50*	200	*50*														
SW3-15	Water level low, not flow	1/02/2017		3.64	0.31	6.67	30.6	0																					
SW3-15	U/s and d/s sites connected	24/03/2017		7.97	0.13	5.85	24.8	4	*1*	3	0.04	0.94	*50*	*50*	*50*														
SW3-15	U/s and d/s sites connected.	24/04/2017		0.92	0.15	6.22	19.8	1																					
SW3-15	Upstream and downstream sites connected. Low flow, low water level. Full sun, dense algae. Weather fine	11/05/2017		7.63	0.16	6.62	21.6	2	*1*	2	*0.02*	0.46	*50*	*50*	*50*														
SW3-15	Weather fine. Connected. Water level low	8/06/2017		5.06	0.15	6.12	14.8	4																					
SW3-15	Upstream and downstream sites connected. Low water level, low flow. Weather fine.	24/07/2017		6.20	0.16	6.18	14.6	7	*1*	3	*0.02*	0.54	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	3/08/2017		5.10	0.17	6.28	13.9	4																					
SW3-15	Weather fine. U/S and D/S connected. Water level very low. No observed flow.	5/09/2017		8.11	0.20	6.06	18.5	1	*1*	3	*0.02*	0.46	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	5/10/2017		5.65	0.22	6.63	22.7	5																					
SW3-15	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	2/11/2017		4.52	0.23	6.72	25.0	10	*1*	11	*0.02*	0.70	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	6/12/2017		4.79	0.24	6.47	26.6	14																					
SW3-15	Upstream and downstream connected. Low flow, medium water level. Weather fine.	23/01/2018		3.90	0.19	6.43	30.0	3	*1*	24	0.03	1.21	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	13/02/2018		2.62	0.16	6.43	27.5	23																					
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/03/2018		3.33	0.22	6.41	25.5	0	*1*	9	0.03	0.80	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	11/04/2018		2.84	0.21	6.25	23.8	8																					
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/05/2018		2.43	0.23	6.20	20.2	9	*1*	9	0.03	0.83	*13*	*50*	*50*														

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	25/06/2018	11:38	5.66	0.25	6.30	11.4	14																					
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	16/07/2018	15:36	5.03	0.23	6.65	12.9	13	*1*	23	0.07	2.02	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2018	13:42	5.62	0.25	6.63	15.4	2																					
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/09/2018	13:00	5.14	0.26	6.70	19.1	11	*1*	14	0.03	0.68	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	26/10/2018	13:10	2.91	0.17	5.83	28.5	13																					
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2018	12:21	6.41	0.19	6.14	26.4	12	*1*	11	0.05	1.34	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2018	13:32	4.36	0.22	7.52	26.6	9																					
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	9/01/2019	11:56	5.54	0.19	6.78	27.6	44	*1*	54	0.06	1.59	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	7/02/2019	11:39	1.79	0.21	7.11	26.2	12																					
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2019	10:30	3.32	0.39	6.94	24.1	29	*1*	7	*0.02*	2.56	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/04/2019	13:21	4.43	0.45	7.26	22.3	75																					
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/05/2019	12:35	3.87	0.41	6.81	20.7	38	*1*	136	0.21	2.19	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	14/06/2019	10:20	5.97	0.45	6.89	15.7	7																					
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/07/2019	14:22	5.99	0.43	6.53	16.3	80	*1*	20	0.03	1.15	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/08/2019	10:21	9.47	0.45	7.32	14.9	5																					
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	19/09/2019	11:54	8.33	0.34	7.36	19.0	6	*1*	12	0.03	0.76	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/10/2019	12:30	8.94	0.44	7.69	21.6	9																					
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/11/2019	10:19	5.69	0.51	7.27	22.6	9	*1*	9	*0.02*	0.65	*50*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2019	12:11	7.49	0.54	7.29	26.0	7																					
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/01/2020	12:47	6.68	0.78	7.87	30.5	6	*1*	8	*0.02*	0.71	*13*	*13*	*50*														
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	13:14	3.07	0.11	5.84	29.5	13																					

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/03/2020	13:27	2.83	0.11	6.06	26.1	18	*1*	20	0.04	0.85	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/04/2020	10:06	4.11	0.13	5.80	19.5	18																					
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	14/05/2020	11:37	3.92	0.17	6.00	17.6	15	*1*	10	0.06	0.70	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	10:35	5.02	0.16	6.49	16.0	10																					
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2020	12:24	4.15	0.24	6.52	23.0	15	*1*	8	*0.02*	0.59	*13*	*50*	*50*	0.290	*0.001*	*0.0010*	*0.002*	*0.002*	1.310	*0.005*	0.160	*0.0001*	*0.003*	*0.001*	*0.0005*	0.075
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	25/05/2021	13:41	4.74	0.11	5.30	16.4	27	*1*	4	0.03	0.63	*13*	*50*	*50*	3.370	*0.001*	*0.0010*	*0.002*	*0.002*	3.300	*0.005*	0.069	*0.0001*	*0.003*	*0.001*	*0.0005*	0.010

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-16	Fast flowing water	4/08/2016		8.43	0.09	5.54	13.7	71																					
SW3-16	Moderate flow - appears turbid	25/08/2016		4.69	0.20	5.78	14.6	29	2	9	0.03	0.61	*50*	*50*	*50*														
SW3-16	Accurate turbidity reading could not be obtained	10/11/2016		4.74	0.28	7.00	28.4		*1*	3	*0.02*	0.54	*50*	*50*	*50*														
SW3-16		6/12/2016		8.30	0.27	7.39	26.5	72																					
SW3-16	Slight flow, water level low.	7/01/2017		2.35	0.26	6.05	26.0	16	*1*	4	*0.02*	0.50	50	*50*	*50*														
SW3-16	Water level low, no flow	27/01/2017		2.77	0.30	6.54	27.6	0																					
SW3-16	Water level low, no flow	28/02/2017		3.66	0.32	6.60	23.1	35																					
SW3-16		7/03/2017		3.10	0.31	6.72	27.1	7	*1*	7	*0.02*	0.50	*50*	*50*	*50*														
SW3-16		14/03/2017		8.24	0.30	6.55	22.9	3	*1*	19	0.03	0.70	*50*	*50*	*50*														
SW3-16	Weather showers. Connected. Water level high. Slight flow.	14/06/2017		4.79	0.07	6.05	16.7	19																					
SW3-16	Upstream and downstream sites connected. Water level slightly lower than usual. Weather fine.	10/10/2017		5.34	0.22	8.04	25.3	8	*1*	3	0.03	0.49	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow. High water level. Rain.	16/10/2017		4.75	0.21	8.32	20.8	352																					
SW3-16	Upstream and downstream sites connected. No visible flow. High water level.	6/11/2017		3.92	0.22	6.59	24.0	29																					
SW3-16	Upstream and downstream sites connected. No visible flow. High water level. Weather, fine.	2/12/2017		3.66	0.25	6.54	24.9	14	*1*	11	*0.02*	0.47	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected, no visible flow, medium water level. Overcast.	22/12/2017		4.90	0.26	6.32	26.3	38																					
SW3-16	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	4/01/2018		2.25	0.16	5.74	24.2	25																					
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/02/2018		2.80	0.19	6.01	24.6	5	*1*	9	*0.02*	0.85	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		3.40	0.20	6.49	25.4	42	*1*	16	0.03	1.06	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/03/2018		3.05	0.22	6.75	24.8	54																					
SW3-16	Upstream and downstream sites connected. Low flow, low water level. Overcast.	22/03/2018		4.60	0.21	6.58	24.8	18	*1*	12	*0.02*	1.75	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/04/2018		3.39	0.22	6.11	23.1	23	*1*	19	*0.02*	1.15	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	27/04/2018		1.54	0.22	6.62	20.2	15																					
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/06/2018	11:22	5.14	0.23	6.46	14.6	23																					

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	28/06/2018	11:59	5.01	0.23	6.09	14.6	27	*1*	4	*0.02*	0.69	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	12:25	5.75	0.25	6.97	14.6	16	*1*	8	*0.02*	0.63	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/09/2018	11:31	5.98	0.26	6.57	16.9	23																				
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	6/10/2018	11:09	4.42	0.27	6.31	20.2	24	*1*	9	*0.02*	0.56	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	12/10/2018	12:23	4.93	0.27	6.70	19.5	52																				
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	14/12/2018	11:52	3.55	0.23	7.38	26.5	6																				
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/12/2018	13:19	4.62	0.22	7.07	26.0	**102**	*1*	**52**	0.04	0.87	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	22/02/2019	14:47	3.97	0.20	6.92	26.1	23	*1*	**23**	0.03	1.16	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Rain.	16/03/2019	10:43	4.80	0.27	6.92	24.0	20																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/04/2019	14:51	4.83	0.38	7.21	21.0	17	*1*	16	0.03	1.54	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	16/05/2019	14:44	5.59	0.43	6.24	17.0	**49**																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	24/06/2019	13:23	6.51	0.44	6.95	12.7	17	*1*	3	*0.02*	0.53	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	28/06/2019	11:53	6.59	0.50	6.87	16.1	**189**																				
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	5/07/2019	11:46	6.69	0.64	**8.65**	16.1	106																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	12/10/2019	10:02	5.69	0.45	6.94	18.5	7	*1*	13	0.04	0.71	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	24/12/2019	12:53	5.07	0.53	6.84	26.8	**390**																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	16/01/2020	10:23	5.46	0.63	8.00	26.8	**58**	*1*	**28**	0.04	0.88	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. High flow, high water level. Water appeared more turbid mid-stream, however sampled closer to bank due to safety concerns. Rain.	18/01/2020	10:50	6.15	0.09	6.14	21.6	330	*1*	172	0.12	2.14	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Medium flow, very high water level. Drizzle.	7/02/2020	11:03	5.49	0.08	6.37	22.7	88																				
SW3-16	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	10/02/2020	12:04	4.74	0.08	6.21	23.7	37																				

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	27/03/2020	12:21	2.92	0.16	6.05	22.6	39	*1*	32	0.05	1.04	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	11:53	3.82	0.11	5.88	21.8	243	*1*	74	0.04	0.89	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Low flow, high water level. Overcast.	4/04/2020	10:46	4.13	0.11	5.53	22.0	172																					
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	10:58	4.53	0.17	6.42	16.3	12	*1*	6	0.05	0.76	*13*	*50*	*50*														
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	8/08/2020	13:49	5.67	0.08	5.59	14.5	20																					
SW3-16	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	13:02	6.81	0.03	6.19	22.3	54	*1*	11	*0.02*	0.59	*15*	*5*	*50*	4.870	*0.001*	*0.0010*	*0.002*	*0.002*	1.990	*0.005*	0.037	*0.0001*	*0.003*	*0.001*	*0.0005*	0.009
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	12:25	4.19	0.18	6.61	23.9	10																					
SW3-16	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	3/05/2021	14:17	5.21	0.11	6.07	18.4	34	*1*	21	*0.02*	0.70	*13*	*50*	*50*	5.470	*0.001*	*0.0010*	*0.002*	*0.002*	3.470	*0.005*	0.053	*0.0001*	*0.003*	*0.001*	*0.0005*	0.011
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.30	6.89		48	1	18	0.04	1.01	13	50	50	5.032	0.001	0.0010	0.002	0.002	3.206	0.005	0.057	0.0001	0.003	0.001	0.0005	0.012
P20				3.44	0.16	6.00																							
St Dev					0.12	0.59																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW08		7/02/2013		3.67	0.17	5.73	25.7	10	*3*	13	0.08	0.60																	
Section3 SW08		29/05/2013		7.87	0.28	6.74	16.9	14	*3*	8	0.02	0.50																	
Section3 SW08		3/07/2013		7.73	0.16	5.71	16.6	33	*3*	*3*	0.03	0.85																	
Section3 SW08		14/11/2013		6.35	0.26	5.77	29.0	15	*3*	8	0.02	0.51																	
Upstream Monitoring																													
SW3-15	Fast flowing water	4/08/2016		7.52	0.07	5.39	14.5	36																					
SW3-15	Moderate flow - appears turbid	25/08/2016		4.02	0.21	5.85	14.9	26	*1*	7	0.03	0.62	*50*	*50*	*50*														
SW3-15		10/11/2016		6.09	0.28	6.89	27.7	0	*1*	7	*0.02*	0.55	*50*	*50*	*50*														

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-15		6/12/2016		8.40	0.27	7.22	26.2	19																				
SW3-15	Slight flow, water level low	7/01/2017		3.05	0.26	6.03	26.1	43																				
SW3-15	Water level low, no flow	27/01/2017		3.52	0.30	6.48	27.3	0																				
SW3-15	Water level low, no flow	28/02/2017		2.84	0.32	6.29	23.5	70																				
SW3-15		7/03/2017		4.32	0.31	6.67	27.5	11	*1*	7	*0.02*	0.60	*50*	*50*	*50*													
SW3-15		14/03/2017		3.91	0.31	6.48	22.9	3	*1*	7	0.08	0.40	*50*	*50*	*50*													
SW3-15	Weather showers. Connected. Water level high. Slight flow.	14/06/2017		5.42	0.06	6.00	16.5	32																				
SW3-15	Upstream and downstream sites connected. Water level slightly lower than usual. Weather fine.	10/10/2017		4.79	0.23	7.99	25.0	16	*1*	5	0.04	1.05	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected. No visible flow. High water level. Rain.	16/10/2017		5.33	0.22	8.34	21.0	56																				
SW3-15	Upstream and downstream sites connected. No visible flow. High water level.	6/11/2017		4.44	0.22	6.82	25.4	26																				
SW3-15	Upstream and downstream sites connected. No visible flow. High water level. Weather, fine.	2/12/2017		3.66	0.25	6.85	25.5	6	*1*	10	*0.02*	0.58	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected, no visible flow, medium water level. Overcast.	22/12/2017		5.12	0.26	6.33	26.7	44																				
SW3-15	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	4/01/2018		2.28	0.16	5.74	23.8	25																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/02/2018		2.64	0.19	6.27	24.9	0	*1*	10	0.03	1.22	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	21/02/2018		1.80	0.20	6.32	25.3	33	*1*	20	0.03	1.02	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/03/2018		3.42	0.22	6.71	25.4	28																				
SW3-15	Upstream and downstream sites connected. Low flow, low water level. Drizzle.	22/03/2018		4.77	0.21	6.40	25.4	33	*1*	15	*0.02*	0.67	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/04/2018		2.60	0.22	5.98	22.5	21	*1*	12	*0.02*	0.98	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	27/04/2018		1.11	0.22	6.66	20.2	6																				
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/06/2018	11:18	5.24	0.23	6.26	15.4	25																				
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	28/06/2018	11:55	5.25	0.23	6.22	15.0	0	*1*	19	0.04	0.74	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	12:29	5.76	0.25	6.94	14.3	17	*1*	8	*0.02*	0.54	*13*	*50*	*50*													
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/09/2018	11:27	5.30	0.26	6.64	17.8	29																				

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	6/10/2018	11:00	4.22	0.26	6.35	19.9	32	*1*	20	*0.02*	0.59	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	12/10/2018	12:19	5.33	0.26	6.96	19.7	48																					
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	14/12/2018	11:58	2.47	0.26	6.96	25.4	26																					
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/12/2018	13:11	3.86	0.21	7.07	25.1	36	*1*	18	0.03	1.01	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	22/02/2019	14:43	3.35	0.21	6.78	26.0	16	*1*	12	0.03	1.38	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Rain.	16/03/2019	10:37	3.80	0.25	6.92	23.2	24																					
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/04/2019	14:42	6.62	0.39	7.28	22.9	35	*1*	32	0.05	3.10	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	16/05/2019	14:40	5.97	0.39	6.00	16.8	10																					
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	24/06/2019	13:15	4.77	0.42	6.90	12.8	51	*1*	6	*0.02*	0.54	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	28/06/2019	11:48	6.82	0.45	6.82	17.2	127																					
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	5/07/2019	11:40	6.05	0.55	6.72	16.8	113																					
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	12/10/2019	10:08	3.50	0.44	6.75	18.1	6	*1*	9	*0.02*	0.69	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	24/12/2019	12:49	3.75	0.55	6.82	26.3	319																					
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	16/01/2020	10:29	4.34	0.58	7.44	26.6	6	*1*	6	*0.02*	0.63	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	10:41	6.58	0.07	5.79	21.5	962	*1*	1168	0.38	2.00	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	10:59	5.92	0.08	6.11	23.2	178																					
SW3-15	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	10/02/2020	12:00	3.45	0.09	6.05	24.7	98																					
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	27/03/2020	12:15	2.94	0.16	6.04	22.7	38	*1*	13	0.04	0.99	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	11:48	4.08	0.11	6.01	21.7	241	*1*	60	0.04	0.89	*13*	*50*	*50*														
SW3-15	Upstream and downstream sites connected. Low flow, high water level. Overcast.	4/04/2020	10:43	4.15	0.11	5.50	21.9	158																					
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:02	4.36	0.18	6.43	16.8	20	*1*	10	0.04	0.78	*13*	*50*	*50*														

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	13:52	5.47	0.08	5.55	14.3	22																					
SW3-15	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	13:05	8.98	0.03	6.17	22.2	45	*1*	10	*0.02*	0.55	*15*	*5*	*50*	4.640	*0.001*	*0.0010*	*0.002*	*0.002*	1.950	*0.005*	0.035	*0.0001*	*0.003*	*0.001*	*0.0005*	0.010
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	12:28	4.49	0.16	6.66	24.2	8																					
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	3/05/2021	14:20	6.03	0.11	5.86	17.8	33	*1*	17	*0.02*	0.69	*13*	*50*	*50*	5.130	*0.001*	*0.0010*	*0.002*	*0.002*	3.520	*0.005*	0.063	*0.0001*	*0.003*	*0.001*	*0.0005*	0.012

SW3-18 - Unnamed tributary of Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-18	Private property - no access	2/08/2016																											
SW3-18	Private property - no access	8/09/2016																											
SW3-18	Private property - no access	6/10/2016																											
SW3-18	Dry	1/11/2016																											
SW3-18	Dry	8/12/2016																											
SW3-18	Dry	13/01/2017																											
SW3-18	Dry	1/02/2017																											
SW3-18	Visible flow	24/03/2017		4.28	0.12	5.40	24.1	5	*1*	4	*0.02*	0.86	*50*	*50*	*50*														
SW3-18	Insufficient water to monitor	24/04/2017																											
SW3-18	Dry	11/05/2017																											
SW3-18	Dry	8/06/2017																											
SW3-18	Insufficient water to monitor	24/07/2017																											
SW3-18	Insufficient water to monitor	3/08/2017																											
SW3-18	Weather fine. U/S and D/S not connected. Water level low. No observed flow. Sample taken in isolated pool. Surface film.	5/09/2017		4.72	**0.31**	5.58	14.4	5	*1*	13	*0.02*	0.39	*13*	*50*	*50*														
SW3-18	Upstream and downstream sites not connected. Low water level. Intermittent / isolated pool. Weather fine.	5/10/2017		**2.51**	**0.37**	**6.55**	18.8	8																					
SW3-18	Dry	2/11/2017																											
SW3-18	Dry	6/12/2017																											
SW3-18	Dry	23/01/2018																											
SW3-18	Dry - not sampled. Weather fine.	13/02/2018																											
SW3-18	Dry - not sampled.	20/03/2018																											
SW3-18	Dry - not sampled. Weather fine.	11/04/2018																											
SW3-18	Dry - not sampled. Weather fine.	8/05/2018																											
SW3-18	Waterway dry. Weather fine.	25/06/2018	11:15																										
SW3-18	Dry, not sampled.	16/07/2018	15:06																										
SW3-18	Waterway dry, not sampled.	8/08/2018	13:35																										
SW3-18	Dry - not sampled.	17/09/2018	12:46																										
SW3-18	Insufficient water to sample.	26/10/2018	13:00																										

SW3-18 - Unnamed tributary of Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-18	Dry, not sampled.	5/11/2018																											
SW3-18	Dry, not sampled.	4/12/2018	13:45																										
SW3-18	Dry, not sampled.	9/01/2019	11:15																										
SW3-18	Dry, not sampled.	7/02/2019	12:12																										
SW3-18	Dry, not sampled.	20/03/2019	10:29																										
SW3-18	No visible flow, very low water level. Weather fine.	24/04/2019	13:08	3.82	0.48	6.59	21.1	389																					
SW3-18	No visible flow, very low water level. Weather fine.	2/05/2019	12:23	2.28	0.77	6.05	20.1	0	*1*	6	0.03	0.57	*13*	*50*	*50*														
SW3-18	Monitoring ceased in May 2019																												
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.29	6.12		17	3	28	0.02	0.78	50	50	50	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				3.65	0.12	5.29																							
St Dev					0.10	0.86																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW09		27/02/2013		6.72	0.13	6.85	23.8	18	*3*	10	0.02	0.70																	
Section3 SW09		21/03/2013		6.53	0.11	6.46	20.5	6	*3*	*3*	0.01	0.60																	
Section3 SW09		18/04/2013		6.71	0.12	6.09	22.1	9	*3*	*3*	0.02	0.80																	
Section3 SW09		22/05/2013		6.42	0.17	6.05	14.6	16	*3*	24	0.02	0.50																	
Section3 SW09		27/06/2013		8.77	0.16	6.00	14.4	5	*3*	*3*	*0.01*	0.30																	
Section3 SW09		24/07/2013		7.59	0.21	5.24	12.9	6	*3*	7	*0.01*	0.32																	
Section3 SW09		21/08/2013		4.87	0.29	6.13	14.5	13	*3*	31	0.02	0.51																	
Section3 SW09		25/09/2013		1.92	0.33	5.32	19.0	16	*3*	33	*0.01*	0.39																	
Section3 SW09		23/10/2013		3.54	0.43	5.43	22.4	32	*3*	29	0.05	1.30																	
Section3 SW09		28/11/2013		5.31	0.24	5.32	21.4	15	*3*	11	*0.01*	0.54																	
Section3 SW09		18/12/2013		4.09	0.29	3.48	24.9	18	*3*	13	*0.25*	0.40																	
Upstream Monitoring																													
SW3-17	Private property - no access	2/08/2016																											

SW3-18 - Unnamed tributary of Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-17	Private property - no access	8/09/2016																											
SW3-17	Private property - no access	6/10/2016																											
SW3-17	Dry	1/11/2016																											
SW3-17	Dry	8/12/2016																											
SW3-17	Dry	13/01/2017																											
SW3-17	Dry	1/02/2017																											
SW3-17	Visible flow	24/03/2017		3.28	0.12	5.28	23.5	4	*1*	8	*0.02*	1.14	*50*	*50*	*50*														
SW3-17	Insufficient water to monitor	24/04/2017																											
SW3-17	Dry	11/05/2017																											
SW3-17	Dry	8/06/2017																											
SW3-17	Insufficient water to monitor	24/07/2017																											
SW3-17	Insufficient water to monitor	3/08/2017																											
SW3-17	Dry	5/09/2017																											
SW3-17	Dry	5/10/2017																											
SW3-17	Dry	2/11/2017																											
SW3-17	Dry	6/12/2017																											
SW3-17	Dry	23/01/2018																											
SW3-17	Dry - not sampled. Weather fine.	13/02/2018																											
SW3-17	Dry - not sampled.	20/03/2018																											
SW3-17	Dry - not sampled. Weather fine.	11/04/2018																											
SW3-17	Dry - not sampled. Weather fine.	8/05/2018																											
SW3-17	Waterway dry. Weather fine.	25/06/2018	11:16																										
SW3-17	Dry, not sampled.	16/07/2018	15:07																										
SW3-17	Waterway dry, not sampled.	8/08/2018	13:36																										
SW3-17	Dry - not sampled.	17/09/2018	12:48																										
SW3-17	Insufficient water to sample.	26/10/2018	12:58																										
SW3-17	Dry, not sampled.	5/11/2018																											
SW3-17	Dry, not sampled.	4/12/2018	13:44																										
SW3-17	Dry, not sampled.	9/01/2019	11:14																										
SW3-17	Dry, not sampled.	7/02/2019	12:12																										

SW3-18 - Unnamed tributary of Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-17	Dry, not sampled.	20/03/2019	10:29																										
SW3-17	Dry, not sampled.	24/04/2019	12:00																										
SW3-17	Dry, not sampled.	2/05/2019																											
SW3-17	Monitoring ceased in May 2019																												

SW3-18 - Unnamed tributary of Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW3-18	Private property - no access	4/08/2016																										
SW3-18	Private property - no access	25/08/2016																										
SW3-18	Dry	10/11/2016																										
SW3-18	Dry	6/12/2016																										
SW3-18	Dry	7/01/2017																										
SW3-18	Dry	27/01/2017																										
SW3-18	Dry	28/02/2017																										
SW3-18	Dry	7/03/2017																										
SW3-18	Dry	14/03/2017																										
SW3-18	Weather showers. Connected. Water level low, slight flow.	14/06/2017		6.28	0.08	5.58	17.4	10																				
SW3-18	Dry	10/10/2017																										
SW3-18	Upstream and downstream sites connected. No visible flow. Very low water level. Rain.	16/10/2017		6.97	0.25	8.31	21.8	39																				
SW3-18	Dry	6/11/2017																										
SW3-18	Dry	2/12/2017																										
SW3-18	Dry	22/12/2017																										
SW3-18	Dry	4/01/2018																										
SW3-18	Unable to access due to haul road being inundated and no safe access.	5/02/2018																										
SW3-18	Dry, not sampled.	21/02/2018																										
SW3-18	Dry - not sampled	7/03/2018																										
SW3-18	Dry - not sampled	22/03/2018																										
SW3-18	Dry	20/04/2018																										
SW3-18	Dry	27/04/2018																										
SW3-18	Insufficient water to sample. Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	9:37																									
SW3-18	Insufficient water to sample. Weather fine.	28/06/2018	11:58																									
SW3-18	Dry, not sampled.	27/08/2018	12:12																									
SW3-18	Dry, not sampled.	7/09/2018	11:22																									
SW3-18	Dry, not sampled.	6/10/2018	10:41																									

SW3-18 - Unnamed tributary of Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-18	Insufficient water to sample.	12/10/2018	12:33																										
SW3-18	Dry, not sampled.	14/12/2018	11:42																										
SW3-18	Insufficient water to sample.	17/12/2018	12:57																										
SW3-18	Dry, not sampled.	22/02/2019	14:10																										
SW3-18	Dry, not sampled.	16/03/2019	10:25																										
SW3-18	No visible flow, very low water level. Overcast.	20/04/2019	15:13	3.44	0.54	6.49	20.7	125	*1*	165	0.10	1.22	*13*	*50*	*50*														
SW3-18	Monitoring ceased in May 2019																												
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.20	6.34		16	3	4	0.02	0.74	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				5.25	0.15	5.31																							
St Dev					0.07	1.15																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW09		7/02/2013		7.77	0.15	5.65	24.2	10	*3*	5	0.02	0.30																	
Section3 SW09		29/05/2013		7.97	0.27	6.34	15.5	4	*3*	*3*	0.02	0.30																	
Section3 SW09		3/07/2013		7.99	0.15	5.31	17.5	39	*3*	*3*	0.02	0.80																	
Section3 SW09		14/11/2013		5.25	0.20	5.13	22.7	8	*3*	*3*	0.02	0.70																	
Upstream Monitoring																													
SW3-17	Private property - no access	4/08/2016																											
SW3-17	Private property - no access	25/08/2016																											
SW3-17	Dry	10/11/2016																											
SW3-17	Dry	6/12/2016																											
SW3-17	Dry	7/01/2017																											
SW3-17	Dry	27/01/2017																											
SW3-17	Dry	28/02/2017																											
SW3-17	Dry	7/03/2017																											
SW3-17	Dry	14/03/2017																											

SW3-18 - Unnamed tributary of Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-17	Weather showers. Connected. Water level low, slight flow.	14/06/2017		6.66	0.08	5.86	17.3	10																				
SW3-17	Dry	10/10/2017																										
SW3-17	Upstream and downstream sites connected. No visible flow. Very low water level. Rain.	16/10/2017		4.24	0.20	8.28	20.3	16																				
SW3-17	Dry	6/11/2017																										
SW3-17	Dry	2/12/2017																										
SW3-17	Dry	22/12/2017																										
SW3-17	Dry	4/01/2018																										
SW3-17	Unable to access due to haul road being inundated and no safe access.	5/02/2018																										
SW3-17	Dry - not sampled.	21/02/2018																										
SW3-17	Dry - not sampled	7/03/2018																										
SW3-17	Dry - not sampled.	22/03/2018																										
SW3-17	Dry	20/04/2018																										
SW3-17	Dry	27/04/2018																										
SW3-17	Insufficient water to sample. Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	10:12																									
SW3-17	Insufficient water to sample. Weather fine.	28/06/2018	11:55																									
SW3-17	Dry, not sampled.	27/08/2018	12:10																									
SW3-17	Dry, not sampled.	7/09/2018	11:20																									
SW3-17	Dry, not sampled.	6/10/2018	10:40																									
SW3-17	Insufficient water to sample.	12/10/2018	12:32																									
SW3-17	Dry, not sampled.	14/12/2018	11:42																									
SW3-17	Dry, not sampled.	17/12/2018	12:58																									
SW3-17	Dry, not sampled.	22/02/2019	14:11																									
SW3-17	Dry, not sampled.	16/03/2019	10:24																									
SW3-17	Dry, not sampled.	20/04/2019	13:50																									
SW3-17	Monitoring ceased in May 2019																											

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW3-20	Dry	2/08/2016																										
SW3-20	Dry	8/09/2016																										
SW3-20	Dry	6/10/2016																										
SW3-20	Dry	1/11/2016																										
SW3-20		8/12/2016		**1.31**	**0.38**	**5.08**	20.7	**88**																				
SW3-20	Very low water level, no flow and stagnant. Not connected with SW3-19	13/01/2017		3.06	**0.55**	**3.62**	29.5	20	1	15	*0.02*	0.75	*50*	*50*	*50*													
SW3-20	Very low water level, no flow and stagnant. Not connected with SW3-19	1/02/2017		2.10	**0.68**	**4.24**	25.5	26																				
SW3-20	Visible flow	24/03/2017		0.62	0.13	5.54	25.2	2	*1*	3	0.04	1.06	*50*	*50*	*50*													
SW3-20	Stagnant water. No connection between u/s and d/s monitoring sites.	24/04/2017		0.00	0.27	5.55	21.0	1																				
SW3-20	Upstream and downstream sites not connected. No visible flow. Water level low, isolated pool. Moderate to heavy surface scum. Weather fine.	11/05/2017		**0.30**	0.26	**5.01**	19.0	9	*1*	27	0.02	0.45	*50*	*50*	*50*													
SW3-20	Weather fine. Not connected. Water level low. Stagnant	8/06/2017		**0.77**	0.27	5.70	15.0	9																				
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	24/07/2017		**0.89**	**0.28**	5.24	14.0	2	*1*	2	*0.02*	0.41	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Heavy scum surface film. Weather fine.	3/08/2017		**1.06**	**0.29**	**5.08**	13.9	3																				
SW3-20	Weather fine. Unsure if U/S and D/S are connected. Water level very low. No observed flow. Lots of floating vegetation.	5/09/2017		**1.04**	**0.31**	4.20	14.2	5	*1*	20	*0.02*	0.38	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites connected. Low water level. No visible flow. Surface scum. Weather fine.	5/10/2017		3.68	**0.32**	**4.72**	18.6	3																				
SW3-20	Upstream and downstream not connected, no fow. Water level low and stagnant.	2/11/2017		1.58	0.27	5.29	23.7	0	*1*	45	*0.02*	0.70	*13*	*50*	*50*													
SW3-20	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		3.75	0.23	5.28	25.0	2																				
SW3-20	Upstream and downstream not connected. No visible flow, very low water level. Weather fine.	23/01/2018		2.25	0.26	5.71	25.7	19	*1*	8	*0.02*	0.76	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		3.54	0.27	5.77	25.7	7																				
SW3-20	Unable to sample due to safety related access issues - moxies working in area.	20/03/2018																										

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	11/04/2018		1.03	0.27	5.60	22.7	38																				
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2018		1.46	0.31	5.54	18.7	97	*1*	41	*0.02*	0.59	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	11:17	9.38	0.30	5.84	13.6	33																				
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Stagnant, no flow. Macrophytes with algal cover. Weather fine.	16/07/2018	14:39	1.66	0.28	5.55	13.7	152	*1*	100	0.07	1.87	*13*	*50*	*50*													
SW3-20	No visible flow, very low water level. Weather fine.	8/08/2018	13:26	0.66	0.29	6.15	11.8	58																				
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	12:25	1.56	0.43	6.07	17.0	45	*1*	35	*0.02*	0.53	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/10/2018	12:41	0.00	0.28	4.93	22.3	20																				
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2018	11:35	0.38	0.28	5.31	22.8	57	*1*	22	0.03	1.11	*13*	*50*	*50*													
SW3-20	Very low flow, dry. Weather fine.	4/12/2018	14:03	2.94	0.49	6.73	22.9	34																				
SW3-20	Upstream and downstream sites not connected. Low flow, low water level. Overcast.	9/01/2019	11:00	0.81	0.24	6.07	25.3	44	*1*	22	0.04	1.23	*13*	*50*	*50*													
SW3-20	No visible flow, very low water level. Weather fine.	7/02/2019	12:57	0.76	0.30	6.83	25.0	428																				
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2019	10:07	1.85	0.70	5.87	22.8	101	*1*	45	0.07	2.97	*13*	*50*	*50*													
SW3-20	No visible flow, very low water level. Weather fine.	24/04/2019	12:55	1.25	0.72	6.00	20.3	9																				
SW3-20	No visible flow, very low water level. Weather fine.	2/05/2019	12:10	1.21	0.69	5.04	19.9	33	*1*	25	0.08	0.81	*13*	*50*	*50*													
SW3-20	No visible flow, very low water level. Weather fine.	14/06/2019	9:49	2.94	0.74	6.55	14.9	20																				
SW3-20	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	4/07/2019	13:45	1.85	0.64	4.84	17.6	24	*1*	7	*0.02*	1.28	*13*	*50*	*50*													
SW3-20	Dry, not sampled	19/08/2019	11:48																									
SW3-20	Insufficient water to sample.	19/09/2019	12:27																									
SW3-20	Dry, not sampled.	3/10/2019	12:58																									
SW3-20	Dry, not sampled.	5/11/2019	10:32																									
SW3-20	Dry, not sampled.	4/12/2019	12:40																									
SW3-20	Dry, not sampled.	8/01/2020	12:25																									
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	18/02/2020	13:31	1.51	0.05	5.68	27.8	11																				

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	3/03/2020	13:47	2.85	0.13	5.36	27.7	16	*1*	13	0.06	1.38	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	15/04/2020	9:48	1.94	0.14	5.15	19.0	42																					
SW3-20	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/05/2020	11:55	4.08	0.25	6.04	18.0	17	*1*	14	*0.02*	0.65	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	15/06/2020	10:46	3.38	0.32	6.40	16.3	**46**																					
SW3-20	Insufficient water to sample.	5/11/2020																											
SW3-20	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	25/05/2021	13:57	3.75	0.14	5.48	17.5	22	*1*	12	*0.03*	0.61	*13*	*50*	*50*	**2.080**	0.001	0.0010	0.002	0.002	**3.730**	0.005	0.150	0.0001	0.003	0.001	0.0005	**0.120**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.27	5.80		45	3	31	0.06	1.17	50	50	50	0.420	0.001	0.0010	0.002	0.002	2.830	0.005	0.320	0.0001	0.003	0.001	0.0005	0.006
P20				1.56	0.14	5.13																							
St Dev					0.08	0.67																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW10		6/03/2013		3.27	0.37	5.82	23.4	21	*3*	17	0.03	1.00																	
Section3 SW10		21/03/2013		2.46	0.13	5.79	21.9	11	*3*	13	0.05	1.00																	
Section3 SW10		18/04/2013		4.40	0.08	5.79	21.1	23	*3*	17	0.04	1.00																	
Section3 SW10		22/05/2013		4.63	0.28	5.87	14.2	17	*3*	13	0.04	0.80																	
Section3 SW10		27/06/2013		5.81	0.15	4.62	15.5	26	*3*	9	0.04	1.00																	
Section3 SW10		24/07/2013		5.01	0.19	5.13	12.0	33	*3*	29	0.03	0.90																	
Section3 SW10		21/08/2013		6.69	0.17	5.14	11.4	21	*3*	21	0.06	0.64																	
Section3 SW10		25/09/2013		6.39	0.23	4.53	22.8	6	*3*	11	0.01	0.61																	
Section3 SW10	Dry	23/10/2013																											
Section3 SW10		28/11/2013		3.32	0.16	5.10	22.0	26	*3*	26	0.01	0.92																	
Section3 SW10		18/12/2013		3.18	0.26	2.99	25.2	20	*3*	18	0.03	1.00																	
Upstream Monitoring																													
SW3-19	Dry	2/08/2016																											

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-19	Not flowing	8/09/2016		5.31	0.18	5.74	17.3	71	*1*	20	0.05	1.00	*50*	*50*	*50*														
SW3-19	Not flowing	6/10/2016		3.51	0.20	5.17	18.7	6																				
SW3-19		1/11/2016		2.31	0.34	4.04	26.4	21	*1*	24	0.04	1.24	*50*	*50*	*50*														
SW3-19	Dry	8/12/2016																											
SW3-19	Dry	13/01/2017																											
SW3-19	Dry	1/02/2017																											
SW3-19	Visible flow	24/03/2017		0.37	0.13	5.67	25.4	0	*1*	4	0.04	1.03	*50*	*50*	*50*														
SW3-19		24/04/2017		0.44	0.15	5.62	20.2	102																					
SW3-19	Field data download error.	11/05/2017							*1*	3	0.03	0.62	*50*	*50*	*50*														
SW3-19	Weather fine. Not connected. Water level low. Stagnant.	8/06/2017		1.64	0.19	5.39	13.9	45																					
SW3-19	Insufficient water to monitor	24/07/2017																											
SW3-19	Insufficient water to monitor	3/08/2017																											
SW3-19	Weather fine. Unsure if U/S and D/S are connected. Water level very low. No observed flow. Lots of floating vegetation.	5/09/2017		3.06	0.15	4.82	18.6	4	*1*	24	*0.02*	0.77	*13*	*50*	*50*														
SW3-19	Insufficient water to sample.	5/10/2017																											
SW3-19	Upstream and downstream not connected, no fow. Water level low and stagnant.	2/11/2017		1.91	0.21	5.79	25.7	5	*1*	47	0.05	1.21	*13*	*50*	*50*														
SW3-19	No connecton between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		5.00	0.30	5.33	24.6	17																					
SW3-19	Dry	23/01/2018																											
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		1.33	0.24	5.69	27.0	18																					
SW3-19	Dry - not sampled	20/03/2018																											
SW3-19	Dry - not sampled. Weather fine.	11/04/2018																											
SW3-19	Dry - not sampled. Weather fine.	8/05/2018																											
SW3-19	Waterway dry. Weather fine.	25/06/2018	11:12																										
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/07/2018	14:58	4.59	0.21	5.95	11.2	7	*1*	35	0.07	1.30	*13*	*50*	*50*														
SW3-19	Waterway dry, not sampled.	8/08/2018	13:29																										
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	12:40	1.56	0.26	5.74	19.6	65	*1*	11	0.04	0.79	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/10/2018	12:51	2.78	0.19	5.52	28.3	62																					

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2018	11:50	3.40	0.20	5.80	28.6	54	*1*	50	0.11	1.95	*13*	*50*	*50*														
SW3-19	Dry, not sampled.	4/12/2018	13:55																										
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/01/2019	11:09	0.89	0.27	6.16	26.1	23	*1*	32	0.07	1.10	*13*	*50*	*50*														
SW3-19	Dry, not sampled.	7/02/2019	13:05																										
SW3-19	Dry, not sampled.	20/03/2019	10:06																										
SW3-19	Dry, not sampled.	24/04/2019	11:46																										
SW3-19	Dry, not sampled.	2/05/2019																											
SW3-19	Dry, not sampled.	14/06/2019	9:50																										
SW3-19	Insufficient water to monitor.	4/07/2019																											
SW3-19	Dry, not sampled	19/08/2019	11:45																										
SW3-19	Dry, not sampled.	19/09/2019	12:26																										
SW3-19	Dry, not sampled.	3/10/2019	12:57																										
SW3-19	Dry, not sampled.	5/11/2019	10:31																										
SW3-19	Dry, not sampled.	4/12/2019	12:40																										
SW3-19	Dry, not sampled.	8/01/2020	12:24																										
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	18/02/2020	13:34	0.66	0.14	5.97	27.9	9																					
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	3/03/2020	13:43	3.01	0.13	5.27	27.6	16	*1*	17	0.07	1.39	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	15/04/2020	9:44	1.96	0.14	5.34	19.0	30																					
SW3-19	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/05/2020	11:59	3.77	0.27	5.42	18.3	66	*1*	51	*0.02*	0.90	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	15/06/2020	10:48	1.22	0.40	6.49	16.7	3																					
SW3-19	Insufficient water to sample.	5/11/2020																											
SW3-19	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	25/05/2021	14:01	9.86	0.12	5.74	17.0	21	*1*	3	*0.02*	0.37	*13*	*50*	*50*	0.420	*0.001*	*0.0010*	*0.002*	*0.002*	2.830	*0.005*	0.320	*0.0001*	*0.003*	*0.001*	*0.0005*	0.006

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-20	Fast flowing water	4/08/2016		8.15	0.06	5.24	14.0	43																					
SW3-20	Low water level (0.3-0.5m), not flowing, no main channel identifiable. Photos taken.	25/08/2016		3.03	0.15	4.91	14.0	18	2	4	*0.02*	0.63	*50*	*50*	*50*														
SW3-20		10/11/2016		3.83	**0.29**	4.22	26.8	11	*1*	20	0.04	0.74	*50*	*50*	*50*														
SW3-20		6/12/2016		9.22	**0.34**	**7.33**	23.8	12																					
SW3-20	No flow, low water level. Sample taken from isolated pool of water. Not connected to SW3-19	7/01/2017		**0.76**	**0.46**	**4.27**	24.5	**63**	*1*	**44**	*0.02*	**1.45**	**50**	*50*	*50*														
SW3-20	No flow, low water level. Sample taken from isolated pool of water. Not connected to SW3-19	27/01/2017		**1.53**	**0.68**	**3.98**	24.2	14																					
SW3-20	Slight flow, low water level. Not connected to SW3-19.	28/02/2017		**0.18**	**0.53**	**4.58**	21.5	**232**																					
SW3-20	No connection between upstream and downstream monitoring sites.	7/03/2017		**0.00**	**0.47**	5.19	25.6	21	**2**	**76**	**0.06**	**1.20**	**50**	**110**	*50*														
SW3-20	Slight visible flow. No connection to upstream monitoring site, which was dry.	14/03/2017		3.00	**0.34**	5.73	22.7	**52**	*1*	**45**	*0.02*	0.50	**50**	*50*	*50*														
SW3-20	Weather showers. Connected. Water level moderate. Steady flow.	14/06/2017		5.53	0.06	5.55	16.1	13																					
SW3-20	Upstream and downstream sites not connected. Water level very low, no flow. Weather fine.	10/10/2017		**2.08**	**0.35**	**8.00**	23.4	7	*1*	11	0.04	0.92	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites connected. Slight flow. Medium to high water level	16/10/2017		**1.49**	**0.38**	7.91	19.0	**88**																					
SW3-20	Upstream and downstream sites connected. Slight flow. Medium to high water level.	6/11/2017		3.29	0.26	5.63	23.8	22																					
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		**0.84**	0.33	5.65	24.2	25	*1*	34	*0.02*	0.64	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites not connected, no visible flow, moderate water level. Overcast.	22/12/2017		5.92	0.38	5.64	23.6	65																					
SW3-20	Upstream and downstream sites not connected. No visible flow. Moderate water level. Weather fine.	4/01/2018		1.24	0.20	5.33	23.7	**59**																					
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		**1.66**	0.29	5.40	23.1	25	*1*	**36**	*0.02*	0.65	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	21/02/2018		1.51	0.28	5.65	22.8	**89**	*1*	**46**	0.03	0.71	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	7/03/2018		3.23	0.28	6.27	23.6	**48**																					
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	22/03/2018		3.15	0.27	5.53	24.2	21	*1*	43	0.04	1.08	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/04/2018		**0.70**	**0.30**	5.19	21.2	24	*1*	**27**	*0.02*	0.87	*13*	*50*	*50*														

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/04/2018		7.04	0.30	6.24	19.7	47																				
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	11:00	2.40	0.32	5.85	16.1	53																				
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	12:21	2.87	0.27	5.96	15.9	16	*1*	10	*0.02*	0.68	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	27/08/2018	12:05	1.77	0.43	6.26	15.3	20	*1*	9	*0.02*	1.07	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	7/09/2018	11:03	0.89	0.50	5.99	16.2	29																				
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/10/2018	9:51	4.08	0.46	6.55	19.1	17	*1*	6	*0.02*	0.37	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	12/10/2018	12:41	4.08	0.38	6.49	18.0	21																				
SW3-20	No visible flow, very low water level. Overcast.	14/12/2018	10:56	9.22	0.51	7.34	22.1	44																				
SW3-20	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	17/12/2018	12:33	2.51	0.25	6.51	22.3	136	*1*	95	0.04	0.89	*13*	*50*	*50*													
SW3-20	No visible flow, very low water level. Weather fine.	22/02/2019	14:10	2.77	0.35	6.22	25.2	283	*1*	114	0.15	2.19	*13*	*50*	*50*													
SW3-20	No visible flow, very low water level. Rain.	16/03/2019	10:11	2.36	0.43	6.34	21.7	133																				
SW3-20	No visible flow, very low water level. Drizzle.	20/04/2019	15:33	0.27	0.58	5.68	19.6	18	*1*	32	*0.02*	0.71	*13*	*50*	*50*													
SW3-20	No visible flow, low water level. Drizzle.	16/05/2019	14:06	1.35	0.49	5.82	16.8	33																				
SW3-20	No visible flow, low water level. Drizzle.	24/06/2019	14:10	2.08	0.46	5.36	13.3	21	*1*	13	*0.02*	0.83	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	28/06/2019	10:19	4.23	0.50	5.18	15.9	86																				
SW3-20	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/07/2019	10:51	2.35	0.51	4.87	16.6	51																				
SW3-20	Dry, not sampled.	12/10/2019	11:37																									
SW3-20	Dry, not sampled.	24/12/2019	13:02																									
SW3-20	Dry, not sampled.	16/01/2020	10:49																									
SW3-20	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	9:58	7.55	0.07	5.50	21.6	263	*1*	89	0.06	1.40	*13*	*50*	*50*													
SW3-20	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:15	2.59	0.20	6.06	23.2	33																				
SW3-20	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	12:17	2.44	0.09	6.22	24.9	16																				
SW3-20	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:57	2.99	0.27	5.71	22.5	62	*1*	34	0.03	0.91	*13*	*50*	*50*													

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	12:15	2.59	0.23	5.20	22.8	50	*1*	12	0.05	0.97	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	4/04/2020	10:32	2.45	0.12	5.06	21.7	92																					
SW3-20	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:16	3.41	0.32	6.27	18.1	20	*1*	17	0.04	0.68	*13*	*50*	*50*														
SW3-20	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	8/08/2020	14:03	4.60	0.13	5.30	16.8	16																					
SW3-20	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	13:21	12.60	0.02	6.35	23.1	26	*1*	10	*0.02*	0.34	*15*	*5*	*50*	1.340	*0.001*	*0.0010*	*0.002*	*0.002*	0.610	*0.005*	0.035	*0.0001*	*0.003*	*0.001*	*0.0005*	0.026
SW3-20	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	12:42	2.59	0.18	6.32	23.3	10																					
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Overcast.	3/05/2021	14:36	4.38	0.12	5.50	19.4	13	*1*	6	*0.02*	0.71	*13*	*50*	*50*	**1.900**	*0.001*	*0.0010*	*0.002*	*0.002*	2.600	*0.005*	0.130	*0.0001*	*0.003*	*0.001*	*0.0005*	0.012
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.27	6.11		45	2	27	0.06	1.04	14	50	50	1.648	0.001	0.0010	0.002	0.002	2.234	0.005	0.111	0.0001	0.003	0.001	0.0005	0.024
P20				2.19	0.13	5.08																							
St Dev					0.10	0.80																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW10		7/02/2013		5.06	0.25	5.78	23.0	9	*3*	27	0.12	1.30																	
Section3 SW10		29/05/2013		6.00	0.50	6.10	16.2	16	*3*	22	0.03	0.80																	
Section3 SW10		3/07/2013		6.74	0.13	5.97	16.0	41	*3*	6	0.03	0.90																	
Section3 SW10		14/11/2013		5.75	0.38	3.40	25.0	3	*3*	*3*	0.01	0.70																	
Upstream Monitoring																													
SW3-19	Fast flowing water.	4/08/2016		10.00	0.06	5.33	14.0	45																					
SW3-19	Sample point approx. 30 m from road (low lying water level, not flowing), no main channel identifiable. Photos taken.	25/08/2016		9.87	0.14	5.05	15.4	2	*1*	4	*0.02*	0.96	*50*	*50*	*50*														
SW3-19		10/11/2016		2.62	0.17	4.76	28.7	9	*1*	8	*0.02*	0.52	*50*	*50*	*50*														
SW3-19	Dry	6/12/2016																											
SW3-19	Dry	7/01/2017																											

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-19	Dry	27/01/2017																											
SW3-19	Dry	28/02/2017																											
SW3-19	Dry	7/03/2017																											
SW3-19	Dry	14/03/2017																											
SW3-19	Weather showers. Connected. Water level moderate. Steady flow.	14/06/2017		5.17	0.06	5.40	16.1	13																					
SW3-19	Dry	10/10/2017																											
SW3-19	Upstream and downstream sites connected. Slight flow. Low water level. Rain.	16/10/2017		2.74	0.23	8.19	19.4	22																					
SW3-19	Upstream and downstream sites connected. Slight flow. Low water level.	6/11/2017		6.29	0.20	5.74	25.3	18																					
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.34	0.27	5.29	25.5	20	*1*	26	0.04	0.80	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites were not connected. No visible flow, low water level. Overcast.	22/12/2017		1.73	0.32	5.32	24.1	84																					
SW3-19	Upstream and downstream sites not connected. No visible flow. Low water level. Weather fine.	4/01/2018		0.91	0.20	5.37	24.8	16																					
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2018		7.06	0.27	4.74	23.1	7	*1*	19	0.05	0.80	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	21/02/2018		0.82	0.27	5.12	23.2	8	*1*	24	0.05	1.06	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	7/03/2018		2.73	0.23	5.83	24.7	37																					
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	22/03/2018		1.53	0.20	6.13	23.6	13	*1*	34	0.06	1.49	*13*	*50*	*50*														
SW3-19	Dry	20/04/2018																											
SW3-19	Dry	27/04/2018																											
SW3-19	Insufficient water to sample. Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	9:51																										
SW3-19	Insufficient water to sample. Weather fine.	28/06/2018	12:14																										
SW3-19	Dry, not sampled.	27/08/2018	12:10																										
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	7/09/2018	11:10	2.83	0.29	6.26	19.2	37																					
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/10/2018	10:01	0.99	0.27	5.58	20.2	36	*1*	12	0.06	1.02	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	12/10/2018	12:50	3.78	0.24	5.77	20.0	47																					

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-19	Dry, not sampled.	14/12/2018	11:01																										
SW3-19	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	17/12/2018	12:45	2.26	0.18	6.33	22.4	122	*1*	86	0.04	0.83	*13*	*50*	*50*														
SW3-19	Dry, not sampled.	22/02/2019	14:05																										
SW3-19	Dry, not sampled.	16/03/2019	10:18																										
SW3-19	Dry, not sampled.	20/04/2019	14:24																										
SW3-19	Dry, not sampled.	16/05/2019	13:01																										
SW3-19	Dry, not sampled.	24/06/2019	14:04																										
SW3-19	Insufficient water to sample.	28/06/2019																											
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	5/07/2019	11:20	2.40	0.38	4.18	17.6	22																					
SW3-19	Dry, not sampled.	12/10/2019	11:36																										
SW3-19	Dry, not sampled.	24/12/2019	13:00																										
SW3-19	Dry, not sampled.	16/01/2020	10:50																										
SW3-19	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	9:52	11.69	0.06	5.70	21.8	309	*1*	124	0.09	1.55	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:17	1.81	0.20	6.00	23.2	33																					
SW3-19	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	12:19	2.95	0.11	6.12	24.8	14																					
SW3-19	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:51	2.74	0.24	5.24	22.2	44	*1*	12	0.04	0.83	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	12:20	2.78	0.23	5.02	22.7	41	*1*	11	0.03	0.94	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	4/04/2020	10:30	2.14	0.13	5.00	21.7	89																					
SW3-19	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:20	2.89	0.33	6.24	17.3	85	*1*	13	0.04	0.71	*13*	*50*	*50*														
SW3-19	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	8/08/2020	14:06	3.19	0.18	5.54	16.6	10																					
SW3-19	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	13:24	10.55	0.02	6.51	23.1	27	*1*	14	*0.02*	0.31	*15*	*5*	*50*	1.640	*0.001*	*0.0010*	*0.002*	*0.002*	0.690	*0.005*	0.033	*0.0001*	*0.003*	*0.001*	*0.0005*	0.028
SW3-19	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	12:44	2.30	0.19	6.05	22.8	13																					
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Overcast.	3/05/2021	14:38	4.08	0.11	5.32	19.3	11	*1*	8	*0.02*	0.70	*13*	*50*	*50*	1.650	*0.001*	*0.0010*	*0.002*	*0.002*	2.620	*0.005*	0.130	*0.0001*	*0.003*	*0.001*	*0.0005*	0.009

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-22	Intermittent watercourse - test was conducted in pools	2/08/2016		3.73	0.21	4.86	14.2	4																					
SW3-22	Flowing	8/09/2016		3.89	0.18	5.67	16.3	3	2	10	*0.02*	0.37	*50*	*50*	*50*														
SW3-22	Not flowing	6/10/2016		2.60	0.17	5.50	16.7	6																					
SW3-22		1/11/2016		7.55	0.17	**5.54**	23.0	3	*1*	15	*0.02*	0.72	*50*	*50*	*50*														
SW3-22	Dry	8/12/2016																											
SW3-22	Dry	13/01/2017																											
SW3-22	Dry	1/02/2017																											
SW3-22	Visible flow	24/03/2017		5.10	0.12	5.79	23.3	1	*1*	*1*	*0.02*	0.37	*50*	*50*	*50*														
SW3-22		24/04/2017		4.23	0.16	6.18	23.2	9																					
SW3-22	Upstream and downstream sites not connected. Low flow. Low water level - isolated pool.	11/05/2017		5.18	0.19	5.80	17.2	4	*1*	4	*0.02*	0.17	*50*	*50*	*50*														
SW3-22	Dry	8/06/2017																											
SW3-22	Upstream and downstream sites connected. Low visible flow. Low water level. Weather fine.	24/07/2017		3.27	0.15	5.85	12.1	8	2	**600**	**0.08**	**2.44**	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites connected by a trickle. Minimal flow, low water level. Weather fine.	3/08/2017		1.32	0.16	5.82	13.1	7																					
SW3-22	Weather fine. U/S and D/S not connected. Water level low. No observed flow. Sample taken in islolated pool. Algae in water column NTU likely affected.	5/09/2017		**0.61**	0.18	5.59	15.3	**98**	*1*	17	*0.02*	0.42	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites not connected. Low water level. Sampled in isolated pool. Weather fine.	5/10/2017		5.59	0.18	5.87	20.1	1																					
SW3-22	Upstream and downstream not connected. No flow, water level low.	2/11/2017		6.49	0.16	6.25	26.0	16	*1*	13	*0.02*	1.01	*13*	*50*	*50*														
SW3-22	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		9.03	0.23	**6.50**	31.5	37																					
SW3-22	Dry	23/01/2017																											
SW3-22	Dry - unable to monitor. Weather fine.	13/02/2018																											
SW3-22	Dry - not sampled.	20/03/2018																											
SW3-22	Dry - not sampled.	11/04/2018																											
SW3-22	Dry - not sampled.	8/05/2018																											
SW3-22	Waterway dry. Weather fine.	25/06/2018	10:58																										

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-22	Upstream and downstream sites not connected. No visible flow, very low water level. Isolated muddy pool. Weather fine.	16/07/2018	14:21	9.72	0.17	6.76	8.9	104	*1*	56	*0.02*	0.19	*13*	*50*	*50*														
SW3-22	Waterway dry, not sampled.	8/08/2018	13:20																										
SW3-22	Waterway dry, not sampled.	17/09/2018	12:12																										
SW3-22	Insufficient water to sample.	26/10/2018	12:33																										
SW3-22	Dry, not sampled.	5/11/2018																											
SW3-22	Dry, not sampled.	4/12/2018	14:09																										
SW3-22	Dry, not sampled.	9/01/2019	10:52																										
SW3-22	Dry, not sampled.	7/02/2019	12:42																										
SW3-22	Dry, not sampled.	20/03/2019	9:59																										
SW3-22	Dry not sampled.	24/04/2019	11:34																										
SW3-22	Dry not sampled.	2/05/2019																											
SW3-22	Dry, not sampled.	14/06/2019	10:02																										
SW3-22	Dry, not sampled.	4/07/2019	15:11																										
SW3-22	Dry, not sampled.	19/08/2019	11:57																										
SW3-22	Insufficient water to sample.	19/09/2019	12:22																										

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-22	Dry, not sampled.	3/10/2019	12:54																										
SW3-22	Dry, not sampled.	5/11/2019	10:36																										
SW3-22	Dry, not sampled.	4/12/2019	12:42																										
SW3-22	Dry, not sampled.	8/01/2020	12:15																										
SW3-22	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	18/02/2020	13:45	5.25	0.12	5.86	25.9	3																					
SW3-22	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	3/03/2020	13:19	6.31	0.14	5.89	26.3	10	*1*	**35**	0.05	1.09	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/04/2020	9:29	6.21	0.15	5.89	19.6	5																					
SW3-22	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/05/2020	12:16	8.77	0.20	**6.89**	21.9	11	*1*	5	*0.02*	0.35	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	15/06/2020	11:00	2.60	0.26	6.29	16.4	**30**																					
SW3-22	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2020	12:49	4.83	0.26	**6.87**	22.4	23	*1*	13	*0.02*	0.43	*13*	*50*	*50*	0.260	*0.001*	*0.0010*	*0.002*	*0.002*	4.350	*0.005*	0.310	*0.0001*	*0.003*	*0.001*	*0.0005*	0.110
SW3-22	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	25/05/2021	14:16	7.67	0.12	6.20	18.1	13	*1*	28	*0.03*	0.69	*13*	*50*	*50*	**1.880**	*0.001*	*0.0010*	*0.002*	*0.002*	2.490	*0.005*	0.220	*0.0001*	*0.003*	*0.001*	*0.0005*	0.081
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.29	6.26		26	3	31	0.05	1.11	43	50	50	1.306	0.001	0.0010	0.002	0.002	4.870	0.005	0.329	0.0001	0.003	0.001	0.0005	0.088
P20				2.33	0.15	5.66																							
St Dev					0.07	0.39																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW11		6/03/2013		6.05	0.18	5.90	22.3	25	*3*	*3*	0.02	0.60																	
Section3 SW11		20/03/2013		5.73	0.13	6.30	22.3	7	*3*	*3*	0.02	0.50																	
Section3 SW11		17/04/2013		7.24	0.12	6.28	20.8	6	*3*	*3*	0.02	0.50																	
Section3 SW11		22/05/2013		3.55	0.14	6.26	14.2	10	*3*	11	0.02	0.30																	
Section3 SW11		26/06/2013		7.45	0.21	6.46	14.4	7	*3*	*3*	*0.01*	0.24																	
Section3 SW11		24/07/2013		6.44	0.20	5.66	12.6	7	*3*	*3*	*0.01*	0.30																	
Section3 SW11		21/08/2013		6.14	0.16	6.37	11.0	10	*3*	8	0.01	0.15																	

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Section3 SW11		25/09/2013		2.34	0.19	5.79	18.9	16	*3*	16	*0.01*	0.39																	
Section3 SW11		23/10/2013		4.28	0.24	6.26	21.7	5	*3*	*3*	0.02	0.52																	
Section3 SW11		28/11/2013		6.07	0.25	5.65	21.5	8	*3*	*3*	0.01	0.44																	
Section3 SW11		18/12/2013		3.81	0.19	5.25	21.8	9	*3*	9	0.25	0.50																	
Upstream Monitoring																													
SW3-21	Intermittent watercourse - test was conducted in pools	2/08/2016		2.59	0.25	5.22	14.9	7																					
SW3-21	Not flowing	8/09/2016		3.45	0.19	5.83	17.0	55	*1*	19	*0.02*	0.41	*50*	*50*	*50*														
SW3-21	Not flowing	6/10/2016		1.63	0.19	5.75	17.9	30																					
SW3-21		1/11/2016		2.30	0.23	5.95	23.0	4	*1*	4	0.04	1.25	*50*	*50*	*50*														
SW3-21	Dry	8/12/2016																											
SW3-21	Dry	13/01/2017																											
SW3-21	Dry	1/02/2017																											
SW3-21	Visible flow	24/03/2017		9.03	0.12	5.74	23.4	1	*1*	2	*0.02*	0.45	*50*	*50*	*50*														
SW3-21		24/04/2017		1.37	0.16	5.76	20.2	4																					
SW3-21	Upstream and downstream sites not connected. Low flow. Low water level. Weather fine.	11/05/2017		2.12	0.17	5.77	17.6	9	*1*	34	*0.02*	0.34	*50*	*50*	*50*														
SW3-21	Weather fine. No connection. Water level low. Water stagnant.	8/06/2017		0.21	0.18	5.88	14.0	5																					

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-21	Upstream and downstream sites connected. Minimal flow. Low water level. Weather fine.	24/07/2017		1.92	0.14	5.81	14.8	7	*1*	2	*0.02*	0.24	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites connected by a trickle. Minimal flow, low water level. Weather fine.	3/08/2017		1.74	0.14	5.67	14.3	7																				
SW3-21	Weather fine. U/S and D/S not connected. Water level low. No observed flow. Sample taken in islolated pool. Less algae in water then D/S site.	5/09/2017		3.35	0.15	5.40	15.5	0	*1*	4	*0.02*	0.25	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. Low water level. Sampled in isolated pool. Weather fine.	5/10/2017		4.22	0.17	5.75	20.8	0																				
SW3-21	Upstream and downstream not connected. No flow, water level low.	2/11/2017		3.15	0.20	5.61	22.8	0	*1*	11	*0.02*	0.44	*13*	*50*	*50*														
SW3-21	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		2.00	0.21	5.64	25.0	50																				
SW3-21	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		4.93	0.22	5.80	27.8	1	*1*	33	0.03	0.89	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		4.28	0.29	5.90	26.9	27																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		4.26	0.21	6.09	25.8	3	*1*	51	0.05	1.34	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	11/04/2018		4.27	0.22	5.90	22.7	30																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2018		7.40	0.25	5.95	19.6	50	*1*	78	0.10	2.05	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	11:10	3.55	0.40	6.00	12.2	5																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/07/2018	14:11	4.53	0.32	6.24	13.5	7	*1*	9	*0.02*	0.58	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/08/2018	13:18	5.92	0.37	6.30	15.4	340																				
SW3-21	No visible flow, very low water level. Weather fine.	17/09/2018	12:18	3.17	0.33	6.25	17.8	14	*1*	21	*0.02*	0.54	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	12:34	1.28	0.25	5.37	25.6	8																				
SW3-21	No visible flow, low water level. Weather fine.	5/11/2018	11:23	3.52	0.25	5.22	24.9	6	*1*	3	0.03	0.78	*13*	*50*	*50*														
SW3-21	No visible flow, very low water level. Weather fine.	4/12/2018	14:13	8.33	0.33	6.71	26.3	13																				
SW3-21	No visible flow, low water level. Overcast.	9/01/2019	10:48	2.32	0.27	5.39	26.1	33	*1*	28	0.06	1.57	*13*	*50*	*50*														
SW3-21	No visible flow, very low water level. Weather fine.	7/02/2019	12:48	1.24	0.30	5.67	26.1	18																				
SW3-21	Insufficient water to sample.	20/03/2019	9:59																									

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-21	No visible flow, very low water level. Weather fine.	24/04/2019	12:44	4.28	0.32	6.73	21.5	42																					
SW3-21	No visible flow, very low water level. Weather fine.	2/05/2019	11:58	4.62	0.38	6.69	20.4	6	*1*	26	0.27	2.31	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	9:59	4.18	0.30	5.87	14.6	0																					
SW3-21	No visible flow, very low water level. Overcast.	4/07/2019	14:00	5.06	0.28	5.45	16.4	10	*1*	7	*0.02*	0.45	*13*	*50*	*50*														
SW3-21	No visible flow, very low water level. Weather fine.	19/08/2019	11:02	8.51	0.30	6.06	14.7	3																					
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/09/2019	12:22	4.84	0.23	5.94	20.4	53	*1*	42	0.06	0.77	*13*	*50*	*50*														
SW3-21	No visible flow, very low water level. Weather fine.	3/10/2019	12:54	6.12	0.29	6.73	22.4	27																					
SW3-21	No visible flow, very low water level. Overcast.	5/11/2019	10:49	5.24	0.33	6.84	21.2	9	*1*	40	0.16	1.64	*50*	*50*	*50*														
SW3-21	Dry, not sampled.	4/12/2019	12:51																										
SW3-21	Insufficient water to sample.	8/01/2020	12:12																										
SW3-21	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	18/02/2020	13:42	5.97	0.12	5.95	24.3	3																					
SW3-21	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	3/03/2020	13:15	6.30	0.14	6.07	25.5	9	*1*	8	*0.02*	0.65	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	15/04/2020	9:26	5.21	0.15	5.72	19.2	7																					
SW3-21	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	14/05/2020	12:14	6.88	0.20	5.88	21.0	13	*1*	5	*0.02*	0.40	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	15/06/2020	11:02	4.90	0.20	6.21	17.7	4																					
SW3-21	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	12:56	4.02	0.22	5.57	23.2	13	*1*	61	0.05	1.43	*13*	*50*	*50*	0.170	*0.001*	*0.0010*	*0.002*	*0.002*	5.670	*0.005*	0.390	*0.0001*	*0.003*	*0.001*	*0.0005*	0.110
SW3-21	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	25/05/2021	14:19	7.49	0.12	6.16	17.6	14	*1*	7	*0.02*	0.31	*13*	*50*	*50*	1.590	*0.001*	*0.0010*	*0.002*	*0.002*	1.670	*0.005*	0.087	*0.0001*	*0.003*	*0.001*	*0.0005*	*0.002*

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-22		4/08/2016		8.51	0.07	5.42	14.8	17																					
SW3-22	Measurements taken directly from fast flowing stream	25/08/2016		7.17	0.13	5.63	14.8	1	2	*1*	*0.02*	0.61	*50*	*50*	*50*														
SW3-22		10/11/2016		3.88	0.21	5.91	25.0	2	*1*	6	*0.02*	0.45	*50*	**250**	*50*														
SW3-22	Dry	6/12/2016																											
SW3-22	Dry	7/01/2017																											
SW3-22	Dry	27/01/2017																											
SW3-22	Dry	28/02/2017																											
SW3-22	Dry	7/03/2017																											
SW3-22	Dry	14/03/2017																											
SW3-22	Weather showers. Connected. Water level moderate. Steady flow.	14/06/2017		7.85	0.07	6.01	16.6	4																					
SW3-22	Upstream and downstream sites not connected. Very low water level. Weather fine.	10/10/2017		4.92	0.18	8.11	25.6	5	*1*	22	0.05	0.64	*13*	*50*	*50*														
SW3-22	Unable to gain wet weather access to site.	16/10/2017																											
SW3-22	Unable to gain access due to piling works.	6/11/2017																											
SW3-22	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		6.04	0.24	6.58	26.9	**23**	*1*	19	*0.02*	0.40	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites not connected, no visible flow, low water level. Overcast.	22/12/2017		6.25	**0.46**	**5.29**	24.9	13																					
SW3-22	Upstream and downstream sites not connected. No visible flow. Low water level. Weather fine.	4/01/2018		**1.84**	0.17	5.38	22.2	**171**																					
SW3-22	Insufficient water to sample	5/02/2018																											
SW3-22	Upstream and downstream sites not connected. Sampled in isolated pool of water. No visible flow, very low water level. Drizzle.	21/02/2018		2.60	0.24	6.19	23.9	**191**	*1*	**101**	0.03	**1.45**	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites not connected. Sampled in isolated pool. No visible flow, low water level. Weather fine.	7/03/2018		5.56	0.24	6.33	24.2	**48**																					
SW3-22	Unable to sample - unsafe to access due to crane loading bridge girders	22/03/2018																											
SW3-22	Dry	20/04/2018																											
SW3-22	Dry	27/04/2018																											
SW3-22	Upstream and downstream sites not connected - sampled within isolated pool. No visible flow, very low water level. Weather fine.	8/06/2018	10:40	5.46	0.21	**6.91**	14.9	**123**																					
SW3-22	Dry, not sampled. Weather fine.	28/06/2018	12:35																										

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-22	Dry, not sampled. Weather fine.	27/08/2018	11:59																										
SW3-22	Dry, not sampled.	7/09/2018	10:57																										
SW3-22	Dry, not sampled.	6/10/2018	10:24																										
SW3-22	Insufficient water to sample.	12/10/2018	13:09																										
SW3-22	Dry, not sampled.	14/12/2018	11:32																										
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	17/12/2018	12:24	4.52	0.10	5.58	22.4	17	*1*	7	*0.02*	0.86	*13*	*50*	*50*														
SW3-22	Dry, not sampled.	22/02/2019	13:53																										
SW3-22	Dry, not sampled.	16/03/2019	9:51																										
SW3-22	Dry, not sampled.	20/04/2019	14:46																										
SW3-22	Dry, not sampled.	16/05/2019	13:16																										
SW3-22	Dry, not sampled.	24/06/2019	13:42																										
SW3-22	Insufficient water to sample.	28/06/2019																											
SW3-22	Dry, not sampled.	5/07/2019																											
SW3-22	Dry, not sampled.	12/10/2019	11:34																										
SW3-22	Dry, not sampled.	24/12/2019	13:08																										
SW3-22	Dry, not sampled.	16/01/2020	10:51																										
SW3-22	Upstream and downstream sites connected. High flow, medium water level. Rain.	18/01/2020	9:33	7.29	0.08	5.55	21.7	**257**	*1*	**186**	**0.08**	**1.63**	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:26	6.90	0.11	6.37	22.9	10																					
SW3-22	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	10/02/2020	12:35	6.55	0.11	6.76	25.2	**54**																					
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:37	5.23	0.20	5.99	23.0	18	*1*	10	*0.02*	0.63	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	31/03/2020	12:38	7.65	0.14	5.88	22.8	7	*1*	*1*	*0.02*	0.34	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites connected. High flow, medium water level. Overcast.	4/04/2020	10:12	6.83	0.13	5.71	21.5	9																					
SW3-22	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/06/2020	11:41	**3.47**	0.23	6.21	17.5	**26**	*1*	8	0.04	0.71	*13*	*50*	*50*														
SW3-22	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	8/08/2020	11:22	7.25	0.12	4.07	15.0	8																					
SW3-22	Upstream and downstream sites connected. Very high flow, very low water level. Rain.	16/12/2020	13:39	14.15	0.01	6.29	21.8	131	*1*	81	0.03	0.77	*15*	*5*	*50*	**5.930**	*0.001*	*0.0010*	0.003	*0.002*	**2.260**	*0.005*	0.038	*0.0001*	*0.003*	*0.001*	*0.0005*	0.008

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-22	Upstream and downstream sites connected. Low flow, low water level. Drizzle.	16/02/2021	13:28	9.11	0.12	6.56	28.1	8																					
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	3/05/2021	14:50	5.58	0.14	5.88	20.3	**32**	**8**	25	0.02	0.72	*13*	*50*	*50*	3.230	*0.001*	*0.0010*	0.002	*0.002*	**2.730**	*0.005*	0.097	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.130**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.28	6.43		19	1	30	0.04	0.83	13	50	50	4.830	0.001	0.0010	0.003	0.002	2.248	0.005	0.151	0.0001	0.003	0.001	0.0005	0.008
P20				3.58	0.13	5.55																							
St Dev					0.11	0.63																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW11		7/02/2013		6.01	0.17	5.80	21.8	4	*3*	*3*	0.04	0.20																	
Section3 SW11		29/05/2013		7.34	0.29	6.43	15.9	7	*3*	*3*	0.01	0.30																	
Section3 SW11		3/07/2013		7.95	0.17	6.05	14.8	15	*3*	*3*	0.02	0.40																	
Section3 SW11		14/11/2013		5.77	0.19	5.17	22.0	7	*3*	*3*	*0.01*	0.43																	
Upstream Monitoring																													
SW3-21	Fast flowing water	4/08/2016		9.89	0.07	5.39	14.8	18																					
SW3-21	In-situ measurements taken directly from fast flowing stream, 40 m west of 'actual site'	25/08/2016		8.51	0.13	5.69	14.8	1	*1*	2	*0.02*	0.31	*50*	*50*	*50*														
SW3-21		10/11/2016		4.52	0.14	5.56	25.3	3	*1*	9	0.03	0.61	*50*	*50*	*50*														
SW3-21	Dry	6/12/2016																											
SW3-21	Dry	7/01/2017																											
SW3-21	Dry	27/01/2017																											
SW3-21	Dry	28/02/2017																											
SW3-21	Dry	7/03/2017																											
SW3-21	Dry	14/03/2017																											
SW3-21	Weather showers. Connected. Water level moderate. Steady flow.	14/06/2017		7.74	0.08	6.06	16.4	5																					
SW3-21	Upstream and downstream sites not connected. Water level very low. Weather fine.	10/10/2017		5.03	0.18	8.01	24.0	3	*1*	16	0.04	0.72	*13*	*50*	*50*														
SW3-21	Unable to gain wet weather access to site	16/10/2017																											

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-21	Not connected. No flow, low water level.	6/11/2017		3.61	0.19	5.83	23.6	0																				
SW3-21	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		2.88	0.22	6.19	25.5	0	*1*	12	*0.02*	0.50	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected, no visible flow, low water level. Overcast.	22/12/2017		9.13	0.29	6.55	25.4	13																				
SW3-21	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/01/2018		6.60	0.19	5.68	24.2	9																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2018		2.67	0.21	5.53	23.0	0	*1*	9	0.03	0.83	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	21/02/2018		1.62	0.23	6.13	23.9	30	*1*	38	0.06	1.18	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	7/03/2018		2.28	0.20	6.21	23.5	5																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	22/03/2018		2.83	0.20	5.65	24.1	53	*1*	11	*0.02*	0.78	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/04/2018		3.48	0.23	5.34	21.7	18	*1*	40	0.08	2.49	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	27/04/2018		4.12	0.22	6.48	21.2	23																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	10:45	3.34	0.24	5.76	14.8	18																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	12:45	4.92	0.23	5.66	15.5	8	*1*	7	*0.02*	0.46	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	11:57	6.14	0.36	6.80	16.1	14	*1*	26	0.03	0.62	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	7/09/2018	10:54	4.08	0.70	6.84	18.9	44																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/10/2018	10:23	6.16	0.26	5.80	20.0	15	*1*	27	0.03	0.70	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	12/10/2018	13:08	8.98	0.26	5.95	20.6	16																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	14/12/2018	11:29	9.06	0.34	7.31	26.7	15																				
SW3-21	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	17/12/2018	12:17	5.29	0.10	5.96	22.4	28	*1*	16	0.03	1.35	*13*	*50*	*50*													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	22/02/2019	13:56	2.50	0.44	6.13	24.6	5	*1*	30	0.05	0.59	*13*	*50*	*50*													
SW3-21	Insufficient water to sample.	16/03/2019	9:57																									
SW3-21	No visible flow, very low water level. Drizzle.	20/04/2019	15:55	4.67	0.27	6.11	22.0	105	*1*	82	0.06	1.19	*13*	*50*	*50*													

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-21	No visible flow, very low water level. Drizzle.	16/05/2019	14:19	2.87	0.28	5.38	17.0	6																					
SW3-21	No visible flow, very low water level. Drizzle.	24/06/2019	13:53	5.23	0.28	5.43	12.9	7	*1*	7	*0.02*	0.30	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2019	10:06	5.00	0.26	6.12	14.9	6																					
SW3-21	No visible flow, very low water level. Drizzle.	5/07/2019	11:04	4.70	0.29	5.33	15.6	12																					
SW3-21	No visible flow, very low water level. Overcast.	12/10/2019	10:32	3.86	0.29	6.63	16.7	2	*1*	15	0.03	0.50	*13*	*50*	*50*														
SW3-21	Insufficient water to monitor.	24/12/2019	13:06																										
SW3-21	Dry, not sampled.	16/01/2020	10:52																										
SW3-21	Upstream and downstream sites connected. High flow, medium water level. Rain.	18/01/2020	9:25	8.55	0.08	5.36	21.7	202	*1*	75	0.05	1.42	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:24	7.18	0.11	6.37	22.9	9																					
SW3-21	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	10/02/2020	12:31	6.89	0.10	6.43	24.0	5																					
SW3-21	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:31	3.74	0.20	5.66	21.8	20	*1*	10	*0.02*	0.50	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	31/03/2020	12:35	8.02	0.14	5.80	21.5	6	*1*	*1*	*0.02*	0.34	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites connected. High flow, medium water level. Overcast.	4/04/2020	10:09	7.19	0.13	5.92	21.8	10																					
SW3-21	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:48	5.07	0.20	6.15	17.4	13	*1*	8	*0.02*	0.42	*13*	*50*	*50*														
SW3-21	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	8/08/2020	11:18	8.48	0.14	4.13	14.6	9																					
SW3-21	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	13:42	14.18	0.01	6.10	21.8	132	*1*	75	0.03	0.75	*15*	*5*	*50*	5.450	*0.001*	*0.0010*	0.003	*0.002*	2.080	*0.005*	0.036	*0.0001*	*0.003*	*0.001*	*0.0005*	0.008
SW3-21	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	16/02/2021	13:25	7.61	0.13	6.93	27.7	9																					
SW3-21	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	3/05/2021	14:54	6.95	0.14	5.96	19.4	14	*1*	16	*0.02*	0.38	*13*	*50*	*50*	2.350	*0.001*	*0.0010*	*0.002*	*0.002*	2.290	*0.005*	0.180	*0.0001*	*0.003*	*0.001*	*0.0005*	0.006

SW3-23 - South Arm Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-23	Good access to river	2/08/2016		7.08	1.42	6.34	17.5	21																					
SW3-23	Flowing	8/09/2016		5.21	0.24	6.52	18.7	6	2	11	0.08	0.72	*50*	*50*	*50*														
SW3-23		6/10/2016		6.40	0.21	6.66	20.9	4																					
SW3-23		1/11/2016		5.33	3.84	6.87	24.4	4	*1*	2	0.03	0.91	*50*	*50*	*50*														
SW3-23		8/12/2016		8.40	8.37	6.57	26.6	11																					
SW3-23	Tidal	13/01/2017		4.95	11.50	6.66	29.9	7	*1*	2	*0.02*	0.86	*50*	*50*	*50*														
SW3-23	Tidal - incoming	1/02/2017		4.17	12.80	7.04	29.8	0																					
SW3-23	High water level	24/03/2017		2.17	0.15	6.09	25.1	34	*1*	41	0.24	1.25	*50*	*50*	*50*														
SW3-23	Tidal	24/04/2017		3.13	0.21	6.83	22.8	2																					
SW3-23	Incoming tide.	18/05/2017		5.93	0.33	7.14	20.0	4	*1*	2	0.06	0.43	*50*	*50*	*50*														
SW3-23	Weather fine. Flow moderate. Mid water level. Tide outgoing.	8/06/2017		7.80	1.10	7.25	17.1	9																					
SW3-23	Outgoing tide, low to morderate flow. Weather fine.	24/07/2017		6.70	0.21	7.06	16.4	6	*1*	5	0.06	0.65	*13*	*50*	*50*														
SW3-23	Incoming tide, moderate flow. Low water level. Weather fine.	3/08/2017		10.31	0.29	6.99	15.7	6																					
SW3-23	Weather fine. No U/S site. Water level normal. Incoming tide.	5/09/2017		8.49	7.57	6.62	19.3	2	*1*	7	*0.02*	0.35	*13*	*50*	*50*														
SW3-23	Incoming tide, medium water level. Drizzle.	3/10/2017		6.85	11.50	7.32	21.4	7																					
SW3-23	Outgoing tide. High Water level.	3/11/2017		4.90	3.22	6.50	26.8	1	*1*	3	*0.02*	0.50	*13*	*50*	*50*														
SW3-23	Incoming tide, high water level. Weather fine.	6/12/2017		5.27	1.67	7.18	26.9	2																					
SW3-23	Low flow, medium water level. Incoming tide. Weather fine.	23/01/2018		5.01	0.77	7.07	29.4	13	*1*	39	0.05	0.84	*13*	*50*	*50*														
SW3-23	Very low flow, low water level. Incoming tide. Overcast.	13/02/2018		5.23	2.80	6.57	28.2	11																					
SW3-23	Low flow, low water level. Incoming tide. Weather fine.	20/03/2018		5.67	0.36	6.59	26.6	22	*1*	11	0.08	0.71	*13*	*50*	*50*														
SW3-23	Low flow, medium water level. Outgoing tide. Weather fine.	11/04/2018		7.05	0.45	6.40	25.8	12																					
SW3-23	Low flow, medium water level. Incoming tide. Weather fine.	8/05/2018		7.80	4.13	7.10	22.1	6	*1*	5	*0.02*	0.43	*13*	*50*	*50*														
SW3-23	No visible flow, medium water level. Outgoing tide. Weather fine.	25/06/2018	10:49	8.48	10.20	6.74	15.1	10																					
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	16/07/2018	13:33	6.15	11.80	6.91	16.1	5	*1*	4	*0.02*	0.24	*13*	*50*	*50*														
SW3-23	No visible flow, low water level. Outgoing tide. Weather fine.	8/08/2018	12:57	9.36	12.40	6.96	17.0	2																					
SW3-23	No visible flow, low water level. Incoming tide. Weather fine.	17/09/2018	11:55	5.49	16.20	7.00	19.7	8	*1*	6	*0.02*	0.29	*13*	*50*	*50*														
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	26/10/2018	10:58	3.75	1.40	6.19	24.5	13																					
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	5/11/2018	10:51	4.87	1.40	7.60	26.9	8	*1*	7	0.05	0.87	*13*	*50*	*50*														
SW3-23	Low flow, low water level. Outgoing tide. Overcast.	4/12/2018	14:29	6.11	4.31	7.32	27.0	7																					

SW3-23 - South Arm Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-23	Low flow, medium water level. Incoming tide. Overcast.	9/01/2019	10:22	3.46	0.66	6.35	27.6	21	*1*	9	0.13	0.90	*13*	*50*	*50*														
SW3-23	Low flow, medium water level. Incoming tide. Overcast.	7/02/2019	13:22	5.43	6.01	7.17	29.4	12																					
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	20/03/2019	9:37	5.45	15.60	7.91	25.9	13	*1*	5	0.03	0.65	*13*	*50*	*50*														
SW3-23	Very low flow, low water level. Incoming tide. Weather fine.	24/04/2019	12:02	5.04	13.80	7.61	23.1	0																					
SW3-23	No visible flow. Medium water level. Outgoing tide. Weather fine.	2/05/2019	11:19	4.69	13.80	7.30	22.6	0	*1*	8	*0.02*	0.80	*13*	*50*	*50*														
SW3-23	Very low flow, medium water level. Outgoing tide. Weather fine.	14/06/2019	9:25	8.47	18.30	7.96	17.3	6																					
SW3-23	No visible flow, medium water level. Outgoing tide. Overcast.	4/07/2019	13:13	6.64	17.90	7.37	17.8	18	*1*	4	*0.02*	0.41	*13*	*50*	*50*														
SW3-23	No visible flow, medium water level. Outgoing tide. Weather fine.	20/08/2019	12:46	4.27	18.20	7.47	18.4	3																					
SW3-23	Low flow, high water level. Incoming tide. Weather fine.	19/09/2019	12:51	5.46	16.00	6.89	20.9	2	*1*	11	*0.02*	0.19	*13*	*50*	*50*														
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	3/10/2019	13:12	7.23	21.30	7.30	22.3	3																					
SW3-23	Very low flow, medium water level. Incoming tide. Overcast.	5/11/2019	11:11	4.90	25.50	7.28	23.4	3	*1*	17	*0.02*	0.37	*50*	*50*	*50*														
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	4/12/2019	11:18	8.00	28.70	6.18	25.7	1																					
SW3-23	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	8/01/2020	10:51	2.98	30.20	7.61	29.9	3	*1*	12	*0.02*	0.32	*13*	*13*	*50*														
SW3-23	Low flow, medium water level. Outgoing tide. Weather fine.	18/02/2020	15:21	0.42	0.17	5.69	29.1	34																					
SW3-23	Medium flow, medium water level. Outgoing tide. Weather fine.	3/03/2020	9:42	2.79	0.18	4.79	26.7	21	*1*	11	0.13	1.73	*13*	*50*	*50*														
SW3-23	Very low flow, low water level. Outgoing tide. Weather fine.	15/04/2020	9:01	3.73	0.40	6.35	22.8	32																					
SW3-23	Low flow, medium water level. Incoming tide. Weather fine.	14/05/2020	13:51	9.31	2.12	7.27	20.8	15	*1*	5	0.03	0.66	*13*	*50*	*50*														
SW3-23	Low flow, low water level. Outgoing tide. Overcast.	15/06/2020	12:51	5.86	1.24	6.13	18.8	0																					
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	5/11/2020	9:49	6.12	15.40	7.04	23.9	11	*1*	10	0.03	0.64	*13*	*50*	*50*	0.310	0.001	*0.0010*	*0.002*	*0.002*	0.450	*0.005*	0.540	*0.0001*	*0.003*	*0.001*	*0.0005*	1.550
SW3-23	Low flow, medium water level. Incoming tide. Weather fine.	25/05/2021	14:40	5.55	0.16	6.19	19.0	7	*1*	*1*	0.03	0.38	*13*	*50*	*50*	0.220	*0.001*	*0.0010*	*0.002*	*0.002*	1.230	*0.005*	0.046	*0.0001*	*0.003*	*0.001*	*0.0005*	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					3.30	7.12		17	3	16	0.08	0.80	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				5.88	0.17	6.57																							
St Dev					2.03	0.37																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													

SW3-23 - South Arm Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Section3 SW12		27/02/2013		4.89	0.17	6.39	25.3	22	*3*	22	0.07	0.80																
Section3 SW12		20/03/2013		5.88	0.13	6.76	24.6	15	*3*	8	0.08	0.80																
Section3 SW12		17/04/2013		5.62	0.18	6.77	23.1	12	*3*	6	0.06	0.80																
Section3 SW12		21/05/2013		9.64	0.13	7.40	19.5	17	*3*	17	0.04	0.60																
Section3 SW12		26/06/2013		9.38	0.35	7.12	16.5	6	*3*	*3*	0.04	0.63																
Section3 SW12		24/07/2013		10.64	0.35	6.57	17.2	22	*3*	15	0.11	0.45																
Section3 SW12		20/08/2013		10.36	0.41	7.42	16.8	14	*3*	16	0.03	0.35																
Section3 SW12		24/09/2013		8.43	3.30	6.90	23.1	4	*3*	6	*0.01*	0.35																
Section3 SW12		22/10/2013		8.01	6.26	7.06	27.4	4	*3*	*3*	0.01	0.31																
Section3 SW12		27/11/2013		8.43	3.47	6.61	25.9	5	*3*	9	0.01	0.54																
Section3 SW12		17/12/2013		8.78	0.71	6.31	26.6	10	*3*	10	0.25	0.50																
Upstream Monitoring																												
No upstream monitoring site																												

SW3-23 - South Arm Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW3-23		4/08/2016		6.59	0.08	5.73	14.7	215																					
SW3-23		10/11/2016		5.29	5.64	6.89	26.3	1	*1*	15	*0.02*	0.42	*50*	*50*	*50*														
SW3-23		6/12/2016		7.86	8.20	7.23	27.4	5																					
SW3-23	Tidal	7/01/2017		4.66	11.50	6.36	27.1	11	*1*	13	*0.02*	0.56	*50*	*50*	*50*														
SW3-23	Tidal	28/02/2017		4.38	14.10	7.12	25.2	10																					
SW3-23	Tidal	7/03/2017		3.88	13.00	7.01	26.9	10	*1*	13	*0.02*	0.50	*50*	*50*	*50*														
SW3-23	Weather showers. Outgoing tide. Water level high. Cane drain and culvert in close proximity to sample site.	14/06/2017		3.80	0.10	6.03	16.7	19																					
SW3-23	High tide. Weather fine.	10/10/2017		5.93	14.30	7.73	24.8	3	*1*	4	0.03	0.63	*13*	*50*	*50*														
SW3-23	Outgoing tide, low flow. Mid water level. Raining.	16/10/2017		7.89	13.20	7.95	21.9	16																					
SW3-23	Outgoing tide, high water level, moderate flow.	6/11/2017		5.69	2.88	7.03	25.8	1																					
SW3-23	Incoming tide, high water level. Weather, fine.	2/12/2017		3.96	1.79	7.71	25.8	1	*1*	11	*0.02*	0.50	*13*	*50*	*50*														
SW3-23	Low to mid water level, incoming tide. Overcast.	22/12/2017		5.10	0.71	7.04	26.7	60																					
SW3-23	Moderate flow, high water level. Weather fine.	4/01/2018		4.60	0.48	7.26	27.6	33																					
SW3-23	Low flow, medium water level. Outgoing tide. Overcast.	5/02/2018		5.21	1.63	6.45	25.4	8	*1*	7	0.05	1.01	*13*	*50*	*50*														
SW3-23	Low flow, low water level. Incoming tide. Weather fine.	7/03/2018		4.98	0.62	7.32	23.9	225																					
SW3-23	Very low flow, low water level. Incoming tide. Weather fine.	20/04/2018		5.16	1.26	7.44	24.9	10	*1*	5	0.07	1.72	*13*	*50*	*50*														
SW3-23	Very low flow, medium water level. Outgoing tide. Weather fine.	8/06/2018	10:01	7.88	8.56	6.96	17.2	15																					
SW3-23	No visible flow, medium water level. Outgoing tide. Weather fine.	27/08/2018	11:29	5.33	15.00	7.62	16.8	8	*1*	6	*0.02*	0.43	*13*	*50*	*50*														
SW3-23	No visible flow, medium water level. Outgoing tide. Weather fine.	7/09/2018	10:22	6.96	15.60	7.46	18.7	12																					
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	6/10/2018	9:20	6.29	16.50	7.32	21.2	4	*1*	4	*0.02*	0.44	*13*	*50*	*50*														
SW3-23	Medium flow, medium water level. Outgoing tide. Overcast.	14/12/2018	10:30	6.69	6.17	7.77	26.7	6																					
SW3-23	Very low flow, high water level. Incoming tide. Weather fine.	22/02/2019	13:30	4.29	10.20	7.48	26.9	11	*1*	15	*0.02*	0.73	*13*	*50*	*50*														
SW3-23	Very low flow, medium water level. Outgoing tide. Rain.	16/03/2019	9:33	6.71	15.10	7.72	26.7	19																					
SW3-23	No visible flow, low water level. Outgoing tide. Overcast.	20/04/2019	16:21	4.69	10.30	6.89	23.3	39	*1*	33	*0.02*	0.72	*13*	*50*	*50*														
SW3-23	High flow, medium water level. Outgoing tide. Drizzle.	16/05/2019	13:42	7.61	15.40	6.56	20.1	8																					
SW3-23	High flow, medium water level. Outgoing tide. Rain.	24/06/2019	14:45	7.33	18.70	7.20	15.9	16	*1*	4	*0.02*	1.72	*13*	*50*	*50*														
SW3-23	Very low flow, medium water level. Incoming tide. Drizzle.	5/07/2019	10:26	8.70	18.50	7.41	17.4	15																					

SW3-23 - South Arm Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW3-23	No access. Site is accessed via cane pad which was in full use. Could not walk in due to safety concerns.	12/10/2019	12:01																										
SW3-23	Very low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	13:40	3.74	**29.50**	**7.19**	27.4	5																					
SW3-23	Medium flow, medium water level. Incoming tide. Weather fine.	16/01/2020	11:13	**3.47**	**22.70**	**7.28**	27.7	**172**	*1*	**72**	*0.04*	0.73	*13*	*50*	*50*														
SW3-23	Low flow, high water level. Outgoing tide. Overcast.	7/02/2020	12:07	**2.91**	**2.10**	**7.14**	26.8	24																					
SW3-23	Low flow, low water level. Incoming tide. Overcast.	27/03/2020	11:01	5.10	0.28	6.08	23.9	25	*1*	8	0.08	**1.23**	*13*	*50*	*50*														
SW3-23	Medium flow, medium water level. Outgoing tide. Drizzle.	4/04/2020	8:24	5.27	0.33	6.10	24.9	**47**																					
SW3-23	Low flow, medium water level. Incoming tide. Weather fine.	11/06/2020	13:20	6.51	**5.28**	**6.93**	19.0	8	*1*	8	0.03	0.75	*13*	*50*	*50*														
SW3-23	Low flow, low water level. Outgoing tide. Weather fine.	8/08/2020	10:34	5.79	**1.09**	4.83	14.6	13																					
SW3-23	High flow, very high water level. Outflowing flood waters. Rain.	16/12/2020	8:28	11.26	**0.08**	**7.56**	22.8	**149**	*1*	**39**	0.09	0.90	*15*	*5*	*50*	5.230	*0.001*	*0.0010*	0.004	*0.002*	2.860	*0.005*	0.078	0.0002	*0.003*	*0.001*	*0.0005*	0.170
SW3-23	Low flow, medium water level. Incoming tide. Drizzle.	16/02/2021	13:10	6.95	0.35	**7.07**	26.9	18																					
SW3-23	Low flow, medium water level. Weather fine.	3/05/2021	10:49	6.80	**0.17**	5.57	20.1	14	*1*	7	0.04	0.91	*13*	*50*	*50*	0.700	0.001	*0.0010*	*0.002*	0.004	1.980	*0.005*	0.120	*0.0001*	*0.003*	*0.001*	*0.0005*	0.150
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.65	6.78		37	3	31	0.10	1.02	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				3.74	0.24	4.59																							
St Dev					0.49	1.99																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW12		7/02/2013		0.49	0.23	6.50	26.3	30	*3*	19	0.06	0.80																	
Section3 SW12		29/05/2013		9.24	0.26	2.70	16.2	11	*3*	8	0.03	0.50																	
Section3 SW12		1/07/2013		9.29	0.26	7.20	16.2	11	*3*	32	0.15	1.10																	
Section3 SW12		13/11/2013		5.90	1.23	5.85	27.1	48	*3*	30	0.07	0.97																	
Upstream Monitoring																													
No upstream monitoring site																													

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW4-02		2/08/2016		9.08	0.00	3.04	17.0	16																					
SW4-02	Flowing	8/09/2016		9.04	1.61	4.48	18.1	22	2	33	0.15	1.06	*50*	*50*	*50*														
SW4-02		7/10/2016		4.71	1.93	7.02	19.7	102																					
SW4-02	Dry	3/11/2016																											
SW4-02		5/12/2016		6.93	2.50	6.86	32.7	**187**																					
SW4-02	Very low water level, no flow and stagnant. Not connected with SW4-01	18/01/2017		7.85	4.23	7.16	37.6	**119**	*1*	**39**	0.08	**8.09**	*13*	*50*	*50*														
SW4-02	Very low water level, no flow and stagnant. Not connected with SW4-01	1/02/2017		3.56	4.79	**2.98**	32.2	0																					
SW4-02	Stagnant, no observable flow.	10/03/2017		4.17	1.64	5.16	24.9	7	3	22	0.03	**3.90**	*50*	120	*50*														
SW4-02		12/04/2017		0.00	0.29	6.44	20.7	5																					
SW4-02	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		0.50	2.18	3.95	20.4	31	*1*	42	0.05	2.12	*50*	330	*50*														
SW4-02	Weather fine. Connected. Level and flow moderate.	7/06/2017		3.84	2.67	3.44	16.2	4																					
SW4-01	Weather fine. Upstream and downstream connected. Incoming tide, therefore SW4-01 is downstream. Flow gentle and level moderate.	14/07/2017		3.98	1.84	3.68	16.1	7	*1*	13	0.06	0.89	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		5.96	5.52	3.63	17.6	67																					
SW4-02	Weather fine. U/S and D/S connected. No observed flow. Low water level. Replicate 2 taken. Water observed entering the site 10m U/S from cane drain.	5/09/2017		7.79	7.62	3.30	17.8	9	*1*	9	*0.02*	1.03	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. Medium water level. Weather fine.	5/10/2017		3.12	9.05	3.71	26.5	47																					
SW4-02	Upstream and downstream sites connected. Medium water level. Weather fine.	3/11/2017		2.25	2.34	3.75	27.7	11	*1*	7	*0.02*	0.64	*13*	*50*	*50*														
SW4-01	Upstream and downstream connected. Little flow, moderate water level. Incoming tide, therefore SW4-01 is downstream. Weather fine.	7/12/2017		6.35	2.09	7.22	26.9	24																					
SW4-01	Upstream and downstream connected. No visible flow, medium water level. Weather fine.	17/01/2018		4.96	2.06	6.06	29.1	**202**	*1*	**131**	**0.26**	2.86	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	14/02/2018		2.70	1.73	7.13	29.0	35																					
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	20/03/2018		**1.51**	2.46	5.30	25.6	43	*1*	18	0.03	1.00	*13*	*50*	*50*														

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2018		2.16	2.22	6.27	22.7	31																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	8/05/2018		6.08	2.44	6.83	20.3	28	*1*	21	0.07	1.39	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	25/06/2018	10:28	5.27	2.65	5.70	12.9	38																				
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	16/07/2018	12:54	6.73	2.64	5.56	13.2	9	*1*	9	*0.02*	0.54	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	8/08/2018	12:37	4.75	2.45	6.98	15.7	27																				
SW4-01	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	17/09/2018	11:32	5.41	4.23	4.83	18.9	21	*1*	12	*0.02*	0.63	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	26/10/2018	12:05	3.05	1.75	6.55	25.2	10																				
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/11/2018	10:36	0.60	2.87	7.06	25.3	164	*1*	**114**	0.07	2.22	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	7/12/2018	12:08	**1.57**	3.27	7.68	23.8	39																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	10/01/2019	10:48	3.52	2.05	7.07	26.7	48	*1*	17	0.10	1.76	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	8/02/2019	11:30	**2.19**	2.32	8.06	25.4	27																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/03/2019	10:52	8.18	2.22	7.39	25.3	116	*1*	77	0.12	1.66	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	24/04/2019	11:28	3.46	2.55	7.26	21.4	23																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level.Outgoing tide. Weather fine.	3/05/2019	13:30	5.38	4.24	7.36	22.2	60	*1*	**30**	0.07	0.97	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	13/06/2019	10:15	6.94	5.49	7.64	15.6	62																				

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	9/07/2019	9:23	4.63	3.11	6.06	15.9	75	*1*	17	0.05	1.06	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	19/08/2019	12:35	3.47	8.11	7.03	19.9	9																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	19/09/2019	14:10	3.92	6.95	6.95	22.5	60	*1*	**37**	*0.02*	1.24	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	10/10/2019	11:45	4.52	12.50	7.03	21.5	58																				
SW4-02	Upstream and downstream sites connected. No visible flow, very low water level. Not affected by tide. Overcast.	5/11/2019	11:31	7.78	**19.50**	8.28	24.0	54	*1*	**30**	0.09	**2.21**	*50*	*50*	*50*													
SW4-02	Insufficient water to sample.	7/12/2019	9:36																									
SW4-02	Dry, not sampled.	8/01/2020	11:48																									
SW4-02	Upstream and downstream sites connected. High flow, very high water level. Weather fine.	18/02/2020	14:13	0.13	0.22	5.58	27.6	39																				
SW4-02	Upstream and downstream sites connected. Low flow, high water level. Overcast.	3/03/2020	10:30	**0.83**	0.28	5.06	27.1	15	*1*	8	0.30	1.92	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/04/2020	11:52	11.37	1.21	4.63	23.6	23																				
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	14/05/2020	12:45	6.53	1.79	5.41	19.8	32	*1*	9	*0.02*	0.86	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	15/06/2020	11:17	3.88	2.21	4.15	17.9	0																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	12/11/2020	10:04	6.40	2.77	5.96	23.9	10	*1*	3	*0.02*	0.77	*13*	*50*	*50*	0.074	*0.001*	*0.0010*	*0.002*	*0.002*	0.690	*0.005*	0.260	*0.0001*	*0.003*	*0.001*	*0.0005*	0.007
SW4-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	26/05/2021	11:01	**2.20**	1.25	4.29	17.1	10	*1*	12	*0.02*	0.51	*13*	*50*	*50*	0.170	*0.001*	*0.0010*	*0.002*	*0.002*	**5.320**	*0.005*	0.650	*0.0001*	*0.010*	*0.001*	*0.0005*	0.023
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					4.53	7.01		80	3	26	0.11	1.76	13	50	50	0.153	0.001	0.0010	0.002	0.002	2.244	0.005	0.564	0.0001	0.011	0.001	0.0005	0.357
P20				2.76	1.47	3.86																						
St Dev					3.47	1.42																						
Threshold				0.50				10	2	10	0.02	0.20																

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW23		27/02/2013		5.13	0.22	6.49	25.8	43	*3*	27	0.08	0.70																	
Section3 SW23		19/03/2013		4.98	0.12	6.35	24.2	19	*3*	*3*	0.17	1.30																	
Section3 SW23		17/04/2013		4.04	0.24	5.83	25.1	16	*3*	11	0.11	1.20																	
Section3 SW23		21/05/2013		7.34	1.09	4.03	17.2	5	*3*	8	0.03	0.50																	
Section3 SW23		26/06/2013		8.42	1.15	5.02	15.9	9	*3*	7	0.04	1.10																	
Section3 SW23		23/07/2013		8.30	1.11	3.96	17.7	9	*3*	7	0.03	0.34																	
Section3 SW23		20/08/2013		10.46	1.48	4.89	18.0	4	*3*	*3*	*0.01*	0.62																	
Section3 SW23		24/09/2013		8.15	1.74	4.33	22.7	9	*3*	13	0.05	0.70																	
Section3 SW23		22/10/2013		8.86	2.16	3.80	30.7	5	*3*	9	0.02	0.62																	
Section3 SW23		28/11/2013		7.54	1.46	3.38	28.6	4	*3*	*3*	*0.01*	0.60																	
Upstream Monitoring																													
SW4-01		2/08/2016		8.76	2.58	3.30	14.1	32																					
SW4-01	Flowing	8/09/2016		2.57	1.54	5.32	18.8	50	*1*	53	0.29	1.87	*50*	*50*	*50*														
SW4-01		7/10/2016		0.00	1.90	6.92	15.9	100																					
SW4-01	Dry	3/11/2016																											
SW4-01		5/12/2016		7.59	2.78	6.75	29.0	10																					
SW4-01	Very low, no flow and stagant. Not connected with SW4-02	18/01/2017		4.43	4.20	7.10	41.1	103	*1*	8	*0.02*	2.68	*13*	*50*	*50*														
SW4-01	Very low, no flow and stagant. Not connected with SW4-02	1/02/2017		2.85	4.61	4.41	27.6	4																					
SW4-01	Stagnant, no observable flow.	10/03/2017		4.54	1.90	5.53	25.1	7	*1*	14	0.03	3.20	*50*	140	*50*														
SW4-01		12/04/2017		0.00	0.28	6.44	21.6	2																					
SW4-01	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		0.26	2.17	4.13	20.5	81	*1*	131	0.15	2.48	180	640	*50*														
SW4-01	Weather fine. Connected. Level and flow moderate.	7/06/2017		3.42	2.69	3.42	16.1	5																					
SW4-02	Weather fine. Upstream and downstream connected. Incoming tide therefore SW4-02 is upstream. Flow gentle and level moderate.	14/07/2017		3.68	1.87	3.65	16.8	7	*1*	11	0.05	0.87	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		6.12	6.11	3.49	18.4	87																					

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-01	Weather fine. U/S and D/S connected. No observed flow. Low water level.	5/09/2017		8.19	7.77	3.50	18.6	21	*1*	14	*0.02*	1.22	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. Medium water level. Weather fine.	5/10/2017		5.11	8.53	3.84	28.9	86																				
SW4-01	Upstream and downstream sites connected. Medium water level. Weather fine.	3/11/2017		2.23	2.33	3.77	26.9	120	*1*	64	0.05	0.82	*13*	*50*	*50*														
SW4-02	Upstream and downstream connected. Incoming tide, little flow, moderate water level. Weather fine.	7/12/2017		5.44	2.00	7.05	26.2	28																				
SW4-02	Upstream and downstream connected. No visible flow, medium water level. Weather fine.	17/01/2018		1.67	1.88	5.71	25.9	153	*1*	60	0.21	2.88	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	14/02/2018		2.94	1.87	7.09	30.1	31																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	20/03/2018		7.40	2.52	6.34	26.2	22	*1*	11	*0.02*	0.86	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2018		1.50	2.43	6.14	22.7	67																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	8/05/2018		9.61	2.47	6.83	19.2	12	*1*	6	*0.03*	1.04	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	25/06/2018	10:14	10.07	6.11	6.55	13.3	22																				
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	16/07/2018	13:07	6.08	2.42	6.21	12.9	26	*1*	13	*0.02*	0.58	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	8/08/2018	12:40	5.00	2.56	6.61	16.6	49																				
SW4-02	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	17/09/2018	11:37	3.25	4.97	5.98	18.7	20	*1*	12	*0.02*	0.66	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Weather fine.	26/10/2018	11:59	2.84	1.77	6.45	25.5	10																				
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/11/2018	10:28	0.93	2.84	5.97	26.2	193	*1*	94	0.05	2.20	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	7/12/2018	12:04	4.57	3.40	7.72	26.4	96																				

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	10/01/2019	10:41	1.83	1.94	7.01	27.1	75	*1*	25	0.10	1.62	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	8/02/2019	11:34	5.04	2.19	8.18	25.9	35																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/03/2019	10:44	5.68	2.57	7.39	25.5	198	*1*	92	0.12	1.54	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	24/04/2019	11:24	2.76	2.48	7.35	21.2	96																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	3/05/2019	13:37	4.78	3.32	7.01	21.6	57	*1*	11	*0.02*	0.82	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	13/06/2019	10:29	7.40	4.88	7.74	16.2	36																				
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	9/07/2019	9:29	4.85	2.56	5.42	15.9	55	*1*	15	0.04	0.84	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	19/08/2019	12:30	6.01	7.71	7.18	20.7	2																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	19/09/2019	14:06	2.78	6.86	7.01	22.6	6	*1*	7	*0.02*	0.98	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	10/10/2019	11:40	3.37	10.30	7.00	22.0	22																				
SW4-01	Upstream and downstream sites connected. No visible flow, very low water level. Not affected by tide. Overcast.	5/11/2019	11:35	4.78	15.10	7.56	22.9	16	*1*	17	0.06	1.69	*50*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	7/12/2019	8:35	7.89	19.40	7.94	23.2	97																				
SW4-01	Dry, not sampled.	8/01/2020	11:32																									
SW4-01	Upstream and downstream sites connected. High flow, very high water level. Weather fine.	18/02/2020	14:17	0.12	0.17	5.76	28.8	38																				
SW4-01	Upstream and downstream sites connected. Low flow, high water level. Overcast.	3/03/2020	10:25	1.91	0.27	4.04	27.3	18	*1*	8	0.30	1.81	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/04/2020	11:55	3.87	1.27	4.68	23.9	27																				
SW4-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	14/05/2020	12:43	6.00	1.77	5.60	19.0	28	*1*	15	0.03	1.00	*13*	*50*	*50*														

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	15/06/2020	11:18	3.86	2.08	4.42	18.0	0																					
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	12/11/2020	10:08	5.93	2.87	5.62	23.5	9	*1*	3	*0.02*	0.85	*13*	*50*	*50*	0.047	*0.001*	*0.0010*	*0.002*	*0.002*	0.660	*0.005*	0.180	*0.0001*	0.007	*0.001*	*0.0005*	0.440
SW4-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	26/05/2021	11:04	2.86	1.23	4.33	18.1	17	*1*	12	0.03	0.48	*13*	*50*	*50*	0.180	*0.001*	*0.0010*	*0.002*	*0.002*	2.640	*0.005*	0.660	*0.0001*	0.012	*0.001*	*0.0005*	0.026

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW4-02		4/08/2016		5.12	0.20	5.61	14.8	163																					
SW4-02		11/11/2016		3.26	1.94	7.95	27.5	287	12	1230	1.38	5.24	*50*	240	*50*														
SW4-02	Dry	6/01/2017																											
SW4-02	Very low, no flow and not connected to SW4-01	1/03/2017		7.04	2.26	3.70	27.2	85	*1*	46	0.16	8.20	*13*	*50*	*50*														
SW4-02	Tidal	7/03/2017		8.42	1.94	3.79	23.5	40																					
SW4-02	Heavy anoxic odour. Dark stain to water. Med-high flow.	6/04/2017		0.00	0.24	6.49	21.8	7	*1*	9	0.25	1.51	*50*	*50*	*50*														
SW4-02	Low water level. No visible flow. U/s and d/s sites connected. Drizzle.	4/05/2017		0.00	2.07	3.93	19.8	25																					
SW4-02	Weather showers. Upstream and downstream sites connected. High tide, outgoing. Slightly turbid water.	13/06/2017		4.48	0.19	5.83	17.9	95	*1*	29	0.11	1.26	*13*	*50*	*50*														
SW4-01	Weather fine. Upstream and downstream connected. Incoming tide therefore SW4-01 is downstream. Flow gentle and level moderate.	17/07/2017		5.38	2.03	3.53	17.0	37																					
SW4-02	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	9/10/2017		5.04	8.03	4.04	29.0	35	*1*	19	*0.02*	2.46	*13*	*50*	*50*														
SW4-01	Conneced. Incoming tide, therefore SW4-01 is downstream. Medium water level.	7/11/2017		1.87	2.37	3.81	24.7	44																					
SW4-01	Upstream and downstream sites connected. Medium water level, incoming tide, therefore SW4-01 is downstream. Weather fine.	11/12/2017		4.93	2.15	7.37	27.3	5	*1*	14	0.04	1.53	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		2.21	0.80	6.18	26.2	98																					
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/02/2018		2.41	1.60	6.83	22.5	122	*1*	26	0.08	1.79	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	7/03/2018		1.44	2.16	6.92	23.4	61																					
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	9/05/2018		3.92	1.90	6.66	21.4	73	*1*	37	0.06	1.06	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, high water level. Incoming tide. Overcast.	7/06/2018	13:35	4.22	1.39	6.76	16.4	206																					
SW4-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Rain.	5/09/2018	10:51	3.51	0.77	6.96	14.9	410	*1*	184	0.30	1.63	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Rain.	12/10/2018	14:25	4.87	11.00	6.39	20.8	14																					

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	29/11/2018	11:20	6.63	3.12	7.52	26.5	37	*1*	50	0.06	1.72	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Overcast.	17/12/2018	11:22	5.64	0.49	6.43	24.4	629																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/02/2019	12:32	2.47	1.94	7.29	24.5	446	*1*	168	0.23	3.55	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:55	5.91	2.98	7.93	25.2	83																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	4/04/2019	14:27	8.48	2.82	8.14	24.0	168	*1*	69	0.14	1.87	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	11:48	5.89	3.66	6.80	14.2	133																				
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	12:16	5.83	7.41	6.82	17.7	29	*1*	13	0.03	0.81	*13*	*50*	*50*													
SW4-02	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Outgoing tide. Overcast.	24/12/2019	14:50	2.01	11.90	4.69	29.5	153																				
SW4-02	Insufficient water to sample.	15/01/2020	10:15																									
SW4-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	6/02/2020	14:15	4.93	1.42	7.30	22.9	106																				
SW4-02	Upstream and downstream sites connected. Very low flow, high water level. Drizzle.	7/03/2020	11:02	1.37	0.52	5.46	24.6	55	*1*	19	0.32	1.86	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:00	8.31	0.29	5.54	22.5	181																				
SW4-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Drizzle.	11/06/2020	12:13	5.31	2.19	5.95	18.7	29	*1*	42	0.13	1.82	*13*	*50*	*50*													
SW4-02	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	8/08/2020	10:57	1.84	2.57	2.18	14.0	5																				
SW4-02	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Drizzle.	16/12/2020	8:46	6.95	0.07	6.81	24.3	49	*1*	5	0.11	0.94	*15*	*5*	*50*	2.420	*0.001*	*0.0010*	*0.002*	*0.002*	1.350	*0.005*	0.054	*0.0001*	*0.003*	*0.001*	*0.0005*	0.014
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	17/02/2021	10:40	9.22	1.10	6.91	23.4	37																				

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	3/05/2021	11:41	1.68	0.67	4.37	19.5	8	*1*	11	0.02	0.55	*13*	*50*	*50*	0.110	*0.001*	*0.0010*	*0.002*	*0.002*	2.590	*0.005*	0.440	*0.0001*	*0.003*	*0.001*	*0.0005*	0.022
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					3.17	7.06		134	2	47	0.24	2.49	13	50	50	1.936	0.001	0.0010	0.002	0.004	2.790	0.005	0.370	0.0001	0.006	0.001	0.0005	0.021
P20				2.17	0.58	4.26																							
St Dev					5.22	1.46																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW23		7/02/2013		1.52	0.16	6.17	22.4	26	*3*	22	0.21	0.40																	
Section3 SW23		28/05/2013		6.98	1.14	4.24	19.7	12	*3*	11	0.03	1.50																	
Section3 SW23		1/07/2013		7.73	1.38	5.47	17.1	47	*3*	33	0.11	3.90																	
Section3 SW23		13/11/2013		5.91	0.48	4.54	24.8	331	*3*	170	0.10	9.10																	
Section3 SW23		17/12/2013		11.89	1.19	3.65	30.6	11	7	4	0.50	0.30																	
Upstream Monitoring																													
SW4-01		4/08/2016		4.82	0.13	5.58	14.6	209																					
SW4-01		11/11/2016		0.00	2.51	7.62	27.2	800	2	80	2.67	7.48	*50*	220	*50*														
SW4-01	Very low, no flow and not connected to SW3-02.	6/01/2017		5.85	4.13	7.23	24.8	24																					
SW4-01	Very low, no flow and not connected to SW3-02.	1/03/2017		6.86	3.15	3.67	27.3	34	*1*	32	0.08	19.70	*13*	50	*50*														
SW4-01	Tidal	7/03/2017		3.37	1.90	4.26	24.2	48																					
SW4-01	Heavy anoxic odour. Dark stain to water. Med-high flow.	6/04/2017		0.00	0.26	6.53	22.2	7	*1*	14	0.39	1.77	*50*	*50*	*50*														
SW4-01	Low water level. No visible flow. U/s and d/s sites connected. Drizzle.	4/05/2017		0.33	2.08	3.93	19.9	24																					
SW4-01	Weather showers. Upstream and downstream sites connected. High tide, outgoing. Slightly turbid water.	13/06/2017		5.28	0.22	5.65	18.1	32	*1*	18	0.09	1.30	*13*	*50*	*50*														
SW4-02	Weather fine. Upstream and downstream connected. Incoming tide therefore SW4-02 is upstream. Flow gentle and level moderate.	17/07/2017		4.56	2.10	3.66	17.5	0																					
SW4-01	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	9/10/2017		7.83	8.06	3.99	30.7	44	*1*	17	*0.02*	2.36	*13*	*50*	*50*														

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-02	Connected. Incoming tide, therefore SW4-02 is upstream. Moderate water level.	7/11/2017		1.11	2.47	3.75	24.4	78																					
SW4-02	Upstream and downstream sites connected. Medium water level, incoming tide, therefore SW4-02 is upstream. Weather fine. Technical error with probe - type A parameters not recorded.	11/12/2017							*1*	6	0.04	1.26	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		1.09	0.74	6.09	25.5	127																					
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	6/02/2018		3.70	1.79	6.63	22.4	128	*1*	23	0.09	1.97	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	7/03/2018		1.41	2.20	7.02	23.7	45																					
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	9/05/2018		4.68	2.00	6.41	20.9	119	*1*	56	0.04	1.34	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow, high water level. Incoming tide. Overcast.	7/06/2018	13:32	6.25	0.80	6.88	15.9	140																					
SW4-01	Upstream and downstream sites connected. No visible flow, high water level. Outgoing tide. Drizzle.	5/09/2018	11:01	3.80	2.05	6.46	15.4	90	*1*	65	0.04	1.16	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Drizzle.	12/10/2018	14:22	4.70	10.80	6.46	20.8	16																					
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	29/11/2018	11:31	7.56	3.02	7.43	23.3	37	*1*	18	0.06	1.71	*13*	*50*	*50*														
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	17/12/2018	11:25	8.52	0.50	6.27	23.8	665																					
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/02/2019	12:38	3.51	2.76	7.73	24.2	313	*1*	184	0.28	2.55	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:50	5.64	3.73	8.44	24.2	133																					
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	4/04/2019	14:23	6.82	3.03	7.82	24.5	96	*1*	22	0.09	1.33	*13*	*50*	*50*														
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	11:53	6.50	3.25	6.68	14.1	113																					
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	12:08	8.92	7.18	7.01	15.9	6	*1*	10	0.04	0.84	*13*	*50*	*50*														

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-01	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Outgoing tide. Overcast.	24/12/2019	14:53	2.84	30.80	6.84	29.8	765																				
SW4-01	No visible flow, very low water level. Not affected by tide. Overcast.	15/01/2020	10:27	3.10	12.00	7.50	25.1	46	*1*	25	0.05	2.39	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	6/02/2020	14:18	3.01	1.33	7.25	22.8	82																				
SW4-01	Upstream and downstream sites connected. Very low flow, high water level. Drizzle.	7/03/2020	10:51	2.64	0.60	4.84	24.7	71	*1*	19	0.26	1.68	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:06	2.58	0.32	5.31	22.6	181																				
SW4-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	11/06/2020	12:09	5.97	2.06	5.86	18.8	32	*1*	22	0.04	1.07	*13*	*50*	*50*													
SW4-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	8/08/2020	10:54	2.30	2.58	2.45	14.0	5																				
SW4-01	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters Drizzle.	16/12/2020	8:42	6.28	0.08	6.89	24.1	52	*1*	14	0.11	1.00	*15*	*5*	*50*	2.390	*0.001*	*0.0010*	*0.002*	0.005	1.350	*0.005*	0.052	*0.0001*	*0.003*	*0.001*	*0.0005*	0.013
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	17/02/2021	10:43	5.14	1.17	6.87	23.5	33																				
SW4-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	3/05/2021	11:38	1.67	0.67	4.71	19.7	10	*1*	10	*0.02*	0.61	*13*	*50*	*50*	0.120	*0.001*	*0.0010*	*0.002*	*0.002*	3.150	*0.005*	0.450	*0.0001*	0.007	*0.001*	*0.0005*	0.023

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW4-04		2/08/2016		8.65	2.90	6.65	17.2	8																					
SW4-04	Flowing	8/09/2016		3.56	0.59	5.25	18.8	5	2	19	0.03	0.67	*50*	*50*	*50*														
SW4-04		7/10/2016		2.42	0.91	6.19	20.2	21																					
SW4-04		3/11/2016		7.49	4.61	6.86	25.6	2	*1*	6	*0.02*	0.98	*50*	*50*	*50*														
SW4-04		5/12/2016		8.46	8.99	6.70	28.5	98																					
SW4-04	Tidal	18/01/2017		5.00	12.90	7.35	30.9	17	*1*	5	*0.02*	0.53	*13*	*50*	*50*														
SW4-04	Tidal	1/02/2017		3.95	14.70	7.54	29.2	0																					
SW4-04	Tidal	10/03/2017		4.14	16.20	7.61	25.6	3	2	5	0.03	0.10	*50*	*50*	*50*														
SW4-04	Tidal	12/04/2017		0.00	0.16	6.37	21.1	7																					
SW4-04	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		1.32	0.59	5.46	19.8	13	*1*	47	0.07	1.37	*50*	200	*50*														
SW4-04	Weather fine. Upstream and downstream sites connected. Level and flow moderate.	7/06/2017		3.00	0.81	4.72	15.9	5																					
SW4-03	Weather fine. Upstream and downstream sites connected. Low flow, incoming tide therefore SW4-03 is downstream. Water level moderate.	14/07/2017		2.68	0.43	4.57	15.3	2	*1*	7	*0.03*	0.89	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		7.17	1.63	7.13	16.1	7																					
SW4-03	Weather fine. U/S and D/S connected. Incoming tide, therefore SW4-03 is downstream. Low water level.	5/09/2017		6.87	9.17	7.09	18.3	3	*1*	5	*0.02*	0.39	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	5/10/2017		7.46	14.20	7.24	23.3	0																					
SW4-04	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	3/11/2017		3.18	1.92	6.68	27.6	2	*1*	9	*0.02*	1.09	*13*	*50*	*50*														
SW4-03	Upstream and downstream connected. Moderate flow, moderate water level. Incoming tide, therefore SW4-03 is downstream. Weather fine.	7/12/2017		5.19	2.20	7.65	26.5	0																					
SW4-03	Upstream and downstream connected. No visible flow, medium water level. Weather fine. Incoming tide.	17/01/2018		5.36	1.31	7.47	28.1	4	*1*	12	0.05	0.63	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	14/02/2018		5.71	3.44	7.50	30.5	0																					
SW4-03	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	20/03/2018		1.63	3.09	6.89	26.2	34	*1*	11	0.03	0.91	*13*	*50*	*50*														

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-04	Upstream and downstream sites connected. No visible flow, very low water level. Outgoing tide. Weather fine.	11/04/2018		3.70	0.53	6.72	25.1	16																				
SW4-03	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	8/05/2018		6.43	4.83	6.80	21.4	7	*1*	9	*0.02*	0.48	*13*	*50*	*50*													
SW4-04	Unable to access safely due to bridge works - cranes lifting in area. The following observations were made from a distance. Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	25/06/2018	9:59																									
SW4-03	Upstream and downstream sites connected. Very low flow, very low water level. Incoming tide. Weather fine.	16/07/2018	12:33	6.46	11.50	6.88	14.4	5	*1*	10	*0.02*	0.63	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	8/08/2018	12:05	7.04	10.60	6.95	16.7	6																				
SW4-03	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	17/09/2018	11:18	3.70	7.02	5.57	18.4	15	*1*	6	*0.02*	0.67	*13*	*50*	*50*													
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	26/10/2018	11:43	2.32	0.73	4.49	24.9	5																				
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/11/2018	9:58	3.27	1.12	6.48	26.1	23	*1*	12	0.06	1.08	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	7/12/2018	11:45	6.73	5.27	7.93	26.4	7																				
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	10/01/2019	10:29	1.69	2.25	7.12	27.7	9	*1*	6	0.10	0.99	*13*	*50*	*50*													
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	8/02/2019	11:15	3.38	8.93	7.69	27.7	10																				
SW4-03	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	22/03/2019	10:26	2.08	17.30	7.42	25.9	50	*1*	20	0.03	1.01	*13*	*50*	*50*													
SW4-03	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	24/04/2019	11:06	**2.21**	15.10	7.20	21.6	6																				
SW4-04	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	3/05/2019	12:55	3.99	15.70	7.14	22.6	8	*1*	10	*0.02*	0.45	*13*	*50*	*50*													

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	13/06/2019	9:41	7.76	19.40	7.82	17.1	9																				
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	9/07/2019	8:46	5.33	20.30	7.09	16.2	15	*1*	7	*0.02*	0.59	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	19/08/2019	12:13	8.23	19.00	7.60	18.3	2																				
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	19/09/2019	13:47	4.77	15.90	7.42	21.1	4	*1*	11	*0.02*	0.27	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	10/10/2019	11:23	3.94	22.70	7.07	22.7	4																				
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	5/11/2019	11:47	4.70	25.40	7.58	23.7	8	*1*	13	0.03	0.74	*50*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	7/12/2019	8:19	4.42	29.20	7.43	25.8	3																				
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/01/2020	11:55	2.90	29.70	7.62	30.0	6	*1*	9	*0.02*	0.31	*13*	*13*	*50*													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	18/02/2020	15:03	4.02	0.06	6.04	27.8	**43**																				
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	3/03/2020	10:03	1.22	0.15	5.43	26.0	13	*1*	8	0.07	1.16	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/04/2020	13:46	6.18	0.45	6.62	25.1	14																				
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	14/05/2020	13:29	4.65	2.76	6.54	19.6	21	*1*	**79**	0.04	1.01	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	15/06/2020	12:29	5.15	3.25	4.26	17.7	2																				
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	12/11/2020	10:51	6.47	16.10	6.80	24.6	16	*1*	14	*0.02*	0.43	*13*	*50*	*50*	0.270	*0.001*	*0.0010*	*0.002*	*0.002*	0.350	*0.005*	**0.500**	*0.0001*	**0.006**	*0.001*	*0.0005*	0.620
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	26/05/2021	10:20	10.82	0.19	6.20	16.6	10	*1*	10	*0.03*	0.70	*13*	*50*	*50*	1.020	*0.001*	*0.0010*	*0.002*	*0.002*	3.190	*0.005*	0.091	*0.0001*	0.003	*0.001*	*0.0005*	0.074

P80 & P20 Values (calculated from baseline and upstream data below)

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80					15.48	7.43		16	3	23	0.04	0.96	20	50	50	0.954	0.001	0.0010	0.002	0.002	2.654	0.005	0.403	0.0001	0.003	0.001	0.0005	0.998
P20				2.55	0.53	5.76																						
St Dev					8.28	1.07																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW13		27/02/2013		4.86	0.13	6.20	26.8	42	*3*	37	0.06	0.80																
Section3 SW13		20/03/2013		2.01	0.12	6.04	22.7	13	*3*	23	0.07	1.00																
Section3 SW13		17/04/2013		3.24	0.41	4.92	22.4	8	*3*	11	0.03	0.70																
Section3 SW13		21/05/2013		6.11	0.49	6.47	24.3	5	*3*	9	0.02	0.50																
Section3 SW13		26/06/2013		7.05	0.32	5.61	15.1	4	*3*	*3*	0.01	0.35																
Section3 SW13		23/07/2013		4.76	0.59	3.78	16.5	6	*3*	*3*	*0.01*	0.51																
Section3 SW13		20/08/2013		8.84	1.19	7.16	16.5	11	*3*	18	0.02	0.33																
Section3 SW13		24/09/2013		7.86	3.38	7.15	22.8	9	*3*	9	*0.01*	0.39																
Section3 SW13		22/10/2013		7.58	6.32	6.89	26.2	5	*3*	6	0.02	0.43																
Section3 SW13		27/11/2013		2.77	0.36	4.00	24.2	11	*3*	31	*0.01*	0.70																
Upstream Monitoring																												
SW4-03		2/08/2016		8.82	2.99	6.61	16.1	13																				
SW4-03	Flowing	8/09/2016		2.96	0.68	4.28	18.5	0	*1*	10	*0.02*	0.97	*50*	150	*50*													
SW4-03		7/10/2016		2.02	0.92	6.10	20.1	18																				
SW4-03		3/11/2016		5.18	4.70	7.35	26.0	5	*1*	2	0.03	0.96	*50*	*50*	*50*													
SW4-03		5/12/2016		8.76	8.65	6.77	28.8	374																				
SW4-03	Tidal	18/01/2017		5.29	13.20	7.48	30.7	4	*1*	10	*0.02*	0.40	*13*	*50*	*50*													
SW4-03	Tidal	1/02/2017		2.89	14.90	7.49	29.3	0																				
SW4-03	Tidal	10/03/2017		4.30	16.30	7.60	25.7	2	*1*	25	0.05	*0.10*	*50*	*50*	*50*													
SW4-03	Tidal	12/04/2017		0.00	0.16	6.40	21.0	4																				
SW4-03	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		0.00	0.56	4.98	19.2	6	*1*	44	0.05	1.21	*50*	210	*50*													
SW4-03	Weather fine.Upstream and downstream sites connected. Level and flow moderate.	7/06/2017		1.74	0.63	4.28	15.3	1																				

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-04	Weather fine.Upstream and downstream sites connected. Low flow, incoming tide therefore SW4-04 is upstream. Water level moderate.	14/07/2017		2.52	0.45	4.67	16.3	2	*1*	7	*0.03*	0.61	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		6.59	1.52	6.27	15.4	4																				
SW4-04	Weather fine. U/S and D/S connected. Incoming tide, therefore SW4-04 is upstream. Low water level.	5/09/2017		7.47	8.43	7.22	18.4	3	*1*	5	*0.02*	0.33	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	5/10/2017		7.41	13.80	6.73	24.3	0																				
SW4-03	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	3/11/2017		1.80	1.38	5.86	26.6	0	*1*	11	*0.02*	0.96	*13*	*50*	*50*														
SW4-04	Upstream and downstream connected. Moderate flow, moderate water level. Incoming tide, therefore SW4-04 is upstream. Weather fine.	7/12/2017		5.76	2.31	7.80	26.7	1																				
SW4-04	Upstream and downstream connected. No visible flow, medium water level. Weather fine. Incoming tide.	17/01/2018		4.06	1.43	7.57	28.0	1	*1*	14	0.04	0.67	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	14/02/2018		6.17	3.41	7.58	30.7	2																				
SW4-04	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	20/03/2018		1.75	2.87	6.81	26.0	18	*1*	10	0.03	0.88	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. No visible flow, very low water level. Outgoing tide. Weather fine.	11/04/2018		3.34	0.57	6.57	24.8	16																				
SW4-04	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	8/05/2018		6.95	4.96	6.82	21.4	11	*1*	7	*0.02*	0.55	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	25/06/2018	10:10	5.40	6.64	6.71	13.7	10																				
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	16/07/2018	12:19	6.22	11.60	6.87	14.5	6	*1*	8	*0.02*	0.35	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	8/08/2018	12:10	7.42	10.20	7.00	16.2	11																				
SW4-04	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	17/09/2018	11:10	3.80	6.96	5.55	18.7	17	*1*	10	*0.02*	0.62	*13*	*50*	*50*														

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	26/10/2018	11:38	2.57	0.83	5.16	24.7	9																					
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/11/2018	10:10	3.49	1.35	6.97	26.7	21	*1*	17	0.06	1.02	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	7/12/2018	11:50	4.65	5.21	7.88	26.4	8																					
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	10/01/2019	10:22	1.37	2.21	7.22	27.5	12	*1*	7	0.10	0.97	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	8/02/2019	11:06	3.04	9.79	7.93	27.9	14																					
SW4-04	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	22/03/2019	10:16	2.47	17.60	7.49	25.9	90	*1*	26	0.04	1.13	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. No visible flow, very low water level.Outgoing tide. Weather fine.	24/04/2019	11:00	6.80	15.20	7.27	21.7	1																					
SW4-03	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	3/05/2019	13:04	3.55	15.90	7.12	22.4	19	*1*	16	0.04	0.59	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	13/06/2019	9:55	7.36	19.60	7.72	16.8	11																					
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	9/07/2019	9:00	4.32	20.20	7.05	16.0	12	*1*	5	*0.02*	0.55	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	19/08/2019	12:20	7.81	19.30	7.44	18.8	3																					
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	19/09/2019	13:55	4.68	16.30	7.36	21.3	5	*1*	16	*0.02*	0.38	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	10/10/2019	11:29	2.92	22.80	7.01	22.7	5																					
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	5/11/2019	11:53	4.50	25.60	7.42	23.8	42	*1*	215	0.04	0.89	*50*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	7/12/2019	8:25	8.49	29.90	7.39	25.0	3																					

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/01/2020	11:47	3.47	30.20	7.74	30.1	10	*1*	25	*0.02*	0.31	*13*	*13*	*50*														
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	18/02/2020	14:58	0.53	0.19	5.89	27.8	32																				
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	3/03/2020	10:10	0.96	0.14	5.46	26.0	12	*1*	5	0.08	1.10	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/04/2020	13:52	4.97	0.50	6.50	25.5	17																				
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	14/05/2020	13:36	4.23	2.83	6.34	19.3	21	*1*	10	*0.02*	0.86	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	15/06/2020	12:36	4.36	3.09	4.20	18.2	4																				
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	12/11/2020	10:44	5.14	16.40	6.70	24.5	12	*1*	23	*0.02*	0.44	*13*	*50*	*50*	0.250	*0.001*	*0.0010*	*0.002*	*0.002*	0.350	*0.005*	0.480	*0.0001*	*0.003*	*0.001*	*0.0005*	1.220
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	26/05/2021	10:40	3.39	0.19	5.93	16.9	14	*1*	9	0.03	0.60	*13*	*50*	*50*	1.130	*0.001*	*0.0010*	*0.002*	*0.002*	3.230	*0.005*	0.093	*0.0001*	*0.003*	*0.001*	*0.0005*	0.110

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW4-04		4/08/2016		6.67	1.84	6.07	15.0	173																					
SW4-04		11/11/2016		5.43	7.83	7.81	26.7	8		11	*0.02*	**1.36**	*50*	*50*	*50*														
SW4-04		6/01/2017		3.78	13.70	7.17	27.1	40																					
SW4-04		1/03/2017		4.68	15.40	7.60	27.3	8	*1*	8	*0.01*	0.40	*13*	*50*	*50*														
SW4-04	Tidal	7/03/2017		4.90	15.80	7.40	26.5	5																					
SW4-04	In-situ measurements taken from bucket sample. Heavy anoxic odour.	6/04/2017		1.77	0.17	6.40	21.8	16	*1*	23	0.09	1.25	*50*	*50*	*50*														
SW4-03	Mid water level, inflowing tide therefore SW4-03 is downstream. U/s and d/s sites connected. Drizzle	4/05/2017		0.00	0.64	4.65	19.1	3																					
SW4-04	Weather showers. Upstream and downstream sites connected. High water level, outgoing tide.	13/06/2017		5.53	0.19	4.73	16.6	9	*1*	15	0.03	0.69	*13*	*50*	*50*														
SW4-03	Weather fine. Upstream and downstream connected. Medium flow, incoming tide therefore SW4-03 is downstream. Low water level.	17/07/2017		1.40	0.57	4.46	15.8	7																					
SW4-04	Upstream and downstream sites connected. Outgoing tide, high water level. Very clear water. Weather fine.	9/10/2017		7.47	13.30	7.55	25.5	0	*1*	4	*0.02*	0.25	*13*	*50*	*50*														
SW4-03	Conncected. Incoming tide, therefore SW4-03 is downstream, moderate water level, low flow.	7/11/2017		**1.60**	1.35	6.29	24.3	5																					
SW4-04	No safe access to due high risk work activities within sample area.	11/12/2017																											
SW4-04	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		3.81	1.18	7.04	27.7	41																					
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	6/02/2018		1.98	2.47	6.76	24.9	18	*1*	**28**	0.07	1.34	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	7/03/2018		3.72	4.84	7.47	26.1	11																					
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	9/05/2018		3.85	5.32	6.97	21.6	19	*1*	8	*0.02*	0.56	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	7/06/2018	13:12	6.71	9.03	6.98	16.8	**227**																					
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Rain.	5/09/2018	10:12	4.45	7.35	6.92	15.2	**129**	*1*	61	**0.21**	0.97	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Rain.	12/10/2018	14:06	4.57	15.50	7.16	21.8	14																					

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-03	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	29/11/2018	11:00	4.15	3.40	7.50	25.6	16	*1*	8	0.05	1.40	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Overcast.	17/12/2018	10:53	5.09	5.96	7.97	26.8	52																				
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/02/2019	12:13	3.95	14.10	7.14	26.1	8	*1*	15	0.03	0.50	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:33	3.33	16.00	7.37	25.4	7																				
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	4/04/2019	14:13	5.72	16.90	8.03	24.2	84	*1*	54	0.05	0.88	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	11:26	6.58	18.40	7.22	15.6	66																				
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	11:34	6.89	19.50	7.56	16.3	4	*1*	13	*0.02*	0.77	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	14:35	7.11	24.50	7.25	27.7	41																				
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	15/01/2020	10:52	1.07	30.70	7.07	25.5	7	*1*	10	0.06	0.83	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Rain.	6/02/2020	14:00	2.94	0.55	6.91	23.1	33																				
SW4-04	Upstream and downstream sites connected. No visible flow, high water level. Outgoing tide. Drizzle.	7/03/2020	10:30	1.81	0.21	5.24	25.1	14	*1*	12	0.09	1.23	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:39	4.31	0.47	6.43	24.5	56																				
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	11/06/2020	12:53	5.34	8.42	6.76	17.7	8	*1*	10	*0.02*	0.82	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	8/08/2020	10:12	10.67	0.23	3.61	13.3	15																				
SW4-04	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Rain.	16/12/2020	9:46	6.24	0.26	4.83	21.7	26	*1*	14	*0.02*	0.58	*15*	*5*	*50*	2.060	*0.001*	*0.0010*	*0.002*	*0.002*	2.560	*0.005*	0.250	*0.0001*	*0.003*	*0.001*	*0.0005*	0.210
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	17/02/2021	10:13	8.47	0.74	7.21	25.2	9																				

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/05/2021	11:16	3.20	0.20	5.29	19.9	12	*1*	15	*0.02*	0.73	*13*	*50*	*50*	0.650	*0.001*	*0.0010*	*0.002*	*0.002*	4.090	*0.005*	0.098	*0.0001*	*0.003*	*0.001*	*0.0005*	0.130
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					15.10	7.44		43	2	23	0.08	1.08	13	50	50	1.912	0.001	0.0010	0.002	0.002	3.966	0.005	0.211	0.0001	0.006	0.001	0.0005	0.287
P20				2.07	0.54	5.77																						
St Dev					8.14	1.02																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW13		7/02/2013		1.30	0.35	5.52	23.7	27	*3*	38	0.15	0.40																
Section3 SW13		28/05/2013		9.84	1.55	7.13	18.5	13	*3*	16	0.06	0.60																
Section3 SW13		1/07/2013		9.84	1.55	7.13	18.5	13	*3*	7	0.03	0.45																
Section3 SW13		13/11/2013		7.36	7.40	6.24	25.9	62	*3*	31	0.02	1.20																
Section3 SW13		17/12/2013		7.36	1.03	6.54	25.7	11	*3*	8	0.50	0.60																
Upstream Monitoring																												
SW4-03		4/08/2016		6.97	1.86	5.78	15.2	171																				
SW4-03		11/11/2016		4.68	7.59	7.63	26.6	2	*1*	7	*0.02*	0.62	*50*	*50*	*50*													
SW4-03		6/01/2017		2.15	14.30	6.96	27.3	42																				
SW4-03		1/03/2017		4.28	16.40	7.50	27.1	7	*1*	6	*0.02*	0.10	*13*	*50*	*50*													
SW4-03	Tidal	7/03/2017		5.55	15.50	7.46	26.5	5																				
SW4-03	Heavy anoxic odour	6/04/2017		0.00	0.15	6.33	21.6	14	*1*	25	0.08	1.28	*50*	*50*	*50*													
SW4-04	Mid water level, inflowing tide therefore SW4-04 is upstream. U/s and d/s sites connected. Drizzle	4/05/2017		0.00	0.62	5.13	19.1	13																				
SW4-03	Weather showers. Upstream and downstream site connected. High water level, outgoing tide.	13/06/2017		4.38	0.18	4.58	16.8	5	*1*	11	*0.02*	0.60	*13*	*50*	*50*													
SW4-04	Weather fine. Upstream and downstream connected. Medium flow, incoming tide therefore SW4-04 is upstream. Low water level.	17/07/2017		0.66	0.54	4.07	15.4	4																				
SW4-03	Upstream and downstream sites connected. Outgoing tide, high water level. Very clear water. Weather fine.	9/10/2017		7.93	13.60	7.52	24.5	0	*1*	6	*0.02*	0.31	*13*	*50*	*50*													

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-04	Conncected. Incoming tide, therefore SW4-04 is upstream. Moderate water level, low flow.	7/11/2017		2.61	2.04	6.85	24.5	4																				
SW4-03	No safe access to due high risk work activities within sample area.	11/12/2017																										
SW4-03	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		6.79	1.13	6.95	27.3	38																				
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	6/02/2018		1.76	2.16	6.82	24.7	3	*1*	14	0.04	1.41	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	7/03/2018		4.51	4.84	7.48	26.0	15																				
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	9/05/2018		6.72	5.53	7.24	21.6	15	*1*	10	*0.02*	0.67	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	7/06/2018	13:06	5.52	8.13	7.04	17.0	97																				
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Rain.	5/09/2018	10:22	4.48	7.28	6.69	15.3	112	*1*	58	0.10	0.10	*13*	*50*	*50*													
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Rain.	12/10/2018	14:11	4.31	15.00	7.12	21.6	18																				
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	29/11/2018	10:51	3.63	3.85	7.64	25.0	23	*1*	12	0.06	1.09	*13*	*50*	*50*													
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Overcast.	17/12/2018	10:59	7.76	6.05	7.94	27.0	52																				
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/02/2019	12:06	4.24	13.50	7.22	25.9	11	*1*	13	0.03	0.56	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:26	3.78	16.30	7.44	25.5	18																				
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	4/04/2019	14:06	5.27	17.50	8.04	24.3	26	*1*	9	*0.02*	0.75	*13*	*50*	*50*													
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	11:18	6.28	19.70	7.18	16.0	39																				
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	11:46	6.51	19.30	7.43	16.2	6	*1*	15	*0.02*	1.00	*13*	*50*	*50*													
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	14:39	4.21	26.70	7.27	28.5	48																				

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	15/01/2020	11:11	1.33	31.00	7.07	25.4	8	*1*	46	0.07	1.02	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Rain.	6/02/2020	14:05	1.39	0.54	6.78	23.2	55																				
SW4-03	Upstream and downstream sites connected. No visible flow, high water level. Outgoing tide. Overcast.	7/03/2020	10:37	1.14	0.20	5.72	25.3	14	*1*	10	0.09	1.29	*13*	*50*	*50*														
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:44	3.87	0.61	6.05	24.2	54																				
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	11/06/2020	12:45	5.77	8.44	6.96	17.9	8	*1*	16	*0.02*	0.83	*13*	*50*	*50*														
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	8/08/2020	10:06	3.87	0.22	3.86	13.4	15																				
SW4-03	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Rain.	16/12/2020	9.36	5.99	0.31	5.56	22.1	26	*1*	7	*0.02*	0.53	*15*	*5*	*50*	2.240	*0.001*	*0.0010*	*0.002*	*0.002*	2.750	*0.005*	0.240	*0.0001*	0.007	*0.001*	*0.0005*	0.340
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	17/02/2021	10:19	8.74	0.74	7.05	25.2	12																				
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	3/05/2021	11:07	2.85	0.20	5.17	19.4	12	*1*	14	*0.02*	0.75	*13*	*50*	*50*	0.600	*0.001*	*0.0010*	*0.002*	*0.002*	4.270	*0.005*	0.093	*0.0001*	*0.003*	*0.001*	*0.0005*	0.075

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW4-06	Murky water, medium sloping banks	2/08/2016		7.18	6.56	6.53	16.6	6																				
SW4-06	Flowing	8/019/2016		5.94	0.46	6.26	19.8	5	*2*	12	0.06	0.73	*50*	*50*	*50*													
SW4-06	Tidal	7/10/2016		4.86	3.67	5.93	19.8	**33**																				
SW4-06	Accurate turbidity reading could not be obtained	3/11/2016		5.40	9.60	7.12	26.4		*1*	19	0.03	0.90	*50*	*50*	*50*													
SW4-06		5/12/2016		8.79	13.70	6.67	30.8	2																				
SW4-06	Tidal	18/01/2017		8.28	9.77	**7.77**	31.6	9	*1*	5	*0.02*	2.42	*13*	*50*	*50*													
SW4-06	Tidal	1/02/2017		**3.53**	12.00	7.19	27.5	1																				
SW4-06	Tidal	10/03/2017		7.11	6.16	**8.14**	23.6	15	*1*	29	*0.02*	0.70	*50*	*50*	*50*													
SW4-06	Tidal	12/04/2017		1.97	0.28	6.53	23.4	14																				
SW4-06	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		3.58	3.50	6.98	21.4	32	*1*	13	*0.05*	1.41	*50*	*50*	*50*													
SW4-06	Weather fine. Connected. Low flow. Outgoing tide.	7/06/2017		6.82	7.47	6.81		7																				
SW4-05	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW4-05 is downstream. Moderate to high water level.	14/07/2017		**3.86**	1.14	6.94	17.3	13	*1*	16	0.09	1.10	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		9.43	8.02	7.28	17.7	12																				
SW4-05	Weather fine. U/S and D/S connected. No observed flow. Low water level.	5/09/2017		8.44	14.20	7.10	18.1	9	*1*	3	*0.02*	0.47	*13*	*50*	*50*													
SW4-06	Upstream and downstream connected. Outgoing tide, low water level. Overcast.	3/10/2017		6.80	19.70	7.42	21.9	4																				
SW4-06	Upstream and downstream connected. Outgoing tide, low water level.	3/11/2017		5.87	7.31	7.45	26.7	8	*1*	**20**	*0.02*	0.65	*13*	*50*	*50*													
SW4-05	Upstream and downstream connected. Little flow, moderate water level. Incoming tide, therefore SW4-05 is downstream. Weather fine.	7/12/2017		7.05	4.66	7.89	27.8	0																				
SW4-05	Upstream and downstream connected. No visible flow, medium water level. Weather fine. Incoming tide.	17/01/2018		5.73	4.03	7.66	28.0	1	*1*	10	*0.02*	0.58	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	14/02/2018		7.81	13.30	7.54	30.1	1																				
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	20/03/2018		4.03	3.28	6.45	25.6	28	*1*	15	*0.02*	1.11	*13*	*50*	*50*													

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2018		3.20	6.89	5.93	25.4	8																				
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	8/05/2018		10.03	8.97	6.40	20.6	4	*1*	3	*0.02*	0.66	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	25/06/2018	10:25	4.97	3.33	4.29	11.9	30																				
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	16/07/2018	11:44	5.53	8.92	6.24	11.7	15	*1*	6	*0.02*	0.94	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	8/08/2018	11:50	8.77	18.90	6.52	16.9	11																				
SW4-05	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	17/09/2018	10:40	2.55	3.52	5.05	18.2	28	*1*	19	*0.02*	0.92	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites not connected. No visible flow, low water level. Incoming tide. Weather fine.	26/10/2018	11:17	2.64	1.73	5.52	26.0	29																				
SW4-05	Upstream and downstream sites not connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/11/2018	9:30	4.38	2.32	6.54	27.3	23	*1*	12	0.04	1.30	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	7/12/2018	11:27	7.35	13.00	7.76	26.2	9																				
SW4-05	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	10/01/2019	10:03	3.32	7.23	7.07	27.1	9	*1*	5	*0.02*	0.87	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	8/02/2019	10:51	5.06	16.80	7.94	27.2	20																				
SW4-05	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	22/03/2019	9:50	6.54	21.90	7.77	25.5	16	*1*	11	0.04	0.60	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites connected. No visible flow, low water level.Outgoing tide. Weather fine.	24/04/2019	10:37	4.20	17.40	7.29	21.8	0																				
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	3/05/2019	12:19	4.59	21.90	6.60	22.6	5	*1*	7	*0.02*	0.51	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	13/06/2019	9:13	9.13	24.30	8.01	16.6	4																				
SW4-06	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	9/07/2019	7:57	6.59	25.90	6.92	16.1	5	*1*	3	*0.02*	0.63	*13*	*50*	*50*													

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	19/08/2019	11:41	7.47	23.70	7.57	18.1	2																					
SW4-05	Upstream and downstream sites not connected. No visible flow, medium water level. Incoming tide. Weather fine.	19/09/2019	13:29	5.04	20.60	7.44	21.6	2	*1*	13	*0.02*	0.29	*13*	*50*	*50*														
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	10/10/2019	10:51	7.16	29.50	6.81	23.0	1																					
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	5/11/2019	12:22	**4.13**	31.90	7.57	23.9	3	*1*	6	*0.02*	0.57	*50*	*50*	*50*														
SW4-06	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	7/12/2019	8:54	6.16	36.70	7.57	24.8	11																					
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/01/2020	11:15	3.87	35.50	7.69	29.1	6	*1*	10	*0.02*	0.35	*13*	*13*	*50*														
SW4-06	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	18/02/2020	14:42	0.65	0.24	5.76	29.5	15																					
SW4-06	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	3/03/2020	10:57	**2.93**	0.30	6.12	27.0	32	*1*	14	0.11	1.45	*13*	*50*	*50*														
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/04/2020	12:09	7.53	2.73	6.67	25.0	34																					
SW4-05	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	14/05/2020	13:04	8.29	9.34	6.70	21.2	18	*1*	9	*0.02*	0.68	*13*	*50*	*50*														
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	15/06/2020	11:30	5.20	6.10	5.26	17.9	11																					
SW4-06	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	12/11/2020	10:23	5.25	24.20	6.49	24.3	3	*1*	7	*0.02*	0.27	*13*	*50*	*50*	0.078	*0.001*	*0.0010*	*0.002*	*0.002*	0.190	**0.010**	0.110	*0.0001*	*0.003*	*0.001*	*0.0005*	0.004
SW4-05	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	26/05/2021	10:02	6.39	1.32	6.31	17.1	25	*1*	6	*0.02*	0.46	*13*	*50*	*50*	**0.550**	*0.001*	*0.0010*	*0.002*	*0.002*	2.020	0.005	0.160	*0.0001*	*0.003*	*0.001*	*0.0005*	0.015
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					16.52	7.39		23	3	19	0.05	1.01	20	50	50	0.404	0.001	0.0010	0.002	0.002	1.670	0.005	0.176	0.0001	0.003	0.001	0.0005	1.810
P20				4.30	1.83	6.20																							
St Dev					9.24	0.88																							

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW14		27/02/2013		9.63	0.18	6.68	25.8	31	*3*	34	0.15	1.20																
Section3 SW14		20/03/2013		5.81	0.16	6.72	24.2	19	*3*	19	0.15	1.00																
Section3 SW14		17/04/2013		2.67	0.29	5.04	21.3	7	*3*	10	0.03	0.70																
Section3 SW14		21/05/2013		9.01	5.11	6.94	21.0	8	*3*	9	*0.01*	0.50																
Section3 SW14		26/06/2013		9.43	1.36	7.03	16.3	13	*3*	14	0.03	0.55																
Section3 SW14		23/07/2013		7.12	1.82	5.80	19.3	23	*3*	21	0.01	0.53																
Section3 SW14		20/08/2013		9.63	7.96	7.14	18.6	9	*3*	13	0.01	0.14																
Section3 SW14		24/09/2013		8.63	7.28	7.18	22.4	4	*3*	5	0.01	0.35																
Section3 SW14		22/10/2013		8.79	11.20	6.94	26.5	4	*3*	*3*	0.14	1.00																
Section3 SW14		27/11/2013		5.44	3.82	3.71	26.2	7	*3*	6	*0.01*	0.54																
Upstream Monitoring																												
SW4-05	Murky water, medium sloping banks	2/08/2016		8.04	6.57	6.20	15.7	14																				
SW4-05	Flowing	8/09/2016		5.91	0.52	5.97	19.5	6	*1*	15	0.06	0.77	*50*	*50*	*50*													
SW4-05	Tidal	7/10/2016		5.47	3.64	4.49	19.3	8																				
SW4-05		3/11/2016		7.01	9.66	6.47	26.6	3	*1*	12	0.03	0.94	*50*	*50*	*50*													
SW4-05		5/12/2016		9.02	15.00	6.73	33.1	3																				
SW4-05	Tidal	18/01/2017		7.84	9.33	6.80	31.3	19	*1*	11	*0.02*	2.88	*13*	*50*	*50*													
SW4-05	Tidal	1/02/2017		6.96	6.56	7.10	28.3	37																				
SW4-05	Tidal	10/03/2017		4.84	6.91	6.72	23.9	3	*1*	25	*0.02*	0.80	*50*	*50*	*50*													
SW4-05	Tidal	12/04/2017		0.88	0.26	6.20	26.1	27																				
SW4-05	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		1.87	3.16	6.68	20.9	61	*1*	24	0.05	1.57	*50*	110	*50*													
SW4-05	Weather fine. Connected. Low flow. Outgoing tide.	7/06/2017		7.05	5.75	7.01	16.4	8																				
SW4-06	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW4-06 is upstream. Moderate to high water level.	14/07/2017		4.71	1.07	6.75	16.9	13	*1*	20	0.14	1.00	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		8.51	8.89	7.36	17.6	8																				

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Weather fine. U/S and D/S connected. No observed flow. Low water level.	5/09/2017		8.13	14.70	7.16	18.1	4	*1*	6	*0.02*	0.38	*13*	*50*	*50*														
SW4-05	Upstream and downstream connected. Outgoing tide, low water level. Overcast.	3/10/2017		7.36	19.10	7.70	21.7	5																				
SW4-05	Upstream and downstream connected. Outgoing tide, low water level	3/11/2017		6.10	5.85	6.88	26.7	2	*1*	5	*0.02*	0.76	*13*	*50*	*50*														
SW4-06	Upstream and downstream connected. Little flow, moderate water level. Incoming tide therefore SW4-06 is upstream. Weather fine.	7/12/2017		6.52	3.79	7.84	27.0	0																				
SW4-06	Upstream and downstream connected. No visible flow, medium water level. Weather fine. Incoming tide.	17/01/2018		5.64	4.41	7.79	27.9	3	*1*	25	*0.02*	0.78	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	14/02/2018		6.79	8.49	7.56	32.6	70																				
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	20/03/2018		2.11	2.82	6.17	25.2	32	*1*	14	0.03	1.38	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2018		3.73	3.80	6.32	24.2	17																				
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	8/05/2018		7.23	11.90	6.70	21.3	8	*1*	6	*0.02*	0.51	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	25/06/2018	9:55	9.61	10.50	6.52	14.1	14																				

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	16/07/2018	11:54	6.02	14.00	6.42	12.9	12	*1*	6	*0.02*	0.62	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	8/08/2018	11:44	4.57	14.30	6.05	15.9	89																				
SW4-06	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	17/09/2018	10:51	2.43	5.28	5.15	17.8	23	*1*	19	*0.02*	0.68	*13*	*50*	*50*														
SW4-06	Upstream and downstream sites not connected. No visible flow, medium water level. Incoming tide. Weather fine.	26/10/2018	11:24	2.57	1.66	6.52	25.6	5																				
SW4-06	Upstream and downstream sites not connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/11/2018	9:39	4.82	1.84	7.06	26.3	15	*1*	10	0.04	0.84	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	7/12/2018	11:21	6.65	12.20	7.52	26.6	4																				
SW4-06	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	10/01/2019	9:52	4.00	4.39	7.03	27.1	23	*1*	12	0.07	1.07	*13*	*50*	*50*														
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	8/02/2019	10:45	5.39	13.60	7.60	28.0	18																				
SW4-06	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Weather fine.	22/03/2019	9:57	7.05	20.00	7.96	26.7	34	*1*	17	0.04	0.48	*13*	*50*	*50*														
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	24/04/2019	10:43	3.55	18.80	7.45	21.6	0																				
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	3/05/2019	12:28	5.03	21.50	7.10	22.4	5	*1*	6	*0.02*	0.43	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	13/06/2019	9:21	11.39	24.80	7.90	17.1	5																				
SW4-05	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	9/07/2019	8:07	4.51	14.80	6.19	15.5	21	*1*	10	*0.02*	1.16	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	19/08/2019	11:46	8.10	25.10	7.15	17.6	3																				
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	19/09/2019	13:19	4.83	20.20	7.35	21.3	2	*1*	4	*0.02*	0.19	*13*	*50*	*50*														

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	10/10/2019	10:59	6.20	27.80	7.14	22.9	2																					
SW4-06	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	5/11/2019	12:16	4.81	29.60	7.72	24.1	4	*1*	8	*0.02*	0.41	*50*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	7/12/2019	8:58	5.13	36.90	7.43	24.4	3																					
SW4-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/01/2020	11:21	3.49	35.80	7.68	29.8	7	*1*	12	*0.02*	0.61	*13*	*13*	*50*														
SW4-05	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	18/02/2020	14:38	0.59	0.24	5.42	29.5	14																					
SW4-05	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	3/03/2020	11:04	3.70	0.31	6.17	26.8	31	*1*	15	0.10	1.38	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/04/2020	12:12	9.79	2.20	6.91	24.8	31																					
SW4-06	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	14/05/2020	13:11	6.39	9.81	6.83	20.4	14	*1*	7	*0.02*	0.70	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	15/06/2020	11:33	4.50	5.77	4.35	17.8	11																					
SW4-05	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	12/11/2020	10:26	5.20	23.00	6.42	24.1	5	*1*	8	*0.02*	0.30	*13*	*50*	*50*	0.100	*0.001*	*0.0010*	*0.002*	*0.002*	0.230	*0.005*	0.160	*0.0001*	*0.003*	*0.001*	*0.0005*	2.260
SW4-06	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	26/05/2021	9:58	5.90	1.54	6.38	17.8	31	*1*	8	*0.02*	0.44	*13*	*50*	*50*	0.480	*0.001*	*0.0010*	*0.002*	*0.002*	2.030	*0.005*	0.180	*0.0001*	*0.003*	*0.001*	*0.0005*	0.010

SW4-06 - Edwards Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW4-06		4/08/2016		6.23	0.82	4.37	14.3	42																					
SW4-06		11/11/2016		6.97	10.60	7.87	26.6	4	*1*	2	*0.02*	0.55	*50*	*50*	*50*														
SW4-06		6/01/2017		**2.79**	22.30	7.34	27.6	59																					
SW4-06		1/03/2017		6.16	4.62	7.38	26.5	32	2	12	*0.02*	1.00	*13*	*50*	*50*														
SW4-06		7/03/2017		4.54	4.21	6.37	24.4	17																					
SW4-06	High flow. Note low oxygen level (repeated measurement x 3) Anoxic odour to water.	6/04/2017		0.00	0.18	6.03	23.8	25	*1*	40	0.14	1.07	*50*	*50*	*50*														
SW4-05	Mid water level, inflowing tide therefore SW4-05 is downstream. U/s and d/s sites connected. Drizzle.	4/05/2017		**1.26**	3.43	6.72	20.2	**61**																					
SW4-06	Weather showers. Upstream and downstream sites connected. High water level, outgoing tide.	13/06/2017		4.95	0.22	4.96	17.9	78	*1*	14	0.05	0.69	*13*	*50*	*50*														
SW4-05	Weather fine. Upstream and downstream connected. Flow moderate, incoming tide therefore SW4-05 is downstream. Water level low-moderate.	17/07/2017		6.05	2.46	7.28	19.2	**79**																					
SW4-05	Upstream and downstream sites connected. Incoming tide, therefore SW4-05 is downstream. High water level. Weather fine.	9/10/2017		9.89	21.80	7.35	26.3	0	*1*	5	*0.02*	0.31	*13*	*50*	*50*														
SW4-05	Connected. Incoming tide, therefore SW4-05 is downstream. Moderate water level, low flow.	7/11/2017		4.07	4.92	7.16	23.7	11																					
SW4-05	Upstream and downstream sites connected. Incoming tide therefore SW4-05 is downstream. Low water level, no visible flow. Weather fine.	11/12/2017		7.27	4.21	8.77	27.4	1	*1*	12	0.03	**1.30**	*13*	*50*	*50*														
SW4-06	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		4.50	2.19	6.88	27.4	38																					
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/02/2018		5.57	9.69	7.28	25.1	0	*1*	37	*0.02*	0.62	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide, therefore SW4-05 is downstream. Overcast.	7/03/2018		**3.32**	6.57	7.29	25.8	33																					
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	9/05/2018		4.31	7.29	7.05	21.1	40	*1*	21	*0.02*	0.71	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. No visible flow, high water level. Incoming tide. Overcast.	7/06/2018	12:41	4.73	11.60	6.56	17.2	57																					

SW4-06 - Edwards Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Rain.	5/09/2018	9:50	3.83	6.01	6.83	14.8	131	*1*	79	*0.02*	1.63	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites not connected. No visible flow, medium water level. Outgoing tide. Rain.	12/10/2018	13:52	6.20	**19.90**	7.05	21.5	5																				
SW4-05	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	29/11/2018	10:05	8.29	9.13	7.13	25.3	21	*1*	**27**	*0.02*	0.85	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Overcast.	17/12/2018	10:24	7.67	6.40	7.83	26.6	7																				
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	22/02/2019	11:41	3.62	21.10	6.49	25.2	8	*1*	10	0.05	0.76	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:01	10.19	24.00	7.86	25.4	8																				
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	4/04/2019	13:44	6.37	24.50	8.29	24.1	20	*1*	8	*0.02*	0.47	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	10:57	8.66	11.20	6.93	15.8	**99**																				
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	10:58	9.99	24.70	7.81	17.3	2	*1*	5	*0.02*	0.29	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	14:18	4.86	**36.10**	7.38	27.9	16																				
SW4-05	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	15/01/2020	10:02	3.23	36.60	7.12	25.3	8	*1*	12	*0.02*	0.94	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	6/02/2020	13:44	6.12	9.52	7.57	24.7	29																				
SW4-06	Upstream and downstream sites connected. No visible flow, high water level. Outgoing tide. Drizzle.	7/03/2020	11:32	3.72	0.45	6.19	26.0	42	*1*	18	0.10	1.20	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:18	5.36	3.69	6.39	24.7	50																				
SW4-05	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	11/06/2020	12:31	4.23	6.32	5.97	18.8	30	*1*	23	*0.02*	1.06	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/08/2020	9:48	5.90	4.29	6.32	14.2	18																				

SW4-06 - Edwards Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Rain.	16/12/2020	9:19	7.69	3.15	6.93	23.8	51	*1*	34	*0.02*	0.57	*15*	*5*	*50*	**2.480**	0.001	*0.0010*	*0.002*	*0.002*	1.750	*0.005*	0.260	*0.0001*	*0.003*	*0.001*	*0.0005*	0.017
SW4-05	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Rain.	17/02/2021	9:57	6.52	2.12	6.97	23.7	53																				
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	3/05/2021	10:27	3.39	0.64	4.86	18.6	19	*1*	20	*0.02*	0.53	*13*	*50*	*50*	0.760	0.001	*0.0010*	*0.002*	*0.002*	4.440	*0.005*	0.250	*0.0001*	**0.009**	*0.001*	*0.0005*	0.028
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					15.00	7.51		59	2	26	0.05	1.00	13	50	50	2.022	0.001	0.0010	0.002	0.002	4.168	0.010	0.254	0.0001	0.003	0.001	0.0005	0.254
P20				3.69	1.82	6.20																						
St Dev					8.97	1.07																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW14		7/02/2013		1.03	0.33	6.45	28.0	24	*3*	16	0.18	0.50																
Section3 SW14		28/05/2013		9.65	3.15	6.93	18.5	11	*3*	14	*0.01*	0.40																
Section3 SW14		1/07/2013		9.65	3.15	6.93	18.5	11	*3*	*3*	0.03	0.51																
Section3 SW14		13/11/2013		3.08	3.62	4.50	26.1	32	*3*	31	0.02	2.00																
Section3 SW14		17/12/2013		8.13	4.67	6.69	27.8	5	9	4	*1.25*	0.40																
Upstream Monitoring																												
SW4-05		4/08/2016		6.14	0.71	4.20	15.8	40																				
SW4-05		11/11/2016		7.04	12.40	7.65	27.3	3	*1*	5	*0.02*	0.44	*50*	*50*	*50*													
SW4-05		6/01/2017		5.72	15.00	7.91	26.4	73																				
SW4-05		1/03/2017		4.98	5.04	6.74	26.7	424	*1*	20	*0.02*	1.00	*13*	*50*	*50*													
SW4-05	Tidal	7/03/2017		3.73	3.80	5.76	24.4	17																				
SW4-05	High flow. Anoxic odour to water.	6/04/2017		0.00	0.17	6.08	24.0	30	*1*	41	0.14	1.08	*50*	*50*	*50*													
SW4-06	Mid water level, inflowing tide therefore SW4-06 is upstream. U/s and d/s sites connected. Drizzle.	4/05/2017		2.06	3.95	6.90	20.3	36																				
SW4-05	Weather showers. Connected. High tide, outgoing.	13/06/2017		4.68	0.21	5.01	18.4	75	*1*	22	0.06	0.97	*13*	*50*	*50*													

SW4-06 - Edwards Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Weather fine. Upstream and downstream connected. Flow moderate, incoming tide therefore SW4-06 is upstream. Water level low-moderate.	17/07/2017		5.46	2.04	6.66	16.3	12																				
SW4-06	Upstream and downstream sites connected. Incoming tide, therefore SW4-06 is upstream. High water level. Weather fine.	9/10/2017		10.43	25.50	7.90	26.1	5	*1*	6	*0.02*	0.27	*13*	*50*	*50*													
SW4-06	Connected. Incoming tide, therefore SW4-06 is upstream. Moderate water level, low flow.	7/11/2017		5.00	5.14	7.45	24.1	10																				
SW4-06	Upstream and downstream sites connected. Incoming tide, therefore SW4-06 is upstream. Low water level, no visible flow. Weather fine.	11/12/2017		7.70	5.07	8.91	27.3	1	*1*	6	*0.02*	0.66	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		3.69	1.82	6.53	28.0	59																				
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	6/02/2018		4.42	9.33	7.21	24.9	0	*1*	34	*0.02*	0.76	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	7/03/2018		5.51	6.03	7.59	26.5	10																				
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	9/05/2018		7.33	12.20	7.13	21.7	10	*1*	5	*0.02*	0.85	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. No visible flow, high water level. Incoming tide. Overcast.	7/06/2018	12:48	4.81	11.00	6.59	17.6	81																				
SW4-05	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Rain.	5/09/2018	9:41	4.35	5.04	6.80	14.5	158	*1*	87	0.04	1.48	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites not connected. No visible flow, low water level. Outgoing tide. Drizzle.	12/10/2018	13:38	3.18	8.01	6.18	20.6	91																				
SW4-06	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	29/11/2018	10:17	5.89	12.00	7.51	24.5	20	*1*	11	*0.02*	0.56	*13*	*50*	*50*													
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Overcast.	17/12/2018	10:19	4.63	1.75	7.34	25.5	157																				
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	22/02/2019	11:51	3.93	18.10	7.20	26.1	10	*1*	14	*0.02*	0.58	*13*	*50*	*50*													
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:09	7.15	19.60	7.87	25.8	13																				
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	13:38	6.08	23.50	8.23	24.6	21	*1*	5	*0.02*	1.00	*13*	*50*	*50*													

SW4-06 - Edwards Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW4-06	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	10:47	9.12	24.50	7.30	15.7	38																					
SW4-05	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	11:08	6.71	23.30	7.48	16.9	5	*1*	11	*0.02*	0.34	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	14:23	3.86	21.80	7.21	30.3	43																					
SW4-06	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	15/01/2020	9:48	2.12	38.30	6.98	24.9	6	*1*	9	*0.02*	0.60	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	6/02/2020	13:48	8.29	4.18	7.77	23.6	60																					
SW4-05	Upstream and downstream sites connected. No visible flow, high water level. Outgoing tide. Drizzle.	7/03/2020	11:40	3.30	0.38	6.35	26.1	44	*1*	17	0.10	1.22	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:24	5.45	3.40	6.59	24.7	50																					
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	11/06/2020	12:27	4.93	6.61	6.20	18.6	38	*1*	27	*0.02*	0.96	*13*	*50*	*50*														
SW4-05	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	8/08/2020	9:52	5.22	3.69	4.32	13.9	12																					
SW4-05	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Rain.	16/12/2020	9:21	8.66	3.31	6.95	23.8	54	*1*	25	0.03	0.66	*15*	*5*	*50*	2.360	0.001	*0.0010*	*0.002*	*0.002*	1.560	*0.005*	0.260	*0.0001*	*0.003*	*0.001*	*0.0005*	0.310
SW4-06	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	9:53	5.97	1.82	6.97	23.3	46																					
SW4-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	3/05/2021	10:31	3.48	0.64	4.21	18.2	22	*1*	18	*0.02*	0.47	*13*	*50*	*50*	0.670	*0.001*	*0.0010*	*0.002*	*0.002*	4.820	0.011	0.230	*0.0001*	*0.003*	*0.001*	*0.0005*	0.028

SW5-02 Yaegl Wetland

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-02	No access	2/08/2016																											
SW5-02	Doesn't appear to flow from upstream site	5/09/2016		**0.86**	2.44	6.04	15.8	13	5	24	**0.75**	**4.52**	*25*	*50*	*50*														
SW5-02	Dry	10/10/2016																											
SW5-02	Dry	1/11/2016																											
SW5-02	Dry	13/12/2016																											
SW5-02	Dry	18/01/2017																											
SW5-02	Dry	1/02/2017																											
SW5-02	Dry	10/03/2017																											
SW5-02	Dry	12/04/2017																											
SW5-02	Dry	3/05/2017																											
SW5-02	Dry	7/06/2017																											
SW5-02	Dry	14/07/2017																											
SW5-02	Stagnant water with no visible flow. Low water level. Weather fine.	7/08/2017		6.29	**4.54**	**7.45**	20.0	**70**																					
SW5-02	Weather fine. U/S and D/S not connected. No flow observed. Water level low. Cane drain.	6/09/2017		8.98	**6.93**	**8.15**	23.8	**275**	*1*	81	0.19	**3.72**	*13*	*50*	*50*														
SW5-02	Dry	3/10/2017																											
SW5-02	Dry	3/11/2017																											
SW5-02	Dry	7/12/2017																											
SW5-02	Dry	17/01/2018																											
SW5-02	Dry	19/02/2018																											
SW5-02	Dry - not sampled. Overcast.	21/03/2018																											
SW5-02	Insufficient water to sample	4/04/2018																											
SW5-02	Upstream and downstream sites not connected. No visible flow, high water level. Overcast.	18/05/2018		2.29	**4.01**	**7.48**	15.6	12	*1*	5	0.11	1.22	*25*	*50*	*25*														
SW5-02	Upstream and downstream sites not connected. No visible flow, high water level. Weather fine.	14/06/2018	10:32	3.94	2.08	6.87	15.4	13																					
SW5-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/07/2018	10:21	3.43	**4.45**	6.76	13.1	12	*1*	5	0.08	0.62	*30*	*250*	*250*														
SW5-02	Upstream and downstream sites not connected. No visible flow, low water level. Slight dust layer. Weather fine.	8/08/2018	10:03	5.27	**5.64**	**7.40**	12.0	15																					

SW5-02 Yaegl Wetland

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-02	Upstream and downstream sites not connected. No visible flow, medium water level. Red algae and surface bacteria layer present. Weather fine.	20/09/2018	9:40	11.01	**6.51**	**6.67**	22.0	22	**3**	9	0.07	1.03	**30**	**250**	**250**														
SW5-02	Upstream and downstream sites not connected. No visible flow, medium water level. Brown algae present. Weather fine.	2/10/2018	9:56	5.11	**4.99**	**6.91**	19.8	**52**																				
SW5-02	Upstream and downstream sites not connected. No visible flow, medium water level. Heavy aquatic vegetation, brown algae, scum layer and bacteria present. Weather fine.	6/11/2018	11:04	5.77	**3.73**	**7.12**	27.6	**72**	*1*	17	0.11	1.45	**30**	*100*	*50*														
SW5-02	Insufficient water to sample	6/12/2018	10:21																										
SW5-02	Insufficient water to sample.	10/01/2019	9:49																										
SW5-02	Dry, not sampled.	12/02/2019	9:27																										
SW5-02	Dry, not sampled.	13/03/2019	10:18																										
SW5-02	No visible flow. Sight bacteria layer. Unable to obtain DO measurement due to very low water level. Overcast.	10/04/2019	8:57		0.93	**6.80**	21.5	47																				
SW5-02	Monitoring ceased in May 2019																												

SW5-02 Yaegl Wetland

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					1.90	6.47		49	3	166	0.28	1.72	27	130	130	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				1.14	0.83	3.80																							
St Dev					1.38	1.35																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW24		28/02/2013		1.26	0.43	5.97	26.1	10	*3*	11	0.20	0.90																	
Section3 SW24		21/03/2013		3.78	0.83	5.89	20.5	60	*3*	*3*	0.26	2.10																	
Section3 SW24		17/04/2013		4.58	0.90	6.04	21.4	25	*3*	94	0.42	1.90																	
Section3 SW24		21/05/2013		8.66	1.07	4.27	16.5	7	*3*	11	0.08	1.10																	
Section3 SW24		26/06/2013		8.53	1.53	3.21	12.4	16	*3*	905	*0.01*	0.80																	
Section3 SW24		23/07/2013		5.71	1.44	3.71	13.8	7	*3*	*3*	0.03	0.60																	
Section3 SW24		20/08/2013		8.26	1.42	4.23	18.4	7	*3*	6	0.05	0.80																	
Section3 SW24		24/09/2013		4.47	1.90	3.80	21.0	10	*3*	40	*0.01*	0.71																	
Section3 SW24	Dry	22/10/2013																											
Section3 SW24		27/11/2013		7.22	1.11	3.57	23.9	8	*3*	*3*	0.03	0.90																	
Section3 SW24		17/12/2013		5.97	0.81	3.97	23.5	47	6	45	0.03	1.00																	
Upstream Monitoring																													
SW5-01	Heavy scum layer - lab samples collected	2/08/2016		0.67	4.71	6.97	16.6	376	4				*25*	*50*	*50*														
SW5-01		5/09/2016		8.09	5.20	6.06	22.3	631	3	214	0.30	1.44	*25*	*50*	*50*														
SW5-01	Dry	10/10/2016																											
SW5-01	Dry	1/11/2016																											
SW5-01	Dry	13/12/2016																											
SW5-01	Dry	18/01/2017																											
SW5-01	Dry	1/02/2017																											
SW5-01	Dry	10/03/2017																											
SW5-01		12/04/2017		0.08	0.17	6.47	23.1	5																					
SW5-01	Dry	3/05/2017																											

SW5-02 Yaegl Wetland

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-01	Dry	7/06/2017																											
SW5-01	Dry	14/07/2017																											
SW5-01	Insufficient water to sample	7/08/2017																											
SW5-01	Dry	6/09/2017																											
SW5-01	Dry	3/10/2017																											
SW5-01	Dry	3/11/2017																											
SW5-01	Dry	7/12/2017																											
SW5-01	Dry	17/01/2018																											
SW5-01	Dry	19/02/2018																											
SW5-01	Unable to obtain accurate DO or turbidity measurement due to very low water level. No visible flow. Drizzle.	21/03/2018			1.76	6.64	24.1		*1*	332	0.55	2.19	*25*	*50*	*50*														
SW5-01	Insufficient water to sample.	4/04/2018																											
SW5-01	Insufficient water to sample.	18/05/2018																											
SW5-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2018	10:24	0.00	1.22	6.71	15.3	38																					
SW5-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/07/2018	10:09	3.65	1.90	6.45	12.3	15	*1*	76	0.13	0.53	*30*	*250*	*250*														
SW5-01	Insufficient water to sample.	8/08/2018	9:45																										
SW5-01	Insufficient water to sample.	20/09/2018	9:27																										
SW5-01	Insufficient water to sample.	2/10/2018	9:44																										
SW5-01	Insufficient water to monitor.	6/11/2018	11:20																										
SW5-01	Dry, not sampled.	6/12/2018	10:25																										
SW5-01	Dry, not sampled.	10/01/2019	9:39																										
SW5-01	Dry, not sampled.	12/02/2019	9:12																										
SW5-01	Dry, not sampled.	13/03/2019	10:18																										
SW5-01	Dry, not sampled.	10/04/2019	9:03																										
SW5-01	Monitoring ceased in May 2019																												

SW5-02 Yaegl Wetland

Wet Event Monitoring

		In-situ (Type A) Parameters							Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW5-02	No Access	5/08/2016																										
SW5-02	Dry	11/11/2016																										
SW5-02	Dry	6/01/2017																										
SW5-02	Dry	1/03/2017																										
SW5-02	Dry	6/03/2017																										
SW5-02	Site access blocked by fallen tree	6/04/2017																										
SW5-02	Dry	4/05/2017																										
SW5-02	Weather showers. Upstream and downstream sites not connected. Water level high.	13/06/2017		5.02	0.22	6.89	19.4	316	*1*	75	0.15	1.11	*13*	*50*	*50*													
SW5-02	Dry	17/07/2017																										
SW5-02	Upstream and downstream sites not connected. Very slight flow, low water level. Overcast.	7/10/2017		3.85	3.68	6.95	22.9	71	*1*	74	0.04	3.34	*13*	*50*	*50*													
SW5-02	Not connected. Low water level, no flow.	7/11/2017		0.82	1.25	6.46	28.3	493																				
SW5-02	Upstream and downstream sites not conencted. No visible flow, low water level. Weather, fine.	2/12/2017		2.98	4.16	7.62	27.4	183	*1*	64	0.04	1.33	*13*	*50*	*50*													
SW5-02	Upstream and downstream sites were not connected. Moderate water level. Weather fine.	3/01/2018		3.87	0.51	6.76	31.2	327																				
SW5-02	Dry, not sampled. Overcast.	1/02/2018																										
SW5-02	No wet weather access to site, no safe pullover area off highway.	7/03/2018																										
SW5-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	19/04/2018		0.00	5.70	7.60	21.8	14	*2*	9	0.15	2.43	*30*	*250*	*250*													
SW5-02	Upstream and downstream sites not connected. No visible flow, high water level. Weather fine.	10/05/2018		1.93	1.06	7.43	19.0	107																				
SW5-02	Upstream and downstream sites not connected, no visible flow, medium water level. Overcast.	6/06/2018	15:28	3.41	8.83	7.39	16.8	92	4	208	0.45	1.12	*30*	*250*	*250*													
SW5-02	Upstream and downstream sites not connected. Very low flow, medium water level. Drizzle.	5/07/2018	10:10	2.15	2.35	6.57	17.9	48																				
SW5-02	Upstream and downstream sites not connected. No visible flow, low water level. Brown algae present. Weather fine.	25/08/2018	13:25	12.77	12.80	7.37	21.8	87	2	18	0.12	1.90	*30*	*250*	*250*													
SW5-02	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	5/09/2018	16:30	5.23	1.11	6.02	19.5	469																				
SW5-02	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	11/10/2018	14:04	3.09	4.03	7.49	23.3	94	*1*	58	0.10	1.99	*13*	*50*	*50*													
SW5-02	No visible flow, very low water level. Outgoing tide. Overcast.	19/11/2018	12:56	7.89	1.66	8.70	25.8	31																				
SW5-02	No visible flow, low water level. Overcast.	18/12/2018	9:53	2.39	0.82	7.11	23.9	145	*1*	61	0.11	0.58	*30*	*250*	*250*													

SW5-02 Yaegl Wetland

Wet Event Monitoring

		In-situ (Type A) Parameters							Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-02	Dry, not sampled.	11/02/2019	10:31																										
SW5-02	No visible flow, very low water level. Weather fine.	9/03/2019	13:55	8.94	1.17	8.36	32.0	101	*1*	94	0.10	1.37	*13*	*50*	*50*														
SW5-02	Insufficient water to sample.	4/04/2019	13:13																										
SW5-02	Monitoring ceased in May 2019																												
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					1.48	7.41		800	3	239	0.34	2.37	50	250	250	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				1.32	0.37	5.86																							
St Dev					0.85	1.28																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW24		5/02/2013		0.63	0.25	6.21	28.4	36	*3*	23	0.22	0.50																	
Section3 SW24		27/05/2013		3.39	0.90	5.36	19.4	13	*3*	65	0.20	1.70																	
Section3 SW24		1/07/2013		7.56	0.42	5.99	16.7	55	*3*	18	0.32	1.30																	
Section3 SW24		13/11/2013		3.31	2.02	3.11	24.0	7	*3*	6	0.08	3.60																	
Upstream Monitoring																													
SW5-01		5/08/2016		4.18	0.71	6.71	16.7	89																					
SW5-01		11/11/2016		7.46	0.01	8.06	25.2	226	2	60	0.03	1.49	*50*	*50*	*50*														
SW5-01	Dry	6/01/2017																											
SW5-01	Turbid stormwater run-off observed in catchment. Turbidity reading recorded as >800 NTU.	1/03/2017		0.64	0.44	6.90	25.2	800	*1*	470	0.26	1.60	*13*	*50*	*50*														
SW5-01	Low water level. Accurate DO reading could not be obtained. Upstream and downstream sites not connected.	6/03/2017			2.15	6.43	26.4	788																					
SW5-01	High flow. No connection to d/s site.	6/04/2017		8.01	0.15	6.36	22.7	7	*1*	181	0.44	2.82	*50*	*50*	*50*														
SW5-01	Dry	4/05/2017																											
SW5-01	Dry	13/06/2017																											
SW5-01	Dry	17/07/2017																											
SW5-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast	7/10/2017		3.45	3.07	4.31	21.4	24	*1*	12	*0.02*	2.26	*13*	*50*	*50*														

SW5-02 Yaegl Wetland

Wet Event Monitoring

		In-situ (Type A) Parameters							Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-01	Dry	7/11/2017																											
SW5-01	Dry	2/12/2017																											
SW5-01	Dry. Weather fine.	3/01/2018																											
SW5-01	Dry, not sampled. overcast.	1/02/2018																											
SW5-01	No wet weather access to site, no safe pullover area off highway.	7/03/2018																											
SW5-01	Insufficient water to sample. Weather fine.	19/04/2018																											
SW5-01	Upstream and downstream sites not connected. No visible flow, medium water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	10/05/2018		1.78	0.86	7.46	20.7	800																					
SW5-01	Upstream and downstream sites not connected, no visible flow, medium water level. Turbidity reading exceeded maximum measuring range of probe. Overcast.	6/06/2018	15:16	4.06	0.41	7.40	19.9	800	16	3620	5.58	2.21	*30*	*250*	*250*														
SW5-01	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	5/07/2018	10:19	0.16	1.16	6.67	18.3	82																					
SW5-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/08/2018	13:39	5.66	1.34	7.45	18.3	224	2	79	0.10	0.85	*30*	*250*	*250*														
SW5-01	Upstream and downstream sites connected. No visible flow, medium water level. Turbidity exceeded maximum measuring range of probe. Drizzle.	5/09/2018	16:40	2.78	0.85	6.22	16.9	800																					
SW5-01	Dry, not sampled.	11/10/2018	14:01																										
SW5-01	Dry, not sampled.	19/11/2018	12:57																										
SW5-01	Insufficient water to sample.	18/12/2018	9:43																										
SW5-01	Dry, not sampled.	11/02/2019	10:24																										
SW5-01	Dry, not sampled.	9/03/2019	13:47																										
SW5-01	Dry, not sampled.	4/04/2019	13:12																										
SW5-01	Monitoring ceased in May 2019																												

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-04		2/08/2016		10.28	13.90	7.43	15.9	70																					
SW5-04		5/09/2016		2.57	3.79	6.64	18.2	78	2	29	0.12	0.76	*25*	*50*	*50*														
SW5-04		10/10/2016		9.07	5.47	6.38	18.3	524																					
SW5-04		1/11/2016		0.82	20.60	6.79	21.8	58	4	20	0.08	11.00	*25*	*50*	*50*														
SW5-04		13/12/2016		6.31	29.10	7.49	25.9	3																					
SW5-04	Very low water level - stagnant, no flow and not connected with SW5-03. Accurate turbidity reading could not be obtained.	18/01/2017		0.20	19.80	6.54	28.9		*1*	110	2.84	16.40	*13*	*50*	*50*														
SW5-04	Very low water level - stagnant, no flow and not connected with SW5-03.	1/02/2017		1.37	22.60	6.93	26.2	462																					
SW5-04	Stagnant, no flow. No connection between upstream and downstream sites. Foul odour.	10/03/2017		3.77	22.40	6.75	24.7	70	*1*	85	0.81	5.80	50	330	*50*														
SW5-04	Stagnant, no visible flow. No connection between upstream and downstream monitoring site.	12/04/2017		0.00	0.39	5.66	21.0	29																					
SW5-04	Stagnant, no flow. Not connected to SW5-03.	3/05/2017		0.00	2.61	6.78	20.6	135	*1*	42	0.42	3.34	50	210	*50*														
SW5-04	Weather fine. Not connected. Low water level. Stagnant.	7/06/2017		0.00	1.55	6.55		79																					
SW5-04	Weather fine. Not connected. Low water level. Stagnant.	14/07/2017		0.35	1.09	6.56	16.7	41	*1*	16	0.21	1.70	*13*	*50*	*50*														
SW5-04	No connection between upstream and downstream sites. Stagnant water with no visible flow. Low water level. Weather fine.	7/08/2017		0.42	1.15	6.54	15.6	63																					
SW5-04	Weather fine. U/S and D/S not connected. No flow observed. Water level low.	6/09/2017		3.09	13.50	6.71	20.7	158	*1*	73	0.33	9.79	*13*	*50*	*50*														
SW5-04	Upstream and downstream connected. Low water level. Soil binder recently applied. Shallow site - unable to obtain DO and turbidity reading. Overcast.	3/10/2017			8.47	7.72	21.1																						
SW5-04	Upstream and downstream not connected. No flow, low water level and stagnant.	3/11/2017		3.96	5.22	6.82	25.3	63	*1*	63	0.37	3.21	*13*	*50*	*50*														
SW5-04	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	7/12/2017		8.26	12.60	7.25	27.9	110																					
SW5-04	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	17/01/2018		10.50	10.60	7.40	27.2	42	*1*	29	0.19	5.68	*13*	*50*	*50*														
SW5-04	Upstream and downstream sites not connected. No visible flow, medium water level. Surface scum lighter than upstream site. Weather fine.	19/02/2018		5.90	18.30	7.95	29.0	54																					
SW5-04	Upstream and downstream sites connected. Very low flow, medium water level. Slight scum layer. Overcast.	21/03/2018		4.48	14.70	6.84	23.3	24	2	46	0.40	8.74	*25*	*50*	*50*														

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-04	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Water slightly green in colour. Overcast.	4/04/2018		7.49	17.40	7.23	21.6	45																				
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	18/05/2018		4.46	14.50	7.12	16.9	10	*1*	16	0.09	2.92	*25*	*50*	*25*													
SW5-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	14/06/2018	9:54	1.11	7.59	6.57	15.0	44																				
SW5-04	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	19/07/2018	9:24	4.48	8.84	6.61	11.5	17	2	6	0.10	2.56	*30*	*250*	*250*													
SW5-04	Unable to determine if upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	8/08/2018	9:17	6.54	20.00	6.86	14.2	53																				
SW5-04	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	20/09/2018	10:11	9.67	7.29	6.77	19.1	23	*1*	13	0.10	2.63	*30*	*250*	*250*													
SW5-04	Upstream and downstream sites connected. No visible flow, low water level. Brown algae present. Weather fine.	2/10/2018	10:23	16.85	14.50	6.76	20.6	118																				
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Bacteria layer present. Water brown/red colour. Weather fine.	6/11/2018	10:01	1.24	6.19	6.30	23.4	168	*1*	80	0.06	6.66	*30*	*100*	*50*													
SW5-03	Upstream and downstream sites connected. No visible flow, low water level. Red brown colour to water. Incoming tide. Algae present. Weather fine.	6/12/2018	9:54	0.16	11.60	6.68	21.7	306																				
SW5-04	Upstream and downstream sites connected. Very low flow, medium water level. Brown algae present. Weather fine.	10/01/2019	10:18	1.47	16.30	8.07	25.4	15	*1*	9	0.19	2.16	*30*	250	250													
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Slight dust layer. Weather fine.	12/02/2019	9:49	2.23	24.90	7.41	25.0	28																				
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Slight bacteria layer. Overcast.	13/03/2019	9:52	0.99	15.10	7.59	23.8	88	5	22	0.31	3.00	*30*	*100*	*50*													
SW5-04	Upstream and downstream sites not connected - dewatering in progress between sites. No visible flow, medium water level. Scum layer on surface. Overcast.	10/04/2019	9:37	0.95	27.80	7.27	22.6	19																				
SW5-03	Monitoring site relocated to new location approx. 600 m north-east. Connected. No visible flow. Medium water level. Incoming tide. Weather fine.	6/05/2019	9:33	1.85	24.80	6.95	16.0	3	*1*	7	*0.01*	2.28	*30*	*100*	*50*													

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-03	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	4/06/2019	10:21	3.51	34.90	7.38	13.7	9																					
SW5-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	4/07/2019	9:51	1.87	26.60	6.85	16.2	8	*1*	13	0.06	0.58	*30*	*100*	*50*														
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	9:24	0.00	30.40	6.96	12.0	3																					
SW5-03	Upstream and downstream sites not connected. No visible flow, low water level. Incoming tide. Council roadworks on James Creek road. Odour, surface bacteria. Weather fine.	5/09/2019	9:59	0.00	32.40	6.84	14.2	17	*1*	1	0.18	0.57	*30*	*100*	*50*														
SW5-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Rain.	1/10/2019	9:30	0.02	33.80	6.85	18.9	10																					
SW5-04	Upstream and downstream sites not connected. No visible flow, very low water level. Outgoing tide. Weather fine.	6/11/2019	12:12	2.70	37.70	7.41	21.6	6	*1*	9	0.25	0.80	*13*	*50*	*50*														
SW5-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	6/12/2019	9:44	6.76	43.60	7.81	24.8	4																					
SW5-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	15/01/2020	9:36	0.44	39.70	5.62	23.2	11	1	9	0.19	0.78	*30*	**230**	*50*														
SW5-04	Upstream and downstream sites not connected. No visible flow, low water level. Outgoing tide. Overcast.	5/02/2020	11:56	0.00	8.08	6.65	23.2	56																					
SW5-04	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Algae and surface bacteria. Orange colouration. Overcast.	4/03/2020	9:35	0.57	0.79	6.21	25.2	90	3	21	0.40	1.71	*30*	*100*	*50*														
SW5-04	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	2/04/2020	9:48	0.00	0.90	6.52	21.7	41																					
SW5-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	5/05/2020	9:52	1.13	5.06	6.69	16.6	106	*1*	17	0.09	2.07	*30*	*100*	*50*														
SW5-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	4/06/2020	9:13	3.25	14.60	6.58	15.2	46																					
SW5-04	Upstream and downstream sites not connected. No visible flow, medium water level. Outgoing tide. Overcast.	13/11/2020	9:12	3.28	29.40	6.95	21.9	19	4	6	0.02	0.81	*30*	*100*	*50*	0.040	0.001	0.0000	**0.005**	**0.005**	1.473	*0.001*	0.215	*0.0003*	**0.017**	*0.001*	*0.0050*	0.002
SW5-04	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	4/05/2021	10:59	2.39	0.37	6.30	19.4	23	1	12	0.08	1.17	*13*	*50*	*50*	0.210	0.001	0.0010	0.002	0.002	4.280	*0.005*	0.120	*0.0001*	0.003	*0.001*	*0.0005*	0.005

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					27.70	7.09		140	3	93	0.28	3.94	30	160	50	0.268	0.002	0.0009	0.001	0.002	17.883	0.004	0.711	0.0002	0.002	0.001	0.0041	0.007
P20				0.04	3.52	5.68																							
St Dev					12.41	1.15																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW15		28/02/2013		3.26	0.34	6.40	25.7	9	*3*	14	0.11	1.20																	
Section3 SW15		20/03/2013		2.96	2.30	6.70	20.7	283	*3*	120	0.30	7.50																	
Section3 SW15		17/04/2013		7.14	1.23	6.68	22.1	24	*3*	5	0.11	2.20																	
Section3 SW15		21/05/2013		6.41	5.44	5.68	14.1	648	*3*	180	0.13	11.00																	
Section3 SW15		26/06/2013		7.21	5.23	5.04	11.7	24	*3*	41	0.13	4.50																	
Section3 SW15		23/07/2013		4.25	3.52	6.32	13.0	67	*3*	79	0.05	13.00																	
Section3 SW15		20/08/2013		6.40	8.03	6.44	16.6	556	*3*	430	0.80	18.00																	
Section3 SW15	Dry	24/09/2013																											
Section3 SW15	Dry	22/10/2013																											
Section3 SW15		27/11/2013		8.64	4.20	3.91	27.0	166	*3*	18	0.02	3.60																	
Section3 SW15	Dry	17/12/2013																											
Upstream Monitoring																													
SW5-03	Red slick. Turbidity appears high, but accurate reading not possible.	2/08/2016		0.00	19.50	6.85	19.4																						
SW5-03	DO reading not accurate - shallow water and soft silty sediment interfering. Turbidity appears high but accurate reading not possible.	5/09/2016			8.69	6.75	17.6		5	322	0.30	3.59	*25*	*50*	*50*														
SW5-03	Dry	10/10/2016																											
SW5-03	Dry	1/11/2016																											
SW5-03	Dry	13/12/2016																											
SW5-03	Dry	18/01/2016																											
SW5-03	Dry	1/02/2017																											
SW5-03	Dry	10/03/2017																											
SW5-03	Dry	12/04/2017																											

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-03	Dry	3/05/2017																											
SW5-03	Dry	7/06/2017																											
SW5-03	Dry	14/07/2017																											
SW5-03	No connection between upstream and downstream sites. Stagnant water with no visible flow. Low water level. Weather fine.	7/08/2017		0.00	0.99	6.51	14.0	9																					
SW5-03	Weather fine. U/S and D/S not connected. No flow observed. Water level low.	6/09/2017		0.76	8.26	6.42	18.1	85	*1*	60	0.11	2.22	*13*	*50*	*50*														
SW5-03	Upstream and downstream connected. Low water level. Soil binder recently applied. Surface film. Overcast.	3/10/2017		1.80	18.80	7.09	22.6	52																					
SW5-03	Upstream and downstream not connected. No flow, low water level and stagnant.	3/11/2017		3.08	2.80	4.18	24.3	49	*1*	40	0.04	0.92	*13*	*50*	*50*														
SW5-03	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	7/12/2017		3.12	6.81	6.63	28.9	222																					
SW5-03	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	17/01/2018		3.93	5.94	6.72	29.2	155	*1*	26	0.12	3.42	*13*	*50*	*50*														
SW5-03	Upstream and downstream sites not connected. No visible flow, low water level. Heavy brown bubbly surface scum layer. Weather fine.	19/02/2018		11.07	20.20	7.55	27.9	123																					
SW5-03	No access to monitoring site - water level too high to cross on foot, no access via worksite. Overcast.	21/03/2018																											
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	4/04/2018		0.52	5.54	5.67	20.9	68																					
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	18/05/2018		0.00	13.70	6.80	17.6	59	*1*	54	0.13	3.99	*25*	*50*	*25*														
SW5-03	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	14/06/2018	10:07	1.88	3.95	4.48	14.6	3																					
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Slight dust layer and red colour to water. Weather fine.	19/07/2018	9:45	3.91	4.40	3.72	10.9	7	2	5	0.10	0.41	*30*	*250*	*250*														
SW5-03	Unable to determine if upstream and downstream sites connected. No visible flow, low water level. Red stain and dust layer present. Weather fine.	8/08/2018	9:30	2.42	10.40	6.01	13.0	52																					
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/09/2018	10:27	1.32	4.38	3.60	17.4	13	*1*	6	0.01	0.48	*30*	*250*	*250*														
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Brown algae present. Weather fine.	2/10/2018	10:38	2.58	6.80	4.78	17.1	59																					

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Tannin/red stain and bacteria/scum layer present. Weather fine.	6/11/2018	10:23	0.04	3.15	5.78	22.8	68	3	748	0.08	*0.00*	62	390	*50*													
SW5-04	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Brown algae present. Weather fine.	6/12/2018	9:28	10.77	19.10	7.67	22.7	16																				
SW5-03	Upstream and downstream sites connected. No visible flow, low water level. Red/brown colour to water, algae present. Weather fine.	10/01/2019	10:45	0.69	13.50	7.64	23.4	223	2	21	0.13	3.75	*30*	250	250													
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Red/brown colour to water, bacteria layer present. Weather fine.	12/02/2019	10:00	1.37	16.50	8.21	23.4	232																				
SW5-04	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Slight scum layer. Overcast.	13/03/2019	10:34	4.37	29.30	7.45	25.1	24	*1*	22	0.61	1.12	*30*	*100*	*50*													
SW5-03	Upstream and downstream sites not connected. No visible flow, medium water level. Water orange/brown colour. Algae present. Overcast.	10/04/2019	9:21	1.39	21.80	7.52	21.9	68																				
SW5-04	Monitoring site relocated to new location approx. 100 m north-east. Connected. No visible flow. Low water level. Incoming tide. Weather fine.	6/05/2019	9:44	2.13	24.30	7.32	17.6	2	4	4	0.01	3.76	*30*	*100*	*50*													
SW5-04	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	4/06/2019	10:32	3.65	35.10	7.49	14.5	12																				
SW5-04	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	4/07/2019	9:44	3.47	27.70	6.86	16.6	6	2	10	0.04	0.71	*30*	*100*	*50*													
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	9:22	0.00	30.40	6.93	11.9	2																				
SW5-04	Upstream and downstream sites not connected. No visible flow, low water level. Incoming tide. Council roadworks on James Creek road. Weather fine.	5/09/2019	10:20	0.00	32.00	6.92	14.9	2	3	6	0.11	0.42	*30*	*100*	*50*													
SW5-04	Upstream and downstream sites connected. No visible flow, very low water level. Incoming tide. Slight odour, evidence of cattle disturbance to creek bank. Drizzle.	1/10/2019	9:25	0.00	34.70	6.58	17.7	9																				
SW5-03	Upstream and downstream sites not connected. No visible flow, very low water level. Outgoing tide. Weather fine.	6/11/2019	12:05	0.37	36.30	7.12	22.2	112	*2*	13	0.33	1.61	*13*	*50*	*50*													

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-03	Upstream and downstream sites connected. No visible flow, very low water level. Outgoing tide. Surface bacteria layer. Weather fine.	6/12/2019	9:23	0.44	41.30	6.66	19.9	59																				
SW5-03	Upstream and downstream sites not connected. No visible flow, very low water level. Slight orange colour to water. Overcast.	15/01/2020	9:26	0.04	41.50	3.39	23.6	18	2	36	0.15	0.73	*30*	*100*	*50*													
SW5-03	Upstream and downstream sites not connected. No visible flow, low water level. Orange colouration, surface scum. Overcast.	5/02/2020	11:53	0.00	8.12	6.61	22.7	60																				
SW5-03	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Algae and surface bacteria. Orange colouration. Weather fine.	4/03/2020	9:30	1.08	0.90	6.45	25.9	142	6	97	0.60	2.48	*30*	*100*	*50*													
SW5-03	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	2/04/2020	9:44	0.00	0.87	6.98	22.0	43																				
SW5-03	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Surface bacteria layer. Weather fine.	5/05/2020	9:42	0.96	5.89	6.77	16.7	139	3	21	0.19	2.29	*30*	*100*	*50*													
SW5-03	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	4/06/2020	9:09	3.88	13.90	6.54	15.0	53																				
SW5-03	Upstream and downstream sites not connected. No visible flow, very low water level. Outgoing tide. Overcast.	13/11/2020	9:08	2.21	29.30	6.46	20.4	23	3	62	0.13	1.07	*30*	*100*	*50*	0.141	0.002	*0.0005*	0.001	*0.001*	21.056	*0.001*	0.844	*0.0003*	0.001	0.001	*0.0050*	0.008
SW5-03	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	4/05/2021	10:54	3.77	0.41	6.23	19.6	30	*1*	12	0.13	1.32	*13*	*50*	*50*	0.300	0.002	*0.0010*	*0.002*	*0.002*	5.190	*0.005*	0.180	*0.0001*	*0.003*	*0.001*	*0.0005*	0.007

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-04	Sample taken just east of sample site due to access issues	5/08/2016		5.10	2.12	6.63	13.9	24																					
SW5-04	Not possible to obtain accurate DO.	11/11/2016			21.30	7.29	24.1	57	8	14	0.12	5.69	50	480	50														
SW5-04	Poor water quality - stagnant, no flow and low water level. Not possible to obtain accurate DO. Turbidity reading exceeded maximum range of probe.	6/01/2017			26.90	6.63	25.6	800																					
SW5-04	Slight flow, water level low. Not possible to obtain accurate DO.	1/03/2017			7.35	6.65	22.7	14	2	44	0.91	10.10	13	50	50														
SW5-04	Bacteria scum layer. Gentle flow.	6/03/2017		4.50	15.50	6.87	25.5	53																					
SW5-04	No visible flow. No connection to u/s site.	6/04/2017		0.81	1.00	6.98	21.0	21	1	23	0.13	1.06	50	50	50														
SW5-04	Low water level, stagnant. U/s and d/s sites not connected. Drizzle.	4/05/2017		0.00	5.09	6.88	20.4	117																					
SW5-04	Weather showers. Upstream and downstream sites not connected. Water level high.	13/06/2017		5.98	0.71	6.60	18.1	81	1	29	0.06	0.93	13	50	50														
SW5-04	Weather fine. Not connected. Slight flow. Water level low and stagnant.	17/07/2017		0.00	13.20	6.77	20.1	9																					
SW5-04	Upstream and downstream sites connected. No observable flow, low water level. Unable to obtain accurate turbidity reading due to low water level. Overcast, drizzle.	7/10/2017		2.68	17.80	6.79	21.9		1	52	0.21	15.50	13	50	50														
SW5-04	Not connected. Low water level, no flow. Stagnant.	7/11/2017		3.29	5.92	6.85	23.6	196																					
SW5-04	Upstream and downstream sites not conencted. No visible flow, medium water level. Weather, fine.	2/12/2017		7.40	10.60	7.12	24.9	29	1	17	0.05	4.47	13	50	50														
SW5-04	Upstream and downstream sites were not connected. No visible flow, high water level. Weather fine.	3/01/2018		3.68	3.39	6.59	26.8	81																					
SW5-04	No visible flow, medium water level. Overcast.	1/02/2018		6.16	14.10	7.63	24.3	23	1	12	0.23	1.71	25	50	50														
SW5-04	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	7/03/2018		1.87	5.45	6.76	21.8	63																					
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	19/04/2018		7.74	16.10	7.58	20.8	18	5	10	0.13	5.47	30	250	250														
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	10/05/2018		1.69	11.60	6.97	18.9	58																					
SW5-04	Upstream and downstream sites connected, no visible flow, high water level. Weather fine.	6/06/2018	14:34	6.81	18.80	6.95	16.3	31	1	37	0.08	3.32	30	250	250														
SW5-04	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	5/07/2018	9:44	4.67	4.99	5.89	16.4	28																					

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-04	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	25/08/2018	12:52	7.47	15.00	7.05	16.8	50	3	20	0.10	4.52	*30*	*250*	*250*													
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Brown algae present. Overcast.	5/09/2018	15:51	8.00	10.60	6.30	18.3	101																				
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Overcast.	11/10/2018	13:19	8.08	0.05	7.49	21.0	250	*1*	64	0.18	11.40	*13*	*50*	*50*													
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	19/11/2018	12:37	3.75	7.86	7.65	23.2	287																				
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Algae present. Overcast.	18/12/2018	9:01	1.58	15.10	6.66	24.5	27	*1*	9	0.30	2.92	*30*	*250*	*250*													
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Slight surface bacteria. Overcast.	11/02/2019	10:57	4.54	24.70	7.44	25.8	22																				
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	13:46	9.17	14.80	8.77	31.2	156	*1*	42	0.30	5.17	*13*	*50*	*50*													
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Outgoing tide. Weather fine.	4/04/2019	13:01	9.43	22.70	7.36	26.0	120																				
SW5-04	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Drizzle.	24/06/2019	12:48	5.58	32.50	6.63	12.6	0	*1*	2	0.07	0.45	*30*	*100*	*50*													
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	9:41	0.00	28.10	6.95	15.0	4																				
SW5-04	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Rain.	24/12/2019	10:33	0.34	32.30	6.95	24.0	25																				
SW5-04	Upstream and downstream sites not connected. No visible flow, low water level. Outgoing tide. Weather fine.	17/01/2020	12:01	3.14	34.10	6.83	24.4	26	*1*	8	0.27	1.67	*50*	*100*	*50*													
SW5-04	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Orange colouration. Overcast.	7/02/2020	11:12	0.00	3.85	6.34	23.1	104	3	37	0.22	2.40	*30*	380	*50*													
SW5-04	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Drizzle.	7/03/2020	12:08	0.23	0.71	5.97	24.6	53																				
SW5-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2020	8:30	1.10	1.23	6.49	20.1	140	5	28	0.26	1.95	*30*	300	*50*													
SW5-04	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	10/06/2020	12:04	3.82	16.10	6.63	17.5	39																				

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	9:26	3.22	2.59	6.08	14.1	81																				
SW5-03	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Overcast.	16/12/2020	9:39	5.73	16.80	6.66	24.1	10	2	6	0.10	0.54	*30*	*100*	*50*	0.058	**0.001**	*0.0005*	*0.001*	0.001	0.110	*0.001*	0.278	*0.0003*	0.001	*0.001*	*0.0050*	**0.008**
SW5-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	3/02/2021	10:01	1.42	1.61	6.70	22.9	**145**																				
SW5-04	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	6/05/2021	9:07	5.48	0.28	6.82	16.2	77	1	**254**	**0.32**	2.00	*15*	*50*	*50*	**8.060**	**0.003**	*0.0010*	**0.006**	**0.007**	**13.100**	*0.005*	0.300	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.035**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					18.52	6.96		116	5	60	0.32	6.31	30	250	250	2.209	0.001	0.0009	0.002	0.002	3.055	0.004	0.320	0.0002	0.002	0.001	0.0041	0.007
P20				0.46	1.80	6.32																						
St Dev					11.09	1.15																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW15		5/02/2013		2.50	0.13	6.31	29.2	39	*3*	12	0.16	0.50																
Section3 SW15		28/05/2013		2.64	4.06	6.50	18.6	22	*3*	120	0.12	7.90																
Section3 SW15		1/07/2013		2.64	4.06	6.50	18.6	22	*3*	34	0.10	2.50																
Section3 SW15		13/11/2013		5.09	0.01	3.21	30.9	11	6	16	0.01	15.00																
Upstream Monitoring																												
SW5-03	High water level, very turbid	5/08/2016		6.06	1.24	6.78	14.4	134																				
SW5-03	Dry	11/11/2016																										
SW5-03	Dry	6/01/2017																										
SW5-03	Dry	1/03/2017																										
SW5-03	Dry	6/03/2017																										
SW5-03	No access after heavy rain.	6/04/2017																										
SW5-03	Dry	4/05/2017																										
SW5-03	Dry	13/06/2017																										
SW5-03	Dry	17/07/2017																										

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-03	Upstream and downstream sites connected. No observable flow, medium water level. Overcast, drizzle.	7/10/2017		7.16	19.80	7.28	23.5	71	*1*	23	0.12	12.30	*13*	*50*	*50*													
SW5-03	Not connected. Low water level, no flow. Stagnant.	7/11/2017		2.44	2.63	4.44	21.7	28																				
SW5-03	Upstream and downstream sites not conencted. No visible flow, medium water level. Weather, fine.	2/12/2017		4.07	5.56	6.71	28.1	230	*1*	64	0.08	3.25	*13*	*50*	*50*													
SW5-03	Upstream and downstream sites were not connected. High water level. Weather fine.	3/01/2018		6.92	2.82	5.68	26.8	55																				
SW5-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	1/02/2018		4.21	18.20	6.87	24.4	116	8	72	0.73	12.44	*25*	150	*50*													
SW5-03	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	7/03/2018		3.04	8.80	6.73	21.5	89																				
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	19/04/2018		0.00	9.26	7.05	20.3	40	7	35	0.13	2.95	*30*	*250*	*250*													
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	10/05/2018		0.04	8.65	6.98	19.1	56																				
SW5-03	Upstream and downstream sites connected, no visible flow, high water level. High DO reading of probe tripple checked. Weather fine.	6/06/2018	14:19	22.88	17.70	6.74	16.6	106	5	57	0.25	3.27	*30*	*250*	*250*													
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Red colour to water. Rain.	5/07/2018	9:28	2.34	3.94	3.55	15.8	12																				
SW5-03	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	25/08/2018	12:39	0.70	15.60	6.58	15.1	187	5	57	0.05	2.60	*30*	*250*	*250*													
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/09/2018	16:03	2.82	6.75	3.65	15.1	20																				
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	11/10/2018	13:40	4.50	6.66	6.83	22.3	91	*1*	21	0.03	1.37	*13*	*50*	*50*													
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Outgoing tide. Overcast.	19/11/2018	12:47	0.10	3.75	6.40	23.9	273																				
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Orange colour to water. Overcast.	18/12/2018	9:17	5.06	5.52	6.79	23.0	116	*1*	49	0.14	2.26	*30*	*250*	*250*													
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Brown/red colour to water. Slight bacteria layer. Overcast.	11/02/2019	11:13	2.25	16.50	8.26	25.2	285																				

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Incoming tide. Unable to sample for turbidity due to low water level. Weather fine.	9/03/2019	13:32	12.49	26.80	8.21	29.4		*1*	232	1.46	5.25	*13*	*50*	*50*														
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	13:08	15.70	22.20	8.26	27.4	67																				
SW5-03	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Drizzle.	24/06/2019	13:05	4.15	33.70	6.77	12.3	0	*1*	3	1.05	0.59	*30*	*100*	*50*													
SW5-03	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	9:28	0.00	28.60	6.81	14.4	4																				
SW5-03	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Rain.	24/12/2019	10:29	2.11	35.60	6.70	23.0	34																				
SW5-03	Upstream and downstream sites not connected. No visible flow, very low water level. Outgoing tide. Slight orange colouration to water. Drizzle.	17/01/2020	11:51	0.05	39.30	6.37	24.4	56	*1*	31	0.29	1.69	*50*	*100*	*50*													
SW5-03	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Orange colouration. Overcast.	7/02/2020	11:07	0.29	4.09	6.34	23.1	100	4	35	0.30	2.94	*30*	390	*50*													
SW5-03	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	7/03/2020	12:04	0.50	0.79	5.73	24.5	54																				
SW5-03	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2020	8:24	1.39	1.31	6.69	21.1	133	4	34	0.35	1.89	*30*	620	160													
SW5-03	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	10/06/2020	12:00	3.37	16.90	6.65	17.1	40																				
SW5-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2020	9:22	2.13	1.86	6.32	14.6	47																				
SW5-04	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Overcast.	16/12/2020	9:45	2.98	12.60	6.64	24.1	13	2	5	0.11	0.55	*30*	*100*	*50*	0.164	0.001	*0.0005*	*0.001*	0.001	0.113	*0.001*	0.363	*0.0003*	0.001	*0.001*	*0.0050*	0.008
SW5-03	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	3/02/2021	9:55	0.23	1.58	6.95	22.9	114																				
SW5-03	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	6/05/2021	9:03	5.36	0.22	7.07	16.7	68	*1*	38	0.23	1.36	*15*	*50*	*50*	2.720	*0.001*	*0.0010*	*0.003*	*0.002*	3.790	*0.005*	0.150	*0.0001*	*0.003*	*0.001*	*0.0005*	0.005

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-06		2/08/2016		7.80	24.00	8.37	17.8	132																					
SW5-06		5/09/2016		7.72	6.28	7.26	18.8	38	4	25	0.06	0.40	*25*	*50*	*50*														
SW5-06		10/10/2016		7.33	16.00	7.57	21.3	13																					
SW5-06		1/11/2016		6.35	25.10	7.57	24.0	10	4	8	0.03	0.32	*25*	*50*	*50*														
SW5-06		13/12/2016		6.31	29.10	7.49	25.9	3																					
SW5-06	Tidal	18/01/2017		5.49	22.60	7.65	29.3	6	*1*	5	*0.02*	0.36	*13*	*50*	*50*														
SW5-05	Tidal - incoming therefore SW5-05 is downstream.	1/02/2017		4.02	24.70	8.06	28.3	8																					
SW5-06	Very high tide	10/03/2017		6.36	36.40	7.85	25.0	7	*1*	78	0.03	0.25	*50*	*50*	*50*														
SW5-06	High tide	12/04/2017		2.52	6.95	6.95	22.3	17																					
SW5-06	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		8.62	11.60	7.59	21.3	10	*1*	30	0.04	1.00	*50*	*50*	*50*														
SW5-06	Weather fine. Upstream and downstream sites connected. Mid water level, outgoing tide.	7/06/2017		5.98	22.00	8.20		12																					
SW5-05	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-05 is downstream. Moderate water level.	14/07/2017		4.63	9.11	7.52	17.6	5	*1*	9	0.08	0.83	*13*	*50*	*50*														
SW5-05	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.66	23.90	8.13	17.9	5																					
SW5-06	Weather fine. U/S and D/S connected. Outgoing tide. Water level high. Wave action likely to affect NTU.	6/09/2017		9.17	31.40	7.88	19.4	22	*1*	117	0.05	0.47	*13*	*50*	*50*														
SW5-06	Upstream and downstream connected. Outgoing tide, low water level. Wave action causing increased turbidity. Overcast.	3/10/2017		6.20	33.40	7.61	21.8	37																					
SW5-06	Upstream and downstream connected. Outgoing tide. Slight flow, high water level.	3/11/2017		4.89	27.00	8.05	25.0	0	*1*	7	*0.02*	0.43	*13*	*50*	*50*														
SW5-05	Upstream and downstream connected. Moderate flow, high water level. Incoming tide, therefore SW5-05 is downstream. Weather fine.	7/12/2017		5.55	14.30	7.87	26.9	1																					
SW5-05	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		4.21	30.40	7.71	25.2	0	*1*	22	*0.02*	0.34	*13*	*50*	*50*														
SW5-06	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		6.41	30.90	8.04	29.5	21																					

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Wave action stirring up bottom sediment at sample point (shallow bank). Overcast.	21/03/2018		6.38	0.88	7.35	26.4	421	*1*	36	0.10	0.49	*25*	*50*	*50*													
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		5.93	3.21	7.90	26.1	67																				
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	18/05/2018		7.24	20.80	7.75	19.1	37	4	25	0.03	0.26	*25*	*50*	*25*													
SW5-06	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Weather fine.	14/06/2018	10:47	6.88	27.40	7.37	17.9	27																				
SW5-05	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	19/07/2018	10:38	8.41	24.90	7.41	15.4	8	*1*	8	0.01	0.17	*30*	*250*	*250*													
SW5-06	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	8/08/2018	10:20	7.77	31.20	7.45	16.5	7																				
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	20/09/2018	11:06	6.79	31.20	7.12	20.5	2	*1*	8	0.01	0.16	*30*	*250*	*250*													
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	2/10/2018	10:57	7.09	27.90	6.80	21.0	18																				
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/11/2018	11:49	5.78	26.40	7.74	25.2	10	*1*	8	*0.01*	0.33	*30*	*100*	*50*													
SW5-06	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	6/12/2018	11:07	5.42	36.70	7.76	24.8	13																				
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	10/01/2019	11:08	6.20	15.70	7.65	27.4	37	*1*	3	0.03	0.41	*30*	250	250													
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	12/02/2019	10:29	5.47	28.90	7.88	28.0	22																				
SW5-05	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	13/03/2019	10:58	5.92	32.10	7.77	27.4	4	4	1	*0.01*	0.28	*30*	*100*	*50*													
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide.Overcast.	10/04/2019	9:57	6.37	27.80	7.83	24.4	45																				
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Fine.	6/05/2019	10:02	6.10	34.50	7.72	21.8	55	*1*	7	*0.01*	0.21	*30*	*100*	*50*													

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-06	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	4/06/2019	11:16	6.94	41.20	8.12	17.2	9																					
SW5-05	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	4/07/2019	10:06	7.24	34.50	7.61	17.3	8	*1*	5	*0.01*	0.24	*30*	*100*	*50*														
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	9:48	8.34	36.90	7.91	16.3	1																					
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	5/09/2019	10:39	7.23	30.90	7.72	19.8	1	*3*	2	*0.01*	0.18	*30*	*100*	*50*														
SW5-05	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Overcast.	1/10/2019	9:07	7.08	33.80	7.67	22.0	9																					
SW5-06	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	6/11/2019	12:28	5.08	38.30	7.98	23.4	3	*1*	9	*0.02*	**0.85**	*13*	*50*	*50*														
SW5-06	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	6/12/2019	9:50	5.85	44.30	7.82	24.9	1																					
SW5-06	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	15/01/2020	9:09	**5.05**	40.70	5.77	26.0	5	7	9	0.03	0.30	*30*	*100*	*50*														
SW5-06	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	5/02/2020	11:37	4.11	23.50	7.58	26.0	8																					
SW5-06	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	4/03/2020	10:02	4.61	2.88	6.91	26.5	27	4	15	0.08	1.01	*30*	*100*	*50*														
SW5-06	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Weather fine.	2/04/2020	10:09	5.92	7.37	7.46	24.7	27																					
SW5-06	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	5/05/2020	10:24	6.02	31.20	8.04	20.4	18	*1*	13	0.04	0.43	*30*	*100*	*50*														
SW5-06	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	4/06/2020	9:37	7.37	32.40	7.87	18.2	11																					
SW5-06	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.	13/11/2020	10:44	6.56	38.70	7.70	23.8	25	*5*	25	0.01	0.25	*30*	*100*	*50*	0.217	0.002	*0.0005*	*0.001*	0.001	0.243	*0.001*	0.036	*0.0003*	0.000	**0.002**	*0.0050*	0.002
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	4/05/2021	11:16	6.67	4.94	6.65	20.9	19	*1*	14	0.02	0.71	*13*	*50*	*50*	1.510	0.002	*0.0010*	*0.002*	0.002	1.600	*0.005*	0.067	*0.0001*	*0.003*	0.001	*0.0005*	**0.320**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					34.28	7.90		36	3	30	0.08	0.55	30	100	50	1.303	0.002	0.0009	0.001	0.002	1.383	0.004	0.060	0.0002	0.002	0.001	0.0041	0.005

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P20				5.53	10.31	6.93																							
St Dev					12.16	0.52																							
Threshold				0.50				10	2	10	0.02	0.20																	

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW16		28/02/2013		6.75	0.09	6.73	25.1	87	*3*	70	0.10	0.80																	
Section3 SW16		20/03/2013		7.46	2.76	6.92	23.3	21	*3*	33	*0.01*	0.80																	
Section3 SW16		16/04/2013		8.58	0.00	6.93	24.4	25	*3*	25	0.07	0.50																	
Section3 SW16		21/05/2013		9.08	18.18	6.71	17.4	7	*3*	18	0.04	0.30																	
Section3 SW16		26/06/2013		10.05	4.07	6.77	15.9	24	*3*	30	0.06	0.51																	
Section3 SW16		23/07/2013		9.05	6.85	7.02	15.7	114	*3*	140	0.15	0.45																	
Section3 SW16		20/08/2013		8.72	19.46	7.60	16.6	203	*3*	210	0.28	0.96																	
Section3 SW16		24/09/2013		8.34	16.36	7.12	22.0	10	*3*	21	*0.01*	0.25																	
Section3 SW16		22/10/2013		8.46	19.18	6.99	22.6	16	*3*	78	*0.01*	0.42																	
Section3 SW16		27/11/2013		7.49	11.18	6.44	25.9	14	*3*	18	*0.01*	0.50																	
Section3 SW16		17/12/2013		7.33	16.83	6.80	24.8	8	*3*	11	1.25	0.10																	
Upstream Monitoring																													
SW5-05		2/08/2016		8.17	24.90	8.32	18.3	47																					
SW5-05		5/09/2016		7.89	6.78	7.19	19.1	45	5	22	0.05	0.37	*25*	*50*	*50*														
SW5-05		10/10/2016		7.23	16.10	7.52	21.4	9																					
SW5-05		1/11/2016		6.50	25.00	7.65	24.2	9	5	15	0.03	0.30	*25*	*50*	*50*														
SW5-05		13/12/2016		5.36	32.20	7.63	25.3	4																					
SW5-05	Tidal	18/01/2017		6.30	22.90	7.34	29.1	16	*1*	5	*0.02*	0.44	*13*	*50*	*50*														
SW5-06	Tidal - incoming therefore SW5-06 is upstream.	1/02/2017		7.16	25.30	8.05	29.1	4																					
SW5-05	Very high tide	10/03/2017		6.35	42.00	8.03	25.0	21	2	41	0.08	*0.25*	*50*	*50*	*50*														
SW5-05	High tide	12/04/2017		3.07	5.80	6.91	22.5	40																					
SW5-05	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		3.76	11.20	7.56	21.4	61	*1*	306	0.23	1.46	*50*	*50*	*50*														
SW5-05	Weather fine. Connected. Mid-tide outgoing. Could not obtain accurate turbidity measurement due to turbid water close to shore.	7/06/2017		7.36	21.70	8.04	18.3																						
SW5-06	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-06 is upstream. Moderate water level.	14/07/2017		4.54	11.50	7.57	17.5	5	*1*	14	0.09	0.91	*13*	*50*	*50*														
SW5-06	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		7.96	25.20	8.24	17.7	4																					

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-05	Weather fine. U/S and D/S connected. Outgoing tide. Water level high.	6/09/2017		7.37	31.10	7.79	18.6	6	*1*	10	*0.02*	0.24	*13*	*50*	*50*														
SW5-05	Upstream and downstream connected. Outgoing tide, low water level. Overcast.	3/10/2017		6.71	35.50	7.73	21.7	5																				
SW5-05	Upstream and downstream connected. Outgoing tide. Slight flow, high water level.	3/11/2017		4.87	26.10	8.08	24.8	2	*1*	16	*0.02*	0.30	*13*	*50*	*50*														
SW5-06	Upstream and downstream connected. Moderate flow, high water level. Incoming tide, therefore SW5-06 is upstream. Weather fine.	7/12/2017		5.97	14.60	7.90	26.8	1																				
SW5-06	Upstream and downstreamconnected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		6.11	28.90	7.73	24.7	0	*1*	14	*0.02*	0.41	*13*	*50*	*50*														
SW5-05	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		6.52	30.30	7.96	29.4	27																				
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	21/03/2018		5.30	1.80	7.32	26.9	76	*1*	29	0.11	0.53	*25*	*50*	*50*														
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		5.32	3.97	8.13	26.0	71																				
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	18/05/2018		7.23	21.40	7.77	19.2	7	*1*	18	0.02	0.25	25	*50*	*25*														
SW5-05	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Weather fine.	14/06/2018	10:54	7.50	26.90	7.55	17.8	38																				
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	19/07/2018	10:48	7.70	25.00	7.54	15.4	4	*1*	2	0.01	0.14	*30*	*250*	*250*														
SW5-05	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	8/08/2018	10:25	7.76	36.30	7.63	16.6	18																				
SW5-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	20/09/2018	10:58	7.11	31.00	6.83	20.5	18	*1*	24	0.02	0.20	*30*	*250*	*250*														
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/10/2018	11:03	7.19	28.40	7.14	20.5	6																				
SW5-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/11/2018	11:38	6.46	24.20	7.68	25.3	10	*1*	14	*0.01*	0.30	*30*	*100*	*50*														
SW5-05	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Wave action. Weather fine.	6/12/2018	11:01	6.26	34.10	7.66	25.0	41																				

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	10/01/2019	11:18	5.40	19.30	7.67	26.9	9	*1*	6	0.03	0.41	*30*	250	250													
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	12/02/2019	10:24	5.97	27.90	7.91	28.1	42																				
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	13/03/2019	11:08	6.02	32.70	7.79	27.3	2	4	2	*0.01*	0.28	*30*	*100*	*50*													
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	10/04/2019	10:03	6.53	28.20	7.85	24.4	17																				
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Fine.	6/05/2019	10:16	6.47	35.00	7.82	22.0	30	*1*	7	*0.01*	0.20	*30*	*100*	*50*													
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	4/06/2019	11:11	7.40	40.00	8.07	17.0	10																				
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	4/07/2019	10:16	7.62	36.20	7.71	17.6	8	*1*	10	*0.01*	0.25	*30*	*100*	*50*													
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	9:42	5.80	36.80	7.88	16.2	1																				
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	5/09/2019	10:50	9.85	31.20	7.76	19.7	1	4	2	*0.01*	0.18	*30*	*100*	*50*													
SW5-06	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Overcast.	1/10/2019	9:12	6.88	36.00	7.71	22.0	8																				
SW5-05	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	6/11/2019	12:21	5.43	38.20	7.94	24.0	3	*1*	3	*0.02*	0.55	*13*	*50*	*50*													
SW5-05	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	6/12/2019	9:30	0.62	40.10	6.87	21.2	12																				
SW5-05	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	15/01/2020	8:52	5.56	41.10	5.80	25.8	14	5	*1*	0.03	0.30	*30*	*100*	*50*													
SW5-05	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	5/02/2020	11:32	4.52	20.10	7.56	26.3	13																				
SW5-05	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	4/03/2020	9:50	4.74	2.62	6.82	26.5	23	3	12	0.07	0.96	*30*	*100*	*50*													
SW5-05	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Weather fine.	2/04/2020	10:04	5.88	6.52	7.37	24.6	34																				

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-05	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	5/05/2020	10:10	6.07	28.90	7.91	20.3	24	*1*	13	0.04	0.42	*30*	*100*	*50*														
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	4/06/2020	9:32	7.42	32.10	7.75	18.0	9																				
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.	13/11/2020	10:25	7.34	37.70	7.69	23.9	14	4	23	0.01	0.22	*30*	*100*	*50*	0.073	0.001	*0.0005*	*0.001*	*0.001*	0.116	*0.001*	0.023	*0.0003*	0.000	0.001	*0.0050*	0.003
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	4/05/2021	11:11	6.74	4.45	6.51	20.9	19	*1*	12	0.03	0.69	*13*	*50*	*50*	1.610	0.002	*0.0010*	*0.002*	*0.002*	1.700	*0.005*	0.069	*0.0001*	*0.003*	*0.001*	*0.0005*	0.006

SW5-06 - Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-06		5/08/2016		8.10	12.30	6.86	15.6	12																					
SW5-06		11/11/2016		6.10	27.50	7.94	25.8	13	*1*	71	0.05	0.55	*50*	*50*	*50*														
SW5-06		6/01/2017		5.61	24.70	7.47	27.3	16																					
SW5-06		1/03/2017		5.52	34.70	7.78	25.6	13	*1*	18	*0.03*	*0.25*	*13*	*50*	*50*														
SW5-06	Mid tide, outflowing. Upstream and downstream sites connected	6/03/2017		5.15	31.60	7.61	27.1	27																					
SW5-06	Low flow.	6/04/2017		7.69	0.26	6.61	21.4	39	*1*	554	0.30	2.41	*50*	*50*	*50*														
SW5-05	Low water level, low flow. Incoming tide therefore SW5-05 is downstream. U/s and d/s sites connected. Drizzle.	4/05/2017		3.57	12.20	7.60	20.9	8																					
SW5-06	Weather showers. Upstream and downstream sites connected. High tide, outgoing.	13/06/2017		6.88	5.63	7.34	17.8	10	*1*	11	0.03	0.65	*13*	*50*	*50*														
SW5-05	Weather fine. Upstream and downstream connected. Incoming tide therefore SW5-05 is downstream, low flow. Low water level.	17/07/2017		6.74	7.12	7.64	16.8	5																					
SW5-06	Upstream and downstream sites connected. Steady flow, high tide. Overcast.	7/10/2017		8.24	43.50	8.13	22.6	9	*1*	18	*0.02*	0.26	*13*	*50*	*50*														
SW5-05	Connected. Incoming tide, therefore SW5-05 is downstream. Moderate water level, low flow.	7/11/2017		6.16	16.40	7.88	24.7	2																					
SW5-06	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	1/12/2017		4.41	21.90	7.86	26.9	2	*1*	16	*0.02*	0.82	*13*	*50*	*50*														
SW5-05	Upstream and downstream sites connected. Incoming tide, therefore SW5-05 is downstream. Slight flow, high water level. Weather fine.	3/01/2018		6.98	14.90	7.41	26.8	105																					
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	1/02/2018		5.26	34.20	7.71	26.4	43	*1*	44	0.06	0.20	*25*	*50*	*50*														
SW5-06	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Drizzle.	7/03/2018		5.63	9.71	7.46	26.1	45																					
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	19/04/2018		6.85	16.70	7.96	24.1	14	*5*	14	0.05	0.42	*30*	*250*	*250*														
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	10/05/2018		6.28	27.20	8.05	21.3	3																					
SW5-05	Upstream and downstream sites connected, low flow, medium water level, incoming tide. Weather fine.	6/06/2018	13:43	7.48	25.00	7.68	17.7	3	17	16	0.03	0.17	*30*	*250*	*250*														
SW5-05	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Drizzle.	5/07/2018	10:44	7.99	20.80	7.42	16.9	4																					

SW5-06 - Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	25/08/2018	11:58	8.42	33.60	8.02	17.0	5	2	4	0.01	0.15	*30*	*250*	*250*													
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	5/09/2018	16:57	6.23	63.30	6.93	17.5	13																				
SW5-06	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	12:51	5.55	41.10	7.93	21.9	8	*1*	12	0.03	0.23	*13*	*50*	*50*													
SW5-06	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	19/11/2018	12:20	5.49	20.40	7.85	25.1	7																				
SW5-06	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Weather fine.	18/12/2018	10:18	6.85	0.84	7.56	26.7	64	*1*	37	0.07	0.29	*30*	*250*	*250*													
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	11/02/2019	11:37	6.12	25.10	7.97	28.3	31																				
SW5-05	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	9/03/2019	13:12	9.18	39.10	8.29	26.2	9	*1*	*5*	*0.02*	*0.56*	*13*	*50*	*50*													
SW5-06	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Weather fine.	4/04/2019	12:32	7.01	38.70	8.45	24.0	4																				
SW5-06	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	24/06/2019	13:32	8.76	35.30	7.65	16.7	15	*1*	2	*0.01*	0.23	*30*	*100*	*50*													
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	1/08/2019	10:05	6.21	35.20	7.86	17.3	2																				
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	24/12/2019	10:49	4.95	42.60	7.84	26.3	5																				
SW5-06	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Drizzle.	17/01/2020	11:36	5.60	39.20	7.55	26.7	6	4	5	*0.04*	0.33	*50*	*100*	*50*													
SW5-06	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	7/02/2020	11:37	4.07	25.00	7.50	25.1	7	5	19	0.06	0.74	*30*	*100*	*50*													
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	12:26	4.67	10.40	8.44	26.3	37																				
SW5-06	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	11/04/2020	8:55	6.67	3.05	7.37	23.7	53	4	23	0.07	0.58	*30*	*100*	*50*													
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Rain.	10/06/2020	12:30	8.28	21.20	7.63	18.0	25																				
SW5-05	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	8/08/2020	9:52	8.70	13.90	7.04	17.2	8																				

SW5-06 - Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-06	Upstream and downstream sites connected. Medium flow, very high water level. Tide rising, however flow is outgoing due to freshwater flows from storm event. Overcast.	16/12/2020	10:24	6.46	2.79	6.96	24.9	108	*1*	48	0.10	0.37	*30*	*100*	*50*	1.158	**0.001**	*0.0005*	*0.001*	0.001	0.566	*0.001*	0.037	*0.0003*	*0.001*	**0.001**	*0.0050*	0.002
SW5-06	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	3/02/2021	10:23	6.00	4.47	7.69	27.9	32																				
SW5-06	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Rain.	6/05/2021	9:26	6.86	13.50	6.96	19.4	28	*1*	21	0.05	0.62	*15*	*50*	*50*	1.490	0.001	*0.0010*	*0.003*	0.006	1.410	0.005	0.097	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.210**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					34.78	7.91		52	3	43	0.09	0.63	30	160	130	2.406	0.001	0.0009	0.002	0.005	1.782	0.004	0.097	0.0002	0.002	0.001	0.0041	0.161
P20				5.10	5.98	7.22																						
St Dev					15.07	0.46																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW16		5/02/2013		3.41	0.37	6.72	25.4	544	*3*	1100	0.10	0.30																
Section3 SW16		28/05/2013		9.78	3.83	7.18	18.4	18	*3*	24	0.04	0.50																
Section3 SW16		2/07/2013		9.78	4.66	7.42	17.7	12	*3*	7	0.03	0.42																
Section3 SW16		13/11/2013		7.82	26.20	6.67	24.3	7	*3*	24	*0.01*	0.33																
Upstream Monitoring																												
SW5-05		5/08/2016		7.67	12.90	6.60	15.8	35																				
SW5-05	Technical issue - no data downloaded	11/11/2016							*1*	222	0.11	1.08	*50*	*50*	*50*													
SW5-05		6/01/2017		6.20	25.40	7.47	27.4	29																				
SW5-05		1/03/2017		4.63	34.20	7.76	25.6	9	*1*	14	*0.03*	*0.25*	*13*	*50*	*50*													
SW5-05	Mid tide, outflowing. Upstream and downstream sites connected	6/03/2017		5.22	31.00	7.64	27.1	45																				
SW5-05	Low flow.	6/04/2017		6.11	0.29	6.88	21.8	68	2	1576	0.52	3.52	*50*	*50*	*50*													
SW5-06	Low water level, low flow. Incoming tide therefore SW5-06 is upstream. U/s and d/s sites connected. Drizzle.	4/05/2017		3.40	12.10	7.60	21.0	9																				
SW5-05	Weather showers. Upstream and downstream sites connected. High tide, outgoing.	13/06/2017		7.54	5.63	7.29	17.7	11	*1*	22	*0.02*	0.65	*13*	*50*	*50*													

SW5-06 - Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-06	Weather fine. Upstream and downstream connected. Incoming tide therefore SW5-06 is upstream. Low flow. Low water level.	17/07/2017		5.38	7.39	7.61	16.9	4																				
SW5-05	Upstream and downstream sites connected. Steady flow, high tide. Overcast.	7/10/2017		8.54	44.10	8.16	22.8	6	*1*	9	*0.02*	0.19	*13*	*50*	*50*													
SW5-06	Connected. Incoming tide. Moderate water level, low flow.	7/11/2017		5.53	20.90	7.98	24.8	29																				
SW5-05	Upstream and downstream sites connected. Low flow, low water level. Ougoing tide. Weather, fine.	1/12/2017		3.79	21.60	7.88	27.2	10	*1*	36	*0.02*	0.57	*13*	*50*	*50*													
SW5-06	Upstream and downstream sites connected. Incoming tide. Slight flow, high water level. Weather fine.	3/01/2018		4.45	16.40	7.38	26.8	114																				
SW5-06	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	1/02/2018		5.11	37.50	7.78	26.3	61	*1*	50	0.06	0.23	*25*	*50*	*50*													
SW5-05	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Drizzle.	7/03/2018		6.20	9.67	7.47	25.7	60																				
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	19/04/2018		5.71	18.20	7.90	24.0	19	*3*	18	0.05	0.40	*30*	*250*	*250*													
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	10/05/2018		5.70	26.10	7.91	21.3	37																				
SW5-06	Upstream and downstream sites connected, low flow, medium water level, incoming tide. Weather fine.	6/06/2018	13:30	6.08	25.60	7.68	17.9	0	*1*	18	0.02	0.21	*30*	*250*	*250*													
SW5-06	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Drizzle.	5/07/2018	10:38	7.24	22.50	7.18	16.8	2																				
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	25/08/2018	12:09	8.77	33.20	8.04	17.3	7	3	3	0.01	0.14	*30*	*250*	*250*													
SW5-06	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Rain.	5/09/2018	17:00	5.73	64.60	7.12	17.5	6																				
SW5-05	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	12:58	5.75	39.80	7.95	21.7	13	*1*	17	0.04	0.26	*13*	*50*	*50*													
SW5-05	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	19/11/2018	12:25	5.85	19.80	7.92	25.3	11																				
SW5-05	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Overcast.	18/12/2018	10:10	6.65	0.90	7.59	26.7	84	*1*	33	0.08	0.29	*30*	*250*	*250*													
SW5-06	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	11/02/2019	11:41	5.73	27.50	7.85	28.0	8																				

SW5-06 - Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-06	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	9/03/2019	13:02	7.25	40.40	8.36	26.1	12	*1*	11	*0.02*	0.26	*13*	*50*	*50*														
SW5-05	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Weather fine.	4/04/2019	12:36	8.34	39.50	8.44	23.8	15																					
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	24/06/2019	13:19	8.34	34.70	7.55	16.1	33	2	2	*0.01*	0.22	*30*	*100*	*50*														
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	1/08/2019	9:58	6.11	34.80	7.84	17.2	3																					
SW5-05	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	24/12/2019	10:44	4.48	42.40	7.81	26.2	5																					
SW5-05	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Rain.	17/01/2020	11:24	5.10	38.80	7.28	26.7	13	1	16	0.04	0.33	*50*	*100*	*50*														
SW5-05	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	7/02/2020	11:29	4.04	24.20	7.41	25.2	8	2	5	0.05	0.76	*30*	*100*	*50*														
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	12:23	4.55	8.76	8.57	26.2	35																					
SW5-05	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	11/04/2020	8:46	6.64	2.88	7.30	23.5	61	4	23	0.06	0.59	*30*	*100*	*50*														
SW5-06	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Drizzle.	10/06/2020	12:34	7.23	23.70	7.72	18.1	10																					
SW5-06	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	8/08/2020	9:56	8.38	13.60	7.28	17.2	10																					
SW5-05	Upstream and downstream sites connected. Medium flow, very high water level. Tide rising, however flow is outgoing due to freshwater flows from storm event. Overcast.	16/12/2020	10:07	6.58	2.76	7.20	25.0	107	2	47	0.10	0.36	*30*	*100*	*50*	1.189	0.001	*0.0005*	*0.001*	0.001	0.551	*0.001*	0.045	*0.0003*	*0.001*	*0.001*	*0.0050*	0.003
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	3/02/2021	10:14	5.71	4.11	7.49	27.9	33																					
SW5-05	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	6/05/2021	9:19	7.11	9.80	6.74	18.6	54	*1*	25	0.10	0.71	*15*	*50*	*50*	2.710	0.001	*0.0010*	*0.003*	0.006	2.090	*0.005*	0.110	*0.0001*	*0.003*	*0.001*	*0.0005*	0.200

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-08		2/08/2016		7.63	30.90	8.18	18.1	7																					
SW5-08		5/09/2016		6.36	10.60	7.17	19.3	21	5	16	0.08	0.55	*25*	*50*	*50*														
SW5-08		10/10/2016		4.50	28.90	7.15	21.2	9																					
SW5-08		1/11/2016		4.79	33.80	7.32	24.3	12	4	2	0.06	0.38	*25*	*50*	*50*														
SW5-08		13/12/2016		4.45	33.80	7.52	25.8	14																					
SW5-08	Tidal	18/01/2017		4.29	33.00	7.01	28.4	29	*1*	24	0.03	0.45	*13*	*50*	*50*														
SW5-07	Tidal - incoming therefore SW5-07 is downstream.	1/02/2017		2.83	36.50	7.86	28.1	11																					
SW5-08	Very high tide	10/03/2017		5.40	40.20	7.80	24.2	10	*1*	23	0.11	0.25	*50*	*50*	*50*														
SW5-08	High tide	12/04/2017		3.14	3.83	7.12	22.9	26																					
SW5-08	Tidal. Low flow, outgoing tide. U/s and d/s sites connected.	3/05/2017		3.81	20.50	7.39	20.3	5	*1*	15	0.03	0.62	*50*	*50*	*50*														
SW5-08	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		6.31	29.10	7.66		8																					
SW5-07	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-07 is downstream. Water level moderate.	14/07/2017		5.89	20.10	7.58	15.9	5	*1*	11	0.08	0.48	*13*	*50*	*50*														
SW5-08	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		6.70	30.10	7.77	17.9	10																					
SW5-08	Weather fine. U/S and D/S connected. Outgoing tide. Water level high.	6/09/2017		5.77	39.10	7.52	19.3	7	*1*	11	*0.02*	0.26	*13*	*50*	*50*														
SW5-08	Upstream and downstream connected. Outgoing tide, low water level. Showers.	3/10/2017		3.08	41.60	7.20	21.2	9																					
SW5-07	Upstream and downstream connected. Incoming tide, therefore SW5-07 is upstream. High water level, slight flow.	3/11/2017		3.45	25.50	7.65	25.9	27	*1*	21	0.03	0.38	*13*	*50*	*50*														
SW5-07	Upstream and downstream connected. Low flow, moderate water level. Incoming tide, therefore SW5-07 is downstream Weather fine.	7/12/2017		4.46	25.70	7.50	25.9	14																					
SW5-07	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		3.85	28.30	7.37	25.4	3	*1*	15	*0.02*	0.30	*13*	*50*	*50*														
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		4.75	32.60	7.57	29.5	60																					
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	21/03/2018		4.05	11.20	7.16	26.7	42	2	31	0.12	0.64	*25*	*50*	*50*														

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		8.17	17.20	7.48	25.5	33																				
SW5-07	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	18/05/2018		5.54	35.00	7.54	18.2	18	*2*	**44**	0.07	0.33	*25*	*50*	*25*													
SW5-08	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	14/06/2018	11:22	**3.88**	29.60	7.32	17.7	26																				
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	19/07/2018	11:06	6.68	37.10	7.40	14.6	9	3	9	0.07	0.37	*30*	*250*	*250*													
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	8/08/2018	11:08	6.20	36.50	7.45	17.0	18																				
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Slack tide. Weather fine.	20/09/2018	11:44	4.65	37.40	7.07	21.4	19	*1*	28	0.05	0.30	*30*	*250*	*250*													
SW5-07	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Weather fine.	2/10/2018	11:22	5.19	40.10	7.20	20.1	18																				
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/11/2018	12:31	5.21	19.60	7.44	27.8	26	6	6	*0.01*	0.40	*30*	*100*	*50*													
SW5-08	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	6/12/2018	11:40	4.20	37.40	7.49	25.0	25																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	10/01/2019	11:42	4.32	26.80	7.54	26.7	26	*1*	17	0.09	0.36	*30*	250	250													
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	12/02/2019	10:37	4.32	39.20	7.60	27.7	21																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	13/03/2019	11:38	3.61	41.70	7.48	27.3	21	**8**	16	0.09	0.52	*30*	*100*	*50*													
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	10/04/2019	10:24	4.63	40.40	7.60	24.3	29																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	6/05/2019	10:42	5.04	41.00	7.57	21.1	20	*1*	16	*0.01*	0.31	*30*	*100*	*50*													
SW5-08	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	4/06/2019	11:45	5.98	46.00	7.92	16.3	12																				
SW5-08	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	4/07/2019	10:33	6.53	41.30	7.58	17.7	19	*1*	**29**	0.03	0.42	*30*	*100*	*50*													

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	9:57	3.67	41.40	7.66	15.8	4																					
SW5-07	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Weather fine.	5/09/2019	11:41	5.50	39.40	7.59	19.9	5	*1*	10	0.03	0.20	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Monitored on northern bank approx 600m NNW of normal monitoring site due to access contstraints. Drizzle.	1/10/2019	10:16	4.76	43.40	7.55	21.5	13																					
SW5-08	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	6/11/2019	14:09	4.51	46.40	7.90	25.3	8	*1*	12	0.03	0.67	*13*	*50*	*50*														
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/12/2019	10:19	4.68	47.50	7.48	26.2	9																					
SW5-07	Upstream and downstream sites connected. High flow, low water level. Incoming tide. Overcast.	15/01/2020	10:17	4.79	47.40	6.50	24.7	25	5	28	0.09	0.30	*30*	*100*	*50*														
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	5/02/2020	12:14	3.60	24.40	7.47	26.7	26																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	4/03/2020	10:14	2.19	1.49	6.90	27.1	58	*1*	24	0.23	1.09	*30*	*100*	*50*														
SW5-08	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	2/04/2020	10:18	2.59	5.92	7.02	23.9	49																					
SW5-08	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	5/05/2020	10:37	5.16	29.20	7.56	19.8	19	2	19	0.07	0.47	*30*	*100*	*50*														
SW5-08	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Weather fine.	4/06/2020	9:46	6.75	33.70	7.56	17.4	28																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	13/11/2020	11:12	4.63	41.60	7.38	25.5	25	2	22	0.03	0.37	*30*	*100*	*50*	0.213	0.002	*0.0005*	*0.001*	0.001	0.410	*0.001*	0.062	*0.0003*	0.001	0.001	*0.0050*	0.003
SW5-08	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	4/05/2021	11:27	3.21	2.54	6.68	21.3	61	1	41	0.23	1.18	*13*	*50*	*50*	4.430	0.003	*0.0010*	*0.004*	0.006	4.370	*0.005*	0.350	*0.0001*	0.006	0.001	*0.0005*	0.260
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					40.28	7.59		38	3	28	0.10	1.04	30	100	50	4.988	0.003	0.0009	0.004	0.005	3.248	0.004	0.237	0.0002	0.002	0.001	0.0041	0.192
P20				3.93	17.08	7.14																							

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
St Dev					13.36	0.32																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW17		28/02/2013		4.15	0.14	6.44	25.3	38	*3*	25	0.17	1.20																	
Section3 SW17		20/03/2013		6.25	2.15	6.92	22.0	24	*3*	14	0.03	1.10																	
Section3 SW17		16/04/2013		4.42	1.16	6.67	21.0	58	*3*	28	0.25	1.00																	
Section3 SW17		21/05/2013		8.96	24.00	6.98	17.0	7	*3*	31	0.05	0.40																	
Section3 SW17		25/06/2013		9.44	15.78	7.14	15.4	10	*3*	17	0.05	0.43																	
Section3 SW17		22/07/2013		9.39	11.33	7.40	16.7	13	*3*	19	0.06	1.10																	
Section3 SW17		19/08/2013		8.74	22.30	7.43	19.1	11	*3*	48	0.05	5.30																	
Section3 SW17		23/09/2013		6.81	27.10	7.11	22.8	9	*3*	23	0.04	0.33																	
Section3 SW17		21/10/2013		7.00	30.30	7.58	24.5	9	*3*	26	0.03	0.32																	
Section3 SW17		25/11/2013		6.56	14.03	7.23	28.5	10	*3*	25	0.04	1.70																	
Section3 SW17		16/12/2013		6.15	18.89	7.02	27.5	13	*3*	12	*1.25*	0.60																	
Upstream Monitoring																													
SW5-07	Looked clean and healthy. Photos taken.	3/08/2016		8.76	32.60	7.63	18.1	7																					
SW5-07		5/09/2016		6.36	10.40	7.21	19.7	16	12	14	0.08	0.55	*25*	*50*	*50*														
SW5-07		10/10/2016		4.39	28.50	7.15	21.2	8																					
SW5-07		1/11/2016		4.81	33.90	7.31	24.5	17	5	3	0.07	0.40	*25*	*50*	*50*														
SW5-07		13/12/2016		3.65	33.90	7.50	26.1	8																					
SW5-07	Tidal	18/01/2017		3.91	33.10	7.02	28.0	45	*1*	27	0.05	0.52	*13*	*50*	*50*														
SW5-08	Tidal - incoming therefore SW5-08 is upstream.	1/02/2017		3.63	36.60	7.87	28.1	15																					
SW5-07	Very high tide	10/03/2017		6.03	40.10	7.84	24.7	8	*1*	22	0.08	*0.25*	*50*	*50*	*50*														
SW5-07	High tide	12/04/2017		2.95	3.48	7.14	22.9	29																					
SW5-07	Tidal. Low flow. Outgoing tide. U/s and d/s sites connected.	3/05/2017		4.24	20.30	7.41	20.5	6	*1*	17	0.04	*1.04*	*50*	*50*	*50*														
SW5-07	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		5.37	29.10	7.63	16.9	6																					
SW5-08	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-08 is upstream. Water level moderate.	14/07/2017		4.25	20.30	7.52	15.6	6	*1*	15	0.11	0.75	*13*	*50*	*50*														

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-07	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.93	29.80	7.77	18.2	9																				
SW5-07	Weather fine. U/S and D/S connected. Outgoing tide. Water level high.	6/09/2017		5.82	39.30	7.48	19.7	10	*1*	16	*0.02*	0.28	*13*	*50*	*50*													
SW5-07	Upstream and downstream connected. Outgoing tide, low water level. Showers.	3/10/2017		3.14	41.60	7.16	21.3	9																				
SW5-08	Upstream and downstream connected. Incoming tide, high water level, slight flow.	3/11/2017		4.06	25.40	7.65	25.2	58	*1*	34	0.03	0.55	*13*	*50*	*50*													
SW5-08	Upstream and downstream connected. Low flow, moderate water level. Incoming tide, therefore SW5-08 is upstream. Weather fine.	7/12/2017		3.97	25.70	7.49	25.7	11																				
SW5-08	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		4.44	28.30	7.37	25.0	0	*1*	14	*0.02*	0.33	*13*	*50*	*50*													
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		4.71	32.30	7.58	29.5	36																				
SW5-08	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	21/03/2018		4.13	12.30	7.38	26.9	60	2	39	0.10	0.49	*25*	*50*	*50*													
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		3.70	17.40	7.50	25.4	27																				
SW5-08	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	18/05/2018		5.81	35.60	7.56	17.9	13	2	31	0.06	0.30	*25*	*50*	*25*													
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	14/06/2018	11:06	4.80	28.60	7.28	18.1	18																				
SW5-08	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	19/07/2018	11:21	6.14	38.30	7.44	14.0	18	4	13	0.07	0.29	*30*	*250*	*250*													
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/08/2018	10:54	5.67	39.40	7.43	17.2	26																				
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Slack tide. Weather fine.	20/09/2018	11:29	4.45	37.60	6.96	21.4	32	2	32	0.06	0.29	*30*	*250*	*250*													
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/10/2018	11:33	5.42	40.60	7.35	20.1	14																				
SW5-07	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	6/11/2018	12:13	5.21	19.70	7.45	27.8	36	4	23	*0.01*	0.39	*30*	*100*	*50*													

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-07	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	6/12/2018	11:31	4.68	37.40	7.52	25.0	49																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	10/01/2019	12:01	4.26	27.50	7.54	26.5	23	*1*	12	0.10	0.33	*30*	250	250														
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	12/02/2019	10:55	4.56	39.40	7.57	28.0	38																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	13/03/2019	11:22	3.66	38.90	7.46	27.2	21	2	16	0.08	0.36	*30*	*100*	*50*														
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	10/04/2019	10:13	4.34	40.60	7.60	24.3	47																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	6/05/2019	10:58	5.46	40.20	7.66	21.0	44	*1*	13	*0.01*	0.26	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	4/06/2019	11:35	5.76	45.90	7.90	16.4	13																					
SW5-07	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	4/07/2019	10:48	6.65	41.20	7.59	17.8	16	*1*	17	0.03	0.41	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	10:14	5.51	41.30	7.63	16.0	6																					
SW5-08	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Weather fine.	5/09/2019	11:14	5.21	42.40	7.57	19.7	4	*1*	8	0.04	0.18	*30*	*100*	*50*														
SW5-08	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Drizzle.	1/10/2019	9:54	4.98	43.90	7.59	21.4	21																					
SW5-07	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Monitored on northern bank approx 600m NNW of normal monitoring site due to access contstraints. Weather fine.	6/11/2019	12:39	3.64	46.50	7.75	24.3	8	*1*	15	0.05	0.70	*13*	*50*	*50*														
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/12/2019	10:04	4.39	44.60	7.42	25.6	16																					
SW5-08	Upstream and downstream sites connected. High flow, low water level. Incoming tide. Overcast.	15/01/2020	9:59	5.13	47.50	6.41	24.8	18	3	19	0.07	0.30	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	5/02/2020	12:32	2.92	23.40	7.43	27.0	33																					

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	4/03/2020	10:34	2.65	1.25	6.98	27.3	53	*1*	24	0.20	1.08	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	2/04/2020	10:35	3.08	4.09	7.15	24.0	50																				
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	5/05/2020	11:00	4.99	26.60	7.48	19.7	21	3	14	0.06	0.51	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	4/06/2020	10:01	6.60	33.40	7.48	17.5	22																				
SW5-07	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Drizzle.	13/11/2020	11:32	3.93	41.90	7.36	24.7	47	*1*	13	0.02	0.37	*30*	*100*	*50*	0.258	0.002	*0.0005*	*0.001*	0.001	0.238	*0.001*	0.064	*0.0003*	0.001	0.001	*0.0050*	0.002
SW5-07	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Overcast.	4/05/2021	11:45	3.77	3.31	6.64	21.6	100	*1*	44	0.17	1.47	*13*	*50*	*50*	6.170	0.003	*0.0010*	0.005	0.006	4.000	*0.005*	0.280	*0.0001*	*0.003*	*0.001*	*0.0005*	0.240

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-08	High water level, turbid water	5/08/2016		6.78	2.17	6.31	13.9	163																					
SW5-08	Data not collected - technical error	10/11/2016																											
SW5-08		6/01/2017		4.44	35.70	7.34	26.8	37																					
SW5-08		1/03/2017		3.87	20.70	7.07	24.6	66	5	25	0.19	2.90	*13*	*50*	*50*														
SW5-08	Low tide, gentle outflow. Upstream and downstream sites connected.	6/03/2017		2.87	25.60	7.27	26.8	23																					
SW5-08	Moderate flow. Outgoing tide.	6/04/2017		4.93	0.51	6.68	20.3	45	*1*	28	0.26	1.12	*50*	*50*	*50*														
SW5-07	Low water level, low flow. Incoming tide therefore SW5-07 is downstream. U/s and d/s sites connected. Drizzle.	4/05/2017		4.62	19.40	7.50	20.0	5																					
SW5-08	Weather showers. Connected. High tide, outgoing.	13/06/2017		6.33	0.23	6.60	16.1	99	*1*	24	0.21	0.68	*13*	*50*	*50*														
SW5-07	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-07 is downstream. Water level low.	17/07/2017		3.85	16.10	7.51	16.5	10																					
SW5-08	Upstream and downstream sites connected. Outgoing tide, steady flow, high water level. Overcast.	7/10/2017		4.51	42.20	7.61	23.6	19	*1*	19	*0.02*	0.36	*13*	*50*	*50*														
SW5-07	Connected. Incoming tide, therefore SW5-07 is downstream. Moderate water level, low flow.	7/11/2017		3.28	24.70	7.58	24.2	26																					
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Ougoing tide. Weather, fine.	1/12/2017		3.26	27.00	7.40	26.7	17	*1*	18	*0.02*	1.18	*13*	*50*	*50*														
SW5-07	Upstream and downstream sites connected. Incoming tide, therefore SW5-07 is downstream. Slight flow, high water level. Weather fine.	3/01/2018		2.82	8.93	6.85	25.1	145																					
SW5-07	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Overcast.	1/02/2018		4.27	32.40	7.48	26.2	42	*1*	21	0.07	0.27	*25*	*50*	*50*														
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Slack tide. Overcast.	7/03/2018		4.28	19.30	7.27	24.5	80																					
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	19/04/2018		4.16	28.30	7.57	23.3	19	*1*	16	0.07	0.37	*30*	*250*	*250*														
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	10/05/2018		3.15	23.80	7.53	20.5	46																					
SW5-07	Upstream and downstream sites connected, low flow, medium water level, incoming tide. Overcast.	6/06/2018	12:46	5.08	39.50	7.32	16.8	55	*1*	16	0.04	0.22	*30*	*250*	*250*														
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	5/07/2018	10:59	4.11	29.60	7.12	17.1	20																					

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	25/08/2018	11:13	7.55	37.00	7.80	17.0	45	*1*	16	0.09	0.45	*30*	*250*	*250*													
SW5-07	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	5/09/2018	15:30	5.55	9.84	6.75	17.9	301																				
SW5-08	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	12:22	4.49	41.90	7.72	22.0	13	*1*	11	0.04	0.23	*13*	*50*	*50*													
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	19/11/2018	11:54	2.65	26.80	7.30	25.3	29																				
SW5-08	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	18/12/2018	10:47	4.82	8.28	7.38	26.1	20	2	9	0.06	0.33	*30*	*250*	*250*													
SW5-07	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Weather fine.	11/02/2019	12:04	3.78	39.30	7.59	28.0	47																				
SW5-07	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	12:44	7.21	40.90	8.10	26.6	29	*1*	11	0.05	0.39	*13*	*50*	*50*													
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	12:13	5.62	39.50	8.18	23.3	50																				
SW5-08	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	24/06/2019	13:48	7.63	45.40	7.49	15.2	2	*1*	8	0.01	0.27	*30*	*100*	*50*													
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	1/08/2019	10:23	4.50	37.60	7.61	17.0	4																				
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	24/12/2019	10:56	4.70	41.40	7.62	26.9	18																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Rain.	17/01/2020	12:44	5.34	41.40	7.58	25.8	67	1	**101**	**0.20**	0.58	*50*	*100*	*50*													
SW5-08	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Overcast.	7/02/2020	11:51	5.26	7.32	6.99	23.7	114	**10**	**44**	**0.26**	**3.37**	*30*	*100*	*50*													
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	12:36	2.30	3.68	8.45	26.5	57																				
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	11/04/2020	9:24	4.71	6.71	7.02	21.6	**98**	4	41	0.18	0.87	*30*	**220**	*50*													
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Drizzle.	10/06/2020	12:57	4.55	33.60	7.19	17.4	39																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	8/08/2020	10:19	5.55	23.20	7.19	16.9	29																				
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	16/12/2020	10:51	4.32	9.81	6.80	24.9	44	2	23	0.20	0.71	*30*	*100*	*50*	0.357	0.001	*0.0005*	*0.001*	0.001	0.289	*0.001*	**0.204**	*0.0003*	0.001	*0.001*	*0.0050*	0.002

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-07	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	3/02/2021	10:45	8.73	11.70	7.58	26.3	45																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	6/05/2021	9:37	7.04	3.13	7.20	16.2	128	1	55	0.20	0.87	*15*	*50*	*50*	6.920	0.001	*0.0010*	0.004	**0.039**	4.150	*0.005*	0.140	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.180**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					39.12	7.62		86	3	40	0.20	1.10	30	160	130	6.689	0.002	0.0009	0.004	0.005	4.597	0.004	0.166	0.0002	0.002	0.001	0.0041	0.113
P20				3.51	7.64	6.95																							
St Dev					14.64	0.44																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW17		5/02/2013		1.90	0.51	6.57	27.8	20	*3*	62	0.19	1.10																	
Section3 SW17		28/05/2013		8.80	22.40	7.32	17.9	6	*3*	16	0.05	0.50																	
Section3 SW17		2/07/2013		7.65	0.76	6.87	17.1	166	*3*	44	0.35	1.60																	
Section3 SW17		12/11/2013		5.55	22.10	6.84	26.0	38	*3*	24	0.07	1.80																	
Upstream Monitoring																													
SW5-07	High water level, turbid water	5/08/2016		4.16	2.28	6.26	14.1	165																					
SW5-07		11/11/2016		3.65	33.60	7.58	26.7	6	*1*	39	0.07	0.60	*50*	*50*	*50*														
SW5-07		6/01/2017		4.08	35.90	7.30	26.8	39																					
SW5-07		1/03/2017		3.70	24.10	7.08	24.5	60	*1*	26	0.13	2.50	*13*	*50*	*50*														
SW5-07	Low tide, gentle outflow. Upstream and downstream sites connected.	6/03/2017		3.24	28.60	7.26	27.0	24																					
SW5-07	Moderate flow. Outflow from cane drain adjacent to site. Samples taken outside of mixing zone as much as possible.	6/04/2017		3.42	0.63	6.80	20.9	55	*1*	40	0.19	1.09	*50*	*50*	*50*														
SW5-08	Low water level, low flow. Incoming tide therefore SW5-08 is upstream. U/s and d/s sites connected. Drizzle.	4/05/2017		4.54	20.40	7.33	20.1	6																					
SW5-07	Weather showers. Connected. High tide, outgoing.	13/06/2017		5.69	0.22	6.59	16.3	110	*1*	27	0.21	0.72	*13*	*50*	*50*														
SW5-08	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-08 is upstream. Water level low.	17/07/2017		3.35	12.90	7.60	16.3	11																					

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-07	Upstream and downstream sites connected. Outgoing tide, steady flow, high water level. Overcast.	7/10/2017		4.15	42.10	7.58	23.6	20	*1*	20	*0.02*	0.38	*13*	*50*	*50*													
SW5-08	Connected. Incoming tide. Moderate water level, low flow.	7/11/2017		3.13	25.20	7.64	23.8	25																				
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Ougoing tide. Weather, fine.	1/12/2017		5.74	26.70	7.73	27.6	8	*1*	14	0.05	0.88	*13*	*50*	*50*													
SW5-08	Upstream and downstream sites connected. Incoming tide, slight flow. High water level. Weather fine.	3/01/2018		3.82	9.06	6.93	25.0	149																				
SW5-08	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Overcast.	1/02/2018		4.62	32.80	7.45	26.4	40	*1*	30	0.07	0.26	*25*	*50*	*50*													
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Slack tide. Overcast.	7/03/2018		3.32	16.40	7.23	24.7	41																				
SW5-08	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	19/04/2018		4.24	28.70	7.54	23.4	22	2	13	0.06	0.36	*30*	*250*	*250*													
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	10/05/2018		3.07	29.50	7.63	20.8	93																				
SW5-08	Upstream and downstream sites connected, low flow, medium water level, incoming tide. Overcast.	6/06/2018	12:30	5.27	39.30	7.18	17.0	34	2	21	0.06	0.26	*30*	*250*	*250*													
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	5/07/2018	11:09	3.96	28.40	7.11	17.1	19																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	25/08/2018	11:40	6.90	39.60	7.72	17.6	43	2	15	0.07	0.33	*30*	*250*	*250*													
SW5-08	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	5/09/2018	15:18	5.81	7.74	7.00	19.2	394																				
SW5-07	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	12:35	4.58	41.90	7.72	22.0	15	*1*	12	0.05	0.30	*13*	*50*	*50*													
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	19/11/2018	12:05	3.02	26.90	7.37	25.3	25																				
SW5-07	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Overcast.	18/12/2018	10:34	5.85	7.58	7.32	26.1	22	*1*	11	0.05	0.34	*30*	*250*	*250*													
SW5-08	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	11/02/2019	11:49	4.34	39.30	7.66	28.0	30																				
SW5-08	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	12:29	7.04	40.90	8.12	26.4	22	*1*	13	0.04	0.44	*13*	*50*	*50*													

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	12:23	6.35	39.90	8.14	23.6	47																					
SW5-07	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	24/06/2019	14:02	7.04	45.80	7.52	15.2	1	*1*	7	0.02	0.28	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	1/08/2019	10:52	4.59	38.70	7.60	17.3	4																					
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	24/12/2019	11:15	6.72	39.20	7.61	26.6	17																					
SW5-08	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Rain.	17/01/2020	12:20	5.84	39.00	7.60	25.8	101	2	27	0.12	0.37	*50*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Overcast.	7/02/2020	12:15	5.80	6.30	6.85	23.6	136	2	4	0.24	2.84	*30*	*100*	*50*														
SW5-07	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	12:49	1.94	2.09	8.54	26.4	72																					
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	11/04/2020	9:06	5.47	8.16	7.08	21.7	77	6	42	0.16	0.84	*30*	*100*	*50*														
SW5-08	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	10/06/2020	12:43	5.54	32.70	7.31	17.8	40																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	8/08/2020	10:05	5.58	23.70	7.19	16.9	34																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	16/12/2020	10:36	4.48	9.41	6.79	25.0	38	3	12	0.21	0.87	*30*	*100*	*50*	0.365	*0.001*	*0.0005*	*0.001*	0.001	0.267	*0.001*	0.167	*0.0003*	0.001	0.001	*0.0050*	0.005
SW5-08	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	3/02/2021	10:33	8.54	12.80	7.53	26.5	42																					
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	6/05/2021	9:52	6.41	1.78	6.97	16.3	171	*1*	77	0.25	1.01	*15*	*50*	*50*	8.270	0.002	*0.0010*	0.005	0.006	5.680	*0.005*	0.160	*0.0001*	*0.003*	*0.001*	*0.0005*	0.140

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-10	Photos taken, accurate turbidity reading could not be obtained	3/08/2016		7.33	34.00	8.50	18.0																						
SW5-10		5/09/2016		7.91	12.20	7.51	19.6	14	2	11	0.04	0.39	*25*	*50*	*50*														
SW5-10		10/10/2016		7.22	23.10	7.69	21.8	4																					
SW5-10		1/11/2016		6.33	32.80	7.66	24.2	2	3	5	*0.01*	0.44	*25*	*50*	*50*														
SW5-10		13/12/2016		9.00	34.40	7.65	25.1	4																					
SW5-10	Tidal	18/01/2017		6.14	31.80	7.26	28.4	9	*1*	7	*0.02*	0.40	*13*	*50*	*50*														
SW5-09	Tidal - incoming therefore SW5-09 is downstream.	1/02/2017		**4.60**	36.30	8.11	27.9	3																					
SW5-10	Very high tide	10/03/2017		6.73	41.70	8.02	24.6	6	*1*	22	0.08	0.25	*50*	*50*	*50*														
SW5-10	High tide	12/04/2017		**4.60**	3.16	7.03	23.0	7																					
SW5-10	Tidal. Low flow. Outgoing tide. U/s and d/s sites connected.	3/05/2017		9.41	19.10	7.56	21.2	2	*1*	18	*0.02*	0.71	*50*	*50*	*50*														
SW5-10	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		8.05	25.50	8.08		3																					
SW5-09	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-09 is downstream. Water level moderate.	14/07/2017		5.95	16.70	7.52	15.8	4	*1*	8	0.06	0.48	*13*	*50*	*50*														
SW5-10	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.68	28.10	8.23	17.6	5																					
SW5-10	Weather fine. U/S and D/S connected. No observed flow, high tide.	6/09/2017		7.23	36.30	7.89	18.8	3	*1*	8	*0.02*	0.18	*13*	*50*	*50*														
SW5-10	Upstream and downstream connected. Outgoing tide, low water level. Showers.	3/10/2017		5.82	40.60	7.73	21.7	5																					
SW5-09	Upstream and downstream connected. Incoming tide, therefore SW5-09 is downstream. High water level, slight flow.	3/11/2017		4.76	24.80	7.58	23.5	14	*1*	4	*0.02*	0.44	*13*	*50*	*50*														
SW5-09	Upstream and downstream connected. Moderate flow, moderate water level. Incoming tide, therefore SW5-09 is downstream. Weather fine.	7/12/2017		5.93	21.20	7.45	25.9	26																					
SW5-09	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		5.32	26.30	7.09	24.6	4	*1*	14	*0.02*	0.51	*13*	*50*	*50*														
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		6.19	33.00	7.88	28.9	10																					
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	21/03/2018		5.75	12.30	7.59	27.2	27	*1*	25	0.04	0.32	*25*	*50*	*50*														
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		5.57	17.30	7.70	25.9	**32**																					

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-09	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	18/05/2018		7.12	34.20	7.96	19.0	4	*1*	24	0.02	0.20	*25*	*50*	*25*														
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	14/06/2018	12:07	6.89	31.20	7.48	17.6	20																				
SW5-09	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	19/07/2018	11:57	7.12	36.30	7.65	15.5	10	*1*	1	0.03	0.16	*30*	*250*	*250*														
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	8/08/2018	11:50	7.31	39.50	7.77	16.9	20																				
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	20/09/2018	12:27	7.19	38.40	7.57	20.8	8	*1*	12	0.01	0.17	*30*	*250*	*250*														
SW5-09	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	2/10/2018	11:53	7.30	38.90	7.77	20.3	4																				
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/11/2018	12:46	6.50	22.20	7.67	26.9	26	4	28	*0.01*	0.33	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	6/12/2018	11:54	6.67	36.40	7.78	24.8	28																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	10/01/2019	13:00	5.37	28.50	7.84	26.4	7	*1*	9	0.03	0.37	*30*	250	250														
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	12/02/2019	11:12	5.85	40.20	7.94	27.8	3																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	13/03/2019	12:09	5.17	43.00	7.88	27.6	7	6	4	0.01	0.21	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	10/04/2019	10:37	6.22	39.30	7.96	24.4	15																				
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/05/2019	11:55	6.68	40.60	7.90	21.5	30	*1*	6	*0.01*	0.16	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Weather fine.	4/06/2019	12:29	7.39	41.30	8.16	16.5	57																				
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	4/07/2019	11:35	7.47	40.80	7.76	17.4	13	*1*	18	*0.01*	0.23	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	10:51	6.59	40.70	7.96	16.0	2																				

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-09	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	5/09/2019	12:49	7.14	42.40	7.93	20.2	2	*1*	3	*0.01*	0.14	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Drizzle.	1/10/2019	10:52	5.99	43.50	7.84	21.2	6																				
SW5-10	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	6/11/2019	13:32	4.57	45.30	8.09	24.1	5	*1*	13	*0.02*	**0.77**	*13*	*50*	*50*														
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/12/2019	11:11	6.55	47.50	7.90	26.4	4																				
SW5-09	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Overcast.	15/01/2020	10:46	5.33	46.90	6.79	25.2	7	4	16	0.04	0.22	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	5/02/2020	13:09	5.00	21.30	7.69	27.1	12																				
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	4/03/2020	11:18	4.85	0.60	7.06	27.4	**77**	3	**61**	**0.14**	1.21	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	2/04/2020	11:13	5.91	3.61	7.28	25.2	**57**																				
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	5/05/2020	11:51	6.79	29.70	7.95	20.1	20	**5**	15	0.04	0.45	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	4/06/2020	10:14	7.30	33.90	7.83	17.7	**25**																				
SW5-10	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Drizzle.	13/11/2020	12:07	6.61	39.10	7.65	23.8	21	*1*	19	0.01	0.26	*30*	*100*	*50*	0.058	0.001	*0.0005*	*0.001*	0.001	0.088	*0.001*	0.023	*0.0003*	0.000	**0.001**	*0.0050*	*0.001*
SW5-10	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/05/2021	12:17	5.55	6.29	6.91	21.6	**69**	*1*	**52**	0.04	0.88	*13*	*50*	*50*	**2.980**	**0.002**	*0.0010*	*0.002*	**0.027**	**2.850**	*0.005*	**0.250**	*0.0001*	0.003	0.001	*0.0005*	**0.750**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					39.78	7.91		22	3	27	0.04	0.73	30	100	50	1.320	0.001	0.0009	0.001	0.002	1.344	0.004	0.168	0.0002	0.002	0.001	0.0041	0.449
P20				5.56	15.56	7.26																						
St Dev					13.66	0.42																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Section3 SW18		28/02/2013		6.56	0.14	6.72	25.4	53	*3*	28	0.07	0.80																
Section3 SW18		19/03/2013		7.83	0.29	7.04	24.8	18	*3*	11	*0.01*	0.80																
Section3 SW18		16/04/2013		8.81	0.59	6.93	25.8	12	*3*	*3*	0.07	0.80																
Section3 SW18		21/05/2013		8.39	18.81	6.69	19.1	3	*3*	14	0.03	0.40																
Section3 SW18		25/06/2013		9.42	12.05	7.27	16.0	5	*3*	5	0.02	0.43																
Section3 SW18		22/07/2013		9.03	11.50	7.33	17.5	9	*3*	8	0.03	0.75																
Section3 SW18		19/08/2013		8.76	19.11	7.54	20.0	4	*3*	14	0.02	0.26																
Section3 SW18		23/09/2013		26.30	8.76	7.26	22.7	4	*3*	11	0.02	0.40																
Section3 SW18		21/10/2013		8.57	32.10	7.35	25.0	11	*3*	29	0.02	0.42																
Section3 SW18		25/11/2013		7.99	17.40	6.98	26.8	6	*3*	190	*0.01*	0.35																
Section3 SW18		16/12/2013		7.76	22.30	7.24	28.6	12	11	7	1.25	0.10																
Upstream Monitoring																												
SW5-09	Photos taken	3/08/2016		7.40	33.80	8.43	17.9	0																				
SW5-09		5/09/2016		8.26	12.10	7.43	19.0	20	2	29	0.04	0.40	*25*	*50*	*50*													
SW5-09		10/10/2016		7.52	23.20	7.69	22.3	10																				
SW5-09		1/11/2016		6.46	32.50	7.64	24.1	2	8	4	0.02	0.26	*25*	*50*	*50*													
SW5-09		13/12/2016		6.05	34.50	7.56	24.8	6																				
SW5-09	Tidal	18/01/2017		6.17	32.10	7.25	28.2	9	*1*	4	*0.02*	0.35	*13*	*50*	*50*													
SW5-10	Tidal - incoming therefore SW5-10 is upstream.	1/02/2017		5.11	36.00	8.19	28.7	0																				
SW5-09	Very high tide	10/03/2017		6.64	41.10	7.94	24.5	9	*1*	207	0.18	*0.25*	*50*	*50*	*50*													
SW5-09	High tide	12/04/2017		5.86	2.71	7.04	21.8	48																				
SW5-09	Tidal. Low flow. Outgoing tide. U/s and d/s sites connected.	3/05/2017		9.25	19.70	7.64	20.8	15	*1*	26	0.02	*0.73*	*50*	*50*	*50*													
SW5-09	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		8.46	25.60	8.02	17.0	29																				
SW5-10	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-10 is upstream. Water level moderate.	14/07/2017		5.51	17.70	7.71	16.1	4	*1*	41	0.10	0.73	*13*	*50*	*50*													
SW5-09	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.67	27.90	8.16	17.4	5																				
SW5-09	Weather fine. U/S and D/S connected. No observed flow, high tide.	6/09/2017		7.51	36.40	7.80	18.5	3	*1*	29	*0.02*	0.33	*13*	*50*	*50*													

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-09	Upstream and downstream connected. Outgoing tide, low water level. Overcast.	3/10/2017		7.00	32.20	7.66	21.1	4																				
SW5-10	Upstream and downstream connected. Incomng tide, high water level, slight flow.	3/11/2017		4.72	25.50	7.75	24.1	4	*1*	4	*0.02*	0.31	*13*	*50*	*50*													
SW5-10	Upstream and downstream connected. Moderate flow, moderate water level. Incoming tide, therefore SW5-10 is upstream. Weather fine.	7/12/2017		5.44	22.70	7.67	26.5	17																				
SW5-10	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		4.69	26.30	7.36	24.9	0	*1*	9	*0.02*	0.30	*13*	*50*	*50*													
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		6.34	32.80	7.87	29.2	16																				
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	21/03/2018		5.92	12.60	7.27	26.8	41	*1*	27	0.06	0.40	*25*	*50*	*50*													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		6.46	16.30	7.74	25.4	10																				
SW5-10	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	18/05/2018		6.33	34.10	7.92	19.0	3	*1*	25	0.02	0.23	*25*	*50*	*25*													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	14/06/2018	11:49	6.71	31.70	7.60	17.7	5																				
SW5-10	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	19/07/2018	11:37	8.15	36.30	7.79	15.3	4	*1*	3	0.03	0.17	*30*	*250*	*250*													
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	8/08/2018	11:27	7.51	38.60	7.82	17.1	7																				
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	20/09/2018	12:06	6.69	43.00	7.55	20.7	30	*1*	21	0.03	0.19	*30*	*250*	*250*													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/10/2018	11:45	7.35	38.70	7.66	20.3	5																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/11/2018	13:16	6.64	21.60	7.55	26.8	15	3	9	*0.01*	0.34	*30*	*100*	*50*													
SW5-09	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	6/12/2018	12:23	6.02	36.30	7.72	25.2	42																				
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	10/01/2019	12:17	6.01	27.20	7.84	26.7	8	*1*	5	0.03	0.35	*30*	250	250													

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	12/02/2019	11:19	5.34	39.60	7.91	28.2	13																					
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	13/03/2019	11:59	5.57	42.50	7.86	27.5	5	5	4	*0.01*	0.19	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	10/04/2019	10:59	6.22	39.40	7.96	24.2	40																					
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/05/2019	11:24	6.61	40.80	7.93	21.6	34	*1*	3	*0.01*	0.16	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Weather fine.	4/06/2019	12:10	6.43	46.20	8.11	16.8	47																					
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	4/07/2019	11:11	7.29	41.90	7.87	17.6	7	*1*	15	*0.01*	0.22	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	10:41	6.56	40.50	7.95	15.8	1																					
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	5/09/2019	13:06	7.25	42.30	7.93	20.1	1	*1*	6	*0.01*	0.15	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Drizzle.	1/10/2019	11:02	6.04	43.10	7.85	21.3	5																					
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/11/2019	13:12	5.06	45.40	8.07	24.0	9	*1*	23	*0.02*	0.50	*13*	*50*	*50*														
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/12/2019	10:38	6.40	47.50	7.90	26.3	3																					
SW5-10	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Overcast.	15/01/2020	10:59	5.53	47.00	6.50	25.5	4	5	9	0.04	0.22	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	5/02/2020	12:50	4.67	21.30	7.59	26.9	16																					
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	4/03/2020	11:06	4.66	0.61	6.97	27.3	52	2	19	0.11	1.08	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	2/04/2020	11:02	5.46	3.44	7.12	24.9	43																					
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	5/05/2020	11:30	6.44	29.30	7.89	20.0	17	2	13	0.04	0.42	*30*	*100*	*50*														

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	4/06/2020	10:24	7.10	33.10	7.83	17.7	11																					
SW5-09	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Drizzle.	13/11/2020	11:48	6.30	39.50	7.69	24.1	19	*1*	14	0.01	0.28	*30*	*100*	*50*	0.118	0.002	*0.0005*	*0.001*	0.001	0.239	*0.001*	0.039	*0.0003*	0.000	0.001	*0.0050*	0.003
SW5-09	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/05/2021	12:05	5.51	5.29	6.56	21.1	33	*1*	15	0.03	0.88	*13*	*50*	*50*	1.620	0.001	*0.0010*	*0.002*	*0.002*	1.620	*0.005*	0.200	*0.0001*	*0.003*	*0.001*	*0.0005*	0.560

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-10	Technical issues - data not downloaded	5/08/2016																											
SW5-10	Accurate turbidity reading could not be obtained	11/11/2016		6.12	33.50	7.99	25.4		*1*	8	*0.02*	0.28	*50*	*50*	*50*														
SW5-10		6/01/2017		6.35	34.40	7.54	26.9	26																					
SW5-10		1/03/2017		5.88	42.30	7.91	25.2	6	*1*	10	0.09	*0.25*	*13*	*50*	*50*														
SW5-10	Low tide, outflowing. Upstream and downstream connected	6/03/2017		6.08	36.70	7.73	27.4	9																					
SW5-10	Moderate flow. Outgoing tide.	6/04/2017		**4.67**	0.37	6.77	21.3	21	*1*	31	0.08	0.99	*50*	*50*	*50*														
SW5-09	Low water level, low flow. Incoming tide therefore SW5-09 is downstream. U/s and d/s sites connected. Drizzle.	4/05/2017		5.88	19.20	7.34	20.3	9																					
SW5-10	Weather showers. Upstream and downstream sites connected. High water level, outgoing tide.	13/06/2017		7.30	1.35	6.54	16.1	**142**	*1*	30	0.05	0.77	*13*	*50*	*50*														
SW5-09	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-09 is downstream. Water level low.	17/07/2017		5.48	17.00	7.48	16.3	9																					
SW5-10	Upstream and downstream sites connected. Outgoing tide, high water level. Overcast.	7/10/2017		7.61	44.60	8.18	22.8	6	*1*	7	*0.02*	0.29	*13*	*50*	*50*														
SW5-09	Connected. Incoming tide, therefore SW5-09 is downstream. Moderate water level, low flow.	7/11/2017		6.07	26.40	7.81	24.1	9																					
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Ougoing tide. Overcast.	1/12/2017		5.36	28.20	7.69	26.9	8	*1*	16	*0.02*	0.53	*13*	*50*	*50*														
SW5-09	Upstream and downstream sites connected. Incoming tide, therefore SW5-09 is downstream. No visible flow. High water level. Weather fine.	3/01/2018		**4.88**	14.30	6.80	26.7	23																					
SW5-09	Upstream and downstream sites connected. High flow, high water level. Incoming tide. Overcast.	1/02/2018		5.12	32.40	7.39	26.5	25	*1*	14	0.04	0.21	*25*	*50*	*50*														
SW5-09	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide, therefore SW5-09 is downstream. Overcast.	7/03/2018		**5.29**	19.00	7.52	25.7	17																					
SW5-09	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Weather fine.	19/04/2018		6.05	31.20	7.96	23.5	6	*1*	6	0.04	0.30	*30*	*250*	*250*														
SW5-10	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	10/05/2018		6.36	28.80	8.05	21.3	8																					
SW5-09	Upstream and downstream sites connected, low flow, medium water level, incoming tide. Drizzle.	6/06/2018	11:23	7.25	34.80	7.10	17.0	25	*1*	11	0.03	0.18	*30*	*250*	*250*														
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Drizzle.	5/07/2018	11:33	7.19	30.20	7.60	17.4	9																					

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	25/08/2018	10:56	8.34	40.10	8.06	17.0	9	*1*	25	0.01	0.15	*30*	*250*	*250*													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	5/09/2018	14:58	5.34	71.10	6.77	17.6	9																				
SW5-10	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	12:10	5.09	40.80	7.82	21.6	17	*1*	20	**0.30**	**1.09**	*13*	*50*	*50*													
SW5-10	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	19/11/2018	11:45	6.41	25.90	7.74	24.5	22																				
SW5-10	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	18/12/2018	11:04	6.35	2.30	7.56	26.6	40	2	13	0.06	0.33	*30*	*250*	*250*													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	11/02/2019	12:38	5.39	40.30	7.87	27.8	10																				
SW5-09	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	12:01	7.34	41.20	8.29	26.3	8	*1*	9	0.03	**1.00**	*13*	*50*	*50*													
SW5-10	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	12:00	5.76	39.60	8.44	23.4	8																				
SW5-10	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	24/06/2019	14:57	8.59	43.90	7.80	15.6	10	*1*	7	*0.01*	0.19	*30*	*100*	*50*													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	1/08/2019	11:46	6.07	38.80	7.87	17.3	1																				
SW5-10	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	24/12/2019	11:45	4.75	42.10	7.77	26.7	7																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	17/01/2020	13:17	5.62	45.90	7.78	26.4	10	**3**	14	0.04	0.27	*50*	*100*	*50*													
SW5-10	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	7/02/2020	13:04	4.14	17.20	6.98	25.1	96	3	36	0.09	1.21	*30*	*100*	*50*													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	13:19	4.57	4.91	**8.49**	26.4	57																				
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	11/04/2020	9:48	5.99	13.10	7.25	23.3	27	**4**	24	0.03	0.62	*30*	*100*	*50*													
SW5-09	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Rain.	10/06/2020	13:16	7.19	19.50	7.71	18.1	10																				
SW5-09	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	8/08/2020	10:39	7.32	23.90	7.60	17.3	11																				

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-10	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.	16/12/2020	11:31	6.70	5.95	7.15	25.6	41	*1*	22	0.07	0.38	*30*	*100*	*50*	0.158	0.001	*0.0005*	*0.001*	*0.001*	0.122	*0.001*	0.068	*0.0003*	*0.001*	*0.001*	*0.0050*	0.000
SW5-09	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	3/02/2021	11:05	6.20	12.40	7.68	27.7	12																				
SW5-10	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Rain.	6/05/2021	10:37	5.67	7.79	6.76	18.5	65	*1*	34	0.05	0.68	*15*	*50*	*50*	**2.880**	*0.001*	*0.0010*	*0.003*	*0.002*	**2.030**	*0.005*	0.170	*0.0001*	*0.003*	*0.001*	*0.0005*	**0.660**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					39.80	7.89		39	3	26	0.07	0.61	30	160	130	2.233	0.001	0.0009	0.002	0.002	1.617	0.004	0.149	0.0002	0.002	0.001	0.0041	0.058
P20				5.30	12.78	7.16																						
St Dev					15.82	0.46																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW18		5/02/2013		3.73	0.46	6.60	26.0	110	*3*	48	0.10	0.50																
Section3 SW18		27/05/2013		9.63	15.67	7.29	20.1	3	*3*	9	0.04	0.40																
Section3 SW18		2/07/2013		8.86	3.84	7.10	17.2	33	*3*	13	0.07	0.60																
Section3 SW18		12/11/2013		8.03	31.00	7.15	26.3	7	*3*	23	0.02	0.32																
Upstream Monitoring																												
SW5-09	Technical issues - data not downloaded	5/08/2016																										
SW5-09	Turbidity reading deemed un-reliable	11/11/2016		5.92	33.50	7.99	25.3		*1*	10	*0.02*	0.28	*50*	*50*	*50*													
SW5-09		6/01/2017		5.57	33.20	7.55	26.5	46																				
SW5-09		1/03/2017		5.00	41.20	7.81	24.1	7	*1*	11	21.50	*0.25*	*13*	*50*	*50*													
SW5-09	Low tide, outflowing. Upstream and downstream connected	6/03/2017		6.22	36.20	7.71	27.6	10																				
SW5-09	Moderate flow. Outgoing tide.	6/04/2017		5.28	0.40	6.76	21.0	19	*1*	208	0.21	1.55	*50*	*50*	*50*													
SW5-10	Low water level, low flow. Incoming tide therefore SW5-10 is upstream. U/s and d/s sites connected. Drizzle.	4/05/2017		5.44	19.10	7.51	20.6	2																				
SW5-09	Weather showers. Upstream and downstream sites connected. High water level, outgoing tide.	13/06/2017		7.67	2.14	6.49	16.1	95	*1*	46	0.05	0.90	*13*	*50*	*50*													
SW5-10	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-10 is upstream. Water level low.	17/07/2017		6.16	17.30	7.61	16.8	3																				

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-09	Upstream and downstream sites connected. Outgoing tide, high water level. Overcast.	7/10/2017		7.59	44.40	8.12	22.6	6	*1*	5	*0.02*	0.21	*13*	*50*	*50*													
SW5-10	Connected. Incoming tide. Moderate water level, low flow.	7/11/2017		5.92	23.90	7.89	24.6	14																				
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Ougoing tide. Overcast.	1/12/2017		4.01	27.80	7.18	27.0	24	*1*	12	*0.02*	0.51	*13*	*50*	*50*													
SW5-10	Upstream and downstream sites connected. Incoming tide. No visible flow. High water level. Weather fine.	3/01/2018		6.94	14.70	7.12	26.7	25																				
SW5-10	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	1/02/2018		5.61	36.90	7.76	25.8	62	*1*	27	0.05	0.22	*25*	*50*	*50*													
SW5-10	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	7/03/2018		5.90	19.40	7.38	25.5	26																				
SW5-10	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Weather fine.	19/04/2018		6.47	30.60	7.92	23.3	6	*1*	4	0.04	0.29	*30*	*250*	*250*													
SW5-09	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	10/05/2018		6.51	29.70	7.99	21.1	10																				
SW5-10	Upstream and downstream sites connected, low flow, medium water level, incoming tide. Drizzle.	6/06/2018	12:03	7.39	34.60	7.39	17.0	10	3	14	0.03	0.24	*30*	*250*	*250*													
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Drizzle.	5/07/2018	11:24	5.78	30.00	7.56	17.4	7																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	25/08/2018	10:40	7.88	40.00	7.94	17.0	9	7	14	0.01	0.14	*30*	*250*	*250*													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	5/09/2018	15:07	5.85	72.50	7.20	17.7	7																				
SW5-09	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	11:58	5.47	40.20	7.69	21.1	18	*1*	17	0.04	0.32	*13*	*50*	*50*													
SW5-09	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	19/11/2018	11:36	5.84	25.10	7.48	24.8	28																				
SW5-09	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	18/12/2018	11:32	6.34	3.23	7.48	26.6	43	*1*	17	0.06	0.34	*30*	*250*	*250*													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	11/02/2019	12:19	5.17	39.00	7.89	27.9	13																				
SW5-10	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	12:11	7.32	40.60	8.30	26.7	4	*1*	4	*0.02*	0.22	*13*	*50*	*50*													

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-09	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	11:43	7.27	39.00	8.44	23.3	8																					
SW5-09	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	24/06/2019	14:25	8.72	43.20	7.82	15.5	2	*1*	6	*0.01*	0.18	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	1/08/2019	11:13	5.40	38.90	7.88	17.2	0																					
SW5-09	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	11:27	4.49	42.10	7.77	26.6	27																					
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	17/01/2020	13:02	5.12	45.90	7.77	26.4	12	1	11	0.03	0.23	*50*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	7/02/2020	12:37	3.23	15.00	6.67	24.8	140	1	46	0.12	1.57	*30*	*100*	*50*														
SW5-09	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	7/03/2020	13:08	4.80	4.92	7.82	26.1	78																					
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	11/04/2020	10:02	5.92	13.50	7.35	23.2	23	2	22	0.04	0.62	*30*	*100*	*50*														
SW5-10	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Rain.	10/06/2020	13:09	6.91	32.30	7.68	18.0	10																					
SW5-10	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	8/08/2020	10:32	7.31	23.70	7.52	17.3	11																					
SW5-09	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.	16/12/2020	11:16	6.83	5.68	7.08	25.7	39	2	17	0.06	0.34	*30*	*100*	*50*	0.203	0.002	*0.0005*	*0.001*	*0.001*	0.126	*0.001*	0.063	*0.0003*	*0.001*	*0.001*	*0.0050*	0.001
SW5-10	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	3/02/2021	11:18	6.36	12.60	7.82	27.5	10																					
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	6/05/2021	10:27	6.39	7.65	6.69	18.6	62	*1*	24	0.06	0.65	*15*	*50*	*50*	2.740	*0.001*	*0.0010*	*0.003*	*0.002*	1.990	*0.005*	0.170	*0.0001*	*0.003*	*0.001*	*0.0005*	0.072

SW5-11 - Mororo Creek (South)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-11	Stagnant water. Photo taken. Accurate turbidity reading could not be obtained.	3/08/2016		3.61	20.90	7.79	16.2																						
SW5-11		5/09/2016		3.37	0.61	6.68	15.1	4	5	4	0.05	0.63	25	50	50														
SW5-11		10/10/2016		0.80	17.20	6.75	18.9	13																					
SW5-11		1/11/2016		1.39	25.80	6.84	22.5	8	5	5	0.03	0.45	25	50	50														
SW5-11		13/12/2016		2.27	28.10	6.58	22.2	3																					
SW5-11	Tidal - very low water level with no flow	18/01/2017		8.66	0.07	6.59	26.8	127	1	31	0.24	1.98	13	50	50														
SW5-11	Tidal - very low water level with no flow	1/02/2017		1.09	27.80	6.99	25.0	5																					
SW5-11	Very high tide	10/03/2017		2.78	23.00	6.59	23.0	8	1	14	0.10	0.40	50	50	50														
SW5-11	Stagnant - no visible flow.	12/04/2017		2.48	0.30	6.32	19.9	1																					
SW5-11	Tidal. Low flow. Outgoing tide.	3/05/2017		8.56	4.85	6.46	19.0	5	1	8	0.06	1.00	50	50	50														
SW5-11	Weather fine. Low water level. Stagnant.	7/06/2017		0.67	12.80	6.49		8																					
SW5-11	Weather fine. Low water level. No flow, stagnant.	14/07/2017		1.96	0.97	6.58	13.1	5	1	13	0.06	1.30	13	50	50														
SW5-11	Very low flow. Low water level. Weather fine.	7/08/2017		1.00	6.79	6.32	14.3	21																					
SW5-11	Weather fine. No U/S site. Water level low. No observed flow.	6/09/2017		1.20	27.90	6.39	15.7	0	1	6	0.02	0.40	13	50	50														
SW5-11	Outgoing tide, low water level. Overcast.	3/10/2017		1.15	34.80	6.84	19.3	4																					
SW5-11	Little to no flow, water level low.	3/11/2017		1.24	8.12	6.39	20.6	46	1	9	0.07	1.25	13	50	50														
SW5-11	No visible flow, low water level. Weather fine.	7/12/2017		3.12	0.41	6.39	21.8	28																					
SW5-11	No visible flow, low water level. Weather fine.	17/01/2018		1.04	6.77	6.09	22.6	26	1	14	0.06	1.10	13	50	50														
SW5-11	No visible flow, very low water level. Slight sulphur smell. Weather fine.	19/02/2018		2.26	22.10	6.94	27.8	25																					
SW5-11	No visible flow, medium water level. Light surface scum layer in areas. Weather fine.	21/03/2018		0.94	0.53	6.88	23.6	11	1	13	0.08	0.70	25	50	50														
SW5-11	No visible flow, low water level. Weather fine.	4/04/2018		1.23	0.99	6.97	21.6	12																					
SW5-11	No visible flow, low water level. Weather fine.	18/05/2018		2.04	14.90	7.03	16.0	18	2	9	0.03	0.47	25	50	25														
SW5-11	No visible flow, low water level. Weather fine.	14/06/2018	11:57	4.31	0.78	7.04	15.2	5																					
SW5-11	No visible flow, low water level. Weather fine.	19/07/2018	11:47	1.96	16.60	7.19	13.1	8	1	16	0.04	0.39	30	250	250														
SW5-11	No visible flow, very low water level. Weather fine.	8/08/2018	11:38	0.00	28.70	6.96	15.4	13																					
SW5-11	No visible flow, low water level. Bacteria/scum layer present. Weather fine.	20/09/2018	12:46	6.13	3.08	7.07	19.9	28	2	9	0.06	0.60	30	250	250														
SW5-11	No visible flow, low water level. Slight bacteria layer. Weather fine.	2/10/2018	12:01	1.79	15.70	7.01	18.0	16																					

SW5-11 - Mororo Creek (South)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-11	Very low flow, low water level. Weather fine.	6/11/2018	13:05	0.67	2.14	6.73	24.8	26	5	16	0.09	0.85	*30*	*100*	*50*														
SW5-11	No visible flow, medium water level. Very light scum layer on surface. Weather fine.	6/12/2018	12:15	0.72	28.10	6.95	23.6	26																					
SW5-11	No visible flow, medium water level. Light scum layer. Weather fine.	10/01/2019	13:13	2.09	18.90	7.07	26.6	21	*1*	5	0.06	0.43	*30*	250	250														
SW5-11	Upstream and downstream sites not connected. No visible flow, low water level. Slight scum layer and odour. Weather fine.	12/02/2019	11:25	2.15	34.50	7.28	26.1	7																					
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	13/03/2019	12:32	2.23	37.60	7.22	25.8	3	4	5	0.04	0.53	*30*	*100*	*50*														
SW5-11	No visible flow, low water level.Outgoing tide. Overcast.	10/04/2019	10:47	1.74	35.30	7.13	22.5	7																					
SW5-11	No visible flow, low water level. Incoming tide. Overcast.	6/05/2019	11:34	1.12	34.20	7.11	18.5	9	*1*	4	*0.01*	0.36	*30*	*100*	*50*														
SW5-11	No visible flow, medium water level. Weather fine.	4/06/2019	12:03	2.82	40.00	7.10	13.8	5																					
SW5-11	No visible flow, medium water level. Water slightly milky. Overcast.	4/07/2019	11:20	4.75	19.70	6.83	16.6	22	*1*	8	*0.01*	1.13	*30*	*100*	*50*														
SW5-11	No visible flow, medium water level. Slight surface bacteria layer, odour. Weather fine.	13/08/2019	10:31	0.00	36.00	6.71	15.3	1																					
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	5/09/2019	12:35	0.29	36.70	6.71	17.7	1	2	1	*0.01*	0.28	*30*	*100*	*50*														
SW5-11	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	1/10/2019	10:45	0.58	38.00	6.70	19.5	7																					
SW5-11	No visible flow, very low water level. Weather fine.	6/11/2019	12:57	1.63	41.20	7.19	22.1	3	*1*	4	*0.02*	0.91	*13*	*50*	*50*														
SW5-11	No visible flow, very low water level. Weather fine.	6/12/2019	10:45	3.29	44.50	7.13	23.4	11																					
SW5-11	No visible flow, very low water level. Overcast.	15/01/2020	10:34	0.28	44.00	5.45	24.2	10	5	5	0.06	0.69	*30*	*100*	*50*														
SW5-11	No visible flow, low water level. Overcast.	5/02/2020	12:44	0.00	12.10	6.52	25.1	29																					
SW5-11	No visible flow, low water level. Overcast.	4/03/2020	10:52	0.92	0.45	6.40	24.6	9	2	20	0.14	1.29	*30*	*100*	*50*														
SW5-11	No visible flow, low water level. Outgoing tide. Weather fine.	2/04/2020	10:52	2.27	0.49	6.35	21.6	22																					
SW5-11	No visible flow, low water level. Outgoing tide. Weather fine.	5/05/2020	11:15	2.10	12.20	6.73	18.0	35	*1*	6	0.06	0.70	*30*	*100*	*50*														
SW5-11	No visible flow, medium water level. Weather fine.	4/06/2020	10:34	1.69	25.60	6.70	16.4	20																					
SW5-11	No visible flow, medium water level. Outgoing tide. Drizzle.	13/11/2020	11:54	1.41	29.90	6.80	22.6	18	*1*	3	0.01	0.50	*30*	*100*	*50*	0.031	0.001	0.0005	*0.001*	0.001	0.732	*0.001*	0.201	0.0003	0.000	0.001	0.0050	0.002
SW5-11	No visible flow, low water level. Overcast.	4/05/2021	11:56	3.96	0.32	7.05	18.3	19	*1*	10	0.03	0.80	*13*	*50*	*50*	3.050	*0.001*	0.0010	0.002	0.002	2.620	0.005	0.063	*0.0001*	0.003	*0.001*	0.0005	0.077
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					4.86	6.66		27	3	19	0.07	1.00	#NUM!	#NUM!	#NUM!	0.090	0.001	0.0001	0.001	0.001	0.290	0.001	0.120	0.0001	0.001	0.003	0.0001	0.007
P20				4.75	0.36	6.24																							
St Dev					8.52	0.39																							

SW5-11 - Mororo Creek (South)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW19		28/02/2013		2.81	0.23	6.26	24.7	12	*3*	18	0.07	1.00																
Section3 SW19		19/03/2013		4.75	0.36	6.48	21.8	11	*3*	*3*	*0.01*	1.30																
Section3 SW19		16/04/2013		5.15	0.13	6.24	21.7	29	*3*	15	0.07	1.10																
Section3 SW19		20/05/2013		9.02	0.91	6.93	15.3	7	*3*	*3*	0.04	0.70				0.090	*0.001*	*0.0001*	*0.001*	*0.001*	0.290	*0.001*	0.120	0.0001	0.001	*0.003*	*0.0001*	0.007
Section3 SW19		25/06/2013		9.03	1.39	6.58	14.1	4	*3*	*3*	0.02	0.60																
Section3 SW19		22/07/2013		9.23	0.64	6.16	15.0	7	*3*	9	0.03	0.92																
Section3 SW19		19/08/2013		7.49	3.88	6.60	19.3	13	*3*	13	0.22	0.72																
Section3 SW19		23/09/2013		4.88	20.54	6.66	22.6	8	*3*	19	0.01	0.53																
Section3 SW19		21/10/2013		3.11	23.60	6.73	24.0	5	*3*	21	0.03	0.42																
Section3 SW19		25/11/2013		5.61	0.39	5.46	25.8	40	*3*	26	0.04	0.82																
Section3 SW19		16/12/2013		6.85	4.86	6.49	27.6	27	7	12	1.25	1.00																
Upstream Monitoring																												
No upstream monitoring site																												

SW5-11 - Mororo Creek (South)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW5-11	Technical issues - data not downloaded	5/08/2016																											
SW5-11	Accurate turbidity reading could not be obtained	11/11/2016		2.75	28.10	6.86	23.1		1	4	0.02	0.45	50	50	50														
SW5-11		6/01/2017		2.45	28.50	6.71	24.2	12																					
SW5-11	Slighty turbid waters	1/03/2017		4.42	0.80	5.61	19.8	45	1	9	0.06	4.10	13	50	50														
SW5-11	Low water level. No flow.	6/03/2017		2.96	1.30	6.69	24.7	6																					
SW5-11	Low flow. Tannin stained water.	6/04/2017		2.53	0.32	6.00	19.2	2	1	10	0.05	1.14	50	50	50														
SW5-11	Low water level, low flow. Incoming tide. Drizzle.	4/05/2017		3.08	1.46	6.13	17.9	6																					
SW5-11	Weather showers. Water level high, moderate flow	13/06/2017		6.84	0.07	6.37	16.1	146	1	37	0.07	1.20	13	50	50														
SW5-11	Weather fine. No flow, water level low. Stagnant.	17/07/2017		1.68	0.56	6.23	13.8	3																					
SW5-11	No observed flow, high water level. Overcast.	7/10/2017		1.69	35.60	6.99	21.4	2	1	5	0.02	0.40	13	50	50														
SW5-11	Water level low, stagnant. No flow.	7/11/2017		4.02	3.31	6.71	20.9	2																					
SW5-11	Water level low, stagnant. Overcast.	1/12/2017		3.14	3.67	5.77	23.9	9	1	9	0.03	1.56	13	50	50														
SW5-11	High water level, weather fine.	3/01/2018		2.37	0.37	6.25	23.0	30																					
SW5-11	No visible flow, very high water level. Overcast.	1/02/2018		0.00	19.20	6.36	25.0	45	2	19	0.06	0.38	25	50	50														
SW5-11	Very low flow, low water level. Overcast.	7/03/2018		1.40	0.52	6.58	22.0	15																					
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	19/04/2018		0.61	12.80	6.99	22.0	12	3	8	0.05	0.48	30	250	250														
SW5-11	No visible flow, low water level. Weather fine.	10/05/2018		3.06	1.43	7.17	18.7	8																					
SW5-11	No visible flow, medium water level. Drizzle.	6/06/2018	11:39	5.12	13.10	6.82	15.6	23	4	11	0.03	0.29	30	250	250														
SW5-11	No visible flow, low water level. Rain.	5/07/2018	11:40	2.70	5.39	6.99	16.4	18																					
SW5-11	No visible flow, low water level. Slight oily residue and odour. Light dust layer on surface. Drizzle.	25/08/2018	10:13	3.69	21.20	7.29	14.5	31	2	16	0.04	1.18	30	250	250														
SW5-11	No visible flow, low water level. Overcast.	5/09/2018	14:48	6.11	5.00	5.90	16.6	117																					
SW5-11	No visible flow, medium water level. Overcast.	11/10/2018	11:45	3.19	28.10	6.67	20.2	9	1	8	0.04	0.58	13	50	50														
SW5-11	No visible flow, very low water level. Overcast.	19/11/2018	11:28	3.68	5.76	6.07	21.2	21																					
SW5-11	No visible flow, low water level. Weather fine.	18/12/2018	11:21	1.60	17.20	6.70	24.5	14	3	6	0.04	0.44	30	250	250														
SW5-11	No visible flow, low water level. Weather fine.	11/02/2019	12:46	1.51	34.70	7.12	26.1	14																					
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	11:48	1.30	31.60	7.20	25.5	21	1	8	0.03	1.18	13	50	50														
SW5-11	No visible flow, very low water level. Weather fine.	4/04/2019	11:36	3.38	27.80	7.37	22.5	14																					
SW5-11	No visible flow, medium water level. Drizzle.	24/06/2019	14:41	4.32	40.00	6.93	13.7	0	3	4	0.05	0.25	30	100	50														

SW5-11 - Mororo Creek (South)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW5-11	No visible flow, medium water level. Water slightly milky. Overcast.	1/08/2019	11:20	**0.52**	**21.20**	**6.51**	15.5	5																					
SW5-11	No visible flow, low water level. Outgoing tide. Overcast.	24/12/2019	11:33	**3.51**	**23.70**	**7.03**	24.4	15																					
SW5-11	No visible flow, low water level. Overcast.	17/01/2020	13:27	**4.88**	6.23	**6.89**	25.2	**270**	**3**	**125**	**0.17**	**1.93**	*50*	*100*	*50*														
SW5-11	High flow, very high water level. Outgoing tide. Overcast.	7/02/2020	12:28	**2.75**	**0.22**	**5.79**	22.7	**328**	**3**	**117**	**0.15**	**2.51**	*30*	*100*	*50*														
SW5-11	Low flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	13:00	**1.45**	0.49	**6.70**	24.3	**50**																					
SW5-11	No visible flow, low water level. Weather fine.	11/04/2020	9:36	**2.43**	0.55	**6.37**	20.3	**58**	3	14	0.07	0.76	*30*	290	*50*														
SW5-11	No visible flow, medium water level. Incoming tide. Rain.	10/06/2020	13:23	6.73	**7.23**	**6.80**	17.3	**113**																					
SW5-11	No visible flow, low water level. Weather fine.	8/08/2020	10:46	5.70	0.94	**6.59**	14.4	20																					
SW5-11	Medium flow, medium water level. Outgoing tide. Overcast.	16/12/2020	11:05	**1.94**	**0.21**	6.11	24.9	**33**	**5**	13	0.09	0.86	*30*	*100*	*50*	**2.345**	**0.001**	**0.0005**	**0.001**	**0.002**	**0.945**	*0.001*	0.052	**0.0003**	*0.001*	0.001	**0.0050**	0.008
SW5-11	No visible flow, low water level. Weather fine.	3/02/2021	10:56	**3.50**	2.52	**6.96**	23.6	19																					
SW5-11	High flow, medium water level. Rain.	6/05/2021	10:15	6.65	**0.02**	**7.36**	16.6	**166**	*1*	**24**	0.07	0.66	*15*	*50*	*50*	**7.640**	*0.001*	**0.0010**	**0.003**	**0.002**	**3.910**	**0.005**	0.075	*0.0001*	**0.003**	*0.001*	**0.0005**	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					6.56	6.19		31	3	18	0.11	1.04	#NUM!	#NUM!	#NUM!	0.100	0.001	0.0001	0.001	0.001	0.300	0.001	0.260	0.0001	0.001	0.003	0.0001	0.014
P20				5.38	0.39	5.94																							
St Dev					7.10	0.27																							
Threshold				0.50				10	2	10	0.02	0.20																	

SW5-11 - Mororo Creek (South)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW19		5/02/2013		3.68	0.55	5.96	25.8	6	*3*	15	0.14	1.00																	
Section3 SW19		27/05/2013		8.49	1.09	6.49	17.8	7	*3*	*3*	0.03	0.90				0.100	*0.001*	*0.0001*	*0.001*	*0.001*	0.300	*0.001*	0.260	0.0001	0.001	*0.003*	*0.0001*	0.014
Section3 SW19		2/07/2013		7.34	0.15	5.99	16.4	57	*3*	5	0.09	0.88																	
Section3 SW19		12/11/2013		6.52	14.77	5.91	24.3	14	*3*	22	0.06	1.10																	
Upstream Monitoring																													
No upstream monitoring site																													

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW6-02	Dry. Photo taken.	3/08/2016																										
SW6-02	Dry	5/09/2016																										
SW6-02	Dry	10/10/2016																										
SW6-02	Dry	1/11/2016																										
SW6-02	Dry	14/12/2016																										
SW6-02	Dry	17/01/2017																										
SW6-02	Dry	1/02/2017																										
SW6-02	Dry	3/03/2017																										
SW6-02	Dry	21/04/2017																										
SW6-02	Dry	10/05/2017																										
SW6-02	Dry	9/06/2017																										
SW6-02	Dry	12/07/2017																										
SW6-02	Dry	3/08/2017																										
SW6-02	Weather fine. U/S and D/S not connected. Waterway dry.	8/09/2017																										
SW6-02	Dry	25/10/2017																										
SW6-02	Dry	1/11/2017																										
SW6-02	Dry	14/12/2017																										
SW6-02	Dry	16/01/2018																										
SW6-02	Dry - not sampled. Weather fine.	20/02/2018																										
SW6-02	Dry - not sampled. Overcast.	21/03/2018																										
SW6-02	Dry - not sampled. Overcast.	4/04/2018																										
SW6-02	Dry	18/05/2018																										
SW6-02	Waterway dry except for two very small pools which had insufficient water to sample.	14/06/2018	12:45																									
SW6-02	Dry, not sampled.	19/07/2018	12:41																									
SW6-02	Waterway dry, not sampled.	8/08/2018	11:50																									
SW6-02	Waterway dry, not sampled.	20/09/2018	14:36																									
SW6-02	Dry, not sampled.	2/10/2018	12:30																									
SW6-02	Dry, not sampled.	6/11/2018	13:50																									
SW6-02	Dry, not sampled.	6/12/2018	12:48																									

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-02	Dry, not sampled.	10/01/2019	13:31																										
SW6-02	Dry, not sampled.	11/02/2019	12:47																										
SW6-02	Dry, not sampled.	13/03/2019	12:52																										
SW6-02	Dry, not sampled.	10/04/2019	11:00																										
SW6-02	Monitoring ceased in May 2019																												
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					1.35	6.75		27	3	11	0.07	0.94	25	50	50	0.005	0.001	0.0001	0.001	0.001	0.025	0.001	0.270	0.0001	0.001	0.003	0.0001	0.003
P20				4.59	0.31	6.31																							
St Dev					0.51	0.24																							
Threshold				0.50				10	2	10	0.02	0.20																	

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW20		28/02/2013		4.36	0.29	6.31	25.1	29	*3*	8	0.05	0.80																	
Section3 SW20		19/03/2013		4.81	0.70	6.69	21.0	7	*3*	*3*	0.05	0.70																	
Section3 SW20		16/04/2013		5.06	0.27	6.30	21.7	32	*3*	9	0.04	0.80																	
Section3 SW20		20/05/2013		6.43	1.21	6.75	15.1	15	*3*	7	0.03	0.50				0.005	*0.001*	*0.0001*	*0.001*	*0.001*	*0.025*	*0.001*	0.270	*0.0001*	0.001	*0.003*	*0.0001*	*0.003*
Section3 SW20		25/06/2013		5.74	1.30	6.25	13.7	13	*3*	*3*	0.02	0.40																	
Section3 SW20		22/07/2013		7.62	0.87	6.26	14.5	25	*3*	13	0.02	0.44																	
Section3 SW20		19/08/2013		4.75	1.56	6.77	15.6	6	*3*	*3*	0.02	0.42																	
Section3 SW20		23/09/2013		3.18	1.15	6.70	19.8	9	*3*	13	0.06	0.85																	
Section3 SW20		21/10/2013		4.92	1.62	7.02	23.2	34	*3*	43	0.08	2.40																	
Section3 SW20		25/11/2013		7.80	0.74	6.55	24.8	21	*3*	6	*0.01*	0.54																	
Section3 SW20		16/12/2013		4.84	1.41	6.75	24.5	14	7	6	0.25	1.00																	
Upstream Monitoring																													
SW6-01	Dry. Photo taken.	3/08/2016																											
SW6-01	Dry	5/09/2016																											
SW6-01	Dry	10/10/2016																											
SW6-01	Dry	1/11/2016																											
SW6-01	Dry	14/12/2016																											
SW6-01	Dry	17/01/2017																											
SW6-01	Dry	1/02/2017																											
SW6-01	No flow/ stagnant pool. Upstream and downstream sites not connected.	3/03/2017		2.02	0.19	6.46	22.4	15	2	3	0.08	1.15	*25*	*50*	*50*														
SW6-01	Stagnant pool, u/s and d/s sites not connected. Overcast.	21/04/2017		5.57	0.33	6.69	18.8	18																					
SW6-01	Insufficent water for sample	10/05/2017																											
SW6-01	Insufficent water for sample	9/06/2017																											
SW6-01	Dry	12/07/2017																											
SW6-01	Insufficent water to sample	3/08/2017																											
SW6-01	Weather fine. U/S and D/S not connected. Waterway dry.	8/09/2017																											
SW6-01	Insufficient water to sample, stream path blocked by temporary crossing.	25/10/2017																											

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-01	Insufficient water to sample. Gravel access track layer down over stream path but dry in this area at time of monitoring.	1/11/2017																											
SW6-01	Dry	14/12/2017																											
SW6-01	No visible flow, very low water level. Weather fine.	16/01/2018		5.82	0.47	6.75	23.9	8	3	5	0.04	0.58	*25*	*50*	*50*														
SW6-01	Dry - not sampled. Weather fine.	20/02/2018																											
SW6-01	Dry - not sampled. Weather fine.	21/03/2018																											
SW6-01	Dry - not sampled. Weather fine.	4/04/2018																											
SW6-01	Dry	18/05/2018																											
SW6-01	Waterway dry, not sampled. Weather fine.	14/06/2018	12:43																										
SW6-01	Dry, not sampled.	19/07/2018	13:04																										
SW6-01	Waterway dry, not sampled.	8/08/2018	11:59																										
SW6-01	Dry - not sampled.	20/09/2018	14:46																										
SW6-01	Dry, not sampled.	2/10/2018	12:22																										
SW6-01	Dry, not sampled.	6/11/2018	13:00																										
SW6-01	Dry, not sampled.	6/12/2018	12:54																										
SW6-01	Dry, not sampled.	10/01/2019	13:23																										
SW6-01	Dry, not sampled.	11/02/2019	12:47																										
SW6-01	Dry, not sampled.	13/03/2019	12:53																										
SW6-01	Dry, not sampled.	10/04/2019	11:01																										
SW6-01	Monitoring ceased in May 2019																												

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW6-02	Photo taken	5/08/2016		7.48	0.16	6.71	14.9	821																					
SW6-02	Dry	10/11/2016																											
SW6-02	Moderate flow. Raining.	6/01/2017		6.52	0.30	6.65	24.1	281																					
SW6-02	Steady flow. Consistent rain. U/S and D/S connected	28/02/2017		6.78	0.09	6.25	21.3	52	*1*	38	0.13	1.52	*25*	*50*	*50*														
SW6-02	Dry	6/03/2017																											
SW6-02	Minor flow. U/s and d/s sites connected	6/04/2017		6.51	0.13	6.53	20.8	30	6	7	0.05	0.50	*25*	*50*	*50*														
SW6-02	Dry	4/05/2017																											
SW6-02	Upstream and downstream sites connected. High flow. Moderate water level. Sunny.	13/06/2017		8.99	0.06	6.04	16.9	48	*1*	17	0.07	0.62	*25*	*50*	*50*														
SW6-02	Dry	17/07/2017																											
SW6-02	Dry	9/10/2017																											
SW6-02	Dry	7/11/2017																											
SW6-02	No access - fast flowing water blocking access track	1/12/2017																											
SW6-02	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	3/01/2018		4.02	0.17	6.55	25.0	25																					
SW6-02	Dry, not sampled.	5/02/2018																											
SW6-02	Small pools of water, insufficient amount to sample. Overcast.	7/03/2018																											
SW6-02	Dry	26/04/2018																											
SW6-02	Dry	10/05/2018																											
SW6-02	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	7/06/2018	10:05	8.67	0.16	6.71	15.1	58	*1*	30	0.08	0.90	*30*	*250*	*250*														
SW6-02	Upstream and downstream sites not connected. Very low flow, very low water level. Drizzle.	5/07/2018	12:08	6.32	0.21	7.07	16.6	82																					
SW6-02	Dry, not sampled.	27/08/2018	11:17																										
SW6-02	Upstream and downstream sites not connected. Very low flow, very low water level. Overcast.	5/09/2018	14:21	4.52	0.40	6.00	16.3	52																					
SW6-02	Upstream and downstream sites not connected. Low flow, very low water level. Overcast.	12/10/2018	10:13	3.85	0.35	6.27	16.2	37	3	12	0.03	1.93	*30*	*100*	*50*														
SW6-02	Dry, not sampled.	19/11/2018	9:25																										
SW6-02	Dry, not sampled.	18/12/2018	12:01																										
SW6-02	Insufficient water to sample.	25/02/2019	9:27																										
SW6-02	Insufficient water to sample.	8/03/2019	9:04																										

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-02	Dry, not sampled.	4/04/2019	12:06																									
SW6-02	Monitoring ceased in May 2019																											
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.41	6.55		54	3	21	0.09	1.40	29	90	50	0.005	0.001	0.0001	0.001	0.001	0.025	0.001	0.480	0.0001	0.001	0.003	0.0001	0.018
P20				4.39	0.09	6.02																						
St Dev					0.30	0.74																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW20		5/02/2013		4.93	1.02	6.55	23.8	4	*3*	5	0.04	0.50																
Section3 SW20		27/05/2013		5.35	0.97	6.52	16.3	15	*3*	*3*	0.03	0.30				0.005	*0.001*	*0.0001*	*0.001*	*0.001*	*0.025*	*0.001*	0.480	*0.0001*	0.001	*0.003*	*0.0001*	0.018
Section3 SW20		2/07/2013		8.72	0.23	6.82	16.8	85	*3*	15	0.11	0.95																
Section3 SW20		12/11/2013		4.32	0.53	3.74	23.9	154	*3*	82	0.07	1.40																

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW6-01	Photo taken	5/08/2016		6.12	0.16	6.32	14.4	13																					
SW6-01	Dry	10/11/2016																											
SW6-01	Low flow. Raining moderately. Recent fire.	6/01/2017		4.67	0.39	6.63	24.9	48																					
SW6-01	Very high flow. Unable to access sample point due to inundation of path. Sample taken approximately 400m upstream.	28/02/2017		7.33	0.09	6.02	20.9	258	3	121	0.35	2.28	*25*	*50*	*50*														
SW6-01	Dry	6/03/2017																											
SW6-01	Minor flow. U/s and d/s sites connected	6/04/2017		5.35	0.13	6.34	20.4	29	2	6	0.04	0.54	*25*	*50*	*50*														
SW6-01	Stagnant pool with no visible flow. U/s and d/s sites not connected. Weather fine.	4/05/2017		7.69	0.34	6.52	19.8	23																					
SW6-01	Upstream and downstream sites connected. Moderate flow. Moderate to high water level. Partly cloudy.	13/06/2017		9.20	0.05	5.98	17.0	51	*1*	21	0.06	0.54	*25*	*50*	*50*														
SW6-01	Dry	17/07/2017																											
SW6-01	Dry	9/10/2017																											
SW6-01	Dry	7/11/2017																											
SW6-01	Upstream and downstream sites connected. High inflow, low to medium water level. Rain.	1/12/2017		4.27	0.24	6.31	23.2	23	2	11	0.09	1.78	*25*	*50*	*50*														
SW6-01	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	3/01/2018		2.89	0.16	6.09	24.9	43																					
SW6-01	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2018		4.02	0.42	6.03	23.7	29	*1*	2	0.04	0.51	*25*	*50*	*50*														
SW6-01	Small pool of water inside works boundary, insufficient water to sample. Overcast	7/03/2018																											
SW6-01	Upstream and downstream sites not connected. No visible flow, dry. Weather fine.	26/04/2018																											
SW6-01	Dry	10/05/2018																											
SW6-01	Upstream and downstream sites connected. High flow, low water level. Sampled within small pool of fast flowing water. Weather fine.	7/06/2018	9:43	9.24	0.07	7.19	15.5	23	*1*	20	0.06	0.69	*30*	*250*	*250*														
SW6-01	Upstream and downstream sites not connected. Very low flow, very low water level. Sampled within very small pool of water with inflow only. Rain.	5/07/2018	12:24	6.92	0.12	6.33	17.5	55																					
SW6-01	Dry, not sampled.	27/08/2018	11:20																										

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-01	Upstream and downstream sites not connected. No visible flow, very low water level. Sampled in a small shallow pool of water. Overcast.	5/09/2018	14:03	6.25	0.09	5.46	16.2	30																				
SW6-01	Upstream and downstream sites not connected. Low flow, very low water level. Overcast.	12/10/2018	9:40	7.64	0.04	6.55	16.6	36	*1*	13	0.08	0.75	*30*	*100*	*50*													
SW6-01	Dry, not sampled.	19/11/2018	9:20																									
SW6-01	Dry, not sampled.	18/12/2018	12:03																									
SW6-01	Dry, not sampled.	25/02/2019	9:28																									
SW6-01	Insufficient water to sample.	8/03/2019	9:05																									
SW6-01	Insufficient water to sample.	4/04/2019	12:05																									
SW6-01	Monitoring ceased in May 2019																											

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW6-04	Photo taken, accurated turbidity reading could not be obtained.	3/08/2016		3.88	0.19	7.41	12.7																						
SW6-04		8/09/2016		8.86	0.16	6.41	14.7	8	3	8	0.02	0.31	*25*	*50*	*50*														
SW6-04		10/10/2016		1.71	0.19	6.22	16.0	4																					
SW6-04		1/11/2016		1.79	0.19	6.56	20.6	23	6	4	0.03	0.47	*25*	*50*	*50*														
SW6-04	Low water level, no flow. Upstream and downstream sites are disconnected.	14/12/2016		0.26	0.21	6.22	21.2	7																					
SW6-04	No visible flow. Upstream and downstream sites are disconnected.	17/01/2017		0.01	0.20	6.39	23.5	18	*1*	20	0.08	0.98	*25*	*50*	*50*														
SW6-04	Very low water level, heavy scum layer, u/s and d/s sites not connected. No visible flow.	1/02/2017		0.56	0.19	6.83	24.2	9																					
SW6-04	Gentle flow. Upstream and downstream sites connected.	3/03/2017		5.73	0.15	5.95	22.1	10	4	5	0.04	1.04	*25*	*50*	*50*														
SW6-04	No visible flow. Upstream and downstream sites connected. Overcast.	21/04/2017		9.94	0.13	6.75	18.3	20																					
SW6-04	Overcast weather. u/s and d/s connected. Low flow with low water level. Brown colour.	10/05/2017		8.05	0.14	6.69	16.4	16	3	4	0.02	0.22	*25*	*50*	*50*														
SW6-04	Unable to determine if upstream and downstream sites were connected due to access issues relating to works occuring between sites. No visible flow. Moderate water level. Weather fine.	9/06/2017		9.71	0.15	6.58	13.3	9																					
SW6-04	Unable to determine if upstream and downstream were connected for access reasons. No visible flow. Mid water level. Weather fine.	12/07/2017		10.36	0.13	6.45	12.1	17	2	5	0.02	0.19	*25*	*50*	*50*														
SW6-04	Unable to determine if upstream and downstream sites were connected (no access). No visible flow, low - mid water level. Weather fine.	9/08/2017		9.01	0.14	7.10	10.3	5																					
SW6-04	Fine weather. U/S and D/S connected. No observed flow. Low water level.	8/09/2017		5.71	0.16	6.06	11.9	3	*1*	8	0.03	0.29	*25*	*50*	*50*														
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	25/10/2017		8.06	0.15	6.28	16.9	6																					
SW6-04	Unable to determine connection. No visible flow, low to medium water level. Cloudy.	1/11/2017		4.67	0.17	6.53	19.5	4	3	5	0.02	0.35	*25*	*50*	*50*														
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	14/12/2017		6.37	0.14	6.53	20.9	6																					
SW6-04	Upstream and downstream sites not connected. No visible flow, medium water level. Light surface scum. Weather fine.	16/01/2018		0.00	0.17	6.36	21.7	16	4	13	0.04	0.40	*25*	*50*	*50*														

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-04	No connection between upstream and downstream points. No visible flow, medium water level. Surface dust layer and tannins. Weather fine.	20/02/2018		0.08	0.19	6.48	23.7	13																				
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	21/03/2018		3.94	0.17	6.56	21.8	2	2	7	0.03	0.30	*25*	*50*	*50*													
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	4/04/2018		4.55	0.16	6.80	20.7	5																				
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	18/05/2018		0.32	0.17	6.48	14.5	3	2	6	0.02	0.36	*25*	*50*	*25*													
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Slight scum layer. Weather fine.	14/06/2018	13:12	2.49	0.14	6.36	13.6	111																				
SW6-04	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	19/07/2018	14:13	2.09	0.14	6.80	9.8	20	*1*	18	0.07	0.30	*30*	*250*	*250*													
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	8/08/2018	13:18	2.24	0.14	6.96	11.3	19																				
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	20/09/2018	13:22	1.24	0.14	7.05	15.9	11	2	10	0.02	0.53	*30*	*250*	*250*													
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	2/10/2018	13:27	2.36	0.13	7.12	16.6	12																				
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	6/11/2018	14:43	2.73	0.14	6.18	22.9	11	2	9	0.02	0.47	*30*	*100*	*50*													
SW6-04	Upstream and downstream sites not connected. No visible flow, medium water level. Light scum layer, tannins, odour. Weather fine.	6/12/2018	13:28	0.00	0.16	6.74	21.4	30																				
SW6-04	No visible flow, very low water level. Light scum layer, tannis and odour present. Weather fine.	10/01/2019	14:24	0.69	0.16	6.88	26.3	27	*1*	13	0.06	0.78	*30*	250	250													
SW6-04	Upstream and downstream sites not connected. No visible flow, very low water level. Light bacteria layer. Weather fine.	11/02/2019	13:36	0.65	0.18	6.92	24.8	12																				
SW6-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/03/2019	13:50	0.63	0.17	7.11	23.4	6	2	7	0.03	0.73	*30*	*100*	*50*													
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Slight bacteria layer. Overcast.	10/04/2019	11:52	1.17	0.21	6.83	20.3	28																				

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Fine.	6/05/2019	13:12	0.57	0.21	7.02	17.4	44	*1*	17	0.12	0.59	*30*	*100*	*50*														
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/06/2019	14:37	0.25	0.20	7.32	12.3	38																				
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/07/2019	12:50	0.86	0.18	6.90	14.1	17	*1*	6	0.02	0.59	*30*	*100*	*50*														
SW6-04	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/08/2019	11:17	0.91	0.49	7.25	12.6	2																				
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/09/2019	14:23	0.00	0.27	6.55	14.0	5	3	3	*0.01*	0.48	*30*	*100*	*50*														
SW6-04	No visible flow, very low water level. Overcast.	1/10/2019	11:51	2.45	0.26	6.68	17.6	18																				
SW6-04	Not monitored in November 2019 due to risks associated with bushfires.																											
SW6-04	Not monitored in December 2019 due to risks associated with bushfires.																											
SW6-04	Dry, not sampled. Monitored approx. 140 m west due to access issues associated with recent bushfires.	15/01/2020	11:48																									
SW6-04	Upstream and downstream sites connected. Very high flow, high water level. Evidence of recent flooding. Overcast.	17/02/2020	9:20	7.07	0.16	6.15	25.3	9																				
SW6-04	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	4/03/2020	12:17	6.99	0.17	6.67	25.3	6	*1*	8	0.04	0.66	*30*	*100*	*50*														
SW6-04	Upstream and downstream sites connected. Very high flow, medium water level. Weather fine.	2/04/2020	11:33	7.97	0.19	7.23	21.9	11																				
SW6-04	Medium flow, medium water level. Weather fine.	5/05/2020	12:28	9.35	0.19	7.57	16.3	13	*1*	4	0.02	0.42	*30*	*100*	*50*														
SW6-04	High flow, low water level. Weather fine.	4/06/2020	11:07	9.98	0.21	7.47	13.8	9																				
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	13/11/2020	13:12	1.11	0.34	6.67	19.1	15	*1*	4	0.03	0.45	*30*	*100*	*50*	0.050	*0.001*	*0.0005*	*0.001*	*0.001*	2.706	*0.001*	0.409	*0.0003*	0.000	*0.001*	*0.0050*	0.011
SW6-04	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/05/2021	12:37	8.02	0.12	7.11	18.5	58	*1*	24	*0.02*	0.53	*13*	*50*	*50*	5.240	*0.001*	*0.0010*	0.004	*0.002*	2.420	*0.005*	0.039	*0.0001*	*0.003*	*0.001*	*0.0005*	0.006
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.28	7.03		29	3	26	0.04	0.56	30	100	50	3.548	0.001	0.0008	0.003	0.001	6.654	0.003	0.871	0.0004	0.002	0.002	0.0032	0.026
P20				1.87	0.14	6.36																						
St Dev					0.12	0.37																						
Threshold				0.50				10	2	10	0.02	0.20																

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW21		28/02/2013		7.54	0.09	6.22	25.6	12	*3*	7	0.03	0.60																	
Section3 SW21		19/03/2013		7.97	0.13	7.03	20.3	14	*3*	24	*0.01*	0.60																	
Section3 SW21		16/04/2013		7.71	0.20	6.38	20.4	21	*3*	13	0.02	0.60																	
Section3 SW21		20/05/2013		9.57	0.14	7.33	14.5	13	*3*	6	0.02	0.40				0.040	*0.001*	*0.0001*	*0.001*	*0.001*	0.270	*0.001*	0.017	0.0005	0.001	*0.003*	*0.0001*	*0.003*
Section3 SW21		25/06/2013		10.30	0.23	7.05	12.7	17	*3*	*3*	0.03	0.33																	
Section3 SW21		22/07/2013		9.56	0.51	6.57	14.5	13	*3*	9	0.01	0.54																	
Section3 SW21		19/08/2013		9.09	0.33	7.32	17.0	13	*3*	*3*	0.05	0.13																	
Section3 SW21		23/09/2013		7.20	0.28	7.32	19.8	25	*3*	20	0.01	0.33																	
Section3 SW21		21/10/2013		3.41	0.39	6.69	23.3	29	*3*	29	0.02	0.40																	
Section3 SW21		25/11/2013		7.38	0.35	6.02	24.7	13	*3*	50	*0.01*	0.54																	
Section3 SW21		16/12/2013		6.93	0.18	6.35	22.9	14	5	4	*0.25*	0.30																	
Upstream Monitoring																													
SW6-03	Photo taken	3/08/2016		10.61	0.19	7.65	13.7	0																					
SW6-03		8/09/2016		9.37	0.16	6.46	14.8	8	5	5	0.02	0.31	*25*	*50*	*50*														
SW6-03		10/10/2016		3.96	0.20	6.21	19.4	10																					
SW6-03		1/11/2016		3.15	0.21	6.60	22.2	49	8	31	0.05	0.66	*25*	*50*	*50*														
SW6-03	Low water level, no flow. Upstream and downstream sites are disconnected.	14/12/2016		3.39	0.18	6.34	22.2	15																					
SW6-03	No visible flow. Upstream and downstream sites are disconnected.	17/01/2017		0.40	0.21	6.42	24.0	27	2	26	0.07	0.90	*25*	*50*	*50*														
SW6-03	Very low water level, heavy scum layer, u/s and d/s sites not connected. No visible flow.	1/02/2017		1.02	0.19	6.98	24.3	19																					
SW6-03	Steady flow, multiple inflow points. Upstream and downstream sites connected.	3/03/2017		6.72	0.15	6.29	21.6	12	3	4	0.03	0.58	*25*	*50*	*50*														
SW6-03	Low but steady flow. U/s and d/s sites connected. Overcast.	21/04/2017		7.73	0.11	6.83	18.7	29																					
SW6-03	Overcast weather. u/s and d/s connected. Moderate flow with a low water level. Brown colour	10/05/2017		8.24	0.14	6.69	16.3	15	2	7	0.02	0.21	*25*	*50*	*50*														
SW6-03	Unable to determine if upstream and downstream sites were connected due access issues relating to works occuring between sites. No visible flow. High water level. Weather fine.	9/06/2017		0.00	0.25	6.11	13.0	19																					

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-03	Unable to determine if upstream and downstream were connected (no access). Low flow. Low to mid water level. Weather fine.	12/07/2017		10.83	0.13	6.60	12.6	12	2	2	0.02	0.18	*25*	*50*	*50*													
SW6-03	Unable to determine if upstream and downstream sites were connected (no access). Moderate flow, low water level. Weather fine.	9/08/2017		10.10	0.14	7.00	9.7	4																				
SW6-03	Fine weather. U/S and D/S connected. No observed flow. Low water level.	8/09/2017		7.68	0.15	6.35	12.5	3	*1*	7	0.03	0.32	*25*	*50*	*50*													
SW6-03	No access to waterway, footbridge removed from southern side, high risk activities on northern side.	25/10/2017																										
SW6-03	Unable to determine connection. Low water level, moderate flow. Cloudy.	1/11/2017		7.01	0.16	6.81	18.2	0	4	1	0.02	0.33	*25*	*50*	*50*													
SW6-03	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	14/12/2017		7.44	0.13	6.69	20.6	6																				
SW6-03	Upstream and downstream sites not connected. Very low flow, very low water level. Weather fine.	16/01/2018		3.17	0.17	6.60	20.9	6	4	9	0.04	0.40	*25*	*50*	*50*													
SW6-03	No connection between upstream and downstream points. No visible flow, very low water level. Slight scum layer on surface. Weather fine.	20/02/2018		1.35	0.29	6.83	24.4	18																				
SW6-03	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	21/03/2018		5.89	0.16	7.08	21.9	0	2	7	0.03	0.29	*25*	*50*	*50*													
SW6-03	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	4/04/2018		6.78	0.15	7.24	20.3	2																				
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	18/05/2018		0.79	0.18	6.64	14.1	34	*1*	30	0.04	0.40	*25*	*50*	*25*													
SW6-03	Unable to determine if upstream and downstream sites were connected. Waterway dry further upstream. No visible flow, low water level. Weather fine.	14/06/2018	12:59	1.87	0.19	6.65	13.7	37																				
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	19/07/2018	14:04	4.37	0.18	7.00	9.7	26	2	45	0.10	0.54	*30*	*250*	*250*													
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/08/2018	13:07	3.55	0.18	7.15	11.3	19																				
SW6-03	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	20/09/2018	13:45	3.13	0.40	6.50	18.3	25	*1*	18	0.02	0.44	*30*	*250*	*250*													
SW6-03	Upstream and downstream sites not connected. Slight surface scum layer. No visible flow, very low water level. Weather fine.	2/10/2018	13:17	0.00	0.40	6.74	14.5	24																				

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-03	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	6/11/2018	14:35	5.19	0.14	6.27	23.6	20	3	4	0.02	0.44	*30*	*100*	*50*														
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Sampled in small pool. Tannins. Weather fine.	6/12/2018	13:37	0.23	0.24	6.36	22.8	37																				
SW6-03	Insufficient water to sample.	10/01/2019	14:27																									
SW6-03	Insufficient water to monitor.	11/02/2019	13:33																									
SW6-03	Insufficient water to sample.	13/03/2019	13:23																									
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	10/04/2019	11:45	5.25	0.18	6.67	21.1	66																				
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	6/05/2019	13:02	0.99	0.20	6.98	18.2	58	*1*	21	*0.01*	0.27	*30*	*100*	*50*														
SW6-03	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/06/2019	14:46	2.19	0.25	6.55	12.7	2																				
SW6-03	Upstream and downstream sites not connected. Sampled in a small pool of water with no visible flow, very low water level. Drizzle.	4/07/2019	12:42	2.18	0.22	6.71	14.8	8	3	2	*0.01*	0.37	*30*	*100*	*50*														
SW6-03	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	13/08/2019	11:10	0.00	0.44	6.72	12.9	3																				
SW6-03	Insufficient water to monitor.	5/09/2019	14:42																									
SW6-03	Dry, not sampled.	1/10/2019	11:48																									
SW6-03	Not monitored in November 2019 due to risks associated with bushfires.																											
SW6-03	Not monitored in December 2019 due to risks associated with bushfires.																											
SW6-03	No access due to risks associated with recent bushfires.	15/01/2020	11:47																									
SW6-03	No access due to risks associated with recent bushfires.	17/02/2020	9:28																									
SW6-03	No access due to risks associated with recent bushfires.	4/03/2020	12:03																									
SW6-03	No access due to risks associated with recent bushfires.	2/04/2020	11:36																									
SW6-03	No access due to risks associated with recent bushfires.	5/05/2020	12:32																									
SW6-03	No access due to risks associated with recent bushfires.	4/06/2020	11:07																									
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	13/11/2020	13:04	5.14	0.77	6.62	19.5	95	6	27	0.03	0.37	*30*	*100*	*50*	0.049	0.001	*0.0005*	*0.001*	*0.001*	9.364	*0.001*	1.424	*0.0003*	0.001	*0.001*	*0.0050*	0.003
SW6-03	Upstream and downstream sites connected. High flow, medium water level. Overcast.	4/05/2021	12:32	8.50	0.12	7.32	18.7	69	*1*	25	*0.02*	0.52	*13*	*50*	*50*	5.880	*0.001*	*0.0010*	0.004	*0.002*	2.590	*0.005*	0.042	*0.0001*	*0.003*	*0.001*	*0.0005*	0.042

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW6-04	Photo taken	5/08/2016		8.39	0.11	6.20	13.3	18																					
SW6-04		10/11/2016		2.25	0.20	7.22	20.9	4	*1*	7	0.04	0.56	*25*	*50*	*50*														
SW6-04	No visible flow from upstream, but inflow from other directions	6/01/2017		**2.88**	0.20	6.32	22.9	17																					
SW6-04	Strong flow with multiple inflow points. Consistent rain. U/S and D/S site connected.	28/02/2017		6.56	0.08	5.93	20.5	138	5	59	0.07	0.75	*25*	*50*	*50*														
SW6-04	Gentle flow. Upstream and downstream sites connected.	6/03/2017		4.33	0.15	6.23	22.5	6																					
SW6-04	Strong flow. High water level (at top of bank). U/s and d/s sites connected	6/04/2017		7.31	0.10	6.19	19.2	20	*1*	3	0.03	0.74	*25*	*50*	*50*														
SW6-04	Slight flow. U/s and d/s sites connected. Weather fine.	4/05/2017		7.91	0.14	6.77	17.7	20																					
SW6-04	Upstream and downstream sites connected. High flow. Very high water level. Sunny.	13/06/2017		9.16	0.05	5.86	16.1	**86**	*1*	**34**	0.06	0.55	*25*	*50*	*50*														
SW6-04	Unable to confirm if upstream and downstream sites were connected. No visible flow. Low water level. Weather fine.	17/07/2017		10.22	0.13	6.61	14.7	12																					
SW6-04	Upstream and downstream sites connected. No visible flow. Low water level. Weather fine.	9/10/2017		1.85	0.15	6.70	19.5	9	2	12	0.06	0.54	*25*	*50*	*50*														
SW6-04	Unable to determine if upstream and downstream sites connected. Medium flow, medium - high water level. Weather fine.	7/11/2017		6.68	0.14	6.31	19.3	10																					
SW6-04	Unable to determine connection. Medium flow, medium to high water level. Rain.	1/12/2017		4.57	0.15	6.25	20.5	12	*1*	17	0.02	0.56	*25*	*50*	*50*														
SW6-04	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	3/01/2018		6.11	0.14	6.52	22.0	17																					
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.	5/02/2018		**0.15**	0.19	6.62	20.7	13	2	12	0.04	0.40	*25*	*50*	*50*														
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	7/03/2018		**2.54**	0.15	6.44	22.4	42																					
SW6-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	26/04/2018		**1.52**	0.17	6.62	18.5	9	2	11	0.04	0.40	*30*	*250*	*250*														
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/05/2018		**1.14**	0.17	7.02	17.2	7																					
SW6-04	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	7/06/2018	11:57	6.88	0.11	6.73	15.1	**79**	5	**567**	**0.15**	**0.92**	*30*	*250*	*250*														
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Drizzle.	5/07/2018	13:40	2.04	0.12	6.56	14.0	40																					

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	10:24	4.67	0.14	7.12	10.9	18	4	11	0.02	0.34	30	250	250													
SW6-04	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	5/09/2018	13:42	5.51	0.25	6.32	13.1	22																				
SW6-04	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	12/10/2018	9:14	4.23	0.13	7.13	16.3	20	1	9	0.02	0.41	30	100	50													
SW6-04	Upstream and downstream sites connected. No visible flow, dry. Overcast.	19/11/2018	10:18	1.37	0.15	6.55	19.9	8																				
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	18/12/2018	12:54	0.04	0.15	6.61	22.3	44	1	3	0.05	0.53	30	250	250													
SW6-04	No visible flow, very low water level. Drizzle.	25/02/2019	10:21	1.66	0.17	7.00	20.8	18																				
SW6-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	8/03/2019	10:18	1.99	0.17	6.76	21.4	13	1	7	0.03	0.57	30	100	50													
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/04/2019	11:35	0.74	0.15	6.44	18.9	38																				
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/06/2019	11:23	1.97	0.18	6.60	12.7	15	1	3	0.01	0.52	30	100	50													
SW6-04	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/07/2019	12:13	2.81	0.19	6.61	14.4	27																				
SW6-04	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	1/08/2019	12:46	0.00	0.27	5.98	12.5	1	1	13	0.03	0.53	30	100	50													
SW6-04	Dry, not sampled. Monitored approx. 140 m west due to access issues associated with recent bushfires.	13/01/2020	11:40																									
SW6-04	Unable to determine if upstream and downstream sites were connected. Very low flow, very low water level. Overcast.	5/02/2020	10:49	0.00	0.36	6.40	22.6	27	2	26	0.05	1.94	30	240	50													
SW6-04	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/03/2020	9:26	6.59	0.15	6.79	23.8	37																				
SW6-04	Upstream and downstream sites connected. Very high flow, high water level. Weather fine.	11/04/2020	10:50	8.32	0.14	6.90	21.2	49	3	20	0.06	0.87	30	100	50													
SW6-04	High flow, medium water level. Rain.	10/06/2020	13:48	9.37	0.21	7.40	15.8	33																				
SW6-04	High flow, medium water level. Weather fine.	8/08/2020	11:16	10.42	0.18	7.02	14.5	14																				
SW6-04	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	12:02	7.36	0.10	6.23	23.7	26	3	20	0.05	0.35	30	100	50	1.225	0.001	0.0005	0.001	0.001	0.592	0.001	0.020	0.0003	0.001	0.001	0.0050	0.002
SW6-04	Upstream and downstream sites connected. Very high flow, medium water level. Weather fine.	3/02/2021	11:46	7.44	0.15	7.35	23.3	43																				
SW6-04	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	6/05/2021	10:55	8.62	0.08	6.91	16.2	45	1	19	0.02	0.47	15	50	50	3.080	0.001	0.0010	0.003	0.002	1.680	0.005	0.025	0.0001	0.003	0.001	0.0005	0.003

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.23	6.72		49	3	31	0.05	0.65	30	250	250	2.060	0.001	0.0008	0.002	0.001	1.433	0.003	0.027	0.0003	0.002	0.002	0.0032	0.005
P20				2.90	0.12	6.08																							
St Dev					0.09	0.52																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW21		5/02/2013		7.76	0.19	5.93	24.5	11	*3*	6	0.02	0.30																	
Section3 SW21		27/05/2013		9.26	0.54	7.11	15.8	22	*3*	10	0.04	0.40				0.050	*0.001*	*0.0001*	*0.001*	*0.001*	0.290	*0.001*	0.015	0.0003	0.001	*0.003*	*0.0001*	0.006
Section3 SW21		2/07/2013		7.12	0.19	6.20	16.0	16	*3*	*3*	0.04	0.90																	
Section3 SW21		12/11/2013		7.72	0.19	6.10	22.9	48	*3*	36	0.02	0.55																	
Upstream Monitoring																													
SW6-03	Photo taken	5/08/2016		8.44	0.10	6.20	13.5	17																					
SW6-03		10/11/2016		2.31	0.22	7.61	22.1	36	3	21	0.05	0.79	*25*	*50*	*50*														
SW6-03	No visible flow to downstream	6/01/2017		7.14	0.09	5.95	24.3	827																					
SW6-03	Strong flow with multiple inflow points. Consistent rain. U/S and D/S sites connected.	28/02/2017		7.19	0.06	6.01	20.3	149	6	83	0.07	0.76	*25*	*50*	*50*														
SW6-03	Gentle flow. Upstream and downstream sites connected.	6/03/2017		5.69	0.15	6.51	22.5	5																					
SW6-03	Strong flow. High water level (at top of bank). U/s and d/s sites connected	6/04/2017		7.62	0.09	6.32	19.5	22	*1*	7	0.03	0.54	*25*	*50*	*50*														
SW6-03	Moderate flow. U/s and d/s sites connected. Weather fine.	4/05/2017		8.05	0.14	6.80	17.8	16																					
SW6-03	Upstream and downstream sites connected. High flow. Very high water level. Sunny.	13/06/2017		8.93	0.06	6.10	16.5	52	*1*	15	0.07	0.66	*25*	*50*	*50*														
SW6-03	Unable to confirm if upstream and downstream sites were connected. Steady flow. Medium water level. Weather fine.	17/07/2017		10.14	0.13	6.52	13.8	13																					
SW6-03	Upstream and downstream sites connected. No visible flow. Low water level. Weather fine.	9/10/2017		2.26	0.19	6.70	19.7	15	*1*	16	0.04	0.39	*25*	*50*	*50*														
SW6-03	Unable to determine if upstream and downstream sites connected. Medium flow, medium - high water level. Weather fine.	7/11/2017		7.09	0.14	6.39	19.2	7																					
SW6-03	Unable to determine connection. High flow, medium water level. Drizzle.	1/12/2017		7.32	0.14	6.53	20.4	25	*1*	16	0.03	0.33	*25*	*50*	*50*														

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-03	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	3/01/2018		5.42	0.13	6.13	22.3	14																				
SW6-03	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Overcast.	5/02/2018		2.95	0.15	5.92	20.8	37	2	20	0.06	0.58	*25*	*50*	*50*													
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow in waterway but some inflow draining from bank. Very low water level. Overcast.	7/03/2018		5.82	0.18	6.59	22.1	52																				
SW6-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	26/04/2018		3.63	0.12	6.29	18.5	51	2	51	0.06	0.58	*30*	*250*	*250*													
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/05/2018		2.68	0.15	6.54	17.0	43																				
SW6-03	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Turbid water observed entering waterway near monitoring site. Overcast.	7/06/2018	10:41	4.14	0.17	6.88	14.1	47	4	47	0.05	0.43	*30*	*250*	*250*													
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Rain.	5/07/2018	12:56	1.56	0.17	6.39	15.1	68																				
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	10:35	4.21	0.20	6.53	12.2	29	*1*	30	0.04	0.65	*30*	*250*	*250*													
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/09/2018	13:35	5.54	0.33	6.19	14.0	24																				
SW6-03	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	12/10/2018	9:02	4.15	0.19	7.14	15.8	24	*1*	15	0.02	0.35	*30*	*100*	*50*													
SW6-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	19/11/2018	10:12	0.00	0.20	6.50	20.2	20																				
SW6-03	Sampled in a small unconnected pool of water. No visible flow, very low water level. Drizzle.	18/12/2018	13:02	0.58	0.23	6.33	22.6	12	3	11	0.04	0.45	*30*	*250*	*250*													
SW6-03	Insufficient water to sample.	25/02/2019	10:14																									
SW6-03	Insufficient water to sample.	8/03/2019	10:06																									
SW6-03	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/04/2019	11:25	3.16	0.23	5.81	19.0	58																				
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Sampled in a small pool of water. Overcast.	26/06/2019	11:14	3.98	0.23	6.30	13.7	4	*1*	4	*0.01*	0.35	*30*	*100*	*50*													
SW6-03	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	12:19	6.79	0.36	5.93	15.7	27																				
SW6-03	Sampled in a pool of isolated water. No visible flow, low water level. Weather fine.	1/08/2019	12:38	1.51	0.36	5.75	13.3	1	*1*	9	0.01	0.30	*30*	*100*	*50*													

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-03	No access due to risks associated with recent bushfires.	13/01/2020	11:51																										
SW6-03	No access due to risks associated with recent bushfires.	5/02/2020	10:40																										
SW6-03	Unable to access due to risks associated with recent bushfires	7/03/2020	9:25																										
SW6-03	No access due to risks associated with recent bushfires.	11/04/2020	10:57																										
SW6-03	No access due to risks associated with recent bushfires.	10/06/2020	13:46																										
SW6-03	No access to due risks associated with recent bushfires.	8/08/2020	11:23																										
SW6-03	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	11:57	7.64	0.10	6.39	23.6	28	23	14	0.05	0.35	*30*	*100*	*50*	1.130	*0.001*	*0.0005*	0.001	*0.001*	0.552	*0.001*	0.019	*0.0003*	*0.001*	*0.001*	*0.0050*	0.003
SW6-03	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	3/02/2021	11:42	7.76	0.18	7.83	23.4	45																					
SW6-03	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	6/05/2021	10:52	8.57	0.12	7.77	16.4	49	*1*	28	*0.02*	0.41	*15*	*50*	*50*	2.680	*0.001*	*0.0010*	*0.003*	*0.002*	2.020	*0.005*	0.032	*0.0001*	*0.003*	*0.001*	*0.0005*	*0.003*

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW6-06	Photo taken	3/08/2016		0.00	0.18	6.88	13.7	15																					
SW6-06		8/09/2016		1.58	0.15	6.03	15.0	23	2	21	0.05	1.28	*25*	*50*	*50*														
SW6-06		10/10/2016		0.76	0.17	6.13	16.5	8																					
SW6-06		1/11/2016		0.71	0.18	6.46	20.3	13	**5**	10	0.06	**1.53**	*25*	*50*	*50*														
SW6-06	Upstream and downstream points are disconnected.	14/12/2016		0.05	0.19	6.04	21.3	24																					
SW6-06	No visible flow. Upstream and downstream sites are disconnected. Heavy scum layer.	17/01/2017		0.16	0.16	6.29	23.3	**43**	*1*	**44**	**0.18**	1.56	*25*	*50*	*50*														
SW6-06	Very low water level, heavy scum layer, u/s and d/s sites not connected. No visible flow.	1/02/2017		0.69	0.13	6.46	24.2	12																					
SW6-06	Medium water level. Upstream and downstream sites connected by very gentle flow.	3/03/2017		2.37	0.12	5.61	23.3	26	5	15	0.05	1.40	*25*	*50*	*50*														
SW6-06	No visible flow. U/s and d/s sites not connected. Drizzle	21/04/2017		0.50	0.15	5.92	18.5	33																					
SW6-06	Overcast weather. u/s and d/s not connected. No visible flow. Low water level.	10/05/2017		0.88	0.15	6.20	16.8	21	3	23	0.04	0.89	*25*	*50*	*50*														
SW6-06	Upstream and downstream sites not connected. No visible flow. Water level low to moderate. Weather fine.	9/06/2017		1.36	0.16	6.05	13.5	20																					
SW6-06	Upstream and downstream sites not connected. No visible flow. Mid water level. Dust layer on surface of water. Weather fine.	12/07/2017		2.06	0.12	6.03	12.5	27	2	17	0.06	0.85	*25*	*50*	*50*														
SW6-06	Upstream and downstream sites not connected. No visible flow. Low to mid water level. Dust layer on surface and sand build-up on edge of bank. Weather fine.	9/08/2017		1.81	0.14	6.51	10.8	6																					
SW6-06	U/S and D/S not connected. No observed flow. Low water level.	8/09/2017		2.43	0.16	6.21	12.6	**26**	*1*	26	0.05	0.94	*25*	*50*	*50*														
SW6-06	Upstream and downstream sites were not connected. No visible flow, low water level. Brown colour, slight surface scum. Weather fine.	25/10/2017		2.80	**0.22**	6.59	17.8	26																					
SW6-06	Upstream and downstream sites not connected. Low water level, no visible flow. Overcast.	1/11/2017		1.75	**0.22**	6.90	19.2	28	5	15	0.07	1.39	*25*	*50*	*50*														
SW6-06	Upstream and downstream sites not connected. Very low flow, medium water level. Surface scum layer. Weather fine.	14/12/2017		3.13	0.19	6.63	22.2	6																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/01/2018		0.00	**0.22**	6.68	21.3	12	**12**	13	0.09	1.34	*25*	*50*	*50*														
SW6-06	No connection between upstream and downstream points. No visible flow, low water level. Tannin stained water. Weather fine.	20/02/2018		1.89	**0.25**	6.70	24.4	6																					

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	21/03/2018		2.67	0.28	6.92	23.4	5	2	8	0.04	1.00	25	50	50														
SW6-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/04/2018		0.40	0.20	6.81	21.8	10																				
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/05/2018		2.17	0.25	6.92	15.7	7	5	5	0.02	0.74	25	50	25														
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Slight sheen visible on surface. Weather fine.	14/06/2018	13:21	1.68	0.31	6.92	14.7	48																				
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/07/2018	13:42	8.89	0.49	7.28	11.1	3	1	3	0.04	0.53	30	250	250														
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	8/08/2018	12:45	4.77	0.50	7.53	12.8	4																				
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	21/09/2018	8:48	4.77	0.44	6.79	15.7	33	4	14	0.02	1.35	30	250	250														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	2/10/2018	13:00	4.96	0.47	7.38	16.5	2																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	6/11/2018	14:10	6.97	0.61	7.17	27.3	15	1	4	0.02	0.72	30	100	50														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	6/12/2018	13:15	4.33	0.53	6.97	21.8	4																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	10/01/2019	13:48	4.38	0.43	7.80	24.6	8	1	3	0.03	0.53	30	250	250														
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Tannins. Weather fine.	11/02/2019	13:08	3.68	0.45	7.84	24.7	6																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/03/2019	13:14	4.88	0.43	7.79	24.5	2	10	3	0.02	0.75	30	100	50														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Fine.	10/04/2019	11:22	2.67	0.32	7.56	21.0	18																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	6/05/2019	12:26	2.91	0.37	7.64	18.0	0	1	12	0.01	0.44	30	100	50														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/06/2019	13:35	3.42	0.42	7.81	13.5	5																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	4/07/2019	12:16	3.69	0.48	7.34	15.3	9	1	4	0.02	2.50	30	100	50														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/08/2019	11:53	0.00	0.27	5.94	11.6	4																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Green algae. Weather fine.	5/09/2019	13:38	7.97	0.52	7.39	15.9	2	1	2	0.01	0.46	30	100	50														

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	1/10/2019	11:28	3.05	0.54	7.44	18.2	9																					
SW6-06	Not monitored in November 2019 due to risks associated with bushfires.																												
SW6-06	Not monitored in December 2019 due to risks associated with bushfires.																												
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	15/01/2020	12:06	0.00	0.39	5.80	23.3	5	7	7	0.06	1.41	30	100	50														
SW6-06	Upstream and downstream sites connected. No visible flow, medium water level. Evidence of recent flooding. Overcast.	17/02/2020	9:39	1.44	0.19	5.82	26.2	15																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	4/03/2020	11:58	1.60	0.20	6.30	25.3	7	3	13	0.07	1.73	30	100	50														
SW6-06	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Weather fine.	2/04/2020	11:59	2.72	0.17	6.44	22.0	24																					
SW6-06	No visible flow, medium water level. Weather fine.	5/05/2020	12:43	2.57	0.25	7.08	16.9	11	7	7	0.06	1.03	30	100	50														
SW6-06	No visible flow, medium water level. Weather fine.	4/06/2020	11:20	3.70	0.34	7.07	15.0	9																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/11/2020	13:37	6.05	0.44	7.26	21.3	13	3	1	0.02	0.66	30	100	50	0.021	0.001	0.0005	0.001	0.001	0.473	0.001	0.094	0.0003	0.000	0.001	0.0050	0.002
SW6-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/05/2021	12:55	5.53	0.11	6.76	20.1	27	1	13	0.02	1.01	13	50	50	6.010	0.001	0.0010	0.004	0.002	3.170	0.005	0.050	0.0001	0.003	0.001	0.0005	0.008
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.19	7.13		26	3	34	0.08	1.29	30	100	50	10.166	0.001	0.0009	0.004	0.002	5.217	0.004	0.115	0.0002	0.002	0.001	0.0041	0.011
P20				0.00	0.13	6.06																							
St Dev					0.07	0.58																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW25		28/02/2013		6.46	0.10	6.12	24.9	16	3	12	0.02	1.10																	
Section3 SW25		19/03/2013		3.13	0.14	6.60	20.4	19	3	47	0.01	1.30																	
Section3 SW25		16/04/2013		6.48	0.10	5.91	21.3	21	3	11	0.03	1.20																	
Section3 SW25		20/05/2013		4.85	0.16	6.42	20.6	24	3	8	0.03	1.80																	
Section3 SW25		25/06/2013		5.47	0.13	6.55	11.2	24	3	8	0.02	0.80																	
Section3 SW25		22/07/2013		6.38	0.32	5.75	14.7	33	3	180	0.03	0.72																	

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Section3 SW25		19/08/2013		4.47	0.42	6.92	16.0	19	*3*	8	0.36	1.10																	
Section3 SW25		23/09/2013		3.31	0.16	7.04	20.2	14	*3*	14	0.03	0.73																	
Section3 SW25		21/10/2013		2.09	0.20	6.56	23.9	15	*3*	11	0.04	0.91																	
Section3 SW25		25/11/2013		4.64	0.25	5.76	24.5	31	*3*	15	0.02	0.80																	
Section3 SW25		16/12/2013		1.94	0.16	5.32	23.2	18	5	9	0.25	0.30																	
Upstream Monitoring																													
SW6-05	Photo taken	3/08/2016		0.00	0.18	6.99	13.3	10																					
SW6-05		8/09/2016		1.18	0.16	6.25	14.4	53	2	53	0.06	1.24	*25*	*50*	*50*														
SW6-05		10/10/2016		2.98	0.18	6.41	16.1	10																					
SW6-05		1/11/2016		0.57	0.19	7.07	20.3	4	*1*	7	0.05	1.25	*25*	*50*	*50*														
SW6-05	Low water level. Upstream and downstream points are disconnected.	14/12/2016		0.05	0.18	6.04	21.4	15																					
SW6-05	No visible flow. Upstream and downstream sites are disconnected. Heavy scum layer.	17/01/2017		0.23	0.16	6.44	23.4	18	2	32	0.12	1.70	*25*	*50*	*50*														
SW6-05	Very low water level, heavy scum layer, u/s and d/s sites not connected. No visible flow.	1/02/2017		0.46	0.15	6.37	24.4	23																					
SW6-05	Medium water level, gentle flow. Upstream and downstream sites connected.	3/03/2017		3.05	0.13	5.61	23.4	25	5	12	0.06	1.46	*25*	*50*	*50*														
SW6-05	No visible flow. U/s and d/s sites not connected. Drizzle	21/04/2017		7.78	0.14	6.12	18.9	25																					
SW6-05	Overcast weather. u/s and d/s not connected. No visible flow. Low water level. Lots of debris	10/05/2017		0.03	0.16	6.27	16.4	34	3	37	0.05	0.92	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow. Water level low to moderate. Weather fine.	9/06/2017		0.00	0.17	6.04	13.1	19																					
SW6-05	Upstream and downstream sites not connected. No visible flow. Mid water level. Dust layer on surface of water. Weather fine.	12/07/2017		1.16	0.13	5.79	12.2	26	*1*	30	0.05	0.73	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow. Low to mid water level. Dust layer on surface. Weather fine.	9/08/2017		1.90	0.16	6.40	10.1	10																					
SW6-05	Lack of erosion and sediment controls under current bridge. U/S and D/S not connected. No observed flow. Low water level. Replicate taken.	8/09/2017		0.30	0.17	5.94	11.7	6	*1*	12	0.04	0.69	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Brown colour. Weather fine.	25/10/2017		0.69	0.14	6.20	17.3	32																					

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-05	Upstream and downstream sites not connected. Low water level, no visible flow. Overcast.	1/11/2017		0.46	0.15	6.44	18.8	19	4	38	0.10	1.44	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/12/2017		0.00	0.10	6.19	21.2	20																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/01/2018		0.00	0.13	6.24	20.8	21	4	34	0.14	1.32	*25*	*50*	*50*														
SW6-05	No connection between upstream and downstream points. No visible flow, very low water level. Tannin stained water. Weather fine.	20/02/2018		0.00	0.13	6.21	23.9	11																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	21/03/2018		0.72	0.11	6.47	21.9	5	2	13	0.08	1.19	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/04/2018		0.00	0.13	6.43	21.0	19																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/05/2018		0.00	0.12	6.79	14.9	23	3	19	0.06	1.00	*25*	*50*	*25*														
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Dust layer on surface, green algae present. Weather fine.	14/06/2018	13:12	0.00	0.11	6.46	13.8	11																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/07/2018	13:27	0.00	0.12	7.55	10.3	12	2	12	0.09	0.56	*30*	*250*	*250*														
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/08/2018	12:35	0.00	0.11	7.60	11.2	11																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	21/09/2018	8:31	0.70	0.10	6.40	14.8	24	2	10	0.04	1.02	*30*	*250*	*250*														
SW6-05	Upstream and downstream sites not connected. Dust layer on surface. No visible flow, very low water level. Weather fine.	2/10/2018	12:52	2.06	0.11	7.66	17.7	8																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	6/11/2018	14:19	0.09	0.14	5.98	23.3	22	4	26	0.08	1.65	*30*	*100*	*50*														
SW6-05	Upstream and downstream sites connected. No visible flow, medium water level. Tannins. Weather fine.	6/12/2018	13:08	1.50	0.29	6.65	23.2	26																				
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Tannins and slight odour. Weather fine.	10/01/2019	14:00	1.63	0.19	7.25	26.0	6	*1*	10	0.07	1.06	*30*	250	250														
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Tannins. Weather fine.	11/02/2019	13:15	3.03	0.19	7.15	26.2	31																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Tannins, slight bacteria layer present. Weather fine.	13/03/2019	13:25	1.98	0.20	7.22	24.4	2	9	7	0.05	1.03	*30*	*100*	*50*														

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/04/2019	11:29	2.58	0.17	7.39	21.4	43																					
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	6/05/2019	12:40	0.41	0.18	7.37	17.5	29	*1*	7	*0.01*	0.45	*30*	*100*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/06/2019	13:27	0.26	0.23	7.65	12.7	37																					
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	4/07/2019	12:07	2.34	0.25	7.36	14.9	14	*1*	8	0.03	0.60	*30*	*100*	*50*														
SW6-05	Sampled in a small isolated pool of water with no visible flow, very low water level. Weather fine.	13/08/2019	11:46	0.00	0.34	6.05	11.6	1																					
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/09/2019	13:44	0.00	0.19	7.21	14.2	2	*1*	*1*	0.02	0.61	*30*	*100*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	1/10/2019	11:21	0.00	0.20	6.95	18.3	11																					
SW6-05	Not monitored in November 2019 due to risks associated with bushfires.																												
SW6-05	Not monitored in December 2019 due to risks associated with bushfires.																												
SW6-05	No access due to risks associated with recent bushfires.	15/01/2020	12:12																										
SW6-05	No access due to risks associated with recent bushfires.	17/02/2020	9:43																										
SW6-05	No access due to risks associated with recent bushfires.	4/03/2020	12:02																										
SW6-05	No access due to risks associated with recent bushfires.	2/04/2020	11:37																										
SW6-05	No access due to risks associated with recent bushfires.	5/05/2020	12:36																										
SW6-05	No access due to risks associated with recent bushfires.	4/06/2020	11:18																										
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	13/11/2020	13:29	2.62	0.31	6.85	20.7	14	3	6	0.05	1.05	*30*	*100*	*50*	0.032	*0.001*	*0.0005*	*0.001*	0.001	2.206	*0.001*	0.097	*0.0003*	0.000	*0.001*	*0.0050*	0.001
SW6-05	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	4/05/2021	12:50	5.29	0.18	6.90	21.9	67	*1*	38	0.06	1.08	*13*	*50*	*50*	12.700	*0.001*	*0.0010*	0.005	*0.002*	5.970	*0.005*	0.120	*0.0001*	*0.003*	*0.001*	*0.0005*	0.013

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW6-06	Photo taken	5/08/2016		5.71	0.13	6.05	13.9	19																					
SW6-06		10/11/2016		0.29	0.19	6.44	21.1	8	3	11	0.07	**1.40**	*25*	*50*	*50*														
SW6-06	No flow from u/s. Moderate flow from other directions	6/01/2017		4.29	0.10	**5.94**	23.1	35																					
SW6-06	High water level, strong flow. U/S and D/S sites connected. Steady rain	28/02/2017		5.79	0.07	5.80	20.7	51	**4**	**25**	0.05	1.10	*25*	*50*	*50*														
SW6-06	No flow/ stagnant. Upstream and downstream sites not connected	6/03/2017		0.00	0.14	5.88	23.0	24																					
SW6-06	No visible flow, moderate water level. U/s and d/s sites connected.	6/04/2017		5.97	0.10	5.75	18.9	33	*1*	10	0.04	1.40	*25*	*50*	*50*														
SW6-06	Low flow. U/s and d/s sites not connected. Weather fine.	4/05/2017		2.42	0.15	6.43	17.7	19																					
SW6-06	Not safe to access due to high water level.	13/06/2017																											
SW6-06	Upstream and downstream sites not connected. No visible flow. Low water level. Weather fine.	17/07/2017		1.90	0.12	5.89	14.1	20																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/10/2017		2.59	0.19	6.87	19.6	33	4	**26**	0.08	**1.18**	*25*	*50*	*50*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	7/11/2017		2.52	**0.24**	6.50	20.3	**238**																					
SW6-06	Upstream and downstream sites not connected. Low flow, high water level. Overcast.	1/12/2017		3.09	**0.21**	6.56	21.4	**152**	**8**	**78**	**0.11**	0.96	*25*	*50*	*50*														
SW6-06	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/01/2018		0.41	0.18	6.38	22.9	31																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/02/2018		1.13	**0.25**	**6.77**	21.3	17	*1*	15	0.07	1.12	*25*	*50*	*50*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	7/03/2018		2.07	**0.23**	6.58	22.3	36																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/04/2018		0.86	**0.21**	**6.91**	19.6	18	*1*	10	0.05	0.92	*30*	*250*	*250*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	10/05/2018		1.04	**0.23**	**7.14**	18.0	11																					
SW6-06	Upstream and downstream sites not connected. Low flow, medium water level. Overcast.	7/06/2018	11:39	5.61	0.18	**6.81**	14.9	**175**	**3**	**62**	**0.09**	0.71	*30*	*250*	*250*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	5/07/2018	13:30	6.50	**0.40**	6.63	15.3	15																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/08/2018	9:52	6.14	**0.47**	**7.49**	12.2	43	*1*	16	0.02	0.50	*30*	*250*	*250*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/09/2018	13:04	5.92	**0.74**	6.46	14.6	**80**																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	12/10/2018	10:53	4.35	**0.33**	6.70	17.3	**72**	2	**29**	0.04	0.56	*30*	*100*	*50*														

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/11/2018	9:52	3.69	**0.52**	6.72	20.8	15																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	18/12/2018	12:21	3.25	**0.49**	7.34	23.4	50	*1*	23	0.05	0.51	*30*	*250*	*250*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	25/02/2019	10:01	1.69	**0.39**	**7.16**	21.2	71																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	8/03/2019	9:32	2.70	**0.41**	7.20	22.4	18	*1*	4	0.02	0.62	*30*	*100*	*50*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/04/2019	12:32	2.54	**0.28**	6.81	20.4	119																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	26/06/2019	10:20	6.38	**0.41**	7.05	14.3	**87**	*1*	**50**	0.06	**2.42**	*30*	*100*	*50*														
SW6-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/07/2019	11:58	6.36	**0.30**	6.93	15.9	**206**																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	1/08/2019	12:18	0.21	**0.46**	7.19	14.0	27	*1*	18	0.04	0.80	*30*	*100*	*50*														
SW6-06	Upstream and downstream sites not connected. No visible flow, very low water level. Monitored approx. 90 m SW due to risks associated with recent bushfires. Overcast.	13/01/2020	10:57	**0.00**	**0.38**	**7.06**	22.5	11																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/02/2020	10:24	**0.00**	**0.32**	**6.83**	23.5	**155**	2	**73**	**0.10**	1.08	*30*	**380**	*50*														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	7/03/2020	9:35	3.81	0.14	6.18	24.3	50																					
SW6-06	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	11/04/2020	10:28	6.02	0.13	6.62	20.7	**84**	**6**	**27**	**0.08**	1.11	*30*	*100*	*50*														
SW6-06	No visible flow, medium water level. Drizzle.	10/06/2020	13:59	7.22	**0.38**	**7.01**	18.0	**112**																					
SW6-06	No visible flow, medium water level. Weather fine.	8/08/2020	11:32	4.42	**0.25**	6.72	14.8	42																					
SW6-06	Upstream and downstream sites connected. Medium flow, high water level. Rain.	16/12/2020	12:26	4.31	0.17	6.13	24.2	24	2	8	0.06	0.78	*30*	*100*	*50*	1.509	*0.001*	*0.0005*	0.001	**0.002**	0.721	*0.001*	**0.044**	*0.0003*	*0.001*	*0.001*	*0.0050*	**0.010**
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	3/02/2021	12:05	2.98	0.12	6.80	23.2	**89**																					
SW6-06	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	6/05/2021	11:08	5.82	0.08	6.85	16.6	105	1	20	0.03	0.49	*15*	*50*	*50*	8.790	*0.001*	*0.0010*	0.003	0.002	3.000	*0.005*	0.022	*0.0001*	*0.003*	*0.001*	*0.0005*	0.006
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.18	6.76		53	3	20	0.08	1.17	30	220	210	10.068	0.001	0.0009	0.003	0.002	3.412	0.004	0.041	0.0002	0.002	0.001	0.0041	0.009
P20				0.11	0.12	5.99																							
St Dev					0.04	0.41																							

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW25		5/02/2013		3.52	0.28	5.87	24.2	18	*3*	31	*0.01*	0.80																	
Section3 SW25		27/05/2013		5.02	0.16	6.63	16.6	30	*3*	17	0.03	0.70																	
Section3 SW25		2/07/2013		9.23	0.18	6.37	15.7	37	*3*	*3*	0.03	0.81																	
Section3 SW25		12/11/2013		4.74	0.17	6.20	22.7	13	*3*	*3*	0.02	1.00																	
Upstream Monitoring																													
SW6-05	Photo taken	5/08/2016		6.50	0.14	6.10	13.6	16																					
SW6-05		10/11/2016		0.56	0.19	6.75	21.2	5	*1*	9	0.07	1.17	*25*	*50*	*50*														
SW6-05	No flow to d/s. Raining.	6/01/2017		4.87	0.14	6.65	23.6	21																					
SW6-05	High water level, strong flow. U/S and D/S sites connected. Steady rain	28/02/2017		6.26	0.10	5.83	20.7	32	2	14	0.04	1.02	*25*	*50*	*50*														
SW6-05	No flow/ stagnant. Upstream and downstream sites not connected	6/03/2017		0.00	0.14	5.89	23.3	22																					
SW6-05	Moderate water level, moderate flow. U/s and d/s sites connected	6/04/2017		6.34	0.10	5.70	18.8	31	*1*	11	0.04	1.34	*25*	*50*	*50*														
SW6-05	No visible flow. U/s and d/s sites not connected. Floating organic debris. Weather fine.	4/05/2017		1.35	0.15	6.20	17.5	20																					
SW6-05	Upstream and downstream sites connected. High flow. High water level. Partly cloudy.	13/06/2017		9.43	0.04	5.81	16.0	102	2	43	0.08	0.75	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow. Low water level. Weather fine.	17/07/2017		0.59	0.14	6.05	13.4	26																					
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/10/2017		1.60	0.16	6.82	20.0	9	2	13	0.08	0.90	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	7/11/2017		0.60	0.14	6.02	19.6	39																					
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	1/12/2017		2.85	0.13	6.37	21.1	10	3	18	0.07	1.00	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	3/01/2018		0.63	0.13	5.99	22.2	56																					
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		0.00	0.13	6.23	20.6	13	3	19	0.09	1.28	*25*	*50*	*50*														
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	7/03/2018		0.00	0.12	6.23	22.0	8																					
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/04/2018		0.00	0.12	6.48	18.6	22	*1*	20	0.08	1.12	*30*	*250*	*250*														

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/05/2018		0.00	0.12	6.05	17.8	22																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	7/06/2018	11:30	0.00	0.12	6.04	15.0	24	*1*	20	0.07	1.20	*30*	*250*	*250*													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	5/07/2018	13:22	0.56	0.10	6.22	14.7	17																				
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	10:06	2.43	0.10	7.01	11.2	9	*1*	5	0.03	0.71	*30*	*250*	*250*													
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/09/2018	12:58	4.37	0.18	5.89	14.0	9																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	12/10/2018	10:45	2.58	0.10	6.53	17.7	24	*1*	11	0.05	1.27	*30*	*100*	*50*													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/11/2018	9:46	0.00	0.15	6.00	20.2	25																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	18/12/2018	12:33	2.68	0.19	6.97	24.4	56	2	25	0.08	1.12	*30*	*250*	*250*													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	25/02/2019	9:54	1.26	0.18	6.73	21.6	110																				
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	8/03/2019	9:41	1.87	0.19	6.85	21.8	22	*1*	9	0.05	0.97	*30*	*100*	*50*													
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/04/2019	12:24	1.06	0.15	6.69	20.1	142																				
SW6-05	Upstream and downstream sites not connected. Low flow, low water level. Drizzle.	26/06/2019	10:31	1.88	0.19	6.76	13.1	5	*1*	3	0.02	0.62	*30*	*100*	*50*													
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/07/2019	11:53	4.80	0.19	6.95	15.2	57																				
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	1/08/2019	12:05	0.00	0.19	6.82	12.9	2	3	7	0.03	0.53	*30*	*100*	*50*													
SW6-05	No access due to risks associated with recent bushfires.	13/01/2020	11:05																									
SW6-05	No access due to risks associated with recent bushfires.	5/02/2020	10:26																									
SW6-05	Unable to access due to risks associated with recent bushfires	7/03/2020	9:34																									
SW6-05	No access due to risks associated with recent bushfires.	11/04/2020	10:34																									
SW6-05	No access due to risks associated with recent bushfires.	10/06/2020	13:57																									
SW6-05	No access to due risks associated with recent bushfires.	8/08/2020	11:22																									
SW6-05	Upstream and downstream sites connected. High flow, high water level. Rain.	16/12/2020	12:19	5.02	0.13	5.67	23.7	58	3	14	0.06	0.75	*30*	*100*	*50*	2.741	0.001	*0.0005*	0.001	*0.001*	1.058	*0.001*	0.036	*0.0003*	*0.001*	0.001	*0.0050*	0.002
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	3/02/2021	11:57	3.92	0.19	6.64	23.6	25																				

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW6-05	Upstream and downstream sites connected. High flow, medium water level. Rain.	6/05/2021	11:05	5.77	0.06	7.05	16.8	116	*1*	23	0.05	0.68	*15*	*50*	*50*	11.900	*0.001*	*0.0010*	0.004	*0.002*	4.000	*0.005*	0.042	*0.0001*	*0.003*	*0.001*	*0.0005*	0.011

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW7-02	Dry. Photo taken.	3/08/2016																										
SW7-02	Dry	8/09/2016																										
SW7-02	Dry	10/10/2016																										
SW7-02	Dry	2/11/2016																										
SW7-02	Dry	14/12/2016																										
SW7-02	Dry	17/01/2017																										
SW7-02	Dry	1/02/2017																										
SW7-02	No flow. No connection between upstream and downstream sites. Sample taken from small puddle.	3/03/2017		1.31	0.14	5.89	22.9	9	3	4	0.03	0.42	*25*	*50*	*50*													
SW7-02	Dry	21/04/2017																										
SW7-02	Dry	10/05/2017																										
SW7-02	Dry	9/06/2017																										
SW7-02	Dry	12/07/2017																										
SW7-02	Dry	3/08/2017																										
SW7-02	Fine weather. U/S and D/S not connected. Dry	8/09/2017																										
SW7-02	Upstream and downstream sites not connected. Stagnant pool with very low water level. Weather fine.	25/10/2017		6.64	**0.16**	**7.00**	19.0	23																				
SW7-02	Dry	1/11/2017																										
SW7-02	Insufficient water to sample. Weather fine.	14/12/2017																										
SW7-02	Dry - unable to sample. Weather fine.	16/01/2018																										
SW7-02	Dry - not sampled. Weather fine.	16/02/2018																										
SW7-02	Insufficient water to sample. Weather fine.	20/03/2018																										
SW7-02	Insufficient water to sample. Weather fine.	4/04/2018																										
SW7-02	Dry	18/05/2018																										
SW7-02	Waterway dry, not sampled. Weather fine.	14/06/2018	14:12																									
SW7-02	Dry, not sampled.	18/07/2018	10:10																									
SW7-02	Waterway dry, not sampled.	8/08/2018	14:08																									
SW7-02	Waterway dry, not sampled.	21/09/2018	9:48																									
SW7-02	Waterway dry, not sampled.	2/10/2018	14:06																									
SW7-02	Dry, not sampled.	7/11/2018	9:19																									

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-02	No visible flow, very low water level. Sampled in a small isolated pool of water. Overcast.	7/12/2018	9:10	2.54	0.39	6.94	19.2	37																				
SW7-02	Dry, not sampled.	11/01/2019	9:34																									
SW7-02	Dry, not sampled.	12/02/2019	12:53																									
SW7-02	Insufficient water to sample.	20/03/2019	10:04																									
SW7-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/04/2019	12:38	5.50	0.50	7.57	21.7	10																				
SW7-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2019	9:27	3.05	0.64	7.38	14.3	0	2	5	0.01	0.30	*30*	*100*	*50*													
SW7-02	Insufficient water to sample.	5/06/2019	9:23																									
SW7-02	Upstream and downstream sites not connected. Medium flow, very low water level. Overcast.	8/07/2019	10:54	5.89	0.51	6.52	17.0	30	*1*	6	0.02	1.80	*30*	*100*	*50*													
SW7-02	Dry, not sampled.	13/08/2019	12:57																									
SW7-02	Dry, not sampled.	6/09/2019	10:10																									
SW7-02	Dry, not sampled.	1/10/2019	12:48																									
SW7-02	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-02	No access due to risks associated with recent bushfires.	17/12/2019																										
SW7-02	No access due to risks associated with recent bushfires.	13/01/2020	13:28																									
SW7-02	No visible flow, low water level. Evidence of recent flooding. Overcast.	17/02/2020	10:18	1.30	0.25	6.17	24.8	28																				
SW7-02	Insufficient water to sample.	4/03/2020	13:15																									
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	2/04/2020	12:39	5.67	0.51	7.56	25.9	13																				
SW7-02	No visible flow, very low water level. Weather fine. Green algae.	14/05/2020	9:39	7.87	0.59	7.47	18.1	25	*1*	8	0.27	1.77	*30*	*100*	*50*													
SW7-02	No visible flow, low water level. Weather fine. Sampled at culvert outlet as waterway was dry further downstream.	4/06/2020	11:44	10.89	0.65	7.34	15.1	9																				
SW7-02	Dry, not sampled.	17/11/2020																										
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	4/05/2021	10:42	5.56	0.30	6.67	20.1	11	*1*	4	0.03	0.29	*30*	*100*	*50*	0.288	*0.001*	*0.0005*	*0.001*	*0.001*	0.941	*0.001*	0.015	*0.0003*	*0.001*	*0.001*	*0.0005*	0.005
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.11	6.51		30	3	34	0.08	1.42	30	124	50	0.373	0.001	0.0005	0.001	0.001	1.864	0.001	0.044	0.0004	0.001	0.003	0.0032	0.006

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P20				0.37	0.07	5.73																							
St Dev					0.05	0.45																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW01-GDE01		3/04/2013		5.92	0.21	5.70	21.7	64	*3*	24	0.04	3.70	*50*	*50*	*50*	0.280	0.001	0.0001	0.001	0.001	0.270	0.001	0.013	0.0005	0.001	0.005	0.0005	0.008
SW01-GDE01		29/04/2013		10.00	0.08	6.40	18.1	24	*3*	12	0.04	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW01-GDE01	Dry	27/08/2013																											
SW01-GDE01	Dry	23/09/2013																											
SW01-GDE01	Dry	28/10/2013																											
SW01-GDE01		16/12/2013		7.90	0.37	5.70	23.6	11	*3*	*3*	0.01	1.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW7-01	Photo taken	3/08/2016		1.72	0.11	6.52	14.0	11																					
SW7-01		8/09/2016		2.94	0.12	5.30	15.1	9	*1*	7	0.03	0.46	*25*	*50*	*50*														
SW7-01		10/10/2016		2.73	0.12	5.77	18.3	7																					
SW7-01		2/11/2016		1.26	0.13	6.28	19.6	11	7	24	0.07	0.95	*25*	*50*	*50*														
SW7-01	Low water level. No flow	14/12/2016		2.34	0.13	6.21	24.3	13																					
SW7-01	No flow. Stagnant pool, water stained black.	17/01/2017		0.51	0.10	6.27	23.6	8	*1*	8	0.05	0.58	*25*	*50*	*50*														
SW7-01	Low water level, sample taken in isolated pool, no visible flow, dark stain.	1/02/2017		1.47	0.11	6.47	24.4	7																					
SW7-01	Low water level, isolated pool. Upstream and downstream sites disconnected. No visible flow, dark stained.	3/03/2017		0.17	0.10	6.31	22.4	25	5	29	0.07	1.11	*25*	*50*	*50*														
SW7-01	No visible flow. Stagnant water. Overcast.	21/04/2017		1.07	0.11	5.70	18.8	14																					
SW7-01	Rain. No visible flow. Medium to high water level.	10/05/2017		1.64	0.10	5.78	17.0	19	*1*	13	0.03	0.49	*25*	*50*	*50*														
SW7-01	No visible flow. Water level moderate. Dark, tannin stained water. Weather fine.	9/06/2017		1.90	0.11	5.65	13.7	23																					
SW7-01	No visible flow. High water level. Dust layer on surface of water. Weather fine.	12/07/2017		2.88	0.11	5.60	13.0	15	2	10	0.03	0.31	*25*	*50*	*50*														
SW7-01	No connection between upstream and downstream sites. Stagnant pool with no visible flow. Low - mid water level. Weather fine.	9/08/2017		3.20	0.10	5.98	10.7	3																					

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-01	Fine weather. U/S and D/S not connected. No flow. Low water level.	8/09/2017		2.50	0.11	5.55	12.6	4	*1*	18	0.05	0.58	*25*	*50*	*50*														
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	25/10/2017		1.54	0.06	6.24	17.6	19																				
SW7-01	Upstream and downstream sites not connected. Low water level, no visible flow. Weather fine.	1/11/2017		1.00	0.07	6.50	18.9	12	5	24	0.07	0.83	*25*	*50*	*50*														
SW7-01	Unable to determine if upstream and downstream sites connected. No visible flow, high water level. Surface scum layer. Weather fine.	14/12/2017		0.92	0.09	5.39	20.9	10																				
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	16/01/2018		0.00	0.09	6.09	21.5	21	3	54	0.07	1.04	*25*	*50*	*50*														
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Sampled in a pool. Dry upstream and downstream of monitoring point. Weather fine.	16/02/2018		0.11	0.10	6.49	24.7	13																				
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	20/03/2018		0.30	0.07	6.03	22.1	14	3	42	0.08	1.19	*25*	*50*	*50*														
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/04/2018		0.00	0.08	6.40	21.0	14																				
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/05/2018		0.00	0.07	6.10	14.7	16	*1*	36	0.07	1.14	*25*	*50*	*25*														
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Tannin stained. Weather fine.	14/06/2018	14:22	0.14	0.07	6.33	14.2	8																				
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	18/07/2018	9:18	1.49	0.07	6.89	9.8	20	3	34	0.08	1.44	*30*	*250*	*250*														
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/08/2018	14:11	1.26	0.07	6.79	12.4	21																				
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	21/09/2018	9:46	0.48	0.08	6.75	15.0	100	3	39	0.16	2.21	*30*	*250*	*250*														
SW7-01	Upstream and downstream sites not connected, sampled in a pool of water. No visible flow, very low water level. Weather fine.	2/10/2018	14:25	0.51	0.08	6.94	17.0	59																				
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Scum/bacteria sheen present. Weather fine.	7/11/2018	10:36	6.36	0.07	6.21	22.4	24	3	11	0.05	1.15	*30*	*100*	*50*														
SW7-01	No visible flow, very low water level. Sampled in an isolated pool of water, slight scum layer present. Overcast.	7/12/2018	9:44	0.00	0.09	6.41	19.4	35																				
SW7-01	No visible flow, very low water level. Sampled in an isolated pool. Weather fine.	11/01/2019	10:35	0.47	0.09	6.67	23.0	41	*1*	25	0.13	1.71	*30*	250	250														

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-01	Insufficient water to monitor.	12/02/2019	12:54																										
SW7-01	Insufficient water to sample.	20/03/2019	10:27																										
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	10/04/2019	13:14	0.95	0.05	6.68	21.0	39																					
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Fine.	8/05/2019	10:15	0.68	0.07	7.24	16.3	18	3	34	0.10	1.11	*30*	220	*50*														
SW7-01	Insufficient water to sample.	5/06/2019	9:23																										
SW7-01	Sampled in a small pool with no visible flow, very low water level. Drizzle.	8/07/2019	11:40	1.74	0.07	6.41	15.7	33	2	33	0.09	1.38	*30*	*100*	*50*														
SW7-01	No visible flow, very low water level. Weather fine.	13/08/2019	11:57																										
SW7-01	Insufficient water to monitor.	6/09/2019	8:59																										
SW7-01	Dry, not sampled.	1/10/2019	12:25																										
SW7-01	Not monitored in November 2019 due to risks associated with bushfires.																												
SW7-01	No access due to risks associated with recent bushfires.	17/12/2019																											
SW7-01	No access due to risks associated with recent bushfires.	13/01/2020	13:12																										
SW7-01	No access due to risks associated with recent bushfires.	17/02/2020	10:22																										
SW7-01	No access due to risks associated with recent bushfires.	4/03/2020	13:16																										
SW7-01	No access due to risks associated with recent bushfires.	2/04/2020	12:55																										
SW7-01	No access due to risks associated with recent bushfires.	14/05/2020	9:43																										
SW7-01	No access due to risks associated with recent bushfires.	4/06/2020	11:46																										
SW7-01	Upstream and downstream sites not connected. Very low flow, very low water level. Overcast.	17/11/2020	8:20	2.89	0.16	6.29	23.2	29	*1*	18	0.04	0.96	*30*	*100*	*50*	0.398	*0.001*	*0.0005*	0.001	0.001	2.442	*0.001*	0.060	*0.0003*	0.001	*0.001*	*0.0050*	0.003
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Weather fine.	4/05/2021	11:06	3.42	0.10	5.98	18.5	30	*1*	18	0.03	0.27	*30*	*100*	*50*	0.335	*0.001*	*0.0005*	0.001	*0.001*	0.996	*0.001*	0.020	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total		
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
Downstream Monitoring																														
SW7-02	Photo taken	5/08/2016		7.33	0.09	6.12	13.5	18																						
SW7-02	Dry	6/12/2016																												
SW7-02	Isolated stagnant pool (no connection to u/s point)	3/01/2017		4.30	0.16	6.64	23.6	21																						
SW7-02	Dry	27/02/2017																												
SW7-02	Steady rainfall, strong flow, localised flooding. Upstream and downstream sites connected	15/03/2017		7.55	0.03	5.86	21.9	135																						
SW7-02	Steady inflow. U/s and d/s monitoring sites likely connected.	5/04/2017		6.19	0.10	6.06	19.2	36	7	8	0.03	0.70	*25*	*50*	*50*															
SW7-02	Steady flow. Could not determine if u/s and d/s sites were connected. Weather fine.	4/05/2017		6.95	0.10	6.76	19.0	60																						
SW7-02	Upstream and downstream sites connected. High flow. Moderate to high water level. Sunny.	13/06/2017		9.01	0.04	5.61	17.2	43	4	10	0.04	0.37	*25*	*50*	*50*															
SW7-02	Dry	4/10/2017																												
SW7-02	Unable to determine if upstream and downstream sites connected. Medium flow, high water level. Weather fine.	7/11/2017		4.83	0.06	5.99	20.3	40	3	22	0.05	0.66	*25*	*50*	*50*															
SW7-02	Unable to determine connection. High flow, medium water level. Overcast.	1/12/2017		6.22	0.06	5.64	23.5	59																						
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	3/01/2018		3.58	0.23	7.07	22.3	44	3	18	0.03	0.46	*25*	*50*	*50*															
SW7-02	Dry, not sampled.	1/02/2018																												
SW7-02	Unable to determine if updream and downstream sites were connected. High flow, low water level. Rain.	6/03/2018		5.81	0.12	6.63	22.8	42	3	14	0.05	0.56	*25*	*50*	*50*															
SW7-02	Dry	19/04/2018																												
SW7-02	Dry	10/05/2018																												
SW7-02	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	7/06/2018	12:40	5.72	0.38	6.90	17.6	215																						
SW7-02	Dry, not sampled.	27/08/2018	11:56																											
SW7-02	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Turbidity exceeded maximum measuring range of probe. Overcast.	5/09/2018	10:44	8.16	0.32	5.50	14.0	800																						
SW7-02	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Overcast.	12/10/2018	11:36	5.19	0.37	7.08	17.3	275	*1*	92	0.04	2.80	*30*	*100*	*50*															

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-02	Upstream and downstream sites not connected. Sampled in isolated pool with no visible flow, very low water level. Overcast.	19/11/2018	10:50	1.69	0.53	6.69	19.0	132																					
SW7-02	Upstream and downstream sites not connected. Low flow, low water level. Overcast.	18/12/2018	14:38	2.49	0.41	6.82	24.1	114	*1*	69	0.09	2.00	*30*	*250*	*250*														
SW7-02	Insufficient water to sample	25/02/2019	12:23																										
SW7-02	Unable to determine if upstream and downstream sites were connected. Low flow, medium water level. Overcast.	8/03/2019	10:59	3.19	0.56	6.64	22.4	15	*1*	2	0.01	0.63	*30*	*100*	*50*														
SW7-02	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	4/04/2019	9:59	4.76	0.47	6.83	18.9	42																					
SW7-02	Upstream and downstream sites not connected. Very low flow, medium water level. Weather fine.	17/05/2019	9:43	5.12	0.66	6.72	18.1	42	*1*	22	0.02	0.60	*30*	*100*	*50*														
SW7-02	Upstream and downstream sites not connected. Medium flow, low water level. Overcast.	25/06/2019	13:54	7.25	0.47	6.98	16.7	399																					
SW7-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	2/08/2019	7:27	3.11	0.42	6.45	12.4	55	*1*	33	0.05	1.09	*30*	270	*50*														
SW7-02	No access due to risks associated with recent bushfires.	11/12/2019																											
SW7-02	Unable to determine if upstream and downstream sites were connected. Very high flow, high water level. Rain.	18/01/2020	8:29	8.98	0.07	6.68	22.8	>1000	5	946	0.56	0.77	50	*100*	*50*														
SW7-02	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2020	9:56	1.10	0.40	6.42	22.6	52																					
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	7/03/2020	10:14	1.85	0.22	6.30	24.3	104	3	56	0.10	0.53	*30*	250	*50*														
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Weather fine.	11/04/2020	11:30	5.99	0.38	6.79	27.9	54																					
SW7-02	Very low flow, low water level. Weather fine.	18/05/2020	8:24	7.19	0.57	6.59	17.4	133	2	37	0.11	3.67	*30*	*100*	*50*														
SW7-02	No visible flow, low water level. Overcast.	11/06/2020	8:40	4.06	0.48	6.33	17.2	46																					
SW7-02	No visible flow, low water level. Weather fine.	17/08/2020	10:47	6.92	0.31	6.38	14.9	61																					
SW7-02	Unable to determine if upstream and downstream sites were connected. Very high flow, high water level. Rain.	15/12/2020	12:47	7.20	0.07	5.59	23.7	23	*1*	16	0.04	0.35	*30*	*100*	*50*	1.595	*0.001*	*0.0005*	*0.001*	*0.001*	0.728	*0.001*	0.030	*0.0003*	*0.001*	0.001	*0.0050*	0.008
SW7-02	Insufficient water to monitor.	3/02/2021	12:52																										
SW7-02	Unable to determine if upstream and downstream sites were connected. Medium flow, high water level. Weather fine.	6/05/2021	13:57	6.54	0.15	6.84	21.0	49	*1*	12	0.05	0.68	*30*	*100*	*50*	0.388	*0.001*	*0.0005*	*0.001*	*0.001*	0.864	*0.001*	0.029	*0.0003*	*0.001*	*0.001*	*0.0005*	0.011

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.12	6.68		63	3	40	0.09	1.91	30	250	50	1.989	0.001	0.0005	0.001	0.001	0.864	0.001	0.039	0.0003	0.002	0.003	0.0032	0.016
P20				0.90	0.06	5.80																							
St Dev					0.06	0.56																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW01-GDE01		31/01/2013		6.90	0.08	5.68	22.7	1	*3*	*3*	0.05	0.50	*50*	*50*	*50*	2.180	0.001	0.0001	0.001	0.001	0.920	0.001	0.045	0.0001	0.002	0.005	0.0005	0.022
SW01-GDE01		28/02/2013		7.01	0.05	4.98	22.4	N/A	*3*	*3*	0.09	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW01-GDE01		27/05/2013		7.60	0.23	6.40	13.3	56	*3*	31	0.05	8.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW01-GDE01		4/07/2013		8.50	0.01	5.80	N/A	52	5	*3*	0.01	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW01-GDE01		29/07/2013		8.00	0.21	6.00	19.1	24	*3*	8	0.01	4.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW01-GDE01		19/11/2013		7.10	0.31	5.80	19.2	118	*3*	35	0.06	4.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW01-GDE01		25/11/2013		7.90	0.18	6.90	22.0	83	*3*	42	0.08	1.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW7-01	Photo taken	5/08/2016		6.74	0.10	6.31	13.2	19																					
SW7-01		6/12/2016		1.43	0.14	6.43	25.4	35	*1*	39	0.13	1.61	*25*	*50*	*50*														
SW7-01	Isolated stagnant pool. Dark grey/black staining	3/01/2017		0.63	0.12	6.57	23.5	72																					
SW7-01	Low water level, isolated pool, no visible flow, dark stained.	27/02/2017		1.56	0.12	6.70	21.3	21	3	40	0.23	2.66	*25*	*50*	*50*														
SW7-01	Steady rainfall, very strong flow, localised flooding. Upstream and downstream sites connected	15/03/2017		8.13	0.03	6.29	21.9	162																					
SW7-01	Steady inflow. U/s and d/s monitoring sites likely connected.	5/04/2017		5.24	0.11	6.12	18.5	35	*1*	9	0.04	0.66	*25*	*50*	*50*														
SW7-01	No visible flow. Could not determine if u/s and d/s sites connected. Overcast.	4/05/2017		2.26	0.11	5.88	17.6	18																					
SW7-01	Upstream and downstream sites connected. High flow. High water level. Surface foam and scum layer present. Overcast.	13/06/2017		9.11	0.04	5.67	17.3	45	*1*	8	0.04	0.36	*25*	*50*	*50*														
SW7-01	Upstream and downstream not connected. No visible flow. Very low water level, grey stain. Weather fine.	4/10/2017		0.90	0.11	6.89	17.1	44																					
SW7-01	Unable to determine if upstream and downstream sites connected. High flow, high water level. Weather fine.	7/11/2017		3.62	0.06	5.38	20.1	50	2	22	0.06	0.71	*25*	*50*	*50*														

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-01	Unable to determine connection. High flow, very high water level. Overcast.	1/12/2017		6.08	0.06	5.35	24.6	72																				
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	3/01/2018		2.01	0.08	5.97	23.4	18	2	37	0.04	0.64	*25*	*50*	*50*													
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	1/02/2018		0.00	0.11	7.35	22.0	20																				
SW7-01	Unable to determine if updream and downstream sites were connected. Very low flow, medium water level. Rain.	6/03/2018		2.04	0.08	6.57	22.5	30	7	27	0.08	1.00	*25*	*50*	*50*													
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	19/04/2018		0.00	0.07	7.19	19.7	22																				
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	10/05/2018		0.00	0.07	6.54	17.5	40	7	43	0.08	1.13	*30*	*250*	*250*													
SW7-01	Upstream and downstream sites not connected. Intermittent waterway, sampled in large pool of water. No visible flow, low water level. Weather fine.	7/06/2018	13:00	3.78	0.06	6.39	14.8	25																				
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	11:10	2.16	0.05	7.11	13.2	25	*1*	32	0.08	1.70	*30*	*250*	*250*													
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/09/2018	11:11	2.58	0.13	5.79	13.9	46																				
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	12/10/2018	12:01	1.69	0.07	6.68	16.8	79	*1*	55	0.11	1.59	*30*	*100*	*50*													
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/11/2018	11:26	0.42	0.08	7.00	19.7	32																				
SW7-01	Sampled in a small unconnected pool of water. No visible flow, very low water level. Overcast.	18/12/2018	13:42	0.22	0.08	6.39	22.9	35	*1*	21	0.08	1.30	*30*	*250*	*250*													
SW7-01	Insufficient water to sample	25/02/2019	11:36																									
SW7-01	Insufficient water to sample.	8/03/2019	12:10																									
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	4/04/2019	10:28	1.31	0.05	5.88	19.1	62																				
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	17/05/2019	10:31	1.35	0.07	6.58	17.2	21	3	18	0.08	1.16	*30*	290	*50*													
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	25/06/2019	14:23	2.99	0.05	6.67	14.3	41																				
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	2/08/2019	7:57	0.00	0.08	6.31	12.4	57	*1*	104	0.17	1.94	*30*	400	*50*													
SW7-01	No access due to risks associated with recent bushfires.	11/12/2019																										

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-01	No access due to risks associated with recent bushfires.	18/01/2020	8:46																										
SW7-01	No access due to risks associated with recent bushfires.	5/02/2020	9:58																										
SW7-01	No access due to risks associated with recent bushfires	7/03/2020	10:23																										
SW7-01	No access due to risks associated with recent bushfires.	11/04/2020	11:47																										
SW7-01	No access due to risks associated with recent bushfires.	18/05/2020	8:28																										
SW7-01	No access due to risks associated with recent bushfires.	11/06/2020	8:30																										
SW7-01	No access due to risks associated with recent bushfires.	17/08/2020	10:46																										
SW7-01	Unable to determine if upstream and downstream sites were connected. Very high flow, very high water level. Rain.	15/12/2020	13:03	6.96	0.07	5.39	24.0	31	2	8	0.03	0.31	*30*	*100*	*50*	1.703	*0.001*	*0.0005*	*0.001*	*0.001*	0.614	*0.001*	0.031	*0.0003*	0.001	0.001	*0.0050*	0.006
SW7-01	No visible flow, medium water level. Overcast.	3/02/2021	12:35	2.43	0.11	6.64	23.7	13																					
SW7-01	Unable to determine if upstream and downstream sites were connected. Medium flow, high water level. Weather fine.	6/05/2021	14:20	7.90	0.07	6.28	16.7	67	*1*	11	0.04	0.40	*30*	*100*	*50*	0.536	*0.001*	*0.0005*	*0.001*	*0.001*	0.779	*0.001*	0.013	*0.0003*	*0.001*	*0.001*	*0.0005*	0.001

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW7-04	Photo taken. Accurate turbidity reading could not be obtained.	3/08/2016		1.46	0.10	6.30	13.0																						
SW7-04		8/09/2016		5.44	0.10	5.52	14.6	21	*1*	21	0.06	0.91	*25*	*50*	*50*														
SW7-04		10/10/2016		3.23	0.11	5.90	17.0	12																					
SW7-04		2/11/2016		3.84	0.12	6.45	19.9	9	5	12	0.07	0.94	*25*	*50*	*50*														
SW7-04	Upstream and downstream points are disconnected.	14/12/2016		1.80	0.13	6.13	22.3	8																					
SW7-04	No flow.	17/01/2017		1.73	0.16	6.43	24.3	14	3	18	0.06	0.50	*25*	*50*	*50*														
SW7-04	U/s and d/s sites are connected, very slight flow. No upstream inflow.	1/02/2017		2.36	0.17	6.62	25.4	6																					
SW7-04	Upstream and downstream sites connected. No visible flow.	3/03/2017		3.48	0.17	6.34	23.1	36	2	21	0.04	0.77	*25*	*50*	*50*														
SW7-04	Very gentle flow. U/s and d/s sites connected. Overcast.	21/04/2017		4.27	0.09	5.69	19.0	24																					
SW7-04	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	23/05/2017		6.73	0.09	5.60	16.9	30	3	9	0.05	0.88	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. Very slight flow.Water level moderate. Weather fine.	9/06/2017		5.72	0.10	5.66	13.6	16																					
SW7-04	Upstream and downstream sites connected. No visible flow. Mid to high water level. Weather fine.	12/07/2017		6.75	0.09	5.53	12.4	23	*1*	11	0.05	0.60	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	9/08/2017		5.58	0.09	5.89	10.3	5																					
SW7-04	Fine weather. U/S and D/S connected No observed flow. Low water level.	8/09/2017		5.80	0.10	5.22	12.4	5	*1*	15	0.05	0.74	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. Medium to high water level. No visible flow. Weather fine.	25/10/2017		5.19	0.15	6.42	18.6	13																					
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	1/11/2017		4.26	0.16	6.39	20.7	0	4	6	0.03	0.39	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/12/2017		2.90	0.10	5.97	24.5	10																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Brown stained but lighter than upstream site. Weather fine.	16/01/2018		2.74	0.12	6.42	24.2	37	4	11	0.06	0.68	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Tannin stained. Weather fine.	16/02/2018		4.44	0.15	6.63	26.8	12																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	20/03/2018		3.75	0.12	6.30	23.5	6	3	11	0.03	0.53	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2018		1.97	0.14	6.50	21.8	6																					

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/05/2018		3.18	0.14	6.78	18.6	10	2	11	0.03	0.39	*30*	*250*	*250*													
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/06/2018	14:49	3.31	0.19	6.55	13.9	28																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	18/07/2018	9:43	4.69	0.21	6.84	9.7	18	3	9	0.04	0.36	*30*	*250*	*250*													
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2018	14:34	4.55	0.21	6.89	11.8	11																				
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	21/09/2018	10:16	6.59	0.23	6.93	15.7	29	2	10	0.02	0.51	*30*	*250*	*250*													
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Brown algae present. Weather fine.	2/10/2018	14:44	6.08	0.23	7.19	16.8	9																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Bacteria layer present, tannin stain. Weather fine.	7/11/2018	11:15	2.64	0.13	6.17	23.5	15	*1*	9	0.04	1.01	*30*	*100*	*50*													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Slight dust layer and tannins present. Overcast.	7/12/2018	10:12	2.49	0.19	6.66	21.3	20																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Light dust layer and tannins present. Weather fine.	11/01/2019	10:12	4.17	0.21	7.07	23.8	4	*1*	4	0.03	0.46	*30*	250	250													

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Tannins. Slight dust layer. Weather fine.	12/02/2019	13:28	3.32	0.22	7.21	26.3	7																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/03/2019	10:50	4.39	0.34	6.97	23.2	11	*1*	4	0.01	**1.03**	*30*	*100*	*50*													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Surface sheen present at SW7-03 - samples taken for oil and grease and hydrocarbon analysis. Weather fine.	10/04/2019	13:38	3.37	**0.32**	7.05	21.6	**34**	*1*	6	0.02	0.58	*30*	*100*	*50*													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Fine.	8/05/2019	10:40	3.97	**0.35**	7.03	16.5	1	*1*	3	0.01	0.23	*30*	*100*	*50*													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/06/2019	9:52	5.29	**0.34**	7.02	12.5	7																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	8/07/2019	11:59	4.95	0.33	6.58	15.6	**33**	*1*	8	0.02	2.22	*30*	*100*	*50*													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	13/08/2019	13:07	1.71	0.35	6.77	11.7	3																				
SW7-04	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	6/09/2019	9:56	5.65	0.35	6.88	14.5	3	*1*	**25**	*0.01*	0.33	*30*	*100*	*50*													
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	1/10/2019	13:20	4.09	0.35	6.96	18.4	9																				
SW7-04	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-04	No access due to risks associated with recent bushfires.	17/12/2019																										
SW7-04	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	13/01/2020	13:04	**0.00**	**0.41**	**7.59**	23.9	4	**4**	5	0.03	0.51	*30*	**400**	*50*													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Evidence of recent flooding. Overcast.	17/02/2020	10:31	2.74	0.12	5.93	26.1	6																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Surface scum. Weather fine.	4/03/2020	13:24	3.17	0.16	6.43	25.8	3	**3**	10	**0.11**	**1.62**	*30*	*100*	*50*													
SW7-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.	2/04/2020	13:08	3.16	0.21	6.86	22.1	9																				
SW7-04	No visible flow, medium water level. Weather fine.	14/05/2020	9:53	4.62	0.22	**6.98**	16.6	7	*1*	3	0.03	0.52	*30*	*100*	*50*													
SW7-04	No visible flow, medium water level. Weather fine.	4/06/2020	11:54	6.10	**0.28**	**7.12**	14.6	5																				
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/11/2020	8:53	6.21	0.23	6.71	25.3	12	2	3	0.02	0.44	*30*	*100*	*50*	0.106	*0.001*	*0.0005*	*0.001*	*0.001*	0.412	*0.001*	0.017	*0.0003*	*0.001*	*0.001*	*0.0050*	0.001
SW7-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	4/05/2021	11:36	3.67	0.15	6.40	18.0	12	**5**	8	0.04	0.48	*30*	*100*	*50*	0.304	*0.001*	*0.0005*	*0.001*	*0.001*	**1.384**	*0.001*	0.024	*0.0003*	*0.001*	*0.001*	*0.0005*	**0.005**

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.24	6.94		26	3	18	0.05	1.00	30	100	50	2.227	0.001	0.0005	0.001	0.002	1.267	0.001	0.050	0.0003	0.001	0.003	0.0032	0.004
P20				2.02	0.09	5.88																							
St Dev					0.08	0.67																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW02-GDE02		3/04/2013		1.25	0.08	5.10	21.4	19	*3*	11	0.04	1.00	*50*	*50*	*50*	3.350	0.001	0.0001	0.002	0.001	1.620	0.001	0.036	0.0001	0.002	0.005	0.0005	0.003
SW02-GDE02		29/04/2013		2.50	0.10	7.20	16.4	52	*3*	10	0.03	2.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		27/08/2013		8.10	0.08	3.70	13.6	97	*3*	17	0.07	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		23/09/2013		7.70	0.10	5.90	17.4	71	*3*	10	0.04	0.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		28/10/2013		7.80	0.14	5.80	18.9	54	*3*	26	0.02	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		16/12/2013		7.10	0.09	5.50	25.9	23	*3*	18	0.03	0.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW7-03	Suggest move site to other side of track. Photo taken.	3/08/2016		6.51	0.09	6.63	13.4	4																					
SW7-03		8/09/2016		4.06	0.11	5.62	14.9	29	*1*	15	0.05	0.56	*25*	*50*	*50*														
SW7-03		10/10/2016		6.49	0.11	5.93	16.6	21																					
SW7-03		2/11/2016		3.72	0.13	6.70	19.1	27	6	32	0.09	1.01	*25*	*50*	*50*														
SW7-03	Upstream and downstream points are disconnected. Low water level.	14/12/2016		6.79	0.15	6.18	24.2	3																					
SW7-03	No flow, water stained black.	17/01/2017		1.71	0.17	6.55	25.1	7	2	13	0.05	0.58	*25*	*50*	*50*														
SW7-03	U/s and d/s sites are connected, very slight flow. Black stain. No upstream inflow.	1/02/2017		1.44	0.18	6.72	25.6	6																					
SW7-03	Upstream and downstream sites connected. No visible flow. Black stain.	3/03/2017		3.20	0.18	6.43	24.1	8	4	5	0.03	1.74	*25*	*50*	*50*														
SW7-03	Very gentle flow (no upstream inflow). U/s and d/s sites connected. Overcast.	21/04/2017		5.38	0.09	5.87	18.9	24																					
SW7-03	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	23/05/2017		7.70	0.09	5.64	16.1	29	*1*	8	0.05	0.90	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. Very slight flow.Water level moderate. Weather fine.	9/06/2017		6.74	0.09	5.84	13.8	15																					
SW7-03	Upstream and downstream sites connected. No visible flow. Mid to high water level. Weather fine.	12/07/2017		7.54	0.09	5.65	12.3	24	*1*	8	0.05	0.59	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	9/08/2017		6.71	0.09	6.13	9.8	4																					
SW7-03	Fine weather. U/S and D/S connected. No observed flow. Low water level.	8/09/2017		7.13	0.10	5.67	13.2	4	*1*	8	0.05	0.64	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. Medium to high water level. No visible flow. Weather fine.	25/10/2017		5.24	0.10	6.44	18.9	9																					
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	1/11/2017		4.09	0.11	6.59	20.3	0	2	3	0.03	0.47	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/12/2017		8.67	0.09	5.94	25.4	9																					
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Dark brown colour. Weather fine.	16/01/2018		2.90	0.09	6.44	22.6	11	6	10	0.07	0.79	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Water dark - tannin stained. Weather fine.	16/02/2018		0.87	0.14	6.50	27.0	37																					
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	20/03/2018		2.25	0.10	6.32	23.5	6	2	23	0.04	0.71	*25*	*50*	*50*														

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2018		1.59	0.11	6.59	21.6	2																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/05/2018		2.01	0.12	6.95	17.6	1	4	5	0.03	0.46	*30*	*250*	*250*													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	14/06/2018	14:43	2.08	0.22	6.73	13.5	16																				
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	18/07/2018	9:36	4.06	0.22	7.02	8.9	28	*1*	14	0.07	0.97	*30*	*250*	*250*													
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2018	14:26	2.76	0.22	7.14	11.4	16																				
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	21/09/2018	10:10	6.91	0.26	6.92	15.5	24	*1*	15	0.04	0.47	*30*	*250*	*250*													
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Brown algae present. Weather fine.	2/10/2018	14:40	2.51	0.25	7.17	17.4	9																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Slight scum/bacteria layer. Tannin stain. Weather fine.	7/11/2018	11:09	0.49	0.12	6.24	24.0	27	2	19	0.07	1.22	*30*	*100*	*50*													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Tannins present. Overcast.	7/12/2018	10:06	1.05	0.18	6.75	20.9	10																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Tannins present. Weather fine.	11/01/2019	10:06	1.72	0.20	6.94	23.8	5	*1*	2	0.03	0.52	*30*	250	250													
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Tannins. Slight dust layer. Weather fine.	12/02/2019	13:25	3.53	0.23	7.37	26.0	13																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/03/2019	10:44	2.13	0.29	6.89	23.1	13	*1*	4	0.01	0.74	*30*	*100*	*50*													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Surface sheen present - samples taken for oil and grease and hydrocarbon analysis. Overcast.	10/04/2019	13:30	4.65	0.22	7.08	21.4	16	3	23	0.03	0.44	*30*	*100*	*50*													
SW7-03	Connected, no visible flow. Low water level. Fine.	8/05/2019	10:34	3.23	0.25	7.11	15.7	1	2	3	0.02	0.29	*30*	*100*	*50*													
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/06/2019	9:48	4.12	0.25	6.99	12.0	4																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	8/07/2019	12:05	2.60	0.29	6.49	15.0	15	*1*	2	0.02	2.74	*30*	*100*	*50*													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	13/08/2019	13:13	0.96	0.32	6.80	11.8	2																				

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-03	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	6/09/2019	9:50	2.51	0.35	6.91	15.0	1	3	3	0.01	0.40	*30*	*100*	*50*													
SW7-03	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	1/10/2019	13:15	2.16	0.36	6.94	18.7	6																				
SW7-03	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-03	No access due to risks associated with recent bushfires.	17/12/2019																										
SW7-03	No access due to risks associated with recent bushfires.	13/01/2020	13:12																									
SW7-03	No access due to risks associated with recent bushfires.	17/02/2020	10:35																									
SW7-03	No access due to risks associated with recent bushfires.	4/03/2020	13:16																									
SW7-03	No access due to risks associated with recent bushfires.	2/04/2020	13:06																									
SW7-03	No access due to risks associated with recent bushfires.	14/05/2020																										
SW7-03	No access due to risks associated with recent bushfires.	4/06/2020	11:56																									
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/11/2020	9:01	4.11	0.24	6.51	24.9	12	*1*	4	0.03	0.68	*30*	*100*	*50*	0.071	*0.001*	*0.0005*	*0.001*	0.002	0.536	*0.001*	0.059	*0.0003*	*0.001*	*0.001*	*0.0050*	0.003
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/05/2021	11:28	6.25	0.10	6.49	18.1	13	*1*	8	0.05	0.57	*30*	*100*	*50*	0.544	*0.001*	*0.0005*	*0.001*	0.002	0.737	0.001	0.013	*0.0003*	*0.001*	*0.001*	*0.0005*	0.005

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW7-04	Flowing very fast. Photo taken.	4/08/2016		7.76	0.08	6.28	14.7	11																					
SW7-04	Upstream and downstream points are disconnected.	6/12/2016		4.10	0.12	6.60	24.9	13	*1*	11	0.05	0.84	*25*	*50*	*50*														
SW7-04	Continuous connection to u/s site. No visible flow.	3/01/2017		3.38	0.16	6.35	24.8	**81**																					
SW7-04	U/S and D/S connected. Slight flow visible.	27/02/2017		**1.66**	0.18	6.71	22.2	16	3	9	0.02	0.63	*25*	*50*	*50*														
SW7-04	Gentle rainfall, steady flow. Upstream and downstream sites connected. Observed sediment laden water discharging from construction site, both north and south of waterway.	15/03/2017		6.65	0.09	6.48	22.7	**212**																					
SW7-04	Steady Inflow. Indications of recent flood event. U/s and d/s sites connected.	5/04/2017		6.39	0.07	5.59	18.8	23	2	8	0.03	1.03	*25*	*50*	*50*														
SW7-04	No visible flow. U/s and d/s sites connected. Weather fine.	4/05/2017		5.03	0.09	5.75	17.6	23																					
SW7-04	Not safe to access due to very high, fast flowing water.	13/06/2017																											
SW7-04	Vegetation and sediment build-up appears to be blocking connection between upstream and downstream sites. No visible flow. Medium water level, grey stain. Weather, fine.	4/10/2017		4.60	0.09	6.27	17.3	13																					
SW7-04	Upstream and downstream sites connected. Low flow, medium water level. Weather, fine.	7/11/2017		5.60	0.07	5.65	20.3	27	*1*	15	0.06	0.84	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. Slight flow, high water level. Drizzle.	1/12/2017		5.76	0.09	5.74	23.1	18																					
SW7-04	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/01/2018		3.38	0.12	6.38	24.5	**67**	4	**37**	0.07	0.55	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	1/02/2018		2.69	0.13	6.73	23.4	13																					
SW7-04	Upstream and downstream sites connected. Very low flow, high water level. Rain.	6/03/2018		4.70	0.16	6.51	23.7	**78**	**4**	**28**	**0.06**	0.47	*25*	*50*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	19/04/2018		3.27	0.13	6.84	20.3	3																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		3.10	0.14	6.74	18.4	10	2	11	0.03	0.38	*30*	*250*	*250*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	7/06/2018	13:19	5.23	0.17	6.75	14.5	**110**																					
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	11:39	6.47	0.21	7.11	11.7	14	2	1	0.02	0.27	*30*	*250*	*250*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/09/2018	11:46	6.36	0.43	6.34	14.2	**161**																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	12:49	6.75	0.22	6.98	17.9	**52**	*1*	14	0.03	0.59	*30*	*100*	*50*														

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	19/11/2018	11:51	2.72	0.13	6.73	21.3	26																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	18/12/2018	14:10	2.71	0.19	6.72	24.0	51	*1*	25	0.05	0.75	*30*	*250*	*250*														
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Rain.	25/02/2019	11:49	2.75	0.22	7.22	22.4	8																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	8/03/2019	11:32	3.67	0.22	7.13	22.9	8	6	3	0.01	0.46	*30*	*100*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2019	10:50	3.73	0.31	6.59	20.2	233																					
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/05/2019	10:59	3.94	0.35	6.77	16.8	0	2	1	0.02	0.21	*30*	*100*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	25/06/2019	14:59	6.95	0.37	6.91	14.0	47																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	2/08/2019	8:24	0.11	0.36	6.63	12.3	7	6	4	0.04	0.74	*30*	*100*	*50*														
SW7-04	No access due to risks associated with recent bushfires.	11/12/2019																											
SW7-04	Upstream and downstream sites connected. Medium flow, high water level. Rain.	18/01/2020	8:53	6.32	0.28	7.13	23.7	502	2	91	0.13	0.49	400	350	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Strong odour, ash, green algae, surface bacteria. Overcast.	5/02/2020	9:35	0.00	0.24	6.39	23.8	209																					
SW7-04	Upstream and downstream sites connected. High flow, very high water level. Overcast.	7/03/2020	10:29	5.53	0.07	6.38	24.5	81	2	20	0.07	0.53	*30*	*100*	*50*														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	11/04/2020	11:45	2.63	0.22	6.92	21.3	19																					
SW7-04	Very low flow, medium water level. Weather fine.	18/05/2020	8:38	7.01	0.28	6.86	17.2	78	2	18	0.04	1.63	*30*	*100*	*50*														
SW7-04	No visible flow, medium water level. Weather fine.	11/06/2020	8:56	7.35	0.25	6.83	17.1	100																					
SW7-04	No visible flow, medium water level. Weather fine.	17/08/2020	10:58	5.88	0.14	5.78	14.6	42																					
SW7-04	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	15/12/2020	13:32	6.35	0.12	6.15	23.6	51	2	20	0.06	0.44	*30*	*100*	*50*	2.498	0.001	*0.0005*	0.001	0.001	0.910	*0.001*	0.014	*0.0003*	0.001	0.001	*0.0050*	0.020
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/02/2021	13:07	2.82	0.15	6.71	25.1	6																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	6/05/2021	14:55	5.49	0.08	6.30	18.6	32	*1*	9	0.04	0.66	*30*	*100*	*50*	0.479	*0.001*	*0.0005*	*0.001*	*0.001*	0.679	*0.001*	0.016	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.23	6.90		36	3	15	0.05	0.87	30	100	50	1.539	0.001	0.0005	0.001	0.001	0.725	0.001	0.057	0.0003	0.001	0.003	0.0032	0.009

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P20				2.80	0.08	5.65																							
St Dev					0.09	0.68																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW02-GDE02		31/01/2013		N/A		N/A	N/A	N/A	*3*	*3*	0.01	0.60	*50*	*50*	*50*	1.650	0.001	0.0001	0.001	0.002	0.760	0.001	0.081	0.0001	0.001	0.005	0.0005	0.010
SW02-GDE02		28/02/2013		6.37	0.04	4.41	22.4	N/A	*3*	*3*	0.13	0.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		27/05/2013		3.20	0.04	4.90	12.8	36	*3*	17	0.05	0.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		4/07/2013		7.90	0.01	5.60	n/a	40	5	19	0.05	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		29/07/2013		6.80		6.20	18.2	39	*3*	36	0.07	0.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		19/11/2013		6.30	0.13	5.90	19.2	42	*3*	14	0.04	0.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW02-GDE02		25/11/2013		N/A		5.40	23.7	35	*3*	16	0.06	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW7-03	Flowing very fast. Photo taken.	4/08/2016		8.15	0.09	6.52	14.7	10																					
SW7-03	Upstream and downstream points are disconnected.	6/12/2016		3.16	0.14	6.33	25.6	15	*1*	10	0.05	0.83	*25*	*50*	*50*														
SW7-03	Stagnant pool. Connected to d/s site but no inflow from further upstream. Black colour. No visible flow	3/01/2017		2.21	0.15	6.40	24.4	22																					
SW7-03	U/S and D/S connected. Slight flow visible. Black stain.	27/02/2017		2.81	0.20	6.83	21.6	5	3	6	0.03	0.83	*25*	*50*	*50*														
SW7-03	Gentle rainfall, steady flow. Upstream and downstream sites connected.	15/03/2017		7.64	0.09	6.34	22.6	115																					
SW7-03	Steady Inflow. Indications of recent flood event. U/s and d/s sites connected.	5/04/2017		6.14	0.07	5.65	18.9	23	3	7	0.03	1.03	*25*	*50*	*50*														
SW7-03	No visible flow. U/s and d/s sites connected. Weather fine.	4/05/2017		5.98	0.09	5.89	18.2	49																					
SW7-03	Upstream and downstream sites connected. High flow. Very high water level. Drizzle.	13/06/2017		9.05	0.04	5.40	16.4	45	2	13	0.05	0.55	*25*	*50*	*50*														
SW7-03	Vegetation and sediment build-up appears to be blocking connection between upstream and downstream sites. No visible flow. Medium water level, grey stain. Weather, fine.	4/10/2017		3.82	0.10	6.46	17.6	11																					
SW7-03	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	7/11/2017		5.90	0.06	5.59	20.3	23	*1*	9	0.05	0.89	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. Slight flow, very high water level. Overcast.	1/12/2017		5.55	0.08	5.67	23.2	19																					

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-03	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/01/2018		3.29	0.10	6.23	24.4	30	3	17	0.05	0.76	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	1/02/2018		2.81	0.11	6.87	23.2	9																				
SW7-03	Upstream and downstream sites connected. Very low flow, high water level. Rain.	6/03/2018		3.66	0.11	6.20	22.7	24	2	4	0.04	0.55	*25*	*50*	*50*														
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	19/04/2018		2.39	0.11	6.97	20.3	1																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		3.25	0.15	6.79	18.1	9	*1*	9	0.03	0.60	*30*	*250*	*250*														
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	7/06/2018	13:14	5.85	0.19	6.91	14.2	14																				
SW7-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	11:32	5.05	0.22	7.23	11.7	13	2	3	0.03	0.34	*30*	*250*	*250*														
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/09/2018	11:40	5.46	0.41	6.40	14.3	17																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	12:42	3.17	0.24	7.00	17.3	14	2	12	0.03	0.58	*30*	*100*	*50*														
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	19/11/2018	11:48	2.80	0.14	6.94	21.5	28																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	18/12/2018	14:04	1.94	0.18	6.63	24.9	35	*1*	14	0.05	0.73	*30*	*250*	*250*														
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Rain.	25/02/2019	11:53	2.79	0.25	7.19	21.5	4																				
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Tannins present. Overcast.	8/03/2019	11:26	1.92	0.25	7.09	22.7	6	29	2	0.02	0.73	*30*	*100*	*50*														
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2019	10:47	1.85	0.19	6.49	19.7	128																				
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/05/2019	10:53	4.84	0.25	6.84	17.3	0	3	3	0.01	0.28	*30*	*100*	*50*														
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	25/06/2019	14:54	6.19	0.24	6.87	12.8	2																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	2/08/2019	8:30	1.70	0.31	6.82	12.5	1	*1*	2	0.01	0.46	*30*	*100*	*50*														
SW7-03	No access due to risks associated with recent bushfires.	11/12/2019																										
SW7-03	No access due to risks associated with recent bushfires.	18/01/2020	8:48																									
SW7-03	No access due to risks associated with recent bushfires.	5/02/2020	9:35																									
SW7-03	No access due to risks associated with recent bushfires	7/03/2020	10:28																									

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-03	No access due to risks associated with recent bushfires.	11/04/2020	11:46																										
SW7-03	No access due to risks associated with recent bushfires.	18/05/2020	8:46																										
SW7-03	No access due to risks associated with recent bushfires.	11/06/2020	8:55																										
SW7-03	No access due to risks associated with recent bushfires.	17/08/2020	11:09																										
SW7-03	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	15/12/2020	13:23	7.19	0.09	5.54	23.2	26	2	5	0.03	0.32	*30*	*100*	*50*	1.372	*0.001*	*0.0005*	*0.001*	*0.001*	0.496	*0.001*	0.020	*0.0003*	*0.001*	*0.001*	*0.0050*	0.008
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/02/2021	13:02	5.46	0.13	6.76	24.5	4																					
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	6/05/2021	14:49	6.05	0.08	6.91	19.4	27	*1*	4	0.05	0.62	*30*	*100*	*50*	0.505	*0.001*	*0.0005*	*0.001*	*0.001*	0.673	*0.001*	0.017	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002

SW7-06 - Oakey Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW7-06	Photo taken	3/08/2016		2.62	0.15	6.75	13.2	1																					
SW7-06		8/09/2016		2.92	0.15	5.92	14.6	11	*1*	8	0.06	0.95	*25*	*50*	*50*														
SW7-06		10/10/2016		4.25	0.17	6.34	18.0	5																					
SW7-06		2/11/2016		3.97	0.17	6.52	20.3	6	6	6	0.04	0.65	*25*	*50*	*50*														
SW7-06		14/12/2016		3.31	0.13	6.27	23.8	6																					
SW7-06	No visible flow.	17/01/2017		0.63	0.16	6.59	25.1	7	4	10	0.10	1.11	*25*	*50*	*50*														
SW7-06	No visible flow.	1/02/2017		1.43	0.17	6.68	25.8	9																					
SW7-06	No flow.	3/03/2017		2.61	0.12	6.40	23.3	9	2	4	0.03	1.17	*25*	*50*	*50*														
SW7-06	Very gentle flow. Overcast.	21/04/2017		0.63	0.14	6.34	19.2	15																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow. Medium water level. Weather fine.	23/05/2017		1.12	0.13	5.81	17.5	27	4	11	0.06	0.84	*25*	*50*	*50*														
SW7-06	Upstream and downstream sites connected. Moderate flow. Moderate water level. Drizzle.	9/06/2017		3.69	0.14	5.93	12.5	15																					
SW7-06	Unable to determine if upstream and downstream sites were connected (no access). No visible flow. High water level. Weather fine.	12/07/2017		2.70	0.12	5.75	12.4	22	*1*	5	0.06	0.71	25	*50*	*50*														
SW7-06	Upstream and downstream sites connected. No visible flow. Mid water level. Thick algae layer on surface of water. Overcast.	3/08/2017		4.40	0.13	4.98	10.0	4																					
SW7-06	Fine Weather. U/S and D/S connected. No observed flow. Low and stagnant water.	8/09/2017		6.67	0.14	5.94	12.5	6	2	6	0.05	0.74	*25*	*50*	*50*														
SW7-06	Upstream and downstream sites connected. No visible flow. Medium to high water level. Weather fine.	25/10/2017		3.21	0.12	6.16	18.8	11																					
SW7-06	Upstream and downstream sites not connected. Medium to high water level, no visible flow. Weather fine.	1/11/2017		3.96	0.13	6.51	20.3	1	5	8	0.06	0.98	*25*	*50*	*50*														
SW7-06	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	14/12/2017		2.54	0.12	6.33	22.8	3																					
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	17/01/2018		0.68	0.11	6.53	21.2	12	3	11	0.05	0.73	*25*	*50*	*50*														
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	16/02/2018		4.21	0.11	6.80	27.2	6																					
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	20/03/2018		1.98	0.11	6.45	23.0	4	2	10	0.05	1.07	*25*	*50*	*50*														

SW7-06 - Oakey Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	5/04/2018		1.44	0.12	6.65	20.9	9																				
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	4/05/2018		2.38	0.11	7.12	18.1	4	*1*	4	0.03	0.59	*30*	*250*	*250*													
SW7-06	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	15/06/2018	9:49	2.19	0.09	6.44	12.3	9																				
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	18/07/2018	10:36	3.05	0.10	6.62	9.3	13	*1*	9	0.05	0.56	*30*	*250*	*250*													
SW7-06	Upstream and downstream sites connected. No visible flow, low water level. Surface dust layer. Weather fine.	8/08/2018	15:08	3.96	0.10	6.75	11.9	18																				
SW7-06	No visible flow, low water level. Weather fine.	21/09/2018	10:48	4.16	**0.10**	**6.76**	15.3	19	2	7	0.03	0.61	*30*	**250**	**250**													
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	2/10/2018	15:08	4.47	**0.10**	**7.04**	17.6	10																				
SW7-06	No visible flow, medium water level. Tannin and light dust film present. Overcast.	7/11/2018	11:46	2.56	0.13	6.31	24.8	12	*1*	6	0.06	**1.31**	*30*	*100*	*50*													
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Tannins. Overcast.	7/12/2018	10:50	**0.32**	0.13	6.62	21.4	18																				
SW7-06	No visible flow, medium water level. Tannins and scum layer present. Weather fine.	11/01/2019	11:20	**1.62**	0.15	6.73	24.1	8	*1*	3	0.04	0.60	*30*	**250**	**250**													
SW7-06	No visible flow, low water level. Tannins. Slight dust layer. Weather fine.	12/02/2019	13:58	4.95	0.16	**7.44**	28.1	11																				
SW7-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	20/03/2019	11:32	3.76	**0.32**	**6.98**	23.1	**54**	*1*	12	0.02	**1.50**	*30*	*100*	*50*													
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	10/04/2019	14:25	4.44	**0.28**	7.03	20.7	**180**																				
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	8/05/2019	11:10	4.35	**0.47**	7.23	15.2	**51**	2	21	0.03	**1.74**	*30*	*100*	*50*													
SW7-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/06/2019	10:17	5.73	**0.51**	7.29	12.2	25																				
SW7-06	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Rain.	8/07/2019	13:17	4.63	**0.23**	6.42	16.3	66	2	31	0.06	**3.12**	*30*	*100*	*50*													
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/08/2019	13:53	0.83	**0.32**	**6.95**	11.7	9																				
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	6/09/2019	11:19	2.53	**0.35**	**7.10**	14.9	8	*1*	13	0.03	0.95	*30*	*100*	*50*													
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	1/10/2019	13:58	5.68	**0.39**	**7.43**	19.2	29																				

SW7-06 - Oakey Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-06	Not monitored in November 2019 due to risks associated with bushfires.																												
SW7-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/12/2019	17:00	6.54	**0.53**	**7.54**	26.3	**49**																					
SW7-06	Upstream and downstream sites not connected. No visible flow, very low water level. Algae. Overcast.	13/01/2020	13:54	8.42	**0.97**	**8.02**	24.1	**66**	3	18	0.06	1.32	*30*	200	*50*														
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	17/02/2020	11:04	1.54	0.17	6.38	26.5	13																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	4/03/2020	13:45	3.20	**0.26**	6.82	27.0	9	3	8	0.08	**1.85**	*30*	*100*	*50*														
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Overcast.	2/04/2020	13:31	2.94	**0.25**	6.84	22.9	61																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	14/05/2020	11:47	5.61	**0.37**	**7.28**	16.9	19	*1*	5	0.04	0.93	*30*	*100*	*50*														
SW7-06	Unable to determine if upstream and downstream sites were connected. Low flow, medium water level. Weather fine.	4/06/2020	12:44	6.64	**0.50**	**7.42**	14.5	9																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	17/11/2020	9:57	5.29	**0.50**	**7.45**	26.1	19	*1*	6	0.03	0.62	*30*	*100*	*50*	0.038	**0.001**	*0.0005*	*0.001*	*0.001*	0.203	*0.001*	**0.214**	*0.0003*	0.001	*0.001*	*0.0050*	0.002
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Overcast.	4/05/2021	12:01	3.34	**0.24**	6.95	19.5	11	*3*	6	0.04	0.47	*30*	*100*	*50*	0.278	0.001	*0.0005*	*0.001*	*0.001*	**1.486**	*0.001*	0.107	*0.0003*	*0.001*	*0.001*	*0.0005*	**0.013**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.20	6.75		37	4	23	0.07	1.06	30	130	50	0.425	0.001	0.0005	0.001	0.001	1.198	0.001	0.176	0.0003	0.001	0.003	0.0032	0.002
P20				1.80	0.12	5.93																							
St Dev					0.05	0.64																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW03		3/04/2013		1.76	0.17	5.50	22.5	11	*3*	*3*	0.04	0.50	*50*	*50*	*50*	0.400	0.001	0.0001	0.001	0.001	1.130	0.001	0.251	0.0001	0.002	0.005	0.0005	0.003
SW03		29/04/2013		1.80	0.16	6.00	17.9	8	*3*	*3*	0.04	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		27/08/2013		7.40	0.23	4.00	15.3	9	*3*	*3*	0.02	0.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SW7-06 - Oakey Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW03		23/09/2013		7.30	0.24	6.50	17.2	37	*3*	12	*0.01*	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		28/10/2013		6.80	0.27	6.50	19.1	6	*3*	5	0.02	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		16/12/2013		6.40	0.18	5.30	26.0	7	*3*	*3*	0.03	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SW7-06 - Oakey Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW7-05	Not safe to access	3/08/2016																											
SW7-05	Not safe to access	8/09/2016																											
SW7-05	Not safe to access	10/10/2016																											
SW7-05	Not safe to access	2/11/2016																											
SW7-05	Not safe to access	14/12/2016																											
SW7-05	Not safe to access	17/01/2017																											
SW7-05	Not safe to access	1/02/2017																											
SW7-05	Not safe to access	3/03/2017																											
SW7-05	Not safe to access	21/04/2017																											
SW7-05	Not safe to access	23/05/2017																											
SW7-05	Not safe to access	9/06/2017																											
SW7-05	Not safe to access	12/07/2017																											
SW7-05	Small pool - upstream and downstream sites connected but waterbody not continuous. No visible flow. Water level very low. Tannin stained. Measurement taken within thick aquatic vegetation. Overcast.	3/08/2017		4.99	0.14	4.92	10.2	5																					
SW7-05	Fine Weather. U/S and D/S connected. No observed flow. Low and stagnant water.	8/09/2017		7.72	0.14	5.90	13.0	6	3	7	0.05	0.72	*25*	*50*	*50*														
SW7-05	Upstream and downstream sites connected but waterway dry further upstream of sample point. No visible flow, low water level. Weather fine.	25/10/2017		2.01	0.13	6.14	19.2	10																					
SW7-05	Upstream and downstream sites connected but waterway dry further upstream. Low water level, no visible flow. Weather fine.	1/11/2017		3.41	0.13	6.51	20.6	2	4	46	0.13	1.75	*25*	*50*	*50*														
SW7-05	Upstream and downstream sites were connected. No visible flow, low water level. Waterway dry further upstream. Weather fine.	14/12/2017		8.87	0.12	6.40	26.4	8																					
SW7-05	Upstream and downstream sites connected. No visible flow, very low water level. Waterway pooling at sample point, dry further upstream. Weather fine.	17/01/2018		0.10	0.11	6.40	22.0	11	3	10	0.05	0.72	*25*	*50*	*50*														
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Waterway dry further upstream. Weather fine.	16/02/2018		3.27	0.11	6.74	27.4	7																					
SW7-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	20/03/2018		0.19	0.12	6.31	22.8	8	2	17	0.06	1.02	*25*	*50*	*50*														

SW7-06 - Oakey Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-05	Upstream and downstream sites connected. No visible flow, very low water level. Drizzle.	5/04/2018		1.46	0.13	6.59	21.1	7																				
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/05/2018		3.18	0.11	7.20	18.1	5	3	7	0.04	0.68	*30*	*250*	*250*													
SW7-05	Upstream and downstream sites connected. Sampled in medium sized pool of water. Waterway dry further upstream. No visible flow, low water level. Weather fine.	15/06/2018	9:24	1.92	0.09	6.84	12.5	25																				
SW7-05	Upstream and downstream sites connected but waterway dry further upstream.. No visible flow, low water level. Weather fine.	18/07/2018	11:03	3.32	0.10	6.47	9.7	8	5	3	0.04	0.44	*30*	*250*	*250*													
SW7-05	Upstream and downstream sites connected. No visible flow, very low water level. Waterway dry further upstream. Weather fine.	8/08/2018	15:32	4.65	0.10	6.67	11.1	12																				
SW7-05	Unable to sample - waterway dry upstream of work area.	21/09/2018	11:23																									
SW7-05	Waterway dry upstream of works area, unable to sample.	2/10/2018	15:25																									
SW7-05	Waterway dry upstream of works area. Not sampled.	7/11/2018	12:58																									
SW7-05	Upstream and downstream sites not connected. Monitoring undertaken at alternate location approx. 350 m south, upstream of works area. No visible flow, very low water level. Rain.	7/12/2018	12:11	5.11	0.16	7.11	24.1	45																				
SW7-05	Dry, not sampled.	11/01/2019	11:49																									
SW7-05	Dry, not sampled.	12/02/2019	14:03																									
SW7-05	Dry, not sampled.	20/03/2019	11:38																									
SW7-05	Upstream and downstream sites not connected. No visible flow, low water level. Monitoring undertaken at alternate location approx. 350 m south, upstream of works area. Weather fine.	10/04/2019	15:26	7.80	0.18	7.11	23.4	58																				
SW7-05	Not connected. No visible flow. Low water level. Fine.	8/05/2019	11:46	4.35	0.18	6.94	18.3	26	2	12	0.03	0.57	*30*	*100*	*50*													
SW7-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/06/2019	11:34	4.29	0.17	6.93	13.9	43																				
SW7-05	Unable to determine if upstream and downstream sites were connected. Medium flow, high water level. Rain.	8/07/2019	12:31	4.65	0.16	5.83	15.8	75	*1*	29	0.08	1.24	*30*	*100*	*50*													
SW7-05	Upstream and downstream sites not connected. No visible flow, medium water level. Small amount of brown algae. Weather fine.	13/08/2019	13:34	0.00	0.20	5.93	13.3	66																				
SW7-05	Upstream and downstream sites not connected. No visible flow, medium water level. Algae. Weather fine.	6/09/2019	10:43	1.49	0.21	6.27	17.0	23	*1*	21	0.05	0.92	*30*	*100*	*50*													

SW7-06 - Oakey Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	1/10/2019	13:45	4.85	0.22	6.42	21.2	34																					
SW7-05	Not monitored in November 2019 due to risks associated with bushfires.																												
SW7-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	17/12/2019	16:48	4.64	0.23	6.60	28.4	9																					
SW7-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/01/2020	14:42	6.91	0.30	6.93	25.1	55	5	31	0.10	1.59	890	1400	*50*														
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Evidence of recent flooding. Overcast.	17/02/2020	11:43	0.17	0.15	5.88	27.2	15																					
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	4/03/2020	14:23	4.75	0.17	6.40	29.1	32	4	36	0.12	1.52	*30*	*100*	*50*														
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	2/04/2020	14:06	3.81	0.17	6.36	25.1	51																					
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	14/05/2020	11:20	5.54	0.17	6.51	18.8	15	*1*	6	0.07	0.98	*30*	*100*	*50*														
SW7-05	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Weather fine.	4/06/2020	13:29	5.74	0.18	6.75	16.2	25																					
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	17/11/2020	9:24	4.65	0.20	6.51	27.3	18	2	8	0.05	0.77	*30*	*100*	*50*	0.094	*0.001*	*0.0005*	*0.001*	*0.001*	0.853	*0.001*	0.064	*0.0003*	*0.001*	*0.001*	*0.0050*	0.001
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Weather fine.	4/05/2021	10:20	6.67	0.12	6.33	18.7	32	4	16	0.05	0.51	*30*	*100*	*50*	0.442	*0.001*	*0.0005*	*0.001*	*0.001*	1.243	*0.001*	0.042	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002

SW7-06 - Oakey Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW7-06	No wet weather access	4/08/2016																											
SW7-06		7/12/2016		2.74	0.17	6.68	25.1	28	*1*	10	0.05	0.76	*25*	*50*	*50*														
SW7-06	No visible flow	3/01/2017		3.32	0.11	6.58	25.3	14																					
SW7-06	No visible flow	27/02/2017		2.93	0.17	**6.81**	22.1	8	*1*	6	0.04	**1.02**	*25*	*50*	*50*														
SW7-06	High water level. Steady flow.	15/03/2017		5.40	**0.06**	6.40	22.8	15																					
SW7-06	Not safe to access - flooding	5/04/2017																											
SW7-06	High water level, moderate flow. Overcast	4/05/2017		3.77	0.14	**7.02**	18.2	11																					
SW7-06	Not safe to access due to high water.	13/06/2017																											
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/10/2017		3.48	0.13	6.50	18.1	15																					
SW7-06	Upstream and downstream sites connected. No visible flow, high water level. Weather, fine.	7/11/2017		1.72	**0.08**	**5.57**	21.1	20	*1*	8	0.07	**1.17**	*25*	*50*	*50*														
SW7-06	No access - high water over access route.	1/12/2017																											
SW7-06	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	3/01/2018		1.35	0.11	6.54	23.3	9	*1*	10	0.05	0.60	*25*	*50*	*50*														
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	1/02/2018		2.90	0.12	6.82	23.8	11																					
SW7-06	No wet weather access to site.	6/03/2018																											
SW7-06	No access - high risk clearing works	19/04/2018																											
SW7-06	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	10/05/2018		1.99	0.10	6.55	19.1	7	**6**	4	0.03	0.47	*30*	*250*	*250*														
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	7/06/2018	13:48	5.72	0.09	6.82	15.1	9																					
SW7-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	12:19	6.38	0.10	6.88	11.6	13	2	3	0.03	0.49	*30*	*250*	*250*														
SW7-06	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	5/09/2018	10:07	6.30	0.16	6.01	14.2	26																					
SW7-06	No visible flow, medium water level. Overcast.	12/10/2018	13:19	4.20	**0.09**	6.75	17.9	19	*1*	13	0.05	0.98	*30*	*100*	*50*														
SW7-06	No visible flow, medium water level. Overcast.	19/11/2018	12:13	2.44	0.13	6.73	21.6	8																					
SW7-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/12/2018	15:16	1.93	0.13	6.78	26.4	32	*1*	11	0.05	0.78	*30*	*250*	*250*														
SW7-06	No visible flow, low water level. Drizzle.	22/02/2019	12:40	4.87	0.16	**7.49**	23.6	47																					
SW7-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	8/03/2019	12:52	3.15	**0.34**	**6.87**	23.7	**166**	2	**84**	0.04	**2.95**	*30*	*100*	*50*														

SW7-06 - Oakey Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-06	Unable to determine whether upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2019	8:57	4.47	0.24	6.49	19.7	344																					
SW7-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	17/05/2019	11:31	6.05	0.46	7.15	17.1	39	*1*	19	0.02	1.15	*30*	*100*	*50*														
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	25/06/2019	12:24	6.54	0.49	7.16	12.8	52																					
SW7-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	2/08/2019	9:52	1.40	0.30	6.97	12.6	11	2	7	0.05	1.66	*30*	220	*50*														
SW7-06	Upstream and downstream sites not connected. No visible flow, very low water level. Green algae present. Weather fine.	11/12/2019	15:05	6.76	0.57	7.82	28.8	90																					
SW7-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Rain.	18/01/2020	9:27	7.32	0.23	7.43	23.3	742	3	259	0.25	1.23	430	410	*50*														
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Overcast.	5/02/2020	8:35	0.69	0.59	7.07	24.3	27																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	7/03/2020	11:07	1.56	0.20	6.49	25.6	180	5	70	0.12	1.02	*30*	*100*	*50*														
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	11/04/2020	12:10	3.69	0.32	6.84	24.8	92																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	18/05/2020	9:12	6.97	0.35	7.39	16.9	43	3	12	0.05	0.92	*30*	*100*	*50*														
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Overcast.	11/06/2020	9:29	4.50	0.40	6.49	16.7	70																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	17/08/2020	11:53	4.95	0.30	6.49	15.6	24																					
SW7-06	Unable to determine if upstream and downstream sites were connected. High flow, very high water level. Rain.	15/12/2020	14:07	5.59	0.09	5.69	25.7	15	2	10	0.04	0.60	*30*	*100*	*50*	1.300	*0.001*	*0.0005*	*0.001*	*0.001*	0.561	*0.001*	0.092	*0.0003*	0.001	0.001	*0.0050*	0.006
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Weather fine.	3/02/2021	14:14	2.05	0.23	7.49	24.4	9																					
SW7-06	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Weather fine.	6/05/2021	12:53	7.55	0.18	6.82	18.8	19	*1*	6	0.04	0.64	*30*	*100*	*50*	0.407	*0.001*	*0.0005*	*0.001*	*0.001*	1.058	*0.001*	0.055	*0.0003*	*0.001*	*0.001*	*0.0005*	0.005

P80 & P20 Values (calculated from baseline and upstream data below)

SW7-06 - Oakey Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80					0.18	6.75		56	3	20	0.07	1.00	30	250	170	1.130	0.001	0.0005	0.001	0.001	0.927	0.001	0.099	0.0003	0.001	0.003	0.0032	0.009
P20				1.20	0.11	5.94																						
St Dev					0.04	0.59																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW03		31/01/2013		N/A	0.18	N/A	N/A	N/A	*3*	*3*	*0.01*	0.70	*50*	*50*	*50*	0.580	0.001	0.0001	0.001	0.001	0.580	0.001	0.120	0.0001	0.001	0.005	0.0005	0.012
SW03		28/02/2013		0.37	0.13	5.60	23.7	N/A	*3*	*3*	0.11	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		27/05/2013		6.80	0.14	5.85	14.2	9	*3*	*3*	0.05	0.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		4/07/2013		7.60	0.11	6.70	n/a	N/A	*3*	*3*	*0.01*	0.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		29/07/2013		4.20	0.19	6.10	14.8	17	*3*	*3*	*0.01*	0.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		19/11/2013		4.00	0.16	6.20	19.1	27	*3*	5	0.02	1.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW03		25/11/2013		5.10	0.16	4.40	23.4	46	*3*	22	0.05	1.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																												
SW7-05	Not safe to access	4/08/2016																										
SW7-05	Not safe to access	7/12/2016																										
SW7-05	Not safe to access	3/01/2017																										
SW7-05	Not safe to access	27/02/2017																										
SW7-05	Not safe to access	15/03/2017																										
SW7-05	Not safe to access	5/04/2017																										
SW7-05	Not safe to access	4/05/2017																										
SW7-05	Not safe to access	13/06/2017																										
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Sampled within pool - waterway is dry further upstream. Weather fine.	4/10/2017		1.00	0.13	6.46	17.9	13																				
SW7-05	No access - water too high	7/11/2017																										
SW7-05	No access - high water over access route.	1/12/2017																										
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/01/2018		0.25	0.09	6.68	23.5	9	2	11	0.05	0.52	*25*	*50*	*50*													
SW7-05	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	1/02/2018		0.49	0.13	6.61	23.7	22																				

SW7-06 - Oakey Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Rain.	6/03/2018		1.20	0.07	6.28	23.8	27	*1*	14	0.06	0.57	*25*	*50*	*50*													
SW7-05	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	19/04/2018		2.68	0.12	6.79	20.5	6																				
SW7-05	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	10/05/2018		2.02	0.09	6.73	19.4	14	*1*	19	0.05	0.51	*30*	*250*	*250*													
SW7-05	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	7/06/2018	14:14	4.65	0.09	6.34	15.0	7																				
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	12:52	4.97	0.10	6.75	11.6	11	2	7	0.03	0.51	*30*	*250*	*250*													
SW7-05	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/09/2018	9:30	3.08	0.17	5.90	15.9	21																				
SW7-05	Dry upstream of works area, not sampled.	12/10/2018	13:19																									
SW7-05	Dry upstream of works area, not sampled.	19/11/2018	12:43																									
SW7-05	Upstream and downstream sites not connected. No visible flow, very low water level. Monitoring undertaken at alternate location approx. 350 m south, upstream of works area. Weather fine.	18/12/2018	16:19	4.24	0.15	6.86	34.1	76	2	10	0.07	1.64	*30*	*250*	*250*													
SW7-05	Dry, not sampled.	22/02/2019	12:17																									
SW7-05	Dry, not sampled.	8/03/2019	12:50																									
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Monitoring undertaken at alternate location approx. 350 m south, upstream of works area. Weather fine.	4/04/2019	9:26	3.54	0.18	6.49	21.2	82																				
SW7-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	17/05/2019	11:58	3.45	0.18	6.61	19.0	18	2	4	0.02	0.51	*30*	*100*	*50*													
SW7-05	Upstream and downstream sites not connected. No visible flow, low water level. Agricultural drain works in progress further upstream, outside of works. Overcast.	25/06/2019	15:23	8.22	0.16	6.90	15.9	69																				
SW7-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	2/08/2019	9:20	0.95	0.20	5.97	13.6	26	4	32	0.08	1.08	*30*	*100*	*50*													
SW7-05	Upstream and downstream sites not connected. No visible flow, low water level. Green algae present. Weather fine.	11/12/2019	15:41	7.32	0.27	7.30	30.1	40																				
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Rain.	18/01/2020	10:29	6.38	0.24	7.16	24.4	32	2	12	0.05	0.73	220	360	*50*													

SW7-06 - Oakey Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Scum layer with bubbles on surface. Overcast.	5/02/2020	9:17	0.00	0.19	6.41	24.4	32																				
SW7-05	Unable to determine if upstream and downstream sites were connected. Medium flow, high water level. Overcast.	7/03/2020	12:13	4.51	0.10	5.94	24.8	68	6	27	0.07	0.95	*30*	*100*	*50*													
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	11/04/2020	13:24	5.80	0.17	6.21	24.2	83																				
SW7-05	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Algae. Weather fine.	18/05/2020	10:33	6.58	0.16	6.09	18.7	20	3	19	0.19	0.93	*30*	*100*	*50*													
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Weather fine.	11/06/2020	10:52	6.84	0.16	5.92	16.7	77																				
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	17/08/2020	11:37	6.72	0.15	6.14	17.3	47																				
SW7-05	Unable to determine if upstream and downstream sites were connected. Very high flow, very high water level. Rain.	15/12/2020	12:09	5.44	0.09	5.49	23.9	42	3	10	0.04	0.42	*30*	*100*	*50*	1.496	*0.001*	*0.0005*	*0.001*	*0.001*	0.605	*0.001*	0.053	*0.0003*	*0.001*	0.001	*0.0050*	0.005
SW7-05	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	3/02/2021	13:54	5.68	0.13	7.36	30.0	17																				
SW7-05	Unable to determine if upstream and downstream sites were connected. Low flow, high water level. Weather fine.	6/05/2021	12:34	8.32	0.11	6.35	17.8	41	*1*	29	0.06	0.79	*30*	*100*	*50*	0.527	*0.001*	*0.0005*	*0.001*	*0.001*	1.142	*0.001*	0.067	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW7-08	Site could not be accessed	10/08/2016																										
SW7-08	Site could not be accessed	8/09/2016																										
SW7-08	Site could not be accessed	10/10/2016																										
SW7-08	Site could not be accessed	2/11/2016																										
SW7-08	Site could not be accessed	14/12/2016																										
SW7-08	Site could not be accessed	17/01/2017																										
SW7-08	Site could not be accessed	1/02/2017																										
SW7-08	Site could not be accessed	3/03/2017																										
SW7-08	Site could not be accessed	21/04/2017																										
SW7-08	Site could not be accessed	23/05/2017																										
SW7-08	Site could not be accessed	9/06/2017																										
SW7-08	Site could not be accessed	12/07/2017																										
SW7-08	Site could not be accessed	3/08/2017																										
SW7-08	Site could not be accessed	8/09/2017																										
SW7-08	Site could not be accessed	25/10/2017																										
SW7-08	Site could not be accessed	1/11/2017																										
SW7-08	Site could not be accessed	14/12/2017																										
SW7-08	Upstream and downstream sites connected. No visible flow, very low water level. Dry further downstream. Weather fine.	17/01/2018		1.50	0.31	7.03	20.3	4	1	5	0.04	0.59	*25*	*50*	*50*													
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Waterway dry at sample point. Monitored approx. 30 m east in pool of water. Tannin stained. Light dust layer on surface. Weather fine.	19/02/2018		0.37	0.34	7.23	21.9	2																				
SW7-08	Dry, unable to sample. Weather fine.	20/03/2018																										
SW7-08	Unable to sample - waterway dry upstream of works area.	5/04/2018																										
SW7-08	Unable to sample - waterway dry upstream of works area.	4/05/2018																										
SW7-08	Upstream and downstream sites connected. Waterway dry at designated sample point and further downstream. Sample taken within works area in large pool of water. Light surface scum. No visible flow, low water level. Weather fine.	15/06/2018	10:16	**0.17**	0.29	7.08	12.5	4																				

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-08	Waterway dry at designated sample point. Sampled inside flagged clearing area within large pool of water that was connected to upstream site (confirmed visually although could not gain access to upstream sample point). No visible flow, very low water level. Weather fine.	18/07/2018	11:29	3.92	0.30	6.93	13.7	8	5	10	0.05	0.61	*30*	250	250													
SW7-08	Dry at designated sample point and downstream of works, some water pooling within works area but insufficient water to sample.	8/08/2018	16:11																									
SW7-08	Upstream and downstream sites connected. No visible flow, low water level. Green algae present. Weather fine.	21/09/2018	11:37	9.20	0.40	7.07	17.6	16	3	1	0.06	1.43	*30*	*250*	*250*													
SW7-08	Upstream and downstream sites connected. Sampled within works area (~100m E of designated sample point) as waterway was dry further downstream. Green algae present. No visible flow, low water level.	2/10/2018	16:07	8.43	0.40	8.06	21.1	44																				
SW7-08	Dry, not sampled.	7/11/2018	13:38																									
SW7-08	Dry, not sampled.	7/12/2018	11:12																									
SW7-08	Dry, not sampled.	11/01/2019	11:34																									
SW7-08	Dry, not sampled.	12/02/2019	14:21																									
SW7-08	Upstream and downstream sites not connected. No visible flow, medium water level. Sampled within works area as waterway dry further downstream. Weather fine.	20/03/2019	11:59	10.21	0.80	7.22	26.3	155	*1*	22	0.01	3.37	*30*	*100*	*50*													
SW7-08	Insufficient water to sample.	10/04/2019	15:03																									
SW7-08	Insufficient water to sample.	8/05/2019																										
SW7-08	Upstream and downstream sites not connected. Sampled within works area as waterway dry further downstream. No visible flow, very low water level. Weather fine.	5/06/2019	10:43	9.29	1.13	7.61	15.0	118																				
SW7-08	Upstream and downstream sites connected. No visible flow, low water level. Sampled within works area due to insufficient water downstream. Drizzle.	8/07/2019	13:36	4.43	0.31	6.18	16.8	71	*1*	13	0.03	1.30	*30*	*100*	*50*													
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Sampled within works area due to insufficient water downstream. Green algae, surface of water covered in small bubbles. Weather fine.	13/08/2019	14:29	13.47	0.99	8.24	16.7	10																				

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Sampled within works area because waterway dry downstream. Weather fine.	6/09/2019	12:14	9.99	**1.01**	**7.88**	22.3	10	*1*	7	0.02	**3.10**	*30*	**360**	*50*													
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Sampled within work area, as waterway was dry downstream. Weather fine.	1/10/2019	14:26	8.68	**1.26**	**8.21**	22.4	**42**																				
SW7-08	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-08	Dry, not sampled.	17/12/2019	17:30																									
SW7-08	Dry, not sampled.	13/01/2020	14:12																									
SW7-08	No visible flow, very high water level. Tannins. Weather fine.	17/02/2020	11:19	0.94	**0.16**	**4.73**	26.3	**26**																				
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/03/2020	14:00	2.70	**0.24**	**6.03**	25.8	**17**	**6**	**15**	0.05	1.80	*30*	*100*	*50*													
SW7-08	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	2/04/2020	13:46	1.52	0.27	**6.25**	22.0	**23**																				
SW7-08	No visible flow, very low water level. Weather fine.	14/05/2020	10:22	6.43	**0.54**	7.23	18.7	**69**	**11**	**21**	0.07	1.04	**96**	**270**	*50*													
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast. Surface scum, algae.	4/06/2020	13:07	5.39	**0.42**	7.15	15.5	**25**																				
SW7-08	Insufficient water to sample.	17/11/2020																										
SW7-08	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	4/05/2021	12:28	4.98	0.14	5.77	18.9	10	1	**65**	0.08	1.07	*30*	*100*	*50*	1.620	*0.001*	*0.0005*	**0.001**	*0.001*	**2.916**	**0.002**	**0.169**	*0.0003*	*0.001*	*0.001*	*0.0005*	**0.042**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.40	7.23		6	3	6	0.10	2.06	30	226	90	1.438	0.001	0.0004	0.001	0.001	1.743	0.001	0.031	0.0002	0.001	0.004	0.0005	0.003
P20				0.34	0.26	6.50																						
St Dev					0.08	0.96																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW04		3/04/2013		0.90	0.17	4.00	20.9	2	*3*	3	0.03	0.60	*50*	*50*	*50*	0.690	0.001	0.0001	0.001	0.001	1.140	0.001	0.025	0.0001	0.001	0.005	0.0005	0.003
SW04		29/04/2013		1.40	0.26	7.10	17.8	12	*3*	26	0.04	0.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04	Dry	27/08/2013																										
SW04	Dry	23/09/2013																										
SW04	Dry	28/10/2013																										

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW04	Dry	16/12/2013																											

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Upstream Monitoring																													
SW7-07	Site could not be accessed	10/08/2016																											
SW7-07	Site could not be accessed	8/09/2016																											
SW7-07	Site could not be accessed	10/10/2016																											
SW7-07	Site could not be accessed	2/11/2016																											
SW7-07	Site could not be accessed	14/12/2016																											
SW7-07	Site could not be accessed	17/01/2017																											
SW7-07	Site could not be accessed	1/02/2017																											
SW7-07	Site could not be accessed	3/03/2017																											
SW7-07	Site could not be accessed	24/04/2017																											
SW7-07	Site could not be accessed	23/05/2017																											
SW7-07	Site could not be accessed	9/06/2017																											
SW7-07	Site could not be accessed	12/07/2017																											
SW7-07	Small pool - upstream and downstream sites connected but waterbody not continuous. No visible flow. Low water level. Tannin stained. Overcast.	3/08/2017		4.32	0.19	4.59	10.1	3																					
SW7-07	Fine Weather. U/S and D/S connected. No observed flow. Low and stagnant water.	8/09/2017		2.98	0.22	6.09	10.5	4	4	6	0.17	2.90	*25*	*50*	*50*														
SW7-07	Upstream and downstream connected but no access to downstream site. Waterway dry upstream of sample point. No visible flow. Water level low. Weather fine.	25/10/2017		2.28	0.28	6.98	17.4	4																					
SW7-07	Upstream and downstream sites connected. Low water level, no visible flow. Cloudy.	1/11/2017		2.18	0.29	7.23	17.9	0	*1*	5	0.13	2.06	*25*	*50*	*50*														
SW7-07	Upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	14/12/2017		1.71	0.29	6.70	20.0	6																					
SW7-07	Upstream and downstream sites connected. No visible flow, very low water level. Waterway dry further upstream. Weather fine.	17/01/2018		1.42	0.31	7.08	19.2	4	2	1	0.04	0.66	*25*	*50*	*50*														
SW7-07	Upstream and downstream sites not connected. No visible flow, very low water level. Sampled in small pool. Dry upstream and downstream of sample point. Weather fine.	19/02/2018		0.38	0.34	7.23	21.3	5																					
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	20/03/2018		0.00	0.32	7.04	21.2	2	2	3	0.03	0.57	*25*	*50*	*50*														

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Sampled in pool, waterway dry upstream of sample point. Overcast.	5/04/2018		0.61	0.33	7.13	19.6	0																				
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/05/2018		0.00	0.33	7.49	17.0	0	*1*	3	0.04	0.83	*30*	*250*	*250*													
SW7-07	Could not make contact with landower, no access.	15/06/2018																										
SW7-07	No access. Could not get in contact with landowner, left voicemail messages.	18/07/2018	11:15																									
SW7-07	No visible flow, very low water level. Sampled in a medium pool of water, waterway dry further upstream. Weather fine.	8/08/2018	15:50	1.18	0.31	7.01	11.9	3																				
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Waterbody dry further upstream. Weather fine.	21/09/2018	12:01	4.21	0.39	7.13	15.9	12	2	*1*	0.04	1.61	*30*	*250*	*250*													
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Waterway dry further upstream. Weather fine.	2/10/2018	15:46	2.75	0.40	7.23	16.5	1																				
SW7-07	Could not make contact with landower, no access.	7/11/2018	13:55																									
SW7-07	No visible flow, medium water level. Tannins. Rain.	7/12/2018	11:35	0.33	0.44	7.14	19.2	4																				
SW7-07	Unable to make contact with landowner.	11/01/2019	12:53																									
SW7-07	Unable to make contact with landowner.	12/02/2019	14:11																									
SW7-07	Unable to make contact with landowner.	20/03/2019	11:52																									
SW7-07	No visible flow, very low water level. Weather fine.	10/04/2019	15:08	1.13	0.31	6.63	21.1	6																				
SW7-07	No visible flow, very low water level. Weather fine.	8/05/2019	12:19	1.89	0.40	7.31	16.8	0	*1*	3	0.06	3.03	*30*	*100*	*50*													
SW7-07	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/06/2019	11:16	1.55	0.42	7.45	12.6	4																				
SW7-07	No access, could not make contact with landowner.	8/07/2019																										
SW7-07	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/08/2019	14:12	0.00	0.38	6.47	13.0	1																				
SW7-07	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/09/2019	11:39	0.00	0.40	6.71	13.9	0	*1*	1	0.10	1.46	*30*	220	*50*													
SW7-07	No access, unable to make contact with landowner.	1/10/2019																										
SW7-07	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-07	Insufficient water to monitor.	17/12/2019	17:15																									
SW7-07	Dry, not sampled.	13/01/2020	14:25																									
SW7-07	No access, unable to make contact with landowner.	17/02/2020	11:21																									

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-07	Unable to make contact with landowner.	4/03/2020	14:00																										
SW7-07	Unable to make contact with landowner.	2/04/2020	13:52																										
SW7-07	Dry, not sampled.	14/05/2020	10:56																										
SW7-07	Insufficient water to monitor.	4/06/2020	13:45																										
SW7-07	Dry, not sampled.	17/11/2020																											
SW7-07	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/05/2021	10:00	5.41	0.13	4.75	17.6	12	5	6	0.04	1.12	*30*	*100*	*50*	1.625	*0.001*	*0.0005*	0.001	*0.001*	1.893	*0.001*	0.032	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																												
SW7-08	Site could not be accessed	4/08/2016																										
SW7-08	Site could not be accessed	7/12/2016																										
SW7-08	Site could not be accessed	3/01/2017																										
SW7-08	Site could not be accessed	27/02/2017																										
SW7-08	Site could not be accessed	15/03/2017																										
SW7-08	Site could not be accessed	5/04/2017																										
SW7-08	Site could not be accessed	4/05/2017																										
SW7-08	Site could not be accessed	13/06/2017																										
SW7-08	Site could not be accessed	4/10/2017																										
SW7-08	Site could not be accessed	7/11/2017																										
SW7-08	Site could not be accessed	1/12/2017																										
SW7-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/01/2018		1.37	0.30	6.91	22.3	3	*1*	4	0.04	0.51	*25*	*50*	*50*													
SW7-08	Upstream and downstream sites not connected. No visible flow, very low water level. Waterway dry further downstream of sample point. Overcast.	1/02/2018		1.28	0.32	7.12	21.9	13																				
SW7-08	Upstream and downstream sites connected. No visible flow, low water level. Sampled approx 15 m east of sample point within flagged clearing area as waterway was dry at sample point and further downstream. Rain.	6/03/2018		5.37	0.20	6.60	21.7	29	5	18	0.06	0.81	*25*	*50*	*50*													
SW7-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/04/2018		1.59	0.30	7.38	19.7	0																				
SW7-08	Unable to sample - waterway dry.	10/05/2018																										
SW7-08	Upstream and downstream sites connected. Waterway dry at designated sample point and further downstream - sample taken within works area. No visible flow, low water level. Overcast.	7/06/2018	14:47	3.11	0.28	6.98	14.8	8																				
SW7-08	Insufficient water to sample. Weather fine.	27/08/2018	13:29																									
SW7-08	Upstream and downstream sites connected. No visible flow, low water level. Waterway dry at designated sample point and further downstream - sampled within works area. Drizzle.	5/09/2018	8:49	3.65	0.63	6.54	14.6	3																				

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-08	Upstream and downstream sites connected. Waterway dry at designated sample point and downstream of works area, sampled within works area. No visible flow, low water level. Overcast.	12/10/2018	14:16	3.14	0.39	6.50	18.4	130	*1*	56	0.06	3.49	*30*	*100*	*50*														
SW7-08	Dry, not sampled.	20/10/2018	14:00																										
SW7-08	Dry, not sampled.	18/12/2018	15:46																										
SW7-08	No visible flow, low water level. Sampled within works area, waterway dry further downstream. Overcast.	25/02/2019	13:29	7.67	0.49	7.15	24.6	121																					
SW7-08	No visible flow, medium water level. Overcast. Sampled within works area as waterway dry downstream.	8/03/2019	13:50	5.84	0.61	6.58	23.2	673	*1*	287	0.06	4.19	*30*	*100*	*50*														
SW7-08	No visible flow, low water level. Weather fine.	4/04/2019	8:28	5.91	0.38	6.33	19.3	401																					
SW7-08	Insufficient water to sample.	17/05/2019	12:20																										
SW7-08	Upstream and downstream sites not connected. Low flow, medium water level. Turbidity exceeded maximum measuring range of probe. Drizzle.	25/06/2019	11:57	9.10	0.30	7.87	14.7	>800																					
SW7-08	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	2/08/2019	10:44	4.25	0.77	7.32	15.6	19	18	11	0.08	8.00	*30*	580	*50*														
SW7-08	Insufficient water to monitor.	11/12/2019	15:20																										
SW7-08	Upstream and downstream sites not connected. Medium flow, high water level. Turbidity exceeded maximum measurement range. Rain.	18/01/2020	9:50	7.88	0.15	7.20	22.9	>1000	4	552	0.42	0.92	*50*	*100*	*50*														
SW7-08	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2020	9:00	2.09	0.98	7.09	23.4	59																					
SW7-08	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	7/03/2020	11:28	2.29	0.14	4.62	24.0	14	6	3	0.03	1.09	*30*	*100*	*50*														
SW7-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/04/2020	12:36	4.11	0.16	5.37	22.0	10																					
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/05/2020	9:46	8.12	0.23	6.95	18.4	557	5	187	0.16	1.28	*30*	*100*	*50*														
SW7-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	11/06/2020	9:52	4.61	0.18	5.75	16.4	56																					
SW7-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	17/08/2020	12:25	6.22	0.20	6.16	14.9	55																					
SW7-08	Upstream and downstream sites connected. Very high flow, very high water level. Weather fine.	15/12/2020	14:33	5.40	0.11	4.97	23.6	29	5	11	0.04	0.71	*30*	*100*	*50*	1.793	*0.001*	*0.0005*	*0.001*	*0.001*	0.568	*0.001*	0.027	*0.0003*	0.001	0.001	*0.0050*	0.003
SW7-08	No visible flow, medium water level. Weather fine.	3/02/2021	13:29	6.17	0.38	7.65	26.5	17																					

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-08	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	6/05/2021	15:17	5.00	0.12	5.84	18.3	12	*1*	5	0.03	1.05	*30*	*100*	*50*	1.263	*0.001*	*0.0005*	*0.001*	*0.001*	1.719	*0.001*	0.044	*0.0003*	*0.001*	*0.001*	*0.0005*	**0.014**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.39	7.17		15	3	13	0.06	1.23	30	242	90	1.663	0.001	0.0005	0.001	0.001	1.673	0.001	0.058	0.0003	0.001	0.003	0.0032	0.006
P20				0.64	0.15	4.58																							
St Dev					0.15	1.24																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW04		31/01/2013		N/A	0.18	N/A	N/A	N/A	*3*	*3*	0.01	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04		28/02/2013		0.50	0.11	4.59	22.2	N/A	*3*	*3*	0.01	1.30	*50*	*50*	*50*	1.230	0.001	0.0001	0.001	0.001	1.270	0.001	0.072	0.0001	0.001	0.005	0.0005	0.003
SW04		27/05/2013		6.63	0.16	4.30	13.7	10	5	*3*	0.02	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04		4/07/2013		7.80	0.11	4.60	n/a	7	*3*	16	0.02	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04		29/07/2013		3.10	0.15	4.80	15.3	18	*3*	39	0.08	0.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04	Dry	19/11/2013																											
SW04	Dry	25/11/2013																											
Upstream Monitoring																													
SW7-07	Site could not be accessed	4/08/2016																											
SW7-07	Site could not be accessed	7/12/2016																											
SW7-07	Site could not be accessed	3/01/2017																											
SW7-07	Site could not be accessed	27/02/2017																											
SW7-07	Site could not be accessed	15/03/2017																											
SW7-07	Site could not be accessed	5/04/2017																											
SW7-07	Site could not be accessed	4/05/2017																											
SW7-07	Site could not be accessed	13/06/2017																											
SW7-07	Upstream and downstream sites not connected, sampled within small pool. No visible flow, very low water level. Weather fine.	4/10/2017		1.85	0.21	6.84	16.6	15																					
SW7-07	Upstream and downstream sites connected. Low flow. High water level. Weather, fine.	7/11/2017		3.32	0.19	4.74	19.3	2	*1*	3	0.03	0.75	*25*	*50*	*50*														

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-07	Upstream and downstream sites connected but dry further upstream. Water low and pooling, no visible flow. Overcast.	1/12/2017		1.68	0.25	6.39	20.3	3																				
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/01/2018		1.99	0.29	6.95	22.1	1	*1*	3	0.04	0.54	*25*	*50*	*50*													
SW7-07	Upstream and downstream sites not connected. No visible flow, very low water level. Waterway dry further upstream of sample point. Overcast.	1/02/2018		0.15	0.33	7.20	21.1	8																				
SW7-07	Upstream and downstream sites connected. No visible flow, very low water level. Waterway dry further upstream. Rain.	6/03/2018		0.36	0.34	7.04	22.0	11	2	2	0.04	0.62	*25*	*50*	*50*													
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/04/2018		0.00	0.32	7.36	19.0	5																				
SW7-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		0.87	0.31	7.22	17.5	1	*1*	7	0.04	0.67	*30*	*250*	*250*													
SW7-07	Unable to access - left message with landowner but did not gain permission to access property.	7/06/2018																										
SW7-07	Sampled in a very shallow pool of water with no visible flow. Weather fine.	27/08/2018	13:19	0.96	0.32	7.24	11.1	5	*1*	*1*	0.02	0.53	*30*	*250*	*250*													
SW7-07	Upstream and downstream sites connected. No visible flow, very low water level. Waterway dry further upstream. Overcast.	5/09/2018	8:20	2.95	0.58	6.43	13.7	1																				
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	12/10/2018	14:43	2.61	0.41	6.75	18.1	58	*1*	32	0.06	2.72	*30*	*100*	*50*													
SW7-07	No visible flow, low water level. Overcast.	19/11/2018	13:25	0.85	0.50	7.11	19.1	18																				
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/12/2018	15:57	0.23	0.43	7.13	21.9	6	*1*	2	0.12	0.89	*30*	*250*	*250*													
SW7-07	No access, unable to make contact with landowner.	22/02/2019	12:18																									
SW7-07	No access, unable to make contact with landowner.	8/03/2019	13:50																									
SW7-07	No access, unable to make contact with landowner.	4/04/2019	12:39																									
SW7-07	No visible flow, low water level. Weather fine.	17/05/2019	12:19	4.67	0.39	7.22	18.5	0	*1*	*1*	0.05	2.04	*30*	*100*	*50*													
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	25/06/2019	12:55	2.06	0.39	7.23	13.5	0																				
SW7-07	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	2/08/2019	10:12	0.00	0.38	6.29	13.5	0	2	1	0.05	0.70	*30*	*100*	*50*													
SW7-07	Insufficient water to monitor.	11/12/2019	15:31																									
SW7-07	Upstream and downstream sites not connected. No visible flow, medium water level. Rain.	18/01/2020	10:08	4.69	0.64	7.03	22.9	35	2	16	0.13	2.46	*50*	*100*	*50*													
SW7-07	No access - unable to make contact with landowner.	5/02/2020	14:38																									

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW7-07	Upstream and downstream sites connected. Very high flow, high water level. Overcast.	7/03/2020	11:50	2.46	0.15	4.45	24.5	4	4	1	0.03	1.10	*30*	240	*50*														
SW7-07	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	11/04/2020	12:53	3.73	0.15	4.64	22.8	7																					
SW7-07	Upstream and downstream sites not connected. Very low flow, high water level. Weather fine.	18/05/2020	10:11	5.65	0.11	4.57	18.3	34	4	12	0.05	1.05	*30*	*100*	*50*														
SW7-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	11/06/2020	10:13	5.04	0.17	4.32	16.6	15																					
SW7-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	17/08/2020	12:38	6.91	0.16	4.44	17.0	8																					
SW7-07	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	15/12/2020	11:49	5.47	0.12	4.43	22.7	14	3	*1*	0.03	0.79	*30*	*100*	*50*	1.351	*0.001*	*0.0005*	*0.001*	*0.001*	0.572	*0.001*	0.034	*0.0003*	*0.001*	0.001	*0.0050*	0.009
SW7-07	Dry, not sampled.	3/02/2021	13:56																										
SW7-07	Upstream and downstream sites connected. High flow, high water level. Overcast.	6/05/2021	10:57	6.66	0.12	4.84	16.7	10	*1*	4	0.03	1.18	*30*	*100*	*50*	1.872	*0.001*	*0.0005*	0.001	*0.001*	1.941	*0.001*	0.036	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-02	Photo taken	10/08/2016		6.57	15.90	6.98	20.6	47																					
SW8-02		9/09/2016		7.93	7.94	7.01	21.5	101	5	24	0.07	0.54	*25*	*50*	*50*														
SW8-02		10/10/2016		6.73	32.70	7.21	25.7	38																					
SW8-02		2/11/2016		4.70	42.20	6.83	25.2	59	6	21	0.12	0.92	*25*	*50*	*50*														
SW8-02	High tide	14/12/2016		6.09	44.70	7.51	28.7	31																					
SW8-02	High tide, low flow.	17/01/2017		7.64	44.10	7.79	32.6	51	2	22	0.19	0.50	*25*	*50*	*50*														
SW8-02	High tide, flowing out.	1/02/2017		4.69	44.70	7.72	29.8	116																					
SW8-01	Mid tide, flowing in therefore SW8-01 is downstream.	3/03/2017		10.13	35.60	7.69	29.8	117	*1*	33	0.11	0.65	*25*	*50*	*50*														
SW8-01	Low tide. Low, incoming flow therefore SW8-01 is downstream. U/s and d/s sites connected. Overcast. Unable to obtain accurate turbidity reading.	21/04/2017		6.13	1.58	6.56	24.6																						
SW8-02	Upstream and downstream sites connected. Outflowing tide, medium water level. Weather fine.	23/05/2017		8.60	21.40	6.68	21.9	47	2	281	0.52	1.03	*25*	*50*	*50*														
SW8-02	Upstream and downstream sites connected. Outflowing tide. Can't determine flow rate due to high winds. Water level moderate to high. Weather fine.	9/06/2017		9.05	29.80	6.91	18.8	88																					
SW8-02	Upstream and downstream sites connected. Outgoing tide, high water level. Weather fine.	12/07/2017		9.64	12.20	6.67	17.9	90	7	44	0.13	0.55	*25*	*50*	*50*														
SW8-01	Upstream and downstream sites connected. Incoming tide, therefore SW8-01 is downstream. Moderate flow. Mid water level. Overcast.	3/08/2017		6.05	30.60	6.97	18.5	46																					
SW8-02	Fine weather. U/S and D/S connected. Gentle flow, run out tide. Medium water level.	7/09/2017		7.65	43.80	7.11	20.3	30	3	43	0.09	0.33	*25*	*50*	*50*														
SW8-01	Upstream and downstream sites connected. Low flow, incoming tide therefore SW8-01 is downstream. High water level. Weather fine.	25/10/2017		9.45	28.10	7.56	25.8	116																					
SW8-02	Upstream and downstream sites connected. Outgoing tide, medium flow. Low water level. Weather fine.	1/11/2017		6.15	28.30	7.67	26.7	81	3	26	0.13	0.60	*25*	*50*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Unable to obtain turbidity reading due to very low water level and unstable bank. Weather fine.	14/12/2017		5.25	34.10	7.19	30.2																						
SW8-02	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	17/01/2018		6.61	31.10	7.50	26.6	32	*1*	33	0.10	0.67	*25*	*50*	*50*														

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	16/02/2018		5.85	37.90	7.43	30.9	64																				
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Surface sheen in patches - appears to be bacteria. Outgoing tide. Weather fine.	20/03/2018		7.21	17.80	6.69	28.4	60	2	20	0.10	0.67	*25*	*50*	*50*													
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	5/04/2018		**4.87**	27.80	7.22	26.6	74																				
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	4/05/2018		6.70	32.50	7.30	22.8	34	*1*	**44**	0.07	0.48	*30*	*250*	*250*													
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	15/06/2018	10:44	**5.55**	35.10	6.94	17.7	55																				
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	18/07/2018	12:08	8.77	37.70	7.07	17.2	24	*1*	13	0.05	0.37	*30*	*250*	*250*													
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	9/08/2018	8:50	6.65	40.40	7.12	16.4	49																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	21/09/2018	12:57	6.91	36.80	7.25	23.1	**150**	3	**68**	0.08	0.45	*30*	*250*	*250*													
SW8-02	Upstream and downstream sites connected. Very low flow, medium water level. Sampled on northern bank for safety reasons. Outgoing tide. Weather fine.	3/10/2018	8:48	7.00	38.60	7.23	20.3	53																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Dust layer present. Weather fine.	7/11/2018	14:11	**5.28**	18.60	7.13	30.0	45	2	18	0.03	1.01	*30*	*100*	*50*													
SW8-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	7/12/2018	13:18	6.55	38.40	7.31	24.7	35																				
SW8-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	11/01/2019	12:46	5.51	46.90	7.31	29.5	77	*1*	31	0.17	0.74	*30*	250	250													
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	12/02/2019	14:57	6.00	52.30	7.86	31.3	68																				
SW8-01	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	15/03/2019	12:16	5.23	51.00	7.50	30.1	94	4	25	0.04	0.64	*30*	*100*	*50*													
SW8-02	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Overcast.	11/04/2019	8:10	5.81	40.60	7.52	22.6	81																				

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-02	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Overcast.	8/05/2019	13:00	7.66	42.00	7.62	21.3	17	*1*	16	0.02	0.37	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	4/06/2019	9:13	6.21	47.90	7.40	15.5	13																				
SW8-02	Upstream and downstream sites connected. Very low flow, very low water level. Outgoing tide. Sampled on northern bank due to access constraints. Weather fine.	9/07/2019	10:34	7.80	16.60	6.59	16.8	24	*1*	15	0.06	1.21	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Sampled at northern bank. Weather fine.	15/08/2019	12:49	7.00	37.00	7.41	19.1	9																				
SW8-01	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Weather fine.	6/09/2019	12:43	6.40	42.40	7.47	23.9	27	*1*	32	0.04	0.39	*30*	200	*50*														
SW8-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Sampled at northern bank due to access constraints. Weather fine.	2/10/2019	8:29	7.41	47.00	7.52	21.9	24																				
SW8-01	Upstream and downstream sites connected. Low flow, very low water level. Incoming tide. Weather fine. Sampled at northern bank.	6/11/2019	8:03	**3.79**	53.20	7.53	23.1	39	**10**	36	0.12	0.50	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	5/12/2019	13:19	5.88	54.10	7.63	28.8	34																				
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	9/01/2020	11:46	5.35	55.60	7.74	30.4	37	5	20	0.15	0.67	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	17/02/2020	12:07	**1.09**	0.26	6.26	28.0	65																				
SW8-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	5/03/2020	10:52	3.47	6.04	6.80	27.7	30	17	1	0.28	1.87	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	1/04/2020	15:07	6.73	7.99	7.18	27.1	72																				
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	14/05/2020	12:19	6.65	35.10	7.36	20.8	40	3	17	0.10	0.52	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	10/06/2020	10:55	6.25	34.30	6.96	18.5	17																				
SW8-01	Upstream and downstream sites connected. Low flow, very high water level. Incoming tide. Overcast.	17/11/2020	11:37	**4.82**	48.50	7.44	29.0	42	2	25	0.03	0.72	*30*	*100*	*50*	0.132	**0.001**	*0.0005*	*0.001*	0.001	0.422	*0.001*	0.308	*0.0003*	0.003	0.001	*0.0050*	0.002

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-01	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	4/05/2021	13:14	7.28	11.00	6.71	23.8	39	*1*	22	0.07	0.74	*30*	*100*	*50*	**0.333**	*0.001*	*0.0005*	*0.001*	0.001	**1.304**	*0.001*	0.522	*0.0003*	**0.006**	*0.001*	*0.0005*	**0.013**

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					44.12	7.50		77	4	43	0.15	0.80	30	240	50	0.261	0.001	0.0004	0.001	0.003	0.962	0.003	0.739	0.0003	0.006	0.003	0.0032	0.009
P20				5.64	17.86	6.82																							
St Dev					14.42	0.42																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW05		3/04/2013		6.52	17.30	6.80	27.0	35	*3*	32	0.15	0.90	*50*	*50*	*50*	0.020	0.001	0.0001	0.001	0.001	0.090	0.001	0.895	0.0001	0.006	0.005	0.0005	0.007
SW05		29/04/2013		6.80	5.44	7.40	23.3	24	*3*	19	0.14	1.10	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.002	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		27/08/2013		8.40	24.80	6.60	19.1	17	*3*	22	1.07	0.80	N/A	N/A	N/A	N/A	N/A	0.0003	N/A	0.003	N/A	0.003	N/A	N/A	N/A	N/A	N/A	N/A
SW05		23/09/2013		10.80	24.70	7.50	25.9	17	*3*	32	*0.01*	0.05	N/A	N/A	N/A	N/A	N/A	0.0003	N/A	0.003	N/A	0.003	N/A	N/A	N/A	N/A	N/A	N/A
SW05		28/10/2013		8.70	33.90	7.20	22.4	13	*3*	40	0.21	0.60	N/A	N/A	N/A	N/A	N/A	0.0003	N/A	0.003	N/A	0.003	N/A	N/A	N/A	N/A	N/A	N/A
SW05		16/12/2013		7.60	36.80	6.10	27.1	10	*3*	57	0.15	1.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.004	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW8-01	Photo taken	10/08/2016		6.84	15.90	6.79	20.9	69																					
SW8-01		9/09/2016		8.00	7.88	6.85	21.9	758	3	44	0.09	0.55	*25*	*50*	*50*														
SW8-01		10/10/2016		7.09	32.00	7.01	25.9	54																					
SW8-01		2/11/2016		5.03	42.10	7.07	25.2	59	6	19	0.13	0.66	*25*	*50*	*50*														
SW8-01	High tide	14/12/2016		6.02	45.10	7.33	28.5	35																					
SW8-01	High tide, low flow.	17/01/2017		6.93	43.90	7.65	31.9	120	8	34	0.22	0.59	*25*	*50*	*50*														
SW8-01	High tide, flowing out.	1/02/2017		6.18	44.20	7.65	31.3	144																					
SW8-02	Mid tide, flowing in therefore SW8-02 is upstream.	3/03/2017		9.76	34.50	7.67	29.3	33	2	58	0.13	0.67	*25*	*50*	*50*														
SW8-02	Low, incoming tide therefore SW8-02 is upstream. Low flow. U/s and d/s sites connected. Overcast. Unable to obtain accurate turbidity reading.	21/04/2017		6.26	1.76	6.67	24.5																						
SW8-01	Upstream and downstream sites connected. Outflowing tide, medium water level. Weather fine.	23/05/2017		7.72	21.40	6.38	22.0	69	4	61	0.14	0.64	*25*	*50*	*50*														
SW8-01	Upstream and downstream sites connected. Outflowing tide. Can't determine flow strength due to high winds. Water level moderate to high. Weather fine.	9/06/2017		8.83	30.00	6.63	19.1	88																					

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-01	Upstream and downstream sites connected. Outgoing tide, high water level. Weather fine.	12/07/2017		9.74	11.70	6.46	17.7	107	3	49	0.04	*0.01*	*25*	*50*	*50*														
SW8-02	Upstream and downstream sites connected. Incoming tide, therefore SW8-02 is upstream. Moderate flow. Mid water level. Overcast.	3/08/2017		7.85	30.50	7.29	18.9	54																				
SW8-01	Fine weather. U/S and D/S connected. Gentle flow, run out tide. Medium water level.	7/09/2017		7.38	44.10	7.29	20.5	35	*1*	41	0.08	0.35	*25*	*50*	*50*														
SW8-02	Upstream and downstream sites connected. Low flow, incoming tide, therefore SW8-02 is upstream. High water level. Weather fine.	25/10/2017		9.48	28.40	7.86	25.7	48																				
SW8-01	Upstream and downstream sites connected. Outgoing tide, medium flow. Low water level. Weather fine.	1/11/2017		5.22	29.50	7.41	26.8	99	3	43	0.15	0.65	*25*	*50*	*50*														
SW8-01	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Unable to obtain turbidity reading due to very low water level and unstable bank. Weather fine.	14/12/2017		5.54	34.20	7.04	31.2																					
SW8-01	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	17/01/2018		6.72	31.20	7.46	26.7	65	*1*	19	0.10	0.65	*25*	*50*	*50*														
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	16/02/2018		5.40	38.50	7.18	30.9	65																				
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	20/03/2018		3.76	18.10	6.82	28.0	61	*1*	25	0.11	0.71	*25*	*50*	*50*														
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	5/04/2018		5.77	25.90	7.10	26.1	51																				
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/05/2018		6.54	32.50	7.12	23.0	29	*1*	34	0.07	0.43	*30*	*250*	*250*														
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	15/06/2018	10:38	6.08	34.70	6.89	17.3	86																				
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	18/07/2018	11:58	8.24	37.30	6.83	17.0	32	4	12	0.05	0.38	*30*	*250*	*250*														
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	9/08/2018	8:45	6.95	40.20	7.00	16.6	62																				
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	21/09/2018	12:47	7.22	36.30	7.14	22.7	113	3	54	0.08	0.44	*30*	*250*	*250*														

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-01	Upstream and downstream sites connected. Very low flow, medium water level. Sampled on northern bank for safety reasons. Outgoing tide. Weather fine.	3/10/2018	8:42	6.57	38.40	7.02	20.3	56																				
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Dust layer present. Outgoing tide. Weather fine.	7/11/2018	14:05	6.28	18.00	7.10	30.2	47	3	30	0.01	0.91	*30*	*100*	*50*													
SW8-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	7/12/2018	13:28	6.61	38.40	7.45	25.0	27																				
SW8-02	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	11/01/2019	12:52	5.57	47.30	7.49	29.3	56	2	31	0.16	0.71	*30*	250	250													
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	12/02/2019	14:52	5.83	52.00	7.75	31.2	48																				
SW8-02	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	15/03/2019	12:31	5.24	50.90	7.61	30.1	96	4	24	0.05	0.67	*30*	*100*	*50*													
SW8-01	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Slight scum layer present. Overcast.	11/04/2019	8:04	6.20	39.40	7.44	21.6	81																				
SW8-01	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Slight scum layer present. Overcast.	8/05/2019	13:14	7.38	41.30	7.71	21.3	23	*1*	14	0.02	0.36	*30*	*100*	*50*													
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	4/06/2019	9:21	6.16	48.70	7.61	16.2	33																				
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Sampled on northern bank due to access constraints. Weather fine.	9/07/2019	10:42	8.62	17.20	6.69	17.1	17	*1*	9	0.05	1.16	*30*	*100*	*50*													
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Sampled at northern bank. Weather fine.	15/08/2019	12:56	6.93	37.60	7.46	19.5	8																				
SW8-02	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Weather fine.	6/09/2019	12:50	6.86	42.80	7.50	23.5	20	*1*	43	0.05	0.40	*30*	240	*50*													
SW8-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Sampled at northern bank, due to access constraints. Weather fine.	2/10/2019	8:21	7.72	47.00	7.47	21.7	77																				
SW8-02	Upstream and downstream sites connected. Low flow, very low water level. Incoming tide. Weather fine. Sampled at northern bank.	6/11/2019	9:21	4.33	53.40	7.51	23.5	41	*1*	30	0.11	0.50	*30*	*100*	*50*													

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-02	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	5/12/2019	13:24	5.62	54.50	7.71	28.0	29																					
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	9/01/2020	11:53	5.67	55.50	7.79	29.7	29	4	42	0.16	0.68	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	17/02/2020	12:14	2.41	0.26	6.46	28.2	77																					
SW8-01	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	5/03/2020	11:00	3.54	5.99	6.87	28.0	31	21	2	0.31	2.01	*30*	260	*50*														
SW8-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	1/04/2020	14:58	5.64	8.27	6.85	26.7	76																					
SW8-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	14/05/2020	12:28	6.73	35.80	7.39	20.9	36	3	22	0.09	0.43	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	10/06/2020	10:50	6.76	31.30	6.54	18.4	18																					
SW8-02	Upstream and downstream sites connected. Low flow, very high water level. Incoming tide. Overcast.	17/11/2020	11:29	5.89	48.20	7.42	29.5	51	3	32	0.04	0.73	*30*	*100*	*50*	0.156	0.001	*0.0005*	*0.001*	0.001	0.581	*0.001*	0.321	*0.0003*	0.003	0.001	*0.0050*	0.001
SW8-02	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	4/05/2021	13:27	7.52	11.20	6.85	23.9	39	3	27	0.08	0.71	*30*	*100*	*50*	0.331	*0.001*	*0.0005*	*0.001*	0.001	1.216	*0.001*	0.505	*0.0003*	0.005	*0.001*	0.0005	0.010

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-02	Photo taken	4/08/2016		7.66	28.30	7.29	17.0	28																					
SW8-02	Low tide.	7/12/2016		4.78	44.40	7.33	27.3	310	*1*	46	0.23	0.82	*25*	*50*	*50*														
SW8-02	No visible inflow to canal from adjacent construction site	3/01/2017		4.30	47.20	7.32	28.2	**378**																					
SW8-02	High tide, flowing in.	27/02/2017		5.33	47.40	7.53	25.3	31	3	17	0.20	0.82	*25*	*50*	*50*														
SW8-02	High, outflowing tide.	15/03/2017		6.53	21.70	6.93	23.6	34																					
SW8-02	No access - flooding	5/04/2017																											
SW8-02	Moderate flow, low water level, outflowing tide. u/s and d/s sites connected. Accurate turbidity reading could not be obtained. Overcast.	4/05/2017		8.55	20.50	6.80	22.5																						
SW8-02	Upstream and downstream sites connected. High flow. Outgoing tide. Very high water level. Drizzle.	13/06/2017		7.98	0.13	6.56	16.3	121	*1*	73	0.32	0.78	*25*	*50*	*50*														
SW8-02	Upstream and downstream sites connected. Outgoing tide, low flow, very high water level. Weather fine.	4/10/2017		5.61	41.20	7.53	23.7	13																					
SW8-02	No access - gate locked	7/11/2017																											
SW8-02	Upstream and downstream sites connected, low flow, low water level, outgoing tide. Weather clearing.	1/12/2017		6.77	24.00	6.91	28.6	127																					
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	4/01/2018		6.31	14.30	7.17	27.4	66	1	18	0.11	0.47	*25*	*50*	*50*														
SW8-01	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Rain.	2/02/2018		4.37	37.80	7.23	24.9	79																					
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Sampled at north side of river due to access issues. Weather fine.	7/03/2018		6.12	15.20	6.71	24.3	81	2	55	0.21	1.47	*25*	*50*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, outgoing tide, medium water level. Weather fine. Sample taken on north bank.	18/04/2018		7.03	31.80	7.70	24.3	32																					
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	1/05/2018		6.54	29.80	7.44	19.6	13	*1*	12	0.06	0.52	*25*	*50*	*50*														
SW8-01	Sampled at northern bank due to wet weather access issues. Upstream and downstream sites connected. Very low flow, very low water level. Incoming tide. Overcast.	8/06/2018	12:58	8.23	37.50	6.90	19.6	26																					

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	4/07/2018	13:08	7.97	32.10	6.62	18.5	14	*1*	11	0.03	0.30	*30*	*250*	*250*														
SW8-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	28/08/2018	8:43	7.36	46.20	7.15	17.0	46																				
SW8-01	Upstream and downstream sites connected. Medium flow, very low water level. Incoming tide. Rain.	4/09/2018	9:34	6.30	57.90	6.04	15.2	19	2	27	0.03	0.41	*30*	*250*	*250*														
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Sampled at northern bank due to access constraints. Drizzle.	12/10/2018	8:09	7.70	11.10	6.61	16.3	**154**																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Sampled from northern bank. Weather fine.	20/11/2018	9:04	6.55	24.40	7.15	24.6	65	4	14	0.09	0.68	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	24/12/2018	10:41	5.41	41.90	7.23	26.2	66																				
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	25/02/2019	14:23	6.73	53.30	7.72	25.2	44	3	58	0.19	0.72	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/03/2019	14:47	6.42	52.20	7.70	27.4	53																				
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	13:40	7.72	34.50	7.30	24.3	34	*1*	19	*0.01*	1.02	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Rain.	25/06/2019	11:21	9.19	19.80	6.60	13.6	46																				
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	5/07/2019	11:03	7.58	19.30	6.36	18.0	30	5	18	0.05	1.36	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	2/12/2019	14:50	6.50	52.80	7.61	27.7	35																				
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	18/01/2020	11:08	4.80	50.40	7.66	26.4	58	7	35	0.13	0.59	*50*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Drizzle.	4/02/2020	14:06	3.74	44.90	7.42	27.7	67																				
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	7/03/2020	12:49	4.16	7.51	6.83	27.9	51	3	27	0.21	1.51	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	11/04/2020	14:35	5.92	25.50	7.19	25.3	27																				

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	18/05/2020	11:30	7.13	33.10	7.49	20.7	25	2	10	0.06	0.41	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	11/06/2020	11:27	7.63	32.50	6.88	19.7	10																				
SW8-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	17/08/2020	13:00	8.85	11.00	6.56	20.4	68																				
SW8-02	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Rain.	16/12/2020	13:08	4.29	0.11	6.62	22.3	428	4	266	**0.55**	1.27	*30*	*100*	*50*	**2.901**	*0.001*	*0.0005*	0.002	0.004	**2.572**	*0.001*	0.073	*0.0003*	0.004	0.001	*0.0050*	0.008
SW8-02	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	15/02/2021	15:58	7.62	33.30	6.78	26.8	37																				
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	6/05/2021	15:01	8.71	9.88	6.88	21.7	34	*1*	30	0.12	0.75	*30*	*100*	*50*	0.454	*0.001*	*0.0005*	*0.001*	*0.001*	1.134	*0.001*	**0.551**	*0.0003*	0.006	*0.001*	*0.0005*	0.011
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					44.26	7.40		80	3	51	0.22	1.20	30	100	50	1.954	0.001	0.0013	0.002	0.012	2.001	0.002	0.347	0.0003	0.008	0.003	0.0032	0.015
P20				5.19	14.00	6.60																						
St Dev					16.50	0.48																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW05		31/01/2013		N/A	0.12	N/A	N/A	N/A	*3*	27	0.02	0.70	*50*	*50*	*50*	0.370	0.001	0.0001	0.001	0.002	0.470	0.001	0.024	0.0001	0.002	0.005	0.0005	0.003
SW05		28/02/2013		2.02	0.08	5.45	24.8	N/A	*3*	30	0.21	1.20	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		27/05/2013		9.30	18.10	6.70	18.1	22	*3*	38	0.03	0.30	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		4/07/2013		8.10	0.22	6.80	n/a	232	*3*	149	0.51	1.40	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.003	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		29/07/2013		8.70	13.40	6.60	23.4	17	*3*	14	0.21	0.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		19/11/2013		7.40	43.20	6.60	24.7	19	*3*	30	0.03	0.70	N/A	N/A	N/A	N/A	N/A	0.0025	N/A	0.025	N/A	0.005	N/A	N/A	N/A	N/A	N/A	N/A
SW05		25/11/2013		7.60	39.20	7.40	26.0	41	*3*	24	0.19	0.05	N/A	N/A	N/A	N/A	N/A	0.0025	N/A	0.025	N/A	0.005	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																												
SW8-01	Photo taken	4/08/2016		7.61	27.30	6.91	17.3	51																				
SW8-01	Low tide.	7/12/2016		4.14	43.90	7.12	27.0	534	*1*	48	0.23	0.85	*25*	*50*	*50*													

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-01		3/01/2017		4.45	47.30	7.39	28.1	135																				
SW8-01	High tide, flowing in.	27/02/2017		5.18	46.80	7.35	25.3	59	2	19	0.17	0.74	*25*	*50*	*50*													
SW8-01	High, outflowing tide.	15/03/2017		7.37	20.30	6.90	23.6	45																				
SW8-01	No access - flooding	5/04/2017																										
SW8-01	Moderate flow, low water level, outflowing tide. u/s and d/s sites connected. Accurate turbidity reading could not be obtained. Overcast.	4/05/2017		8.55	20.30	6.46	22.6																					
SW8-01	Upstream and downstream sites connected. High flow. Outgoing tide. Very high water level. Drizzle.	13/06/2017		8.09	0.12	6.43	16.3	118	*1*	80	0.34	0.78	*25*	*50*	*50*													
SW8-01	Upstream and downstream sites connected. Outgoing tide, low flow, very high water level. Weather fine.	4/10/2017		5.56	42.30	7.33	23.8	33																				
SW8-01	No access - locked gate	7/11/2017																										
SW8-01	Upstream and downstream sites connected, low flow, low water level, outgoing tide. Weather clearing.	1/12/2017		6.47	23.30	7.13	29.1	543																				
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	4/01/2018		5.76	14.40	6.95	27.1	58	2	20	0.11	0.47	*25*	*50*	*50*													
SW8-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Rain.	2/02/2018		4.36	38.30	7.31	25.2	69																				
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Sampled at north side of river due to access issues. Weather fine.	7/03/2018		5.89	14.70	6.84	24.2	80	*1*	54	0.21	1.42	*25*	*50*	*50*													
SW8-01	Upstream and downstream sites connected. Medium flow, outgoing tide, medium water level. Weather fine. Sample taken on north bank.	18/04/2018		6.87	31.60	7.59	24.5	29																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	1/05/2018		6.24	30.10	7.38	20.3	8	2	8	0.04	0.39	*25*	*50*	*50*													
SW8-02	Sampled at northern bank due to wet weather access issues. Upstream and downstream sites connected. Very low flow, very low water level. Incoming tide. Weather fine.	8/06/2018	12:52	7.57	33.40	6.55	20.2	36																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Sampled from north bank due to access issues. Overcast.	4/07/2018	13:14	7.74	32.40	6.81	18.3	14	*1*	14	0.04	0.31	*30*	*250*	*250*													
SW8-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	28/08/2018	8:55	7.15	46.30	7.35	17.2	21																				

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-02	Upstream and downstream sites connected. Medium flow, very low water level. Incoming tide. Rain.	4/09/2018	9:26	6.66	52.60	5.77	15.3	15	*1*	21	0.03	0.48	*30*	*250*	*250*														
SW8-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Sampled at northern bank due to access constraints. Drizzle.	12/10/2018	8:16	6.28	16.00	6.45	16.7	110																				
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Sampled from northern bank. Weather fine.	20/11/2018	9:12	6.06	24.20	7.28	25.3	40	4	17	0.08	0.66	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	24/12/2018	10:34	4.87	41.80	6.99	25.9	74																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	25/02/2019	14:13	6.94	52.90	7.54	25.2	51	3	53	0.15	0.66	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/03/2019	14:43	6.64	51.90	7.59	27.1	37																				
SW8-01	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	13:54	8.94	34.00	7.56	24.6	22	*1*	17	*0.01*	0.99	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Rain.	25/06/2019	11:14	9.70	15.80	6.53	13.5	48																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	5/07/2019	11:13	7.61	19.10	6.51	18.0	37	5	23	0.06	1.46	*30*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	2/12/2019	14:55	5.92	53.60	7.63	27.6	31																				
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Drizzle.	18/01/2020	10:58	5.20	49.80	7.63	26.5	54	6	50	0.11	0.55	*50*	*100*	*50*														
SW8-02	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Drizzle.	4/02/2020	14:11	3.37	44.80	7.41	28.2	75																				
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	7/03/2020	12:45	4.09	7.63	6.65	28.1	62	12	26	0.26	1.72	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	11/04/2020	14:31	6.08	25.40	7.09	25.7	34																				
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	18/05/2020	11:21	7.15	32.60	7.28	20.7	29	7	17	0.05	0.38	*30*	*100*	*50*														
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	11/06/2020	11:31	7.02	34.00	7.04	19.5	13																				

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	17/08/2020	13:05	9.34	10.80	6.90	20.7	96																					
SW8-01	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Rain.	16/12/2020	13:02	4.38	0.11	6.66	22.3	437	3	262	0.48	1.21	*30*	*100*	*50*	2.873	*0.001*	*0.0005*	0.002	0.004	2.560	*0.001*	0.094	*0.0003*	0.004	*0.001*	*0.0050*	0.008
SW8-01	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Rain.	15/02/2021	16:06	7.84	33.20	7.42	26.7	21																					
SW8-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	6/05/2021	15:06	8.93	9.53	6.86	22.0	35	*1*	25	0.08	0.61	*30*	*100*	*50*	0.576	*0.001*	*0.0005*	*0.001*	*0.001*	1.161	*0.001*	0.516	*0.0003*	0.011	*0.001*	*0.0005*	0.020

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-04	Photo taken	10/08/2016		9.59	0.28	5.16	24.8	27																					
SW8-04		9/09/2016		8.45	0.32	4.51	21.6	114	12	534	0.63	3.67	25	50	50														
SW8-04	Dry	10/10/2016																											
SW8-04	Dry	2/11/2016																											
SW8-04	Dry	14/12/2016																											
SW8-04	Dry	17/01/2017																											
SW8-04	Dry	1/02/2017																											
SW8-04	Dry	13/03/2017																											
SW8-04	Dry	21/04/2017																											
SW8-04	Upstream and downstream sites connected. No visible flow. Low water level. Could not obtain accurate DO reading due to low water level. Weather fine.	23/05/2017			0.22	5.91	21.8	21	5	53	0.20	1.64	25	50	50														
SW8-04	Dry	9/06/2017																											
SW8-04	Insufficient water to sample	13/07/2017																											
SW8-04	Insufficient water to monitor.	4/08/2017																											
SW8-04	Fine weather. U/S and D/S not connected. No observed flow. Dry.	1/09/2017																											
SW8-04	Insufficient water to sample. Not connected to upstream site.	25/10/2017																											
SW8-04	Insufficient water to sample. Not connected to upstream site.	22/11/2017																											
SW8-04	Insufficient water to sample. Not connected to upstream site. Weather fine.	15/12/2017																											
SW8-04	Dry - unable to sample. Weather fine.	23/01/2018																											
SW8-04	Dry - unable to sample. Weather fine.	16/02/2018																											
SW8-04	Insufficient water to sample. Weather fine.	20/03/2018																											
SW8-04	No access, exclusion zone blocking access track.	5/04/2018																											
SW8-04	No access, exclusion zone blocking access track.	4/05/2018																											
SW8-04	Upstream and downstream sites not connected. No visible flow, low water level. Sampled amongst heavy vegetation. Weather fine.	15/06/2018	11:28	0.71	0.38	5.66	12.5	4																					
SW8-04	Upstream and downstream sites not connected. No visible flow. Sampled in bucket due to very low water level- could not obtain oxygen measurement. Weather fine.	18/07/2018	13:16		0.70	7.05	12.9	29	1	41	0.16	0.61	30	250	250														

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-04	Dry, not sampled.	9/08/2018	10:44																										
SW8-04	Dry - not sampled.	21/09/2018	13:42																										
SW8-04	Insufficient water to sample.	3/10/2018	11:11																										
SW8-04	Insufficient water to sample.	8/11/2018	9:30																										
SW8-04	No visible flow, very low water level. Slight surface bacteria layer, heavy aquatic vegetation. Red brown algae present. Overcast.	7/12/2018	14:24	2.40	**0.69**	**6.55**	23.9	14																					
SW8-04	Dry, not sampled.	11/01/2019	13:30																										
SW8-04	Dry, not sampled.	13/02/2019	10:47																										
SW8-04	Dry, not sampled.	15/03/2019	11:12																										
SW8-04	Dry, not sampled.	11/04/2019	8:39																										
SW8-04	Dry, not sampled.	8/05/2019																											
SW8-04	Insufficient water to sample.	3/06/2019	15:15																										
SW8-04	Upstream and downstream sites not connected. Very low flow, medium water level, algae. Weather fine.	9/07/2019	11:57	9.19	**0.19**	**6.13**	17.4	8	*1*	6	0.11	**1.32**	*30*	*100*	*50*														
SW8-04	Insufficient water to sample.	15/08/2019	11:49																										
SW8-04	Insufficient water to monitor.	6/09/2019	13:29																										
SW8-04	Dry, not sampled.	2/10/2019	9:15																										
SW8-04	Dry, not sampled.	6/11/2019	8:43																										
SW8-04	Dry, not sampled.	5/12/2019	12:42																										
SW8-04	Insufficient water to sample.	9/01/2020	11:16																										
SW8-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	17/02/2020	12:54	0.02	0.24	**5.52**	27.2	**33**																					
SW8-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/03/2020	11:49	0.33	0.40	5.00	26.4	13	4	1	0.07	0.87	*30*	*100*	*50*														
SW8-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	1/04/2020	14:08	3.14	0.41	5.07	25.0	12																					
SW8-04	No visible flow, very low water level. Overcast.	14/05/2020	13:24	1.64	**0.57**	4.45	17.3	13	2	9	0.03	0.45	*30*	*100*	*50*														
SW8-04	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	10/06/2020	10:18	3.83	0.41	4.76	16.3	2																					
SW8-04	Dry, not sampled.	17/11/2020																											
SW8-04	Upstream and downstream sites connected. High flow, high water level. Weather fine.	4/05/2021	14:23	4.18	0.14	4.71	20.6	0	*1*	1	0.03	0.62	*30*	*100*	*50*	**0.828**	*0.001*	*0.0005*	0.001	*0.001*	**1.455**	*0.001*	0.018	*0.0003*	*0.001*	*0.001*	*0.0005*	**0.007**

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.49	4.50		24	4	38	0.08	1.01	30	100	50	0.730	0.001	0.0001	0.001	0.001	1.254	0.001	0.022	0.0002	0.001	0.004	0.0005	0.003
P20				1.49	0.21	4.19																							
St Dev					0.19	1.25																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW06		3/04/2013		7.30	0.21	4.50	26.4	9	*3*	*3*	0.04	0.60	*50*	*50*	*50*	0.420	0.001	0.0001	0.001	0.001	1.030	0.001	0.024	0.0001	0.001	0.005	0.0005	0.003
SW06		28/04/2013		9.05	0.19	9.30	24.7	2	*3*	*3*	0.06	0.90	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		27/08/2013		8.40	0.49	4.00	18.3	8	*3*	48	0.15	1.70	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		23/09/2013		8.40	0.58	4.30	25.4	12	*3*	37	0.08	1.00	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06	Dry	28/10/2013																											
SW06	Dry	16/12/2013																											
Upstream Monitoring																													
SW8-03	Photo taken	10/08/2016		3.97	0.27	4.84	15.4	2																					
SW8-03		9/09/2016		1.98	0.47	4.16	16.8	98	4	12	0.03	0.47	*25*	*50*	*50*														
SW8-03	Dry	10/10/2016																											
SW8-03	Water depth insufficient for sample	2/11/2016																											
SW8-03	Dry	14/12/2016																											
SW8-03	Dry	17/01/2017																											
SW8-03	Dry	1/02/2017																											
SW8-03	Dry	13/03/2017																											
SW8-03	High water level. No visible flow. Overcast.	21/04/2017		1.83	0.27	4.30	19.1	24																					
SW8-03	Upstream and downstream sites connected. No visible flow. High water level. Weather fine.	23/05/2017		3.56	0.21	4.35	17.6	18	4	43	0.07	0.92	*25*	*50*	*50*														
SW8-03	Insufficient water to monitor.	9/06/2017																											
SW8-03	Upstream and downstream sites connected. No visible flow. Low water level. Overcast.	13/07/2017		3.12	0.28	4.24	12.5	16	*1*	3	0.02	0.32	*25*	*50*	*50*														
SW8-03	Insufficient water to monitor.	4/08/2017																											

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-03	Fine weather. Dry.	1/09/2017																											
SW8-03	Insufficient water to sample.	25/10/2017																											
SW8-03	Dry	22/11/2017																											
SW8-03	Dry	15/12/2017																											
SW8-03	Dry - unable to sample. Weather fine.	23/01/2018																											
SW8-03	Dry - unable to sample. Weather fine.	16/02/2018																											
SW8-03	Insufficient water to sample. Weather fine.	20/03/2018																											
SW8-03	Insufficient water to sample.	5/04/2018																											
SW8-03	Insufficient water to sample.	4/05/2018																											
SW8-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	15/06/2018	11:16	1.49	0.48	4.43	13.3	5																					
SW8-03	Insufficient water to sample.	18/07/2018	13:03																										
SW8-03	Dry, not sampled.	9/08/2018	9:12																										
SW8-03	Dry - not sampled.	21/09/2018	14:08																										
SW8-03	Dry, not sampled.	3/10/2018	9:53																										
SW8-03	Insufficient water to sample.	8/11/2018	8:05																										
SW8-03	Dry, not sampled.	7/12/2018	13:57																										
SW8-03	Dry, not sampled.	11/01/2019	13:21																										
SW8-03	Dry, not sampled.	13/02/2019	10:47																										
SW8-03	Dry, not sampled.	15/03/2019	11:12																										
SW8-03	Dry, not sampled.	11/04/2019	8:22																										
SW8-03	Dry, not sampled.	8/05/2019																											
SW8-03	Dry, not sampled.	3/06/2019	15:18																										
SW8-03	Upstream and downstream sites not connected. No visible flow, sampled in bucket of water due to very low water level. Weather fine.	9/07/2019	11:41	2.41	0.85	4.43	16.8	29	*1*	9	0.10	1.07	*30*	*100*	*50*														
SW8-03	Dry, not sampled	15/08/2019	11:42																										
SW8-03	Dry, not sampled.	6/09/2019	13:40																										
SW8-03	Dry, not sampled.	2/10/2019	9:06																										
SW8-03	Dry, not sampled.	6/11/2019	8:46																										
SW8-03	Dry, not sampled.	5/12/2019	12:42																										

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-03	Insufficient water to sample.	9/01/2020	11:17																										
SW8-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	17/02/2020	12:34	0.00	0.33	4.19	25.3	10																					
SW8-03	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/03/2020	11:25	0.37	0.58	4.45	24.2	2	25	*1*	0.05	0.56	*30*	*100*	*50*														
SW8-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	1/04/2020	14:22	0.70	0.29	4.47	21.8	31																					
SW8-03	Insufficient water to sample.	14/05/2020	13:20																										
SW8-03	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	10/06/2020	10:27	3.12	0.42	4.14	15.2	5																					
SW8-03	Dry, not sampled.	17/11/2020																											
SW8-03	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	4/05/2021	14:16	2.77	0.12	4.69	18.3	9	2	2	0.03	0.63	*30*	*100*	*50*	0.807	*0.001*	*0.0005*	0.001	*0.001*	1.310	*0.001*	0.012	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-04	Photo taken	4/08/2016		7.20	0.16	5.97	17.4	139																					
SW8-04	Dry	6/12/2016																											
SW8-04	Dry	3/01/2016																											
SW8-04	Dry	27/02/2017																											
SW8-04	Steady flow, heavy rainfall.	15/03/2017		3.43	0.09	6.01	23.0	69																					
SW8-04	Very high water level. U/s and d/s sites connected. Showers and overcast weather.	5/04/2017		0.00	0.07	5.68	20.5	17	4	4	0.20	1.09	*25*	*50*	*50*														
SW8-04	Slight flow, u/s and d/s sites not connected. Insufficient water to obtain accurate turbidity reading.	4/05/2017		7.24	0.37	4.45	21.2																						
SW8-04	Upstream and downstream sites connected. Low to moderate flow. Very high water level. Weather fine.	13/06/2017		3.80	0.04	5.75	17.9	40	2	13	0.15	0.68	*25*	*50*	*50*														
SW8-04	Dry	4/10/2017																											
SW8-04	Insufficient water to sample	6/11/2017																											
SW8-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	2/12/2017		2.92	0.23	5.79	27.2	32																					
SW8-04	Upstream and downstream sites not connected. No visible flow. Insufficient water to sample. Weather fine.	4/01/2018																											
SW8-04	Dry, not sampled.	2/02/2018																											
SW8-04	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	7/03/2018		1.64	0.17	5.28	24.7	51	*1*	15	0.14	1.28	*25*	*50*	*50*														
SW8-04	Dry	19/04/2018																											
SW8-04	No wet weather access to site	1/05/2018																											
SW8-04	No wet weather access to site	8/06/2018																											
SW8-04	Upstream and downstream sites not connected. No visible flow, medium water level. Water very shallow at designated sample point, sampled approx. 250 m upstream. Overcast.	4/07/2018	12:09	2.26	0.24	5.76	16.3	20	11	89	0.37	1.13	*30*	*250*	*250*														
SW8-04	Dry, not sampled.	28/08/2018	9:40																										
SW8-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	4/09/2018	10:53	3.38	0.48	5.48	15.4	22	3	9	0.15	2.48	*30*	250	250														
SW8-04	No visible flow, low water level. Drizzle.	11/10/2018	13:09	3.91	0.17	5.88	20.6	55																					
SW8-04	Insufficient water to sample.	20/11/2018	9:59																										
SW8-04	Dry, not sampled.	24/12/2018	9:51																										

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-04	Dry, not sampled.	25/02/2019	15:15																										
SW8-04	Dry, not sampled.	8/03/2019	15:12																										
SW8-04	Dry, not sampled.	3/04/2019	13:57																										
SW8-04	Low flow, low water level. Overcast.	25/06/2019	9:22	5.11	0.17	**5.72**	13.3	**23**																					
SW8-04	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	5/07/2019	9:26	0.91	0.16	**5.70**	16.2	**26**	4	16	**0.32**	**1.98**	*30*	*100*	*50*														
SW8-04	Dry, not sampled.	2/12/2019	14:29																										
SW8-04	Dry, not sampled.	18/01/2020	12:06																										
SW8-04	Dry, not sampled.	4/02/2020	13:37																										
SW8-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	7/03/2020	13:26	2.62	0.43	**5.31**	26.2	12	**12**	4	0.04	0.43	*30*	**240**	*50*														
SW8-04	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/04/2020	15:03	5.57	0.24	5.23	25.2	**21**																					
SW8-04	Upstream and downstream sites not connected. Low flow, medium water level. Weather fine.	18/05/2020	12:12	4.69	0.48	4.83	19.1	4	3	**20**	0.03	0.41	*30*	*100*	*50*														
SW8-04	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/06/2020	12:05	5.16	0.40	5.49	18.0	**16**																					
SW8-04	Upstream and downstream sites not connected. Very low flow, low water level. Weather fine.	17/08/2020	13:32	5.11	0.31	4.63	17.1	6																					
SW8-04	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	15/12/2020	11:16	4.14	0.15	4.99	23.8	12	**6**	1	0.09	0.70	*30*	*100*	*50*	0.318	*0.001*	*0.0005*	*0.001*	*0.001*	0.207	*0.001*	0.090	*0.0003*	0.001	0.001	*0.0050*	0.008
SW8-04	No visible flow, very low water level. Weather fine.	15/02/2021	15:32	**1.42**	0.41	4.79	23.5	**36**																					
SW8-04	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	6/05/2021	15:28	4.00	0.15	5.17	17.8	8	*1*	7	0.04	0.84	*30*	*100*	*50*	0.770	*0.001*	*0.0005*	*0.001*	*0.001*	1.374	*0.001*	0.025	*0.0003*	*0.001*	*0.001*	*0.0005*	0.005
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.51	5.12		15	3	17	0.09	1.19	30	100	50	1.191	0.001	0.0002	0.001	0.001	1.893	0.001	0.122	0.0003	0.003	0.003	0.0032	0.014
P20				2.38	0.14	4.18																							
St Dev					0.22	0.76																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW06		1/02/2013		N/A	0.18	N/A	N/A	N/A	*3*	*3*	0.30	1.50	*50*	*50*	*50*	0.860	0.001	0.0001	0.001	0.002	2.270	0.001	0.110	0.0001	0.002	0.005	0.0005	0.013
SW06		28/02/2013		3.44	0.13	4.14	27.9	N/A	*3*	21	0.07	1.00	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW06		27/05/2013		9.20	0.14	4.20	19.6	2	*3*	*3*	0.03	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		5/07/2013		6.30	0.12	4.20	16.6	1	*3*	*3*	*0.01*	0.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		29/07/2013		9.60	0.20	4.10	22.3	12	*3*	14	0.07	0.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		19/11/2013		10.00	0.51	6.00	27.8	122	*3*	168	0.61	5.10	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		25/11/2013		9.30	0.22	7.10	29.0	23	*3*	17	0.16	1.80	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.002	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW8-03	Photo taken	4/08/2016		4.82	0.42	4.81	14.5	9																					
SW8-03	Dry	6/12/2016																											
SW8-03	Dry	3/01/2016																											
SW8-03	Dry	27/02/2017																											
SW8-03	Steady flow, heavy rainfall.	15/03/2017		5.37	0.68	5.47	22.9	20																					
SW8-03	Very high water level. U/s and d/s sites connected. Showers and overcast weather.	5/04/2017		2.26	0.11	5.12	19.0	22	2	3	0.05	1.19	*25*	*50*	*50*														
SW8-03	No visible flow, no connection between u/s and d/s sites.	4/05/2017		2.41	0.47	4.18	18.0	5																					
SW8-03	Upstream and downstream sites connected. No visible flow. Very high water level. Sample point approx. 30 m SW of designated sample point due to high water level. Drizzle.	14/06/2017		3.23	0.12	5.13	16.5	0	*1*	9	0.05	1.07	*25*	*50*	*50*														
SW8-03	Dry	4/10/2017																											
SW8-03	Insufficient water to sample	6/11/2017																											
SW8-03	Dry	2/12/2017																											
SW8-03	Upstream and downstream sites not connected. No visible flow, very low water level. Insufficient water to sample. Weather fine.	4/01/2018																											
SW8-03	Dry, not sampled.	2/02/2018																											
SW8-03	Upstream and downstream sites connected. No visible flow, very high water level. Overcast.	7/03/2018		3.39	0.24	4.21	21.6	0	*1*	6	0.03	0.82	*25*	*50*	*50*														
SW8-03	Upstream and downstream sites not connected. No visible flow, dry. Weather fine.	19/04/2018																											
SW8-03	No wet weather access to site	1/05/2018																											
SW8-03	No wet weather access to site	8/06/2018																											
SW8-03	Upstream and downstream sites not connected. No visible flow, low water level. Sampled in shallow pool. Overcast.	4/07/2018	11:44	2.05	0.52	4.07	15.8	6	*1*	58	0.09	0.81	*30*	*250*	*250*														

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-03	Dry, not sampled.	28/08/2018	9:41																										
SW8-03	Insufficient water to montior.	4/09/2018	11:54																										
SW8-03	Dry, not sampled.	11/10/2018	13:24																										
SW8-03	Dry, not sampled.	20/11/2018	9:35																										
SW8-03	Dry, not sampled.	24/12/2018	9:35																										
SW8-03	Dry, not sampled.	25/02/2019	15:01																										
SW8-03	Dry, not sampled.	8/03/2019	15:10																										
SW8-03	Dry, not sampled.	3/04/2019	13:57																										
SW8-03	Insufficient water to monitor.	25/06/2019	9:45																										
SW8-03	Upstream and downstream sites connected. No visible flow, low water level. Rain.	5/07/2019	10:15	0.36	0.84	4.27	16.5	10	7	6	0.04	0.79	*30*	*100*	*50*														
SW8-03	Dry, not sampled.	2/12/2019	14:30																										
SW8-03	Dry, not sampled.	18/01/2020	12:05																										
SW8-03	Dry, not sampled.	4/02/2020	13:37																										
SW8-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	7/03/2020	13:13	1.11	0.27	4.44	23.6	0	9	1	0.02	0.52	*30*	*100*	*50*														
SW8-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	11/04/2020	14:53	2.98	0.16	4.73	20.9	0																					
SW8-03	Upstream and downstream sites not connected. Very low flow, low water level. Weather fine.	18/05/2020	11:58	2.56	0.43	4.32	17.7	1	3	1	0.02	0.48	*30*	*100*	*50*														
SW8-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	11/06/2020	11:56	3.67	0.23	4.78	16.8	2																					
SW8-03	Upstream and downstream sites not connected. No visible flow, very low water level. Insuffiecient water to sample DO and turbidity. Weather fine.	17/08/2020	13:22		0.54	4.76	16.1																						
SW8-03	Upstream and downstream sites connected. Very low flow, very high water level. Rain.	15/12/2020	11:04	3.30	0.72	3.89	22.2	3	2	5	0.05	0.51	*30*	*100*	*50*	1.411	*0.001*	*0.0005*	*0.001*	*0.001*	0.432	*0.001*	0.130	*0.0003*	0.003	*0.001*	*0.0050*	0.014
SW8-03	Insufficient water to monitor.	15/02/2021	15:29																										
SW8-03	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	6/05/2021	15:23	3.82	0.14	4.79	16.7	10	*1*	4	0.03	0.83	*30*	*100*	*50*	0.691	*0.001*	*0.0005*	0.001	*0.001*	1.326	*0.001*	0.020	*0.0003*	*0.001*	*0.001*	*0.0005*	0.012

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-06	Photo taken. Accurate turbidity reading could not be obtained	10/08/2016		9.52	0.19	5.17	22.4																						
SW8-06	Accurate turbidity reading could not be obtained	9/09/2016		8.20	0.18	4.75	20.6		4	50	0.08	0.54	*25*	*50*	*50*														
SW8-06	Dry	10/10/2016																											
SW8-06	Water depth insufficient for sampling and monitoring	2/11/2016																											
SW8-06	Very low water level.	14/12/2016		5.80	0.35	6.38	32.5	23																					
SW8-06	Dry	17/01/2017																											
SW8-06	Insufficent water for sampling and monitoring	3/02/2017																											
SW8-06	Insufficent water for sampling and monitoring	13/03/2017																											
SW8-06	Low flow. U/s and d/s sites connected. Overcast.	21/04/2017		5.71	0.13	5.09	23.5	23																					
SW8-06	Upstream and downstream sites connected. Steady flow, high water level. Weather fine.	23/05/2017		7.01	0.14	4.69	20.9	16	2	1	0.01	0.51	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. Low to moderate water level and flow. Weather fine.	9/06/2017		8.49	0.15	5.35	19.3	7																					
SW8-06	Upstream and downstream sites connected. Steady flow. Medium water level. Overcast.	13/07/2017		6.73	0.13	4.66	15.2	18	*1*	1	0.02	0.37	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	4/08/2017		5.44	0.16	5.00	17.3	2																					
SW8-06	Fine weather. U/S and D/S connected. No observed flow. Low water level.	7/09/2017		7.30	0.17	5.34	19.4	4	*2*	107	0.07	0.92	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. Slight flow, low water level. Weather fine.	25/10/2017		6.83	0.15	5.55	25.8	3																					
SW8-06	Upstream and downstream sites connected. Slight flow, low water level. Weather fine.	22/11/2017		6.30	0.17	5.37	21.2	3	*1*	9	0.02	0.28	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Heavy algal growth. Weather fine.	15/12/2017		3.00	0.16	5.41	23.4	2																					
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Surface bacteria layer, moderate algal growth. Weather fine.	23/01/2018		0.12	0.20	6.19	22.3	26	*1*	59	0.04	0.34	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	16/02/2018		1.29	0.16	5.60	25.5	9																					
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2018		1.60	0.15	5.06	22.4	2	*1*	24	0.04	0.37	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/04/2018		4.03	0.16	5.50	22.9	1																					
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/05/2018		4.12	0.14	4.79	19.7	3	*3*	1	0.01	0.28	*30*	*250*	*250*														

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-06	Upstream and downstream sites connected. Low flow, low water level. Some green algae present. Weather fine.	15/06/2018	11:47	4.58	0.16	4.64	15.3	10																					
SW8-06	Upstream and downstream sites connected. Very low flow, very low water level. Heavy aquatic veg, some brown and green algae. Weather fine.	18/07/2018	13:49	5.06	0.16	5.22	15.4	4	*1*	2	0.02	0.08	*30*	*250*	*250*														
SW8-06	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	9/08/2018	9:24	**2.77**	0.16	**6.39**	12.1	11																					
SW8-06	Upstream and downstream sites connected. Very low flow, low water level. Brown algae present. Weather fine.	21/09/2018	14:21	4.91	0.22	**5.77**	20.3	14	4	5	*0.00*	0.14	*30*	**250**	**250**														
SW8-06	Upstream and downstream sites connected. Very low flow, very low water level. Heavy aquatic vegetation growth. Brown algae present. Weather fine.	3/10/2018	10:10	**3.12**	**0.29**	**5.91**	18.3	7																					
SW8-06	Upstream and downstream sites connected. Very low flow, low water level. Slight bacteria layer, light tannin stain present. Drizzle.	8/11/2018	8:32	**1.20**	**0.15**	5.49	21.8	19	*1*	26	0.03	0.30	*30*	280	*50*														
SW8-06	Insufficient water to sample.	7/12/2018	14:23																										
SW8-06	Insufficient water to sample.	11/01/2019	13:40																										
SW8-06	Dry, not sampled.	13/02/2019	10:50																										
SW8-06	Dry, not sampled.	15/03/2019	11:10																										
SW8-06	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	11/04/2019	10:58	4.91	0.32	**6.24**	22.6	30																					
SW8-06	Dry, not sampled.	8/05/2019																											
SW8-06	Upstream and downstream sites connected. No visible flow, very low water level. Bacteria layer on surface. Weather fine.	3/06/2019	15:04	7.45	0.23	**6.13**	20.8	**55**																					
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Green algae and heavy aquatic vegetation. Weather fine.	9/07/2019	12:35	**3.51**	0.21	5.52	17.3	8	2	1	*0.01*	0.21	*30*	*100*	*50*														
SW8-06	Upstream and downstream sites connected. Very low flow, very low water level. Green and brown algae. Weather fine.	15/08/2019	11:26	4.22	0.17	**5.71**	18.2	10																					
SW8-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/09/2019	13:50	**1.97**	**0.31**	**6.18**	26.9	27	*1*	**59**	**0.08**	0.74	*30*	**240**	*50*														
SW8-06	Insufficient water to monitor	2/10/2019	9:19																										
SW8-06	Dry, not sampled.	6/11/2019	8:52																										
SW8-06	Insufficient water to sample.	5/12/2019	12:41																										
SW8-06	Insufficient water to sample.	9/01/2020	11:06																										

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	17/02/2020	13:29	2.03	0.16	4.62	26.9	0																					
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Drizzle.	5/03/2020	12:10	2.00	0.18	5.09	25.9	3	16	4	0.04	0.25	*30*	*100*	*50*														
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	1/04/2020	13:38	4.64	0.17	4.83	24.4	8																					
SW8-06	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	14/05/2020	13:38	4.09	0.20	4.95	19.9	7	*1*	8	0.02	0.20	*30*	*100*	*50*														
SW8-06	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	10/06/2020	9:58	5.55	0.22	4.64	17.0	7																					
SW8-06	Dry, not sampled.	17/11/2020																											
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/05/2021	9:26	4.50	0.14	5.07	19.0	2	*1*	27	0.03	0.49	*30*	*100*	*50*	**0.748**	*0.001*	*0.0005*	**0.001**	*0.001*	1.151	*0.001*	**0.014**	*0.0003*	*0.001*	*0.001*	*0.0005*	**0.004**
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.25	5.00		32	4	33	0.07	0.85	30	190	50	0.653	0.001	0.0001	0.001	0.001	1.341	0.001	0.014	0.0002	0.001	0.004	0.0005	0.002
P20				3.57	0.16	4.39																							
St Dev					0.07	0.84																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW07		2/04/2013		5.55	0.17	3.80	26.4	12	6	*3*	0.01	0.40	*50*	*50*	*50*	0.430	0.001	0.0001	0.001	0.001	0.780	0.001	0.014	0.0001	0.001	0.005	0.0005	0.003
SW07		29/04/2013		8.70	0.14	8.90	21.8	2	*3*	*3*	*0.01*	0.40	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		27/08/2013		5.30	0.20	4.50	17.6	N/A	*3*	16	*0.01*	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		23/09/2013		6.10	0.19	4.30	22.3	7	*3*	35	0.02	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		28/10/2013		1.90	0.35	4.50	19.9	42	*3*	56	0.21	2.10	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.002	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		16/12/2013		3.10	0.32	5.30	26.0	138	*3*	40	0.18	3.40	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW8-05	Photo taken	10/08/2016		8.82	0.19	5.07	22.0	0																					
SW8-05		9/09/2016		9.18	0.19	4.62	19.7	4	4	4	0.03	0.32	*25*	*50*	*50*														
SW8-05	Dry	10/10/2016																											
SW8-05	Water depth insufficient for sample.	2/11/2016																											

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-05	Very low water level.	14/12/2016		6.93	0.37	4.53	35.5	59																				
SW8-05	Dry	17/01/2017																										
SW8-05	Insufficent water for sampling and monitoring	3/02/2017																										
SW8-05	Insufficent water for sampling and monitoring	13/03/2017																										
SW8-05	Low flow, mid water level. U/s and d/s sites connected. Overcast.	21/04/2017		5.86	0.15	4.39	23.8	31																				
SW8-05	Upstream and downstream sites connected. Steady flow, high water level. Weather fine.	23/05/2017		7.74	0.16	4.40	20.4	4	4	31	0.09	1.06	*25*	*50*	*50*													
SW8-05	Upstream and downstream sites connected. Low to moderate water level and flow. Weather fine.	9/06/2017			0.17	4.51	18.2	11																				
SW8-05	Upstream and downstream sites connected. Steady flow. Medium water level. Overcast.	13/07/2017		7.08	0.14	4.34	14.2	21	*1*	11	0.02	0.41	*25*	*50*	*50*													
SW8-05	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	4/08/2017		5.59	0.16	4.60	17.4																					
SW8-05	Fine weather. U/S and D/S connected. No observed flow. Insufficient water for sample.	7/09/2017																										
SW8-05	Insufficient water to sample.	25/10/2017																										
SW8-05	Upstream and downstream sites connected. Slight flow, low water level. Weather fine.	22/11/2017		7.78	0.20	4.54	21.8	10	*1*	1	0.02	0.22	*25*	*50*	*50*													
SW8-05	Insufficient water to sample, heavy aquatic vegetation and algal growth. Weather fine.	15/12/2017																										
SW8-05	Upstream and downstream sites connected. No visible flow. Insufficient water to sample. Weather fine.	23/01/2018																										
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Unable to take DO reading due to very low water level. Weather fine.	16/02/2018			0.22	4.87	26.4	14																				
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2018		3.81	0.20	4.40	22.8	8	2	30	0.05	0.54	*25*	*50*	*50*													
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	5/04/2018		9.02	0.21	4.80	25.8	7																				
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/05/2018		6.98	0.15	4.52	19.9	9	*1*	3	0.02	0.40	*30*	*250*	*250*													
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2018	11:42	8.71	0.19	4.31	15.0	6																				
SW8-05	Upstream and downstream sites connected. Very low flow. Abundant aquatic veg. Sample water collected in bucket due to very low water level- could not obtain oxygen measurement. Weather fine.	18/07/2018	13:36		0.24	5.26	16.3	3	4	3	0.02	0.17	*30*	*250*	*250*													

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-05	Upstream and downstream sites connected. Very low flow. Could not obtain turbidity reading due to very low water level and heavy aquatic vegetation. Weather fine.	9/08/2018	9:32	4.72	0.15	5.02	11.8	196																				
SW8-05	Heavy aquatic vegetation, very low water level - insufficient water to sample. Weather fine.	21/09/2018	14:30																									
SW8-05	Insufficient water to sample, heavy aquatic vegetation growth.	3/10/2018	10:12																									
SW8-05	Upstream and downstream sites connected. No visible flow. Heavy aquatic vegetation, water dark brown. Sampled in bucket due to very low water level- no oxygen reading. Overcast.	8/11/2018	8:16		0.30	5.72	22.7	38	12	158	0.42	2.25	*30*	300	*50*														
SW8-05	Insufficient water to sample.	7/12/2018	14:23																									
SW8-05	Dry.	10/01/2019	13:35																									
SW8-05	Dry, not sampled.	13/02/2019	10:56																									
SW8-05	Dry, not sampled.	15/03/2019	11:11																									
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Heavy aquatic vegetation. Overcast.	11/04/2019	11:05	7.06	0.39	5.36	23.9	82																				
SW8-05	Dry, not sampled.	8/05/2019																										
SW8-05	Insufficient water to sample.	3/06/2019	14:50																									
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/07/2019	12:42	4.50	0.27	4.90	17.3	7	2	3	0.01	0.23	*30*	*100*	*50*													
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Brown algae. Weather fine.	15/08/2019	11:33	6.25	0.25	4.78	16.9	6																				
SW8-05	Insufficient water to monitor.	6/09/2019	13:50																									
SW8-05	Dry, not sampled.	2/10/2019	9:24																									
SW8-05	Dry, not sampled.	6/11/2019	8:50																									
SW8-05	Insufficient water to sample.	5/12/2019	12:40																									
SW8-05	Insufficient water to sample.	9/01/2020	11:06																									
SW8-05	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	17/02/2020	13:24	0.00	0.19	4.60	26.4	12																				
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	5/03/2020	12:02	0.40	0.20	4.51	25.4	6	8	1	0.03	0.37	*30*	*100*	*50*													
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	1/04/2020	13:31	3.41	0.19	4.44	23.9	5																				
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	14/05/2020	13:47	6.09	0.23	4.37	18.6	12	*1*	19	0.03	0.44	*30*	*100*	*50*													

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	10/06/2020	10:03	4.41	0.24	4.38	16.6	6																				
SW8-05	Dry, not sampled.	17/11/2020																										
SW8-05	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	4/05/2021	9:37	2.61	0.15	4.84	18.6	3	*1*	2	0.03	0.47	*30*	*100*	*50*	0.709	*0.001*	*0.0005*	0.001	*0.001*	1.481	*0.001*	0.012	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-06		4/08/2016		7.32	0.19	5.81	16.4	6																					
SW8-06	Not possible to obtain accurate turbidity reading due to shallow water.	6/12/2016		4.30	0.34	6.38	28.8		*1*	29	0.07	9.34	*25*	*50*	*50*														
SW8-06	Water too shallow for DO reading. Readings for other parameters taken in jar.	3/01/2017			0.34	6.41	26.4	23																					
SW8-06	Insufficient water for sampling and monitoring	27/02/2017																											
SW8-06	Heavy rain. Strong flow. Upstream and downstream sites connected.	15/03/2017		6.24	0.10	6.57	23.9	53																					
SW8-06	No access - water over access road	5/04/2017																											
SW8-06	Moderate flow, u/s and d/s sites connected. Overcast.	4/05/2017		6.08	0.18	5.18	20.4	16																					
SW8-06	Not safe to access. Haul road closed due to flooding.	13/06/2017																											
SW8-06	Insufficient water to sample.	4/10/2017																											
SW8-06	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	6/11/2017		5.94	0.19	5.28	24.5	19	*1*	9	0.04	0.47	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	2/12/2017		4.15	0.18	5.28	23.1	0																					
SW8-06	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	4/01/2018		4.73	0.19	5.36	23.4	0	*1*	2	0.02	0.18	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Water milky blue colour. Rain.	2/02/2018		3.74	0.22	6.36	21.4	32																					
SW8-06	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		4.96	0.14	5.46	25.6	67	2	13	0.07	0.65	*25*	*50*	*50*														
SW8-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/04/2018		2.02	0.15	5.98	21.7	37																					
SW8-06	No wet weather access to site	1/05/2018																											
SW8-06	No wet weather access to site	8/06/2018																											
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	4/07/2018	11:21	6.29	0.20	5.03	17.3	9	*1*	10	0.03	0.20	*30*	*250*	*250*														
SW8-06	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	28/08/2018	9:39	6.48	0.25	6.86	14.4	11																					
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	4/09/2018	11:29	5.40	0.32	4.94	15.3	50	4	22	0.06	0.48	*30*	*250*	*250*														
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	11/10/2018	13:48	4.53	0.19	5.49	19.2	44																					

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-06	Upstream and downstream sites connected. Low flow, low water level. Brown algae present, abundant aquatic vegetation. Weather fine.	20/11/2018	10:22	2.47	0.15	5.43	20.3	0	*1*	10	0.01	0.17	*30*	*100*	*50*														
SW8-06	Insufficient water to sample, red algae present, heavy aquatic vegetation.	24/12/2018	9:53																										
SW8-06	Insufficient water to sample.	25/02/2019	15:13																										
SW8-06	Insufficient water to sample.	8/03/2019	15:18																										
SW8-06	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	3/04/2019	13:17	4.21	0.26	6.13	21.6	19	*1*	5	0.02	1.06	*30*	*100*	*50*														
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Overcast.	25/06/2019	10:01	8.00	0.15	5.89	14.0	61																					
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	9:57	4.23	0.23	5.55	16.9	15	3	2	0.01	0.32	*30*	*100*	*50*														
SW8-06	Dry, not sampled.	2/12/2019	14:00																										
SW8-06	Upstream and downstream sites connected. Low flow, medium water level. Rain.	18/01/2020	12:20	5.88	0.26	6.58	22.9	356	6	190	0.16	2.09	530	440	120														
SW8-06	No visible flow, very low water level. Overcast.	4/02/2020	13:16	5.58	0.35	6.45	24.0	84																					
SW8-06	Upstream and downstream sites connected. High flow, high water level. Drizzle.	7/03/2020	13:40	2.92	0.18	4.88	25.6	3	11	2	0.03	0.44	*30*	*100*	*50*														
SW8-06	Upstream and downstream sites connected. Very high flow, high water level. Weather fine.	11/04/2020	15:10	4.67	0.16	4.96	25.5	6																					
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Overcast.	18/05/2020	12:26	5.39	0.18	4.88	19.9	12	3	5	0.03	0.45	*30*	*100*	*50*														
SW8-06	Upstream and downstream sites connected. Very high flow, medium water level. Weather fine.	11/06/2020	12:14	5.70	0.17	4.92	19.6	8																					
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	17/08/2020	13:44	6.12	0.16	4.63	18.0	5																					
SW8-06	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	10:34	5.40	0.12	5.69	23.4	15	*1*	4	0.11	0.56	*30*	*100*	*50*	0.699	*0.001*	*0.0005*	*0.001*	*0.001*	0.315	*0.001*	0.018	*0.0003*	0.001	0.001	*0.0050*	0.004
SW8-06	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	15/02/2021	15:05	5.38	0.21	4.74	28.0	17																					
SW8-06	Upstream and downstream sites connected. High flow, high water level. Weather fine.	6/05/2021	15:59	4.98	0.12	4.66	19.2	5	*1*	1	0.02	0.65	*30*	*100*	*50*	0.677	*0.001*	*0.0005*	*0.001*	*0.001*	0.933	*0.001*	0.012	*0.0003*	*0.001*	*0.001*	*0.0005*	0.006
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.27	5.55		32	4	13	0.07	0.63	30	128	50	0.651	0.001	0.0003	0.001	0.001	1.381	0.001	0.023	0.0003	0.001	0.003	0.0032	0.011
P20				4.15	0.13	4.50																							
St Dev					0.11	0.55																							

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW07		1/02/2013		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW07		28/02/2013		4.11	0.13	4.24	26.5	N/A	*3*	*3*	0.10	0.70	*50*	*50*	*50*	0.460	0.001	0.0001	0.001	0.001	1.640	0.001	0.025	0.0001	0.001	0.005	0.0005	0.003
SW07		27/05/2013		8.20	0.15	4.30	19.5	12	*3*	*3*	0.02	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		5/07/2013		3.80	0.12	4.50	15.4	3	*3*	*3*	*0.01*	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		29/07/2013		8.90	0.16	4.35	22.6	2	*3*	*3*	*0.01*	0.20	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		19/11/2013		6.26	0.60	5.10	25.3	21	*3*	30	0.04	1.90	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		25/11/2013		6.50	0.29	6.20	26.7	11	*3*	11	0.04	1.10	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																												
SW8-05		4/08/2016		7.16	0.19	5.79	16.6	5																				
SW8-05	Not possible to obtain accurate turbidity reading due to shallow water.	6/12/2016		6.26	0.17	5.57	35.0		*1*	14	0.06	0.58	*25*	*50*	*50*														
SW8-05	Water to shallow for DO reading. Reading for other parameters taken in jug.	3/01/2017			0.49	4.59	31.2	63																				
SW8-05	Insufficient water for sampling and monitoring	27/02/2017																										
SW8-05	Heavy rain. Strong flow. Upstream and downstream sites connected.	15/03/2017		6.04	0.09	6.17	23.5	26																				
SW8-05	No access - water over access road	5/04/2017																										
SW8-05	Moderate flow, u/s and d/s sites connected. Overcast.	4/05/2017		5.96	0.20	4.39	20.1	7																				
SW8-05	Not safe to access. Haul road closed due to flooding.	13/06/2017																										
SW8-05	Insufficient water to sample	4/10/2017																										
SW8-05	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	6/11/2017		6.09	0.20	4.80	24.9	17	*1*	6	0.04	0.44	*25*	*50*	*50*														
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	2/12/2017		8.15	0.23	4.57	24.8	0																				
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	4/01/2018		8.42	0.24	4.79	25.1	0	*1*	6	0.02	0.21	*25*	*50*	*50*														
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Water milky blue colour. Rain.	2/02/2018		6.84	0.25	5.10	20.5	90																				

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-05	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		4.75	0.14	5.46	25.9	60	2	12	0.08	0.76	*25*	*50*	*50*														
SW8-05	Upstream and downstream sites not connected. No visible flow, insufficient water. Weather fine.	19/04/2018																											
SW8-05	No wet weather access to site	1/05/2018																											
SW8-05	No wet weather access to site	8/06/2018																											
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	4/07/2018	11:14	6.05	0.23	4.65	17.1	5	5	24	0.03	0.25	*30*	*250*	*250*														
SW8-05	Insufficient water to sample. Weather fine.	28/08/2018	9:43																										
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	4/09/2018	11:22	7.55	0.35	4.48	15.0	24	2	9	0.07	0.52	*30*	*250*	*250*														
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	11/10/2018	13:56	4.67	0.22	5.02	19.6	28																					
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Suspended dark red algae in water column, abundant aquatic vegetation. Weather fine.	20/11/2018	10:05	3.46	0.32	5.64	24.1	24	4	13	0.06	0.24	*30*	*100*	*50*														
SW8-05	Insufficient water to sample, heavy vegetation growth.	24/12/2018	9:54																										
SW8-05	Dry, not sampled.	25/02/2019	15:18																										
SW8-05	Dry, not sampled.	8/03/2019	15:18																										
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	3/04/2019	13:26	7.81	0.30	5.01	25.8	62	3	34	0.04	0.60	*30*	*100*	*50*														
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	25/06/2019	10:06	8.71	0.12	5.61	13.7	51																					
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	9:51	3.76	0.27	4.96	16.4	19	*1*	7	0.02	0.34	*30*	*100*	*50*														
SW8-05	Dry, not sampled.	2/12/2019	14:05																										
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Rain.	18/01/2020	12:11	6.84	0.12	5.73	22.1	16	10	6	0.12	0.49	*50*	*100*	*50*														
SW8-05	Dry, not sampled.	4/02/2020	13:14																										
SW8-05	Upstream and downstream sites connected. Medium flow, high water level. Drizzle.	7/03/2020	13:34	2.13	0.19	4.64	25.3	2	8	3	0.03	0.30	*30*	240	*50*														
SW8-05	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	11/04/2020	15:13	4.15	0.16	4.81	26.1	7																					
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	18/05/2020	12:22	4.79	0.19	4.52	19.2	11	2	1	0.03	0.51	*30*	*100*	*50*														
SW8-05	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	11/06/2020	12:17	4.88	0.17	4.63	18.7	8																					

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-05	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/08/2020	13:41	5.87	0.17	4.36	16.0	3																				
SW8-05	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	10:30	4.52	0.11	5.27	23.1	12	4	5	0.12	0.59	*30*	*100*	*50*	0.576	*0.001*	*0.0005*	*0.001*	*0.001*	0.285	*0.001*	0.020	*0.0003*	0.001	0.001	*0.0050*	0.007
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	15/02/2021	15:04	4.19	0.21	4.77	27.3	112																				
SW8-05	Upstream and downstream sites connected. High flow, high water level. Weather fine.	6/05/2021	15:49	3.62	0.13	4.53	18.8	4	2	1	0.03	0.62	*30*	*100*	*50*	0.701	*0.001*	*0.0005*	0.001	*0.001*	0.992	*0.001*	0.010	*0.0003*	*0.001*	*0.001*	*0.0005*	0.013

SW8-08 - McDonald's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-08	Photo taken. Accurate turbidity reading could not be obtained	10/08/2016		2.96	0.25	4.84	14.0																						
SW8-08		9/09/2016		2.88	0.29	4.33	16.5	63	8	7	0.03	0.58	*25*	*50*	*50*														
SW8-08		11/10/2016		0.81	0.34	4.92	16.9	204																					
SW8-08	Insufficient water to enable accurate DO reading.	2/11/2016			0.36	5.02	22.8	7	6	27	0.08	0.87	*25*	*50*	*50*														
SW8-08	Insufficient water to enable accurate DO reading.	14/12/2016			0.55	4.04	26.5	22																					
SW8-08	Very low water level, no visible flow. Dense aquatic vegetation and scum layer visible.	17/01/2017		1.50	0.44	5.17	25.9	8	5	386	0.80	6.70	*25*	*50*	*50*														
SW8-08	Very low water level. Thick aquatic veg.	3/02/2017		1.19	0.40	5.87	25.7	203																					
SW8-08	Low water level. No observed flow. Upstream and downstream sites connected.	13/03/2017		0.27	0.46	4.40	20.8	0	*1*	*1*	0.02	0.39	*25*	*50*	*50*														
SW8-08	Slight flow. U/s and d/s sites connected. Drizzle.	26/04/2017		2.52	0.23	4.20	18.5	10																					
SW8-08	Upstream and downstream sites connected. Moderate flow, medium water level. Weather fine.	23/05/2017		3.83	0.18	4.18	18.5	5	2	77	0.08	1.27	*25*	*50*	*50*														
SW8-08	Upstream and downstream sites connected. Slight flow. Moderate to high water level. Weather fine.	9/06/2017		2.78	0.27	4.21	14.6	8																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	13/07/2017		3.65	0.21	4.12	13.4	0	8	1	0.02	0.56	*25*	*50*	*50*														
SW8-08	Dewatering in progress, sandbags and pump installed, no connection between upstream and downstream sites. Sample point approximately 20m downstream of pump outlet. No visible flow. Mid water level. Weather fine.	4/08/2017		3.30	0.28	4.10	12.8	4																					
SW8-08	Fine weather. U/S and D/S connection blocked by construction works. No observed flow. Low water level.	7/09/2017		0.88	0.34	6.10	15.7	28	6	27	0.11	0.55	*25*	*50*	*50*														
SW8-08	Upstream and downstream sites connected. Medium water level. Slight flow. Weather fine.	25/10/2017		6.17	0.26	5.51	24.8	15																					
SW8-08	Upstream and downstream sites connected. Low water level, no visible flow. Surface sheen.	22/11/2017		0.17	0.29	5.82	19.8	4	5	3	0.03	0.32	*25*	*50*	*50*														
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Technical error with probe, no Type A parameters recorded. Weather fine.	15/12/2017																											
SW8-08	Upstream and downstream sites not connected. No visible flow, medium water level. Light surface bacteria and algae. Weather fine.	23/01/2018		0.00	0.35	6.18	22.1	9	*1*	11	0.05	0.38	*25*	*50*	*50*														

SW8-08 - McDonald's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Some brown algae and surface bacteria layer present. Overcast.	16/02/2018		0.03	0.35	6.17	23.9	3																				
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Surface scum layer. Weather fine.	20/03/2018		0.00	0.30	5.97	21.4	1	*1*	31	0.07	0.69	*25*	*50*	*50*													
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Slight surface bacteria layer. Weather fine.	5/04/2018		0.00	0.33	5.87	22.5	1																				
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/05/2018		1.69	0.26	5.50	18.8	5	*1*	2	0.03	0.51	*30*	*250*	*250*													
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Tannin stained. Weather fine.	15/06/2018	12:06	3.27	0.26	5.12	14.6	4																				
SW8-08	Upstream and downstream sites connected. Low flow, low water level. Green algae present. Weather fine.	18/07/2018	14:08	2.11	0.29	5.67	14.8	2	*1*	6	0.04	0.28	*30*	*250*	*250*													
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Dust layer on surface. Brown algae. Small patches of surface bacteria. Weather fine.	9/08/2018	10:03	0.00	0.35	6.04	13.0	22																				
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Light bacteria layer. Weather fine.	21/09/2018	15:03	0.62	0.31	5.68	17.5	14	3	3	0.02	0.69	*30*	*250*	*250*													
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Surface bacteria layer and brown algae present. Weather fine.	3/10/2018	10:46	0.00	0.34	6.16	15.8	6																				
SW8-08	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	8/11/2018	9:04	0.00	0.33	5.84	22.0	15	*1*	20	0.05	0.54	*30*	230	*50*													
SW8-08	No visible flow, low water level. Overcast.	7/12/2018	14:45	0.00	0.36	6.32	20.8	13																				
SW8-08	No visible flow, very low water level. Algae present. Light bacteria layer. Weather fine.	11/01/2019	13:59	0.42	0.38	6.83	24.7	36	2	36	0.26	2.38	*30*	250	250													
SW8-08	Sampled within a small isolated pool of water with very low water level. Weather fine.	13/02/2019	11:14	0.67	0.41	7.30	26.8	99																				
SW8-08	Sampled in an isolated pool of water with no visible flow, very low water level. Weather fine.	15/03/2019	10:05	2.29	0.43	6.92	23.1	32	3	14	0.16	3.08	*30*	*100*	*50*													
SW8-08	Upstream and downstream sites not connected. No visible flow, medium water level. Heavy aquatic vegetation growth. Overcast.	11/04/2019	11:29	0.00	0.55	6.17	19.9	13																				
SW8-08	Not connected. No visible flow. Very low water level.	8/05/2019	14:42	2.40	0.49	7.07	16.4	10	2	163	0.38	2.83	*30*	*100*	*50*													
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/06/2019	14:47	0.00	0.45	6.08	14.2	3																				

SW8-08 - McDonald's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/07/2019	13:27	3.60	0.39	4.54	16.5	2	*1*	6	0.03	0.81	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Surface scum. Weather fine.	15/08/2019	11:14	0.00	0.38	**5.76**	14.2	2																				
SW8-08	Upstream and downstream sites not connected. No visible flow, medium water level. Green and brown algae, odour. Weather fine.	6/09/2019	14:06	0.00	0.37	**6.08**	16.7	0	*1*	8	0.02	0.38	*30*	210	*50*														
SW8-08	No visible flow, low water level. Weather fine.	2/10/2019	9:39	**0.00**	0.40	**6.26**	16.4	**14**																				
SW8-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/11/2019	9:08	**0.00**	0.38	**6.26**	17.6	**85**	*1*	23	0.14	1.15	*30*	**250**	*50*														
SW8-08	Sampled in an isolated pool with no visible flow, very low water level. Weather fine.	5/12/2019	12:32	0.79	**0.47**	**6.41**	22.1	**27**																				
SW8-08	Insufficient water to sample.	9/01/2020	11:03																									
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	17/02/2020	13:43	**0.29**	0.29	4.53	25.1	0																				
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Algae. Weather fine.	5/03/2020	12:32	1.03	0.30	4.72	24.3	0	3	2	0.03	0.52	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	1/04/2020	12:58	0.92	0.29	**5.10**	21.6	5																				
SW8-08	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	14/05/2020	14:03	**0.00**	0.31	**5.37**	17.9	7	2	4	0.03	0.51	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. Very low flow, high water level. Drizzle.	10/06/2020	9:43	1.88	0.29	**5.20**	16.2	4																				
SW8-08	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	17/11/2020	15:02	0.97	0.37	**5.74**	23.0	**30**	2	16	0.08	0.98	*30*	*100*	*50*	**0.959**	*0.001*	**0.0005**	0.001	**0.001**	**3.426**	*0.001*	**0.165**	**0.0003**	**0.003**	0.001	**0.0050**	0.002
SW8-08	Upstream and downstream sites connected. High flow, high water level. Weather fine.	6/05/2021	15:43	3.23	0.16	4.85	17.8	2	**5**	1	0.03	0.55	*30*	*100*	*50*	0.904	*0.001*	*0.0005*	**0.002**	*0.001*	**1.132**	*0.001*	**0.025**	*0.0003*	0.001	*0.001*	*0.0005*	0.005
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.42	4.82		11	3	27	0.16	1.22	30	234	50	0.888	0.001	0.0004	0.002	0.001	0.894	0.001	0.014	0.0002	0.002	0.004	0.0005	0.006
P20				0.58	0.25	4.15																						
St Dev					0.11	0.51																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW08		2/04/2013		2.40	0.22	3.60	21.6	7	*3*	*3*	0.01	0.70	*50*	*50*	*50*	0.620	0.001	0.0001	0.001	0.001	0.900	0.001	0.015	0.0001	0.002	0.005	0.0005	0.007

SW8-08 - McDonald's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW08		30/04/2013		2.17	0.23	6.25	16.7	1	*3*	*3*	0.04	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		27/08/2013		7.50	0.36	4.00	17.5	2	*3*	*3*	1.15	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		23/09/2013		3.60	0.35	3.90	22.3	2	*3*	*3*	*0.01*	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		28/10/2013		6.70	0.43	4.40	21.8	5	*3*	*3*	0.04	0.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		16/12/2013		2.00	0.56	3.40	23.0	1	*3*	6	0.03	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW8-07	Photo taken	10/08/2016		3.32	0.25	4.88	14.4	0																					
SW8-07		9/09/2016		2.92	0.29	4.35	17.1	27	4	25	0.07	0.97	*25*	*50*	*50*														
SW8-07		11/10/2016		0.69	0.35	4.78	17.7	130																					
SW8-07	Insufficient water to enable accurate DO reading.	2/11/2016			0.51	5.35	21.9	11	6	19	0.21	2.17	*25*	*50*	*50*														
SW8-07	Insufficient water to enable accurate DO reading.	14/12/2016			0.52	4.05	26.1	8																					
SW8-07	Very low water level, no visible flow. Dense aquatic vegetation and scum layer visible.	17/01/2017		0.38	0.39	5.25	25.5	7	4	166	0.66	3.00	*25*	*50*	*50*														
SW8-07	Very low water level. Thick aquatic veg.	3/02/2017		1.73	0.38	4.95	25.0	14																					
SW8-07	Low water level. No observed flow. Upstream and downstream sites connected.	13/03/2017		0.48	0.46	4.42	20.7	1	*1*	*1*	0.02	0.40	*25*	*50*	*50*														
SW8-07	Slight flow. U/s and d/s sites connected. Drizzle.	26/04/2017		2.28	0.25	4.32	18.6	8																					
SW8-07	Upstream and downstream sites connected. Moderate flow, medium water level. Weather fine.	23/05/2017		4.12	0.18	4.20	18.7	6	4	2	*0.01*	0.63	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. Slight flow. Moderate to high water level. Weather fine.	9/06/2017		4.94	0.26	4.20	15.6	6																					
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Riffle section upstream of sample point. Weather fine.	13/07/2017		9.55	0.19	4.06	14.1	0	*1*	1	0.02	0.45	*25*	*50*	*50*														
SW8-07	Dewatering in progress, sandbags and pump installed, no connection between upstream and downstream sites. No visible flow. Mid water level. Weather fine.	4/08/2017		5.57	0.21	3.60	13.4	8																					
SW8-07	Fine weather. U/S and D/S connection blocked by construction works. No observed flow. Low water level. Algal bloom likely to have caused a temporary spike in DO.	7/09/2017		12.15	0.43	3.85	16.3	16	3	2	0.03	0.27	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. Low water level, medium flow. Weather fine.	25/10/2017		2.50	0.29	4.41	20.1	0																					

SW8-08 - McDonald's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-07	Upstream and downstream sites connected. Gentle flow, low water level. Sulphur odour. Weather fine.	22/11/2017		0.35	0.28	4.63	18.8	3	3	1	0.02	0.50	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites were connected. Very low flow very low water level. Strong odour. Weather fine.	15/12/2017		0.33	0.33	4.98	22.5	2																				
SW8-07	Upstream and downstream sites not connected. No visible flow, very low water level. Very small pool, strong odour, light algae. Weather fine.	23/01/2018		0.49	0.37	4.89	22.8	9	*1*	80	0.18	1.95	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Sulphur odour. Weather fine.	16/02/2018		0.53	0.35	5.09	23.1	14																				
SW8-07	Upstream and downstream sites connected. No visible flow, medium water level. Some green algae present. Weather fine.	20/03/2018		1.31	0.28	4.26	21.8	8	*1*	38	0.08	1.05	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. Low flow, very low water level. Some green algae present. Weather fine.	5/04/2018		2.06	0.33	4.60	21.9	0																				
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	4/05/2018		5.17	0.21	4.21	17.3	12	2	5	0.03	0.72	*30*	*250*	*250*														
SW8-07	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	15/06/2018	12:00	2.82	0.25	4.25	13.2	2																				
SW8-07	Upstream and downstream sites connected. Low flow, very low water level. Odour, green algae. Weather fine.	18/07/2018	14:01	2.57	0.27	4.67	13.1	2	*1*	1	0.03	0.44	*30*	*250*	*250*														
SW8-07	Upstream and downstream sites connected. Very low flow, very low water level. Green algae present, odour. Weather fine.	9/08/2018	9:45	1.16	0.34	4.81	11.7	11																				
SW8-07	Upstream and downstream sites connected. Very low flow, very low water level. Green algae present. Weather fine.	21/09/2018	14:50	5.25	0.33	4.42	18.9	12	3	36	0.06	1.05	*30*	*250*	*250*														
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Green algae present. Weather fine.	3/10/2018	10:39	0.66	0.35	5.03	15.5	6																				
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Heavy aquatic vegetaion, algae present. Drizzle.	8/11/2018	8:56	0.01	0.30	4.79	21.3	11	3	79	0.16	2.39	*30*	370	*50*														
SW8-07	Insufficient water to sample	7/12/2018	14:44																									
SW8-07	Dry, not sampled.	11/01/2019	13:43																									
SW8-07	Dry, not sampled.	13/02/2019	11:04																									
SW8-07	Dry, not sampled.	15/03/2019	10:09																									
SW8-07	Sampled in a small isolated pool of water. No visible flow, very low water level. Rain.	11/04/2019	11:22	1.68	0.71	4.40	20.3	1																				

SW8-08 - McDonald's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-07	Dry, not sampled.	8/05/2019																											
SW8-07	Upstream and downstream sites connected. Very low flow, low water level. Heavy aquatic vegetation. Weather fine.	3/06/2019	14:43	0.93	0.54	4.50	16.1	6																					
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Green algae and heavy aquatic vegetation. Weather fine.	9/07/2019	13:19	1.44	0.45	4.17	16.4	2	*1*	1	*0.01*	0.53	*30*	*100*	*50*														
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Heavy green algae growth. Weather fine.	15/08/2019	11:08	0.00	0.41	4.44	13.8	1																					
SW8-07	Upstream and downstream sites not connected. No visible flow, very low water level. Green algae, slight odour. Weather fine.	6/09/2019	14:11	0.00	0.42	4.38	18.2	9	*1*	7	0.02	0.59	*30*	230	*50*														
SW8-07	Dry, not sampled.	2/10/2019	9:34																										
SW8-07	Dry, not sampled.	6/11/2019	9:01																										
SW8-07	Dry, not sampled.	5/12/2019	12:33																										
SW8-07	Insufficient water to sample.	9/01/2020	11:03																										
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	17/02/2020	13:40	0.81	0.29	3.93	25.3	0																					
SW8-07	Upstream and downstream sites connected. Low flow, low water level. Algae. Weather fine.	5/03/2020	12:25	1.14	0.33	4.32	24.5	19	90	5	0.17	1.87	*30*	*100*	*50*														
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	1/04/2020	13:03	0.81	0.33	4.44	21.4	16																					
SW8-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/05/2020	14:10	2.15	0.32	4.59	17.7	11	2	1	0.03	0.67	*30*	*100*	*50*														
SW8-07	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	10/06/2020	9:47	2.19	0.30	4.59	15.8	4																					
SW8-07	Dry, not sampled.	17/11/2020																											
SW8-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	6/05/2021	15:40	4.07	0.15	4.66	18.1	3	2	*1*	0.02	0.60	*30*	*100*	*50*	0.955	*0.001*	*0.0005*	0.002	*0.001*	0.869	*0.001*	0.009	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW8-08	Photo taken. Accurate turbidity reading could not be obtained	4/08/2016		5.07	0.22	4.95	14.2																						
SW8-08		25/08/2016		3.63	0.16	4.33	16.3	3	14	2	0.03	0.68	*25*	*50*	*50*														
SW8-08		6/12/2016		6.01	0.66	4.06	28.2	15	*1*	8	0.05	0.79	*25*	*50*	*50*														
SW8-08		8/12/2016		2.29	0.59	4.14	22.8	2																					
SW8-08	Continuous waterway but no visible flow.	3/01/2017		0.34	0.40	4.85	25.2	19																					
SW8-08	No visible flow.	6/01/2017		2.80	0.61	4.12	24.4	5	2	**22**	**0.06**	0.95	*25*	*50*	*50*														
SW8-08	Very low water level. Thick aquatic veg. Accurate turbidity and DO readings could not be obtained due to insufficient water.	27/02/2017			0.41	5.71	22.5		2	42	0.25	3.28	*25*	*50*	*50*														
SW8-08	Steady flow. Upstream and downstream sites connected.	16/03/2017		1.93	0.19	4.31	22.2	3																					
SW8-08	Channel full of water with slight flow. Channel has overtopped banks. Tannin stained water.	20/03/2017		2.23	0.14	4.32	24.1	0																					
SW8-08	Very high water level. U/s and d/s sites connected. Steady flow.	5/04/2017		0.00	0.08	5.38	19.6	30	2	6	0.20	2.13	*25*	*50*	*50*														
SW8-08	No access - demolition in progress	4/05/2017																											
SW8-08	Fine weather. U/s and d/s connected. Steady flow with a high water level.	11/05/2017		3.68	0.19	4.24	17.3	5	3	4	0.02	0.66	*25*	*50*	*50*														
SW8-08	Upstream and downstream sites connected. Sample point approx. 10 m N of designated site due to high water level. Slight flow. Water level very high. Sample taken amongst aquatic vegetation.	14/06/2017		3.32	0.06	4.69	16.8	2	*1*	1	0.02	0.60	*25*	*50*	*50*														
SW8-08	Upstream and downstream sites connected. Moderate flow. High water level. Rain.	17/06/2017		3.10	0.26	4.45	17.6	0																					
SW8-08	Upstream and downstream sites connected. Steady flow, moderate water level. Weather fine.	4/10/2017		**0.75**	0.41	**6.61**	21.4	**46**																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	16/10/2017		4.68	0.24	**4.93**	20.4	0	2	4	0.03	**1.28**	*25*	*50*	*50*														
SW8-08	Upstream and downstream sites connected. Medium flow. Medium - high water level. Weather, clearing.	6/11/2017		3.46	0.20	**4.85**	22.4	12																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Weather; fine.	7/11/2017		3.39	0.20	4.59	22.5	2	*1*	7	0.04	1.02	*25*	*50*	*50*														
SW8-08	Upstream and downstream sites connected. Slight flow, low water level. Overcast.	2/12/2017		0.75	0.28	**5.55**	23.7	2																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Surface scum layer. Overcast.	22/12/2017		**1.09**	0.36	**5.80**	25.9	**41**																					
SW8-08	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	4/01/2018		4.81	0.23	**4.95**	25.3	**23**	*1*	2	0.03	0.75	*25*	*50*	*50*														

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-08	Upstream and downstream sites not connected. No visible flow, low water level. Slight light brown scum layer. Weather fine	31/01/2018		0.00	0.37	6.23	23.6	9	1	5	0.06	0.60	25	50	50														
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Rain.	2/02/2018		0.41	0.34	6.14	20.8	14																				
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Overcast.	5/02/2018		5.05	0.34	5.27	24.1	14	3	13	0.06	1.06	25	50	50														
SW8-08	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		2.69	0.17	4.18	23.8	0	1	10	0.05	1.76	25	50	50														
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/04/2018		0.00	0.32	6.14	22.3	11																				
SW8-08	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	23/04/2018		1.93	0.32	5.80	21.3	7																				
SW8-08	No wet weather access to site	1/05/2018																										
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		3.42	0.24	4.72	19.8	26	1	12	0.04	0.64	30	250	250														
SW8-08	No wet weather access to site.	8/06/2018																										
SW8-08	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	4/07/2018	10:27	4.24	0.21	5.24	16.0	7	1	5	0.03	1.05	30	250	250														
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Slight scum layer. Weather fine.	28/08/2018	10:01	0.70	0.35	6.23	14.8	11																				
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	4/09/2018	10:25	3.24	0.61	5.48	15.1	72	4	40	0.05	1.99	30	250	250														
SW8-08	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	7/09/2018	9:37	3.62	0.47	5.40	15.9	2																				
SW8-08	Upstream and downstream sites connected. No visible flow, high water level. Drizzle.	11/10/2018	12:50	1.80	0.34	5.89	18.8	82																				
SW8-08	Upstream and downstream sites connected. High flow, high water level. Drizzle.	15/10/2018	10:54	3.66	0.18	4.48	18.1	6	1	1	0.02	0.88	30	100	50														
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Brown algae present. Weather fine.	20/11/2018	10:56	0.00	0.35	5.98	19.9	0	3	7	0.03	0.32	30	100	50														
SW8-08	Upstream and downstream sites connected. Very low flow, high water level. Brown algae present. Weather fine.	22/11/2018	13:13	0.66	0.34	6.03	22.3	4																				
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Green and brown algae present, heavy aquatic vegetation. Drizzle.	24/12/2018	9:13	0.04	0.41	6.07	21.0	23																				
SW8-08	Sampled in an isolated pool of water with no visible flow and very low water level. Drizzle.	25/02/2019	15:47	0.52	0.50	7.25	22.8	202	5	70	0.60	7.03	30	290	50														

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-08	Sampled in an isolated pool of water with no visible flow and very low water level. Weather fine.	8/03/2019	15:35	0.84	0.47	7.03	24.5	35																					
SW8-08	Sampled in an isolated pool of water with no visible flow and low water level. Rain.	16/03/2019	8:17	1.73	0.39	6.84	21.6	40	*1*	24	0.17	2.81	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	3/04/2019	14:36	1.36	0.57	6.01	21.8	32	*1*	15	0.04	2.26	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Heavy aquatic vegetation. Weather fine.	18/04/2019	10:31	0.68	0.49	6.25	19.8	4																					
SW8-08	Upstream and downstream sites connected. High flow, high water level. Rain.	25/06/2019	8:56	6.13	0.49	5.15	14.5	38																					
SW8-08	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	27/06/2019	11:37	3.91	0.41	5.03	15.7	15	*1*	10	0.03	0.82	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	5/07/2019	9:05	2.29	0.42	4.83	16.5	9	3	12	0.02	0.86	*30*	*100*	*50*														
SW8-08	Sampled in an isolated pool with no visible flow, very low water level. Weather fine.	2/12/2019	13:42	0.00	0.44	6.40	24.4	51																					
SW8-08	Sampled in an isolated pool with no visible flow, very low water level. Green algae. Weather fine.	27/12/2019	12:58	2.68	0.60	6.77	24.3	4																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	18/01/2020	12:43	4.66	0.44	5.80	23.1	348	*1*	205	0.21	3.04	*50*	*100*	*50*														
SW8-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/02/2020	13:02	0.00	0.59	5.86	23.2	89																					
SW8-08	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/02/2020	9:56	8.10	0.47	4.77	22.5	8	2	6	0.04	1.18	*30*	460	200														
SW8-08	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	7/03/2020	13:58	2.14	0.26	4.30	24.2	0																					
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Overcast.	11/03/2020	8:31	1.99	0.24	4.33	21.8	0	9	*1*	0.02	0.65	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	11/04/2020	15:22	2.40	0.24	4.52	21.8	1																					
SW8-08	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	18/05/2020	12:38	2.95	0.28	4.94	18.3	6	5	3	0.03	0.70	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	11/06/2020	12:24	2.57	0.30	5.31	18.1	7																					
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather, fine.	15/06/2020	13:20	3.40	0.24	4.64	17.5	2	2	*1*	0.03	0.64	*30*	*100*	*50*														
SW8-08	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/08/2020	13:57	2.51	0.22	4.87	15.1	3																					
SW8-08	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	10:10	3.69	0.38	3.80	22.1	3	3	1	0.04	0.63	*30*	*100*	*50*	0.860	*0.001*	*0.0005*	0.001	*0.001*	0.331	*0.001*	0.054	*0.0003*	0.002	0.001	*0.0050*	0.006

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	15/02/2021	14:50	**0.32**	0.31	**5.46**	23.0	17	*1*	1	0.03	0.66	*30*	*100*	*50*	0.621	*0.001*	*0.0005*	0.001	*0.001*	**1.125**	*0.001*	**0.067**	*0.0003*	**0.002**	*0.001*	*0.0005*	**0.016**

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.50	4.75		12	4	11	0.06	1.17	30	100	50	0.858	0.001	0.0005	0.001	0.001	0.684	0.001	0.029	0.0003	0.001	0.003	0.0032	0.007
P20				1.90	0.20	4.03																							
St Dev					0.20	0.46																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW08		1/02/2013		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		28/02/2013		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		28/05/2013		1.70	0.11	4.60	14.9	1	*3*	6	0.04	0.60	*50*	*50*	*50*	0.520	0.001	0.0001	0.001	0.001	0.550	0.001	0.012	0.0001	0.001	0.005	0.0005	0.003
SW08		5/06/2013		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		29/07/2013		8.10	0.25	4.70	19.6	4	*3*	6	0.04	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		19/11/2013		5.10	0.53	4.30	22.7	14	*3*	11	0.02	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		25/11/2013		6.50	0.65	5.10	25.6	6	*3*	13	0.06	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																													
SW8-07	Photo taken	4/08/2016		4.55	0.23	5.05	14.2	0																					
SW8-07		25/08/2016		3.34	0.18	4.69	16.2	4	14	1	0.03	0.70	*25*	*50*	*50*														
SW8-07		6/12/2016		3.06	0.72	4.10	27.7	23	*1*	11	0.06	1.00	*25*	*50*	*50*														
SW8-07		8/12/2016		3.05	0.62	4.09	23.3	4																					
SW8-07		3/01/2017		0.44	0.51	5.01	24.4	47																					
SW8-07	No visible flow.	6/01/2017		3.31	0.63	4.11	24.6	3	3	*1*	0.03	0.62	*25*	*50*	*50*														
SW8-07	Very low water level. Thick aquatic veg. Accurate turbidity and DO readings could not be obtained due to insufficient water.	27/02/2017			0.38	6.19	21.9		6	155	0.62	6.66	*25*	*50*	*50*														
SW8-07	Steady flow. Upstream and downstream sites connected.	16/03/2017		1.74	0.21	4.66	22.2	6																					
SW8-07	Channel full of water with slight flow. Channel has overtopped banks. Tannin stained water.	20/03/2017		1.79	0.14	4.43	24.0	0																					
SW8-07	Very high water level. U/s and d/s sites connected. Steady flow.	5/04/2017		0.00	0.08	5.43	19.7	28	3	3	0.20	2.17	*25*	*50*	*50*														
SW8-07	No access - demolition in progress	4/05/2017																											
SW8-07	Fine weather. U/s and d/s connected. Steady flow with a high water level.	11/05/2017		5.44	0.20	4.38	17.6	5	*1*	2	0.02	0.63	*25*	*50*	*50*														

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-07	Upstream and downstream sites connected. Sample point approx. 10 m N of designated site due to high water level. Slight flow. Water level very high. Sample taken amongst aquatic vegetation.	14/06/2017		3.06	0.06	4.72	16.8	9	*1*	35	0.13	1.51	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. Moderate flow. High water level. Rain.	17/06/2017		3.04	0.12	4.89	17.4	0																				
SW8-07	Upstream and downstream sites connected. Steady flow, very low water level. Weather fine.	4/10/2017		5.64	0.51	4.21	24.6	10																				
SW8-07	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	16/10/2017		5.90	0.21	3.98	20.5	0	*1*	*0*	0.02	0.99	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. Medium - high flow. Medium - high water level. Weather, clearing.	6/11/2017		3.46	0.20	4.10	21.9	4																				
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather, fine.	7/11/2017		3.70	0.20	3.99	23.2	13	*1*	5	0.03	0.78	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. Slight flow, low water level. Overcast.	2/12/2017		0.48	0.28	4.65	21.6	0																				
SW8-07	Upstream and downstream sites connected. Medium flow, low water level. Odour. Overcast.	22/12/2017		8.09	0.38	4.39	23.5	1																				
SW8-07	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/01/2018		2.02	0.24	4.30	23.3	0	4	1	0.02	0.79	*25*	*50*	*50*														
SW8-07	Insufficient water to sample. No visible flow. Weather fine	31/01/2018																										
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Sulfur smell. Rain.	2/02/2018		3.46	0.49	4.22	19.9	14																				
SW8-07	Upstream and downstream sites connected. High flow, low water level. Sulfur smell. Overcast.	5/02/2018		7.30	0.26	3.92	24.2	19	2	1	0.03	0.63	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		2.64	0.25	4.64	23.4	0	*1*	1	0.03	1.08	*25*	*50*	*50*														
SW8-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	19/04/2018		1.44	0.35	4.95	21.0	12																				
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	23/04/2018		3.36	0.37	4.48	19.8	4																				
SW8-07	No wet weather access to site	1/05/2018																										
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	10/05/2018		1.98	0.26	4.43	18.8	3	*1*	2	0.02	0.65	*30*	*250*	*250*														
SW8-07	No wet weather access to site.	8/06/2018																										
SW8-07	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	4/07/2018	10:34	7.20	0.15	3.89	15.6	5	*1*	2	0.02	0.67	*30*	*250*	*250*														

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Heavy aquatic vegetation, green algae present. Weather fine.	28/08/2018	9:56	0.46	0.37	5.14	13.5	25																				
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	4/09/2018	10:17	6.30	0.69	4.39	14.0	5	3	5	0.03	0.79	*30*	*250*	*250*													
SW8-07	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	7/09/2018	9:46	3.70	0.48	3.89	14.9	0																				
SW8-07	Upstream and downstream sites connected. Low flow, low water level. Drizzle.	11/10/2018	12:44	4.80	0.31	4.46	18.5	9																				
SW8-07	Upstream and downstream sites connected. Very high flow, high water level. Drizzle.	15/10/2018	11:13	2.45	0.20	4.21	17.9	0	*1*	*1*	0.02	0.82	*30*	*100*	*50*													
SW8-07	Upstream and downstream sites connected. Low flow, low water level. Abundant aquatic vegetation, green algae and light scum layer present. Weather fine.	20/11/2018	10:42	3.65	0.37	4.54	21.6	0	*1*	64	0.23	3.71	*30*	*100*	*50*													
SW8-07	Upstream and downstream sites connected. Medium flow, low water level. Green and brown algae present. Weather fine.	22/11/2018	13:08	0.96	0.31	5.06	22.4	2																				
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Green algae present, slight odour. Rain.	24/12/2018	9:05	0.32	0.40	5.12	21.7	30																				
SW8-07	Dry, not sampled.	25/02/2019	15:35																									
SW8-07	Dry, not sampled.	8/03/2019	15:24																									
SW8-07	Insufficient water to sample.	16/03/2019	8:11																									
SW8-07	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	3/04/2019	14:28	2.07	0.93	4.02	21.7	4	*1*	12	0.05	1.26	*30*	*100*	*50*													
SW8-07	Upstream and downstream sites connected. Very low flow, very low water level. Odour, heavy aquatic vegetation. Weather fine.	18/04/2019	10:25	2.22	0.79	4.44	19.7	2																				
SW8-07	Upstream and downstream sites connected. High flow, high water level. Rain.	25/06/2019	8:48	7.71	0.24	4.62	13.1	13																				
SW8-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	27/06/2019	11:44	3.53	0.42	4.14	15.4	9	2	3	0.03	0.91	*30*	*100*	*50*													
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	9:00	2.77	0.48	4.25	16.0	7	*1*	*1*	*0.01*	0.56	*30*	*100*	*50*													
SW8-07	Dry, not sampled.	2/12/2019	13:48																									
SW8-07	Dry, not sampled.	27/12/2019	13:02																									
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	18/01/2020	12:35	5.49	0.77	4.04	22.1	9	8	5	0.07	1.29	620	560	*50*													
SW8-07	Insufficient water to sample.	4/02/2020	13:00																									

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW8-07	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	7/02/2020	9:49	1.73	0.49	4.88	22.5	8	2	4	0.05	1.17	*30*	430	180													
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	7/03/2020	13:51	3.35	0.24	3.98	24.7	7																				
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	11/03/2020	8:36	2.74	0.23	4.03	21.8	10	4	38	0.03	1.00	*30*	*100*	*50*													
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/04/2020	15:26	2.92	0.24	4.20	22.0	4																				
SW8-07	Upstream and downstream sites connected. Low flow, high water level. Overcast.	18/05/2020	12:42	4.52	0.27	3.94	17.8	2	9	1	0.02	0.83	*30*	*100*	*50*													
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/06/2020	12:28	4.53	0.23	3.91	17.2	2																				
SW8-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather, fine.	15/06/2020	13:31	6.49	0.21	3.85	17.2	9	5	*1*	0.03	0.77	*30*	*100*	*50*													
SW8-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/08/2020	13:53	3.89	0.22	4.40	14.8	11																				
SW8-07	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	10:07	3.68	0.37	3.95	21.9	3	2	1	0.04	0.65	*30*	*100*	*50*	0.910	*0.001*	*0.0005*	0.001	*0.001*	0.270	*0.001*	0.040	*0.0003*	0.002	0.001	*0.0050*	0.010
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Heavy algae. Weather fine.	15/02/2021	14:46	9.07	0.34	4.37	26.0	27	*1*	4	0.03	0.96	*30*	*100*	*50*	0.782	*0.001*	*0.0005*	0.002	*0.001*	0.773	*0.001*	0.007	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

SW9-01 - Montis Gully

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW9-01	Not safe to access	10/08/2016																											
SW9-01	Not safe to access	9/09/2016																											
SW9-01	Not safe to access	11/10/2016																											
SW9-01	Not safe to access	2/11/2016																											
SW9-01	Not safe to access	14/12/2016																											
SW9-01	Not safe to access	17/01/2017																											
SW9-01	Not safe to access	3/02/2017																											
SW9-01	Not safe to access	13/03/2017																											
SW9-01	Not safe to access	26/04/2017																											
SW9-01	Gentle flow. Medium water level. Dense aquatic vegetation. Weather fine.	23/05/2017		9.05	0.18	3.93	20.7	16	3	40	0.09	1.78	25	50	50														
SW9-01	Moderate water level. Low to moderate flow. Drizzle.	9/06/2017		5.22	0.17	5.37	18.0	92																					
SW9-01	Steady flow. Medium water level. Weather fine.	13/07/2017		6.88	0.14	4.49	15.7	36	1	13	0.10	0.87	25	50	50														
SW9-01	No visible flow. Low water level. Weather fine.	4/08/2017		5.35	0.16	5.52	18.1	10																					
SW9-01	Weather fine. No observed flow and low water level.	7/09/2017		3.98	0.17	5.71	21.4	6	2	21	0.06	0.44	25	50	50														
SW9-01	No observed flow. Isolated pool. D/S and U/S not connected. Tannin stained. Fine weather.	25/10/2017		5.22	0.17	6.11	28.3	15																					
SW9-01	No visible flow, low water level. Weather fine.	22/11/2017		4.30	0.22	6.00	23.9	32	4	12	0.08	0.79	25	50	50														
SW9-01	Insufficient water to sample. Weather fine.	15/12/2017																											
SW9-01	No visible flow, very low water level. Unable to obtain accurate turbidity measurement due to low water level and aquatic vegetation/ algae growth. Weather fine.	23/01/2018		8.57	0.13	5.43	31.5		3	167	0.15	1.15	25	50	50														
SW9-01	No visible flow, very low water level. Insufficient water level for DO measurement. Brown algae present. Weather fine.	14/02/2018			0.21	6.11	34.5	45																					
SW9-01	Upstream and downstream sites not connected. No visible flow, medium water level. Brown algae present. Weather fine.	15/03/2018		7.33	0.16	6.61	27.9	20	1	41	0.10	0.53	25	50	50														
SW9-01	No visible flow, low water level. Weather fine.	5/04/2018		10.62	0.25	6.45	26.5	117																					
SW9-01	No visible flow, medium water level. Weather fine.	3/05/2018		5.05	0.23	6.45	22.8	34	4	6	0.04	0.55	30	250	250														
SW9-01	No visible flow, low water level. Brown algae present and light scum layer on surface. Weather fine.	15/06/2018	12:46	4.14	0.20	6.08	16.4	51																					
SW9-01	No visible flow, low water level. Weather fine.	17/07/2018	14:40	7.33	0.16	5.87	15.6	11	1	117	0.13	1.17	30	250	250														

SW9-01 - Montis Gully

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-01	No visible flow, low water level. Brown and green algae present. Weather fine.	9/08/2018	11:35	5.22	0.19	5.84	14.7	15																					
SW9-01	No visible flow, low water level. Light drizzle.	24/09/2018	8:30	1.72	0.13	5.62	17.3	49	4	28	0.03	0.23	*30*	250	250														
SW9-01	No visible flow, very low water level. Brown algae present. Weather fine.	3/10/2018	11:52	4.56	0.17	6.10	24.6	25																					
SW9-01	No visible flow, low water level. Heavy aquatic vegetation and brown algae present. Drizzle.	8/11/2018	10:19	0.30	0.25	6.27	21.7	34	3	97	0.11	1.22	*30*	350	*50*														
SW9-01	No visible flow, low water level. Algae present. Weather fine.	11/12/2018	8:31	0.21	0.18	6.08	20.3	40																					
SW9-01	Insufficient water to sample.	15/01/2019	8:48																										
SW9-01	Dry, not sampled.	13/02/2019	11:42																										
SW9-01	Insufficient water to sample.	15/03/2019	9:40																										
SW9-01	No visible flow, medium water level. Rain.	11/04/2019	11:55	6.24	0.21	5.80	22.0	49																					
SW9-01B	Monitoring site relocated to new location approx. 1 km east. Upstream and downstream sites connected. No visible flow, low water level. Fine.	8/05/2019	15:16	0.72	1.70	3.16	18.7	0	3	6	0.02	0.02	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/06/2019	13:26	0.25	1.58	3.20	16.0	6																					
SW9-01B	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	9/07/2019	13:59	1.96	0.47	3.43	16.5	19	*1*	29	0.03	1.25	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Surface bacteria layer in patches, red algae. Weather fine.	8/08/2019	12:52	0.00	0.55	3.50	18.2	6																					
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	11/09/2019	8:50	1.40	0.58	3.45	13.7	5	*1*	10	*0.01*	0.15	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/10/2019	10:00	2.08	0.39	4.64	19.0	29																					
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/11/2019	9:57	0.14	0.39	6.21	19.6	231	*1*	51	0.03	0.99	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/12/2019	12:00	0.00	0.44	6.20	26.0	130																					
SW9-01B	Upstream and downstream sites not connected. No visible flow, low water level. Bacteria layer on surface. Weather fine.	9/01/2020	10:13	0.68	0.58	6.40	24.2	65	8	39	0.05	0.89	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	17/02/2020	14:14	0.00	0.27	4.31	27.3	6																					
SW9-01B	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	5/03/2020	13:13	0.29	0.67	3.37	25.2	33	*1*	3	0.02	*0.01*	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	1/04/2020	12:37	0.55	0.69	3.35	22.1	20																					

SW9-01 - Montis Gully

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	14/05/2020	14:33	0.91	0.56	3.73	18.6	41	2	19	0.02	0.23	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	8/07/2020	9:23	3.84	0.37	3.58	11.8	21																					
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	17/11/2020	13:55	0.98	0.43	**5.55**	25.2	67	2	**53**	0.04	**1.09**	*30*	*100*	*50*	0.569	**0.001**	*0.0005*	0.002	*0.001*	19.007	*0.001*	**0.587**	*0.0003*	0.014	**0.001**	*0.0050*	0.014
SW9-01B	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	18/05/2021	13:05	**0.55**	0.18	5.06	15.6	5	5	15	0.05	0.52	*30*	*100*	*50*	0.906	*0.001*	*0.0005*	0.002	*0.001*	7.474	*0.001*	0.070	*0.0003*	0.003	*0.001*	*0.0005*	0.008
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.72	4.70		37	4	50	0.05	0.56	30	100	50	2.680	0.001	0.0005	0.002	0.001	18.677	0.001	0.210	0.0003	0.019	0.001	0.0041	0.047
P20				0.68	0.13	3.27																							
St Dev					0.43	1.05																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW09		2/04/2013		2.14	0.14	4.00	22.4	5	*3*	14	0.11	1.10																	
SW09		30/04/2013		2.20	0.12	7.00	17.6	24	*3*	165	0.03	0.50																	
SW09		27/08/2013		8.70	0.13	4.70	21.6	14	*3*	131	0.08	0.80																	
SW09		23/09/2013		9.40	0.11	5.70	29.6	10	*3*	12	*0.01*	0.30																	
SW09		28/10/2013		7.90	0.13	5.30	23.4	24	*3*	37	0.04	0.50																	
SW09		16/12/2013		6.70	0.13	5.30	30.9	43	23	70	0.04	0.50																	
Upstream Monitoring																													
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SW9-01 - Montis Gully

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
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SW9-01A	New upstream monitoring location established. Upstream and downstream sites connected. No visible flow, low water level. Fine.	8/05/2019	15:20	4.98	1.68	2.84	18.9	0	4	*1*	0.02	*0.01*	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/06/2019	13:17	4.75	1.57	3.28	16.0	8																				

SW9-01 - Montis Gully

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-01A	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/07/2019	13:51	1.92	0.49	3.37	16.3	20	*1*	8	0.01	0.48	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, low water level. Red algae. Weather fine.	8/08/2019	12:44	0.00	0.57	3.44	17.2	7																				
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	11/09/2019	8:42	0.79	0.72	3.27	14.3	9	*1*	8	*0.01*	0.09	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/10/2019	10:06	1.36	0.83	3.17	22.1	37																				
SW9-01A	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/11/2019	9:49	3.82	0.53	3.48	20.8	22	*1*	9	0.02	0.19	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	5/12/2019	11:55	1.62	0.73	4.12	29.0	42																				
SW9-01A	Insufficient water to sample.	9/01/2020	10:24																									
SW9-01A	Upstream and downstream sites connected. Low flow, high water level. Overcast.	17/02/2020	14:07	0.00	0.35	3.56	27.3	2																				
SW9-01A	Upstream and downstream sites connected. Low flow, medium water level. Algae. Weather fine.	5/03/2020	13:07	0.29	0.67	3.49	26.2	36	175	3	0.07	0.52	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	1/04/2020	12:31	0.68	0.64	3.47	22.9	21																				
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	14/05/2020	14:44	0.90	0.72	3.24	18.5	50	2	8	0.02	0.16	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, high water level. Drizzle.	8/07/2020	9:20	3.39	0.46	3.63	11.8	27																				
SW9-01A	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	17/11/2020	13:48	0.54	0.68	3.24	27.0	76	2	29	0.03	0.29	*30*	*100*	*50*	3.124	*0.001*	*0.0005*	0.001	0.001	21.819	*0.001*	0.256	*0.0003*	0.023	*0.001*	*0.0050*	0.057
SW9-01A	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	18/05/2021	13:11	1.46	0.21	4.26	15.0	3	5	2	0.04	0.62	*30*	*100*	*50*	0.905	*0.001*	*0.0005*	0.002	0.001	6.111	*0.001*	0.027	*0.0003*	0.002	*0.001*	*0.0005*	0.008

SW9-01 - Montis Gully

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW9-01	Accurate turbidity reading could not be obtained.	4/08/2016		6.72	0.24	4.53	14.4																						
SW9-01	No access	7/12/2016																											
SW9-01	No access	3/01/2016																											
SW9-01	No access	27/02/2016																											
SW9-01	No access	15/03/2017																											
SW9-01	No access	5/04/2017																											
SW9-01	No access	4/05/2017																											
SW9-01	No visible flow. Very high water level. Sample point approx. 20 m SW of designated site due to high water level. Drizzle.	14/06/2017		5.55	0.07	4.63	16.4	15	*1*	9	0.08	0.82	*25*	*50*	*50*														
SW9-01	Gentle flow, moderate water level. Weather fine.	4/10/2017		2.77	0.36	6.06	21.1	23																					
SW9-01	No visible flow. High water level. Overcast.	6/11/2017		1.57	0.19	6.18	22.0	83	*1*	16	0.08	0.79	*25*	*50*	*50*														
SW9-01	No visible flow, high water level. Overcast.	22/12/2017		1.86	0.21	6.38	24.7	89																					
SW9-01	No visible flow. Moderate to high water level. Overcast.	2/01/2018		4.47	0.29	6.17	30.5	8	*1*	11	0.07	1.14	*13*	*50*	*50*														
SW9-01	No visible flow, low water level. Rain.	2/02/2018		3.29	0.20	5.35	20.1	19																					
SW9-01	Very low flow, high water level. Rain.	6/03/2018		5.00	0.20	6.82	24.6	55	2	5	0.06	0.50	*25*	*50*	*50*														
SW9-01	Low flow, high water level. Overcast.	23/04/2018		8.09	0.27	6.58	21.1	319																					
SW9-01	Very low flow, medium water level. Overcast.	1/05/2018		3.72	0.22	7.03	19.0	32	*1*	59	0.14	1.26	*25*	*50*	*50*														
SW9-01	Low flow, medium water level. Weather fine.	8/06/2018	12:25	3.47	0.23	6.27	17.5	98																					
SW9-01	Low flow, medium water level. Overcast.	4/07/2018	9:57	4.85	0.22	6.15	16.3	743	*1*	600	0.68	5.67	*30*	250	250														
SW9-01	No visible flow, very low water level. Weather fine.	27/08/2018	14:25	8.28	0.16	6.77	19.6	36																					
SW9-01	Medium flow, medium water level. Drizzle.	4/09/2018	12:53	5.76	0.46	5.86	17.0	265	3	61	0.09	1.15	*30*	250	250														
SW9-01	No visible flow, low water level. Rain.	11/10/2018	12:18	4.53	0.20	6.14	19.0	43																					
SW9-01	Low water level, no visible flow. Heavy aquatic vegetation, brown algae, light scum layer. Weather fine.	12/11/2018	10:16	1.73	0.19	6.39	20.8	38	*1*	21	0.03	0.33	*30*	*100*	*50*														
SW9-01	No visible flow, very low water level. Heavy aquatic vegetation growth, brown algae present. Overcast.	24/12/2018	11:06	2.29	0.43	6.68	24.9	202																					
SW9-01	Dry, not sampled.	22/02/2019	11:36																										
SW9-01	Low flow, very low water level. Abundant aquatic vegetation, slight algae growth. Rain.	16/03/2019	8:42	4.51	0.37	4.86	21.9	86																					
SW9-01	No visible flow, medium water level. Overcast.	3/04/2019	12:17	3.43	0.46	6.18	22.8	183	*1*	89	0.06	0.82	*30*	*100*	*50*														

SW9-01 - Montis Gully

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-01B	Monitoring site relocated to new location approx. 1 km east. Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	24/05/2019	13:54	0.58	1.66	2.87	19.7	8																					
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/06/2019	13:52	0.69	1.49	3.19	18.3	15	3	15	0.02	0.14	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	8/07/2019	9:43	3.37	0.32	5.59	16.9	92																					
SW9-01B	Upstream and downstream sites connected. Very low flow, medium water level. Red algae, heavy aquatic vegetation. Overcast.	2/08/2019	12:11	0.00	0.64	3.50	16.5	102	*1*	65	0.07	0.42	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/12/2019	13:12	0.52	0.43	5.86	25.0	114																					
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	18/01/2020	13:17	3.19	0.35	6.05	24.0	524	3	253	0.19	2.77	*50*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	4/02/2020	12:31	0.70	0.53	5.71	24.1	63																					
SW9-01B	Upstream and downstream sites connected. Medium flow, high water level. Rain.	7/03/2020	14:23	0.76	0.64	3.41	24.7	15	2	26	0.03	*0.01*	*30*	230	*50*														
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/04/2020	7:51	1.31	0.58	3.77	20.5	40																					
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Surface bacteria layer. Weather fine.	7/05/2020	11:52	1.70	0.61	3.68	19.6	32	3	129	0.03	0.09	*30*	*100*	*50*														
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Surface bacteria layer. Weather fine.	1/06/2020	10:58	2.52	0.53	3.44	16.6	37																					
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	12:41	4.34	0.31	3.67	16.3	14																					
SW9-01B	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	9:49	5.46	0.36	3.35	22.3	7	5	*1*	0.10	0.58	*30*	*100*	*50*	2.352	*0.001*	*0.0005*	0.001	0.002	3.336	*0.001*	0.089	*0.0003*	0.007	0.001	*0.0050*	0.030
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Surface scum layer. Weather fine.	4/02/2021	10:27	0.20	0.28	5.77	24.0	14																					
SW9-01B	Upstream and downstream sites connected. High flow, high water level. Weather fine.	3/05/2021	14:56	1.42	0.16	4.45	19.6	7	4	*1*	0.04	0.66	*30*	*100*	*50*	0.958	*0.001*	*0.0005*	0.001	*0.001*	5.158	*0.001*	0.032	*0.0003*	0.002	*0.001*	*0.0005*	0.008
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.77	5.00		24	3	36	0.12	0.90	30	100	50	2.014	0.001	0.0005	0.001	0.001	5.392	0.001	0.071	0.0003	0.006	0.001	0.0041	0.026
P20				1.48	0.16	3.39																							

SW9-01 - Montis Gully

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
St Dev					0.47	0.82																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW09		1/02/2013		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																	
SW09		1/03/2013		2.95	0.12	5.30	22.8	N/A	*3*	18	0.32	1.50																	
SW09		28/05/2013		7.55	0.17	4.40	17.6	2	*3*	6	0.05	0.90																	
SW09		5/07/2013		7.80	0.10	5.00	18.5	4	*3*	6	0.07	0.80																	
SW09		29/07/2013		8.80	0.12	5.00	21.5	6	*3*	5	0.06	0.60																	
SW09		19/11/2013		8.10	0.15	5.10	24.9	108	*3*	97	0.09	0.90																	
SW09		25/11/2013		8.50	0.16	5.50	28.8	14	*3*	16	0.13	0.50																	
Upstream Monitoring																													
No upstream monitoring site																													
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SW9-01 - Montis Gully

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
No upstream monitoring site																													
No upstream monitoring site																													
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No upstream monitoring site																													
No upstream monitoring site																													
No upstream monitoring site																													
SW9-01A	New upstream monitoring location established. Upstream and downstream sites connected. Low flow, low water level. Weather fine.	24/05/2019	13:47	1.48	1.82	2.92	19.9	0																					
SW9-01A	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	3/06/2019	13:42	2.99	1.50	3.20	17.6	4	2	*1*	0.02	0.03	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. Very low flow, high water level. Drizzle.	8/07/2019	9:35	3.32	0.42	3.50	15.7	9																					
SW9-01A	Upstream and downstream sites connected. Very low flow, medium water level. Red algae, heavy aquatic vegetation. Overcast.	2/08/2019	12:03	0.00	0.67	3.46	16.4	14	2	22	0.04	0.13	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	2/12/2019	13:06	1.84	0.90	4.18	28.1	27																					
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	18/01/2020	13:09	3.04	0.38	5.02	23.4	212	*1*	115	0.13	1.27	*50*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	4/02/2020	12:35	0.47	1.05	3.28	24.7	38																					
SW9-01A	Upstream and downstream sites connected. Very low flow, high water level. Rain.	7/03/2020	14:17	0.89	0.64	3.33	24.5	22	9	46	0.04	*0.01*	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/04/2020	7:45	2.07	0.77	3.49	19.5	22																					
SW9-01A	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	7/05/2020	11:46	1.85	0.73	3.57	18.6	20	*1*	12	0.02	0.05	*30*	*100*	*50*														
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	1/06/2020	11:03	2.47	0.51	3.39	17.1	23																					
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	12:43	4.17	0.30	3.68	17.5	4																					
SW9-01A	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	9:46	3.91	0.38	3.43	22.3	5	*1*	3	0.10	0.59	*30*	2600	2400	2.256	*0.001*	*0.0005*	0.001	0.002	3.227	*0.001*	0.084	*0.0003*	0.007	*0.001*	*0.0050*	0.031

SW9-01 - Montis Gully

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-01 A	Upstream and downstream sites connected. No visible flow, very high water level. Weather fine.	4/02/2021	10:21	0.50	0.28	4.82	22.7	2																				
SW9-01A	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	3/05/2021	15:02	2.14	0.18	4.25	20.7	5	*1*	14	0.07	0.72	*30*	*100*	*50*	1.047	*0.001*	*0.0005*	0.001	*0.001*	5.934	*0.001*	0.020	*0.0003*	0.002	*0.001*	*0.0005*	0.008

SW9-03 - Everson's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW9-03	No access	10/08/2016																											
SW9-03	No access	9/09/2016																											
SW9-03	No access	10/10/2016																											
SW9-03	No access	2/11/2016																											
SW9-03	No access	14/12/2016																											
SW9-03	No access	17/01/2017																											
SW9-03	No access	3/02/2017																											
SW9-03	No access	13/03/2017																											
SW9-03	Slight flow. U/s and d/s sites not connected. Overcast.	26/04/2017		0.95	0.23	4.58	19.1	30																					
SW9-03	Could not determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	23/05/2017		2.66	0.19	4.60	19.6	8	4	8	0.62	1.86	*25*	*50*	*50*														
SW9-03	Upstream and downstream sites not connected. No visible flow. Water level low. Drizzle.	9/06/2017		4.75	0.19	4.64	16.2	9																					
SW9-03	Unable to determine if upstream and downstream sites were connected. No observed flow. Medium water level. Weather fine.	13/07/2017		4.88	0.17	4.61	13.9	18	4	1	0.44	1.31	*25*	*50*	*50*														
SW9-03	No access	4/08/2017																											
SW9-03	U/S and D/S sites connected. Fine weather. No observed flow. Very low water level. Sample taken in isolated pool.	7/09/2017		6.17	0.21	5.05	16.8	5	2	4	0.87	2.00	*25*	*50*	*50*														
SW9-03	Isolated pool. U/S and D/S connected. No observed flow. Fine weather.	26/10/2017		2.33	0.22	4.79	20.3	8																					
SW9-03	Insufficient water to sample.	22/11/2017																											
SW9-03	Insufficient water to sample. Weather fine.	15/12/2017																											
SW9-03	Upstream and downstream sites not connected. Very low water level. Insufficient water to sample, waterway near dry. Weather fine.	23/01/2018																											
SW9-03	Insufficient water to sample. Weather fine.	14/02/2018																											
SW9-03	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	15/03/2018		1.32	0.24	4.51	25.4	17	*1*	10	0.67	2.09	*25*	*50*	*50*														
SW9-03	Upstream and downstream sites connected only by a trickle, waterway is a series of slightly connected pools. No visible flow, low water level. Weather fine.	5/04/2018		1.74	0.23	4.69	24.0	28																					
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/05/2018		2.27	0.23	4.66	20.3	13	*4*	2	0.57	1.60	*30*	*250*	*250*														

SW9-03 - Everson's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-03	Upstream and downstream sites connected. Low flow, medium water level. Tannin stained. Weather fine.	15/06/2018	13:14	2.12	0.20	4.65	14.7	4																				
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Green algae present. Weather fine.	17/07/2018	14:13	4.91	0.21	4.85	13.3	6	*1*	3	**1.09**	1.56	*30*	*250*	*250*													
SW9-03	Upstream and downstream sites connected. No visible flow. Could not obtain DO measurement due to low water level. Weather fine.	9/08/2018	12:09		0.21	4.72	13.5	7																				
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Light scum layer on surface. Light drizzle.	24/09/2018	8:04	1.96	0.22	4.59	15.3	12	**5**	**35**	**1.16**	**2.49**	*30*	*250*	*250*													
SW9-03	Upstream and downstream sites connected by a trickle of water. No visible flow and very low water level. Weather fine.	3/10/2018	12:32	3.41	0.24	5.00	21.3	20																				
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Tannin and dust layer present. Evidence of cattle disturbance to creek bed. Drizzle.	8/11/2018	11:04	1.37	0.20	5.00	20.8	**53**	2	**52**	**1.75**	**2.65**	*30*	*100*	*50*													
SW9-03	Insufficient water to sample	11/12/2018	8:52																									
SW9-03	Dry, not sampled.	15/01/2019	9:41																									
SW9-03	Dry, not sampled.	13/02/2019	12:14																									
SW9-03	Dry, not sampled.	15/03/2019	9:34																									
SW9-03	Upstream and downstream sites connected. No visible flow, very low water level. Rain.	11/04/2019	10:01	3.33	**1.38**	**4.10**	20.1	10																				
SW9-03	Dry, not sampled.	8/05/2019																										
SW9-03	Insufficient water to sample.	5/06/2019	12:50																									
SW9-03	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	9/07/2019	14:39	3.29	0.45	**5.52**	17.1	11	*1*	4	0.79	2.02	*30*	*100*	*50*													
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2019	12:18	**0.00**	0.39	4.70	16.7	3																				
SW9-03	Insufficient water to monitor.	11/09/2019	9:10																									
SW9-03	Dry, not sampled.	2/10/2019	10:31																									
SW9-03	Dry, not sampled.	6/11/2019	10:25																									
SW9-03	Dry, not sampled.	5/12/2019	11:41																									
SW9-03	Insufficient water to sample.	9/01/2020	9:59																									
SW9-03	Upstream and downstream sites connected. Very low flow, medium water level. Surface scum layer. Weather fine.	17/02/2020	14:33	0.00	**0.47**	5.27	26.5	**30**																				

SW9-03 - Everson's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/03/2020	13:52	0.12	0.32	5.29	25.7	5	13	2	0.93	2.27	*30*	*100*	*50*													
SW9-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	1/04/2020	11:57	0.49	0.47	5.44	24.1	46																				
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/05/2020	15:15	1.72	0.31	4.61	17.7	10	2	1	0.58	2.02	*30*	*100*	*50*													
SW9-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.	8/07/2020	9:38	1.75	0.28	5.19	12.6	17																				
SW9-03	Dry, not sampled.	17/11/2020																										
SW9-03	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/05/2021	12:45	2.03	0.25	5.80	15.4	23	1	15	0.74	1.42	*30*	*100*	*50*	0.603	*0.001*	*0.0005*	*0.001*	*0.001*	1.685	*0.001*	0.666	*0.0003*	0.005	*0.001*	*0.0005*	0.011
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.30	4.91		21	3	23	0.72	2.26	30	242	170	0.782	0.001	0.0005	0.001	0.001	1.250	0.001	0.048	0.0003	0.001	0.001	0.0005	0.005
P20				1.02	0.19	4.36																						
St Dev					0.14	0.37																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW10		3/04/2013		2.90	0.20	4.40	24.2	4	*3*	8	0.72	1.40																
SW10	pH lab sampled	30/04/2013		4.90	0.15	4.80	17.6	24	*3*	40	0.74	1.90																
SW10		27/08/2013		7.20	0.15	4.00	19.9	5	*3*	24	0.62	2.00																
SW10		23/09/2013		6.30	0.15	5.10	24.8	4	*3*	7	0.66	1.50																
SW10	Dry	28/10/2013																										
SW10		16/12/2013		6.40	0.23	5.50	27.4	63	*3*	31	0.65	2.40																
Upstream Monitoring																												
SW9-02	Sample taken approx. 100 m upstream due to access issues. Photo taken.	10/08/2016		1.09	0.21	5.65	15.3	0																				
SW9-02	Sample taken approx. 100 m upstream due to access issues	9/09/2016		0.58	0.20	4.69	17.9	3	4	14	0.74	2.20	*25*	*50*	*50*													
SW9-02	Sample taken approx. 100 m upstream due to access issues	11/10/2016		0.39	0.21	4.59	17.9	4																				
SW9-02	No access	2/11/2016																										

SW9-03 - Everson's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-02	No access	14/12/2016																											
SW9-02	No access	17/01/2017																											
SW9-02	No access	3/02/2017																											

SW9-03 - Everson's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-02	No access	13/03/2017																											
SW9-02	Slight flow. U/s and d/s sites not connected. Overcast.	26/04/2017		1.24	0.19	4.58	18.8	20																					
SW9-02	Could not determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	23/05/2017		2.03	0.19	4.66	19.0	7	3	2	0.55	1.81	*25*	*50*	*50*														
SW9-02	Upstream and downstream sites not connected. No visible flow. Water level low. Drizzle.	9/06/2017		3.10	0.20	4.36	15.5	1																					
SW9-02	Unable to determine if upstream and downstream sites were connected. No observed flow. Medium water level. Weather fine.	13/07/2017		4.21	0.15	4.52	13.8	41	*1*	1	0.42	1.48	*25*	*50*	*50*														
SW9-02	No access	4/08/2017																											
SW9-02	U/S and D/S sites connected. Weather Fine No observed flow. Very low water level. Sample taken in isolated pool.	7/09/2017		2.49	0.19	4.53	12.8	3	*1*	2	0.40	1.67	*25*	*50*	*50*														
SW9-02	No observed flow. Isolated pool. D/S and U/S not connect. Tannins stain. Fine weather.	26/10/2017		2.25	0.22	4.75	19.2	4																					
SW9-02	Insufficient water to sample.	22/11/2017																											
SW9-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	15/12/2017		0.00	0.23	4.61	22.8																						
SW9-02	Upstream and downstream sites not connected. No visible flow, very low water level. Insufficient water to sample, waterway near dry. Weather fine.	23/01/2018																											
SW9-02	Upstream and downstream sites not connected. low water level. Weather fine.	14/02/2018		0.00	0.31	4.89	25.2	21																					
SW9-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	15/03/2018		1.86	0.21	4.57	24.1	5	2	78	0.72	3.01	*25*	*50*	*50*														
SW9-02	Upstream and downstream sites were connected only by a trickle, waterway is a series of slightly connected pools. No visible flow, low water level. Dust layer on surface, slight odour. Weather fine.	5/04/2018		2.75	0.23	4.41	24.2	17																					
SW9-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	3/05/2018		1.96	0.23	4.66	19.1	23	3	3	0.51	1.71	*30*	*250*	*250*														
SW9-02	Upstream and downstream sites connected. Low flow, medium water level. Tannin stained. Weather fine.	15/06/2018	13:07	2.41	0.22	4.46	13.7	4																					
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/07/2018	13:57	3.38	0.22	4.81	12.4	4	2	*1*	0.39	1.43	*30*	*250*	*250*														
SW9-02	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	9/08/2018	11:57	1.38	0.21	4.72	13.5	10																					

SW9-03 - Everson's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Light scum layer on surface. Light drizzle.	24/09/2018	7:55	1.75	0.23	4.67	16.8	12	*1*	*1*	0.54	1.61	*30*	*250*	*250*														
SW9-02	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	3/10/2018	12:23	6.00	0.23	5.00	21.3	37																				
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Tannins and dust layer present. Drizzle.	8/11/2018	10:55	0.55	0.20	4.77	21.0	31	*1*	4	0.57	1.88	*30*	230	*50*														
SW9-02	Insufficient water to sample	11/12/2018	8:58																										
SW9-02	Dry, not sampled.	15/01/2019	9:42																										
SW9-02	Dry, not sampled.	13/02/2019	12:10																										
SW9-02	Dry, not sampled.	15/03/2019	9:34																										
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Rain.	11/04/2019	9:52	3.15	0.88	4.62	19.2	8																				
SW9-02	Dry, not sampled.	8/05/2019																										
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/06/2019	12:51	2.48	0.55	5.04	13.9	3																				
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	9/07/2019	14:31	2.34	0.43	4.23	16.1	10	*1*	3	0.87	2.31	*30*	*100*	*50*														
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/08/2019	12:24	1.41	0.38	4.22	19.8	5																				
SW9-02	Insufficient water to monitor.	11/09/2019	9:16																										
SW9-02	Dry, not sampled.	2/10/2019	10:23																										
SW9-02	Dry, not sampled.	6/11/2019	10:20																										
SW9-02	Dry, not sampled.	5/12/2019	11:41																										
SW9-02	Insufficient water to sample.	9/01/2020	10:00																										
SW9-02	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	17/02/2020	14:39	0.00	0.24	5.05	26.5	0																				
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/03/2020	14:01	0.76	0.30	4.27	25.7	0	*1*	3	0.62	2.40	*30*	*100*	*50*														
SW9-02	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Weather fine.	1/04/2020	12:05	1.41	0.33	4.35	22.4	3																				
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/05/2020	15:06	1.66	0.32	4.11	17.6	3	2	1	0.35	1.99	*30*	*100*	*50*														
SW9-02	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.	8/07/2020	9:47	2.02	0.29	4.24	11.6	7																				

SW9-03 - Everson's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-02	Dry, not sampled.	17/11/2020																											
SW9-02	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	18/05/2021	12:37	2.08	0.18	5.25	15.0	32	3	22	0.36	1.87	*30*	*100*	*50*	0.782	*0.001*	*0.0005*	*0.001*	*0.001*	1.250	*0.001*	0.048	*0.0003*	*0.001*	*0.001*	*0.0005*	0.005

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW9-03	No access	4/08/2016																											
SW9-03	No access	7/12/2016																											
SW9-03	No access	3/01/2017																											
SW9-03	No flow. Overcast	28/02/2017		3.04	0.52	4.04	22.5	12	4	6	0.20	0.62	*25*	*50*	*50*														
SW9-03	Steady flow. Upstream and downstream sites connected.	16/03/2017		2.34	0.29	4.17	22.3	7																					
SW9-03	No entry - gate locked	5/04/2017																											
SW9-03	Slight flow, u/s and d/s sites connected. Tannin stained water. Light drizzle.	4/05/2017		2.41	0.25	4.74	18.7	67																					
SW9-03	Upstream and downstream sites connected. Moderate flow. Moderate to high water level. Overcast.	14/06/2017		4.04	0.10	4.98	16.8	11	2	3	0.37	0.94	*25*	*50*	*50*														
SW9-03	Upstream and downstream sites not connected. No visible flow. Very low water level - unable to obtain DO measurment. Dust layer on surface. Weather fine.	4/10/2017			0.39	4.62	23.5	23																					
SW9-03	Unable to determine if upstream and downstream sites connected. No visible flow. Medium water level. Overcast.	6/11/2017		2.22	0.22	4.74	21.2	14	3	58	0.95	2.60	*25*	*50*	*50*														
SW9-03	No access	22/12/2017																											
SW9-03	No access	2/01/2018																											
SW9-03	Very low water level, insufficient water to sample. Drizzle.	2/02/2018																											
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	6/03/2018		2.01	0.27	4.40	22.4	36	*1*	8	0.39	1.29	*25*	*50*	*50*														
SW9-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	23/04/2018		2.43	0.24	4.77	20.3	13																					
SW9-03	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	1/05/2018		3.85	0.23	4.98	18.3	4	7	3	0.72	1.67	*25*	*50*	*50*														
SW9-03	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	8/06/2018	11:58	4.57	0.22	4.69	15.6	7																					
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	4/07/2018	9:32	3.92	0.20	4.65	15.7	20	*1*	26	0.66	1.68	*30*	*250*	*250*														
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	14:49	3.16	0.21	5.08	16.8	36																					
SW9-03	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	4/09/2018	13:35	5.23	0.43	4.35	16.0	58	3	79	0.90	2.19	*30*	*250*	*250*														

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Evidence of cattle disturbance. Rain.	11/10/2018	11:56	3.95	0.21	4.96	18.5	68																				
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Light scum layer. Weather fine.	12/11/2018	10:56	2.39	0.18	4.77	22.4	151	*1*	29	1.04	1.98	*30*	*100*	*50*													
SW9-03	Insufficient water to sample	24/12/2018	11:21																									
SW9-03	Dry, not sampled.	22/02/2019	11:19																									
SW9-03	Dry, not sampled.	16/03/2019	8:53																									
SW9-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	3/04/2019	11:53	2.37	1.73	4.00	22.1	35	*1*	7	0.43	2.29	*30*	*100*	*50*													
SW9-03	Insufficient water to sample.	24/05/2019	13:27																									
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/06/2019	13:15	2.45	0.53	4.63	17.2	23	4	3	0.67	1.94	*30*	230	*50*													
SW9-03	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	8/07/2019	9:08	3.24	0.48	5.90	16.2	29																				
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	2/08/2019	11:36	0.00	0.43	4.72	15.3	6	*1*	5	0.69	1.93	*30*	*100*	*50*													
SW9-03	Dry, not sampled.	2/12/2019	12:58																									
SW9-03	Low flow, low water level. Overcast.	18/01/2020	13:48	4.23	0.84	4.28	23.2	75	2	31	0.71	2.44	470	420	*50*													
SW9-03	Dry, not sampled.	4/02/2020	12:10																									
SW9-03	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	7/03/2020	14:40	0.29	0.36	5.51	24.6	6	3	4	0.78	2.15	*30*	220	*50*													
SW9-03	Upstream and downstream sites connected. No visible flow, medium water level.Overcast.	9/04/2020	7:18	1.49	0.33	5.16	20.0	22																				
SW9-03	Upstream and downstream sites connected. Low flow, low water level. Weather, fine.	7/05/2020	12:22	2.89	0.30	4.97	18.2	17	6	3	0.57	1.70	*30*	*100*	*50*													
SW9-03	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	1/06/2020	10:33	1.15	0.32	5.37	16.8	13																				
SW9-03	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	8/08/2020	13:23	3.36	0.26	5.84	17.4	11																				
SW9-03	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	9:27	3.74	0.85	5.97	23.2	25	3	11	0.12	5.60	*30*	*100*	*50*	0.441	0.002	*0.0005*	*0.001*	0.002	0.440	*0.001*	3.943	*0.0003*	0.037	0.001	*0.0050*	0.170
SW9-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	4/02/2021	9:38	0.62	0.24	5.85	23.4	5																				
SW9-03	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	3/05/2021	14:21	1.64	0.23	5.97	20.4	6	4	3	0.47	1.28	*30*	*100*	*50*	0.682	*0.001*	*0.0005*	*0.001*	*0.001*	1.363	*0.001*	0.431	*0.0003*	0.002	0.001	*0.0005*	0.011

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.42	5.34		37	3	30	1.44	3.01	30	100	50	1.514	0.002	0.0005	0.001	0.001	1.086	0.001	0.081	0.0003	0.002	0.001	0.0041	0.016
P20				0.98	0.21	4.38																							
St Dev					0.14	0.46																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW10		31/01/2013		N/A	0.29	N/A	N/A	N/A	*3*	*3*	1.82	3.60																	
SW10		1/03/2013		0.98	0.17	4.67	21.8	N/A	*3*	34	2.46	3.50																	
SW10		28/05/2013		3.80	0.15	4.30	15.3	4	*3*	12	0.26	1.40																	
SW10		5/07/2013		0.97	0.13	5.40	16.3	36	5	53	2.09	2.00																	
SW10		30/07/2013		7.50	0.17	4.70	18.0	274	*3*	255	2.30	4.20																	
SW10	Dry	19/11/2013																											
SW10		25/11/2013		10.70	0.27	5.70	25.6	11	*3*	*3*	0.96	1.70																	
Upstream Monitoring																													
SW9-02	Sample taken approx. 100m upstream as no access to sample point	4/08/2016		2.58	0.26	5.49	14.5	30																					
SW9-02	Sample taken approx. 100m upstream as no access to sample point	7/12/2016		0.06	0.42	5.42	23.8	12	*1*	5	1.56	3.03	*25*	*50*	*50*														
SW9-02	No access	3/01/2017																											
SW9-02	No flow. Overcast	28/02/2017		2.92	0.55	4.54	22.0	26	3	13	0.49	3.59	*25*	*50*	*50*														
SW9-02	Steady flow. Upstream and downstream sites connected.	16/03/2017		2.09	0.24	4.27	22.2	7																					
SW9-02	No entry - gate locked	5/04/2017																											
SW9-02	Slight flow, u/s and d/s sites connected. Tannin stained water. Light drizzle.	4/05/2017		2.31	0.21	4.51	18.2	11																					
SW9-02	Upstream and downstream sites connected. Low to moderate flow. Moderate to high water level. Overcast.	14/06/2017		3.98	0.09	5.34	16.7	7	2	57	0.50	1.76	*25*	*50*	*50*														
SW9-02	Upstream and downstream sites not connected. No visible flow. Very low water level. Dust layer on surface. Weather fine.	4/10/2017		0.85	0.30	4.49	19.9	25																					

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-02	Unable to determine if upstream and downstream sites connected. Medium flow. Medium water level. Overcast.	6/11/2017		1.56	0.23	4.94	21.1	13	*1*	31	0.94	2.94	*25*	*50*	*50*														
SW9-02	No access	22/12/2017																											
SW9-02	No access	2/01/2018																											
SW9-02	No visible flow, low water level. Sampled in medium sized pool. Rain.	2/02/2018		5.09	0.26	4.67	19.1	22																					
SW9-02	Upstream and downstream sites connected. Low flow, low water level. Drizzle.	6/03/2018		2.19	0.25	4.80	22.2	60	2	11	0.86	2.55	*25*	*50*	*50*														
SW9-02	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	23/04/2018		1.94	0.27	4.66	19.8	20																					
SW9-02	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	1/05/2018		3.11	0.23	4.73	17.8	4	9	17	0.48	1.82	*25*	*50*	*50*														
SW9-02	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	8/06/2018	11:50	4.18	0.23	4.95	15.0	7																					
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	4/07/2018	9:15	2.94	0.21	4.83	15.5	34	*1*	22	0.57	1.65	*30*	*250*	*250*														
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Slight scum layer. Weather fine.	27/08/2018	14:42	3.94	0.26	4.95	16.0	40																					
SW9-02	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/09/2018	13:26	4.21	0.45	4.68	15.0	74	*1*	27	0.98	2.22	*30*	*250*	*250*														
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	11/10/2018	11:43	2.65	0.27	5.53	17.8	88																					
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Light scum/ bacteria layer. Tannins. Weather fine.	12/11/2018	10:44	0.84	0.20	4.44	19.8	9	*1*	3	0.40	1.47	*30*	*100*	*50*														
SW9-02	Insufficient water to sample.	24/12/2018	11:17																										
SW9-02	Dry, not sampled.	22/02/2019	11:24																										
SW9-02	Dry, not sampled.	16/03/2019	8:00																										
SW9-02	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	3/04/2019	11:43	2.98	0.70	4.33	20.6	80	*1*	28	0.25	1.60	*30*	*100*	*50*														
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/05/2019	13:29	0.66	0.66	5.18	19.8	10																					
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/06/2019	13:04	2.45	0.50	4.88	16.8	8	2	4	0.36	1.07	*30*	*100*	*50*														
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	8/07/2019	9:00	2.11	0.41	4.15	15.8	29																					

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Green algae. Weather fine.	2/08/2019	11:24	0.00	0.46	4.21	14.8	4	*1*	2	0.77	2.31	*30*	*100*	*50*														
SW9-02	Dry, not sampled.	2/12/2019	12:56																										
SW9-02	Dry, not sampled.	18/01/2020	14:01																										
SW9-02	Dry, not sampled.	4/02/2020	12:15																										
SW9-02	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	7/03/2020	14:53	0.73	0.30	4.38	24.1	0	3	*1*	0.78	2.46	*30*	330	*50*														
SW9-02	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Weather fine.	9/04/2020	7:27	1.78	0.34	4.35	19.7	5																					
SW9-02	Upstream and downstream sites connected. Low flow, low water level. Weather, fine.	7/05/2020	12:13	2.51	0.32	4.26	17.5	0	5	2	0.28	1.67	*30*	*100*	*50*														
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	1/06/2020	10:41	2.28	0.32	4.53	16.5	5																					
SW9-02	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	8/08/2020	13:14	3.87	0.23	4.99	15.8	4																					
SW9-02	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	9:21	3.79	0.44	5.90	22.9	59	3	11	0.66	1.09	*30*	*100*	*50*	1.704	0.002	*0.0005*	0.001	0.001	1.036	*0.001*	0.089	*0.0003*	0.002	0.001	*0.0050*	0.019
SW9-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	4/02/2021	9:46	1.58	0.23	4.86	22.1	0																					
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	3/05/2021	14:30	2.31	0.17	5.37	19.8	21	4	1	0.40	1.38	*30*	*100*	*50*	0.753	*0.001*	*0.0005*	*0.001*	*0.001*	1.099	*0.002*	0.051	*0.0003*	0.001	0.001	*0.0005*	0.007

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-02	Low tide. Photo taken.	10/08/2016		5.32	0.36	7.27	16.2	8																					
SW10-02		12/09/2016		6.47	4.15	6.76	21.4	58	5	74	0.25	0.85	*25*	*50*	*50*														
SW10-02		11/10/2016		6.88	17.10	7.03	21.9	**731**																					
SW10-02		2/11/2016		6.01	21.60	6.91	24.0	34	5	35	0.12	0.32	*25*	*50*	*50*														
SW10-02	High tide	15/12/2016		6.56	11.50	7.27	27.0	47																					
SW10-02	Low tide, outflowing tide.	18/01/2017		7.72	0.69	8.19	29.5	72	*1*	25	**0.22**	0.42	*25*	*50*	*50*														
SW10-01	Mid tide, gentle flow. Incoming tide therefore SW10-01 is downstream.	3/02/2017		7.95	8.10	7.77	31.1	35																					
SW10-02	Very high, outflowing tide.	13/03/2017		5.08	23.30	7.22	25.5	16	*1*	7	0.08	0.42	*25*	*50*	*50*														
SW10-02	Low water level, outflowing tide. U/s and d/s sites connected. Overcast.	26/04/2017		4.42	0.29	6.69	21.5	41																					
SW10-02	Light rain. U/s and d/s connected, tidal waterway with outgoing tide. Accurate turbidity reading could not be obtained because sediment is stirred up when accessing water to sample.	10/05/2017		6.35	3.40	6.96	19.8		*1*	45	0.16	0.48	*25*	*50*	*50*														
SW10-01	Upstream and downstream sites connected. Mid water level. Inoming tide, therefore SW10-01 is downstream. Weather fine.	28/06/2017		7.34	0.16	7.15	17.3	31																					
SW10-01	Upstream and downstream sites connected. Incoming tide, mid water level. Weather fine.	13/07/2017		9.11	0.39	6.51	15.4	46	3	12	0.10	0.41	*25*	*50*	*50*														
SW10-02	Upstream and downstream sites connected. Outgoing tide, moderate flow. Water level mid-high. Weather fine.	4/08/2017		8.66	16.40	8.02	16.3	32																					
SW10-02	Fine weather. U/S and D/S connected. High tide, medium flow running out.	7/09/2017		6.80	21.90	7.29	18.2	6	*1*	12	0.05	0.24	*25*	*50*	*50*														
SW10-01	U/S and D/S connected. Low water level. Incoming tide therefore SW10-01 is downstream. Gentle flow. Weather fine.	26/10/2017		5.94	0.41	6.87	22.3	28																					
SW10-01	Upstream and downstream sites connected. Moderate flow, high water level. Incoming tide therefore SW10-01 is downstream. Weather, fine.	22/11/2017		8.94	0.67	7.46	23.8	29	3	16	0.14	0.56	*25*	*50*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	15/12/2017		6.97	7.03	**6.86**	28.6	**281**																					
SW10-01	Upstream and downstream sites connected. High flow, high water level. Incoming tide therefore SW10-01 is downstream. Weather fine.	23/01/2018		**5.37**	9.06	7.06	27.7	**76**	3	**109**	**0.27**	**1.08**	*25*	*50*	*50*														

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	14/02/2018		5.65	22.20	7.38	27.7	18																				
SW10-02	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	15/03/2018		4.68	0.35	6.91	24.6	30	*1*	19	0.25	0.75	*25*	*50*	*50*													
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	5/04/2018		7.08	0.23	7.24	25.6	70																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	3/05/2018		8.42	0.39	7.69	21.3	32	*3*	17	0.13	0.25	*30*	*250*	*250*													
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	15/06/2018	13:53	7.06	8.27	6.55	18.0	25																				
SW10-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	17/07/2018	12:48	8.08	15.00	7.11	15.4	33	*1*	42	0.10	0.24	*30*	*250*	*250*													
SW10-02	Upstream and downstream sites connected. Low flow, very low water level. Outgoing tide. Weather fine.	9/08/2018	13:11	7.37	15.90	6.66	17.8	14																				
SW10-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Overcast.	24/09/2018	9:37	5.48	23.60	6.78	20.9	63	5	13	0.05	0.19	*30*	*250*	*250*													
SW10-01	Upstream and downstream sites connected. High flow, high water level. Incoming tide. Strong wave action. Weather fine.	3/10/2018	13:51	6.77	18.60	7.36	21.7	11																				
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Drizzle.	8/11/2018	12:02	4.27	12.30	6.75	26.6	104	*1*	47	0.16	0.61	*30*	*100*	*50*													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	11/12/2018	9:57	5.06	11.20	7.25	25.9	25																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Wave action. Weather fine.	15/01/2019	10:45	7.11	29.50	7.75	29.1	104	*1*	52	0.25	0.51	*30*	*100*	*100*													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	13/02/2019	14:10	7.20	35.50	7.82	32.6	73																				
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	14/03/2019	15:41	7.01	35.90	7.56	27.4	20	2	9	*0.01*	0.36	*30*	*100*	*50*													
SW10-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Drizzle.	11/04/2019	12:49	7.08	18.20	7.04	23.5	82																				
SW10-02	Connected. Medium water level. Low flow. Outgoing tide. Fine.	6/05/2019	15:46	6.68	17.90	7.68	22.0	84	*1*	24	*0.01*	0.41	*30*	*100*	*50*													
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	5/06/2019	14:22	8.32	27.70	7.61	16.9	47																				

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	9/07/2019	15:59	7.01	0.47	6.44	16.9	30	2	8	0.10	0.78	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	16/08/2019	8:42	6.11	16.50	7.33	17.2	5																				
SW10-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Wave action. Overcast.	11/09/2019	10:06	6.64	30.00	7.30	17.7	94	*1*	76	0.19	0.29	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/10/2019	11:39	**5.26**	29.20	7.21	23.4	36																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	6/11/2019	11:20	5.75	33.00	7.54	25.4	39	*1*	9	0.05	0.19	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	5/12/2019	10:06	5.55	40.00	7.57	26.7	49																				
SW10-02	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	9/01/2020	8:48	5.17	42.50	7.61	28.1	4	3	4	0.09	0.26	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Strong odour. Wave action. Weather fine.	17/02/2020	15:44	0.24	0.27	6.04	27.7	**557**																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	12/03/2020	8:39	4.38	0.33	6.64	24.3	52	5	22	**0.19**	1.13	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	1/04/2020	10:55	6.11	11.90	7.30	25.2	72																				
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	14/05/2020	16:12	8.31	16.90	7.36	20.0	33	3	17	0.07	0.36	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Drizzle.	8/07/2020	10:30	7.53	12.90	6.77	16.2	30																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	19/11/2020	11:26	5.63	23.70	7.25	26.2	14	2	19	0.04	0.38	*30*	*100*	*50*	0.113	**0.001**	*0.0005*	*0.001*	**0.001**	0.211	*0.001*	**0.102**	*0.0003*	0.001	**0.001**	*0.0050*	0.003
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	18/05/2021	11:32	7.00	2.01	7.29	18.2	30	*1*	11	0.08	0.50	*30*	*100*	*50*	**0.316**	*0.001*	*0.0005*	*0.001*	**0.001**	**0.747**	*0.001*	0.066	*0.0003*	**0.002**	0.001	*0.0005*	**0.004**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					23.04	7.52		73	4	46	0.17	0.73	30	100	50	0.246	0.001	0.0005	0.001	0.001	0.622	0.001	0.080	0.0003	0.002	0.001	0.0041	0.003
P20				5.61	0.46	6.88																						

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
St Dev					11.89	0.43																							
Threshold				0.50				10	2	10	0.02	0.20																	

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW11		3/04/2013		6.89	0.27	6.80	25.1	107	*3*	35	0.12	0.60																	
SW11		30/04/2013		6.80	0.23	7.90	20.4	83	*3*	117	0.27	0.80																	
SW11		27/08/2013		9.00	3.69	7.40	20.8	69	*3*	46	0.15	0.60																	
SW11		23/09/2013		7.80	11.40	7.00	23.3	51	*3*	115	0.12	0.30																	
SW11		28/10/2013		8.80	19.80	6.90	24.3	8	*3*	24	0.07	0.30																	
SW11		16/12/2013		8.20	13.30	6.90	29.0	49	*3*	35	0.17	0.05																	
Upstream Monitoring																													
SW10-01	Low tide. Photo taken.	10/08/2016		5.34	0.33	7.20	16.3	7																					
SW10-01		12/09/2016		5.91	4.08	6.93	20.9	97	4	216	0.54	0.87	*25*	*50*	*50*														
SW10-01		11/10/2016		7.32	17.20	6.74	21.9	664																					
SW10-01		2/11/2016		6.32	19.80	6.43	23.4	34	4	152	0.36	0.81	*25*	*50*	*50*														
SW10-01	High tide	15/12/2016		6.63	11.60	7.14	27.2	66																					
SW10-01	Low tide, outflowing tide.	18/01/2016		6.86	0.71	7.90	29.3	88	*1*	20	0.19	0.40	*25*	*50*	*50*														
SW10-02	Mid tide, gentle flow. Tide inflowing therefore SW10-02 is upstream site.	3/02/2017		8.00	8.43	7.98	31.1	15																					
SW10-01	Very high, outflowing tide.	13/03/2017		4.75	23.00	6.86	25.4	31	*1*	5	0.08	0.42	*25*	*50*	*50*														
SW10-01	Low water level, outflowing tide. U/s and d/s sites connected. Accurate turbidity reading could not be obtained because sediment is stirred up when accessing water to sample. Overcast.	26/04/2017		4.11	0.32	6.48	21.6																						
SW10-01	Light rain. U/s and d/s connected, tidal waterway with outgoing tide. Accurate turbidity reading could not be obtained because sediment is stirred up when accessing water to sample.	10/05/2017		6.40	3.22	6.72	19.6		2	29	0.13	0.48	*25*	*50*	*50*														
SW10-02	Upstream and downstream sites connected. Incoming tide, therefore SW10-02 is upstream. Mid water level. Weather fine.	28/06/2017		7.33	0.18	6.94	17.5	35																					
SW10-02	Upstream and downstream sites connected. Incoming tide, mid water level. Weather fine.	13/07/2017		8.85	0.46	6.75	15.6	37	2	15	0.11	0.44	*25*	*50*	*50*														
SW10-01	Upstream and downstream sites connected. Outgoing tide, moderate flow. Water level mid-high. Weather fine.	4/08/2017		8.67	16.10	7.75	16.3	9																					
SW10-01	Fine weather. U/S and D/S connected. High tide, medium flow running out. Replicate taken	7/09/2017		7.08	21.10	7.20	18.0	26	*1*	55	0.17	0.36	*25*	*50*	*50*														

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-02	U/S and D/S connected. Low water level. Incoming tide therefore SW10-02 is upstream. Gentle flow. Weather fine.	26/10/2017		6.10	0.33	7.11	23.1	32																				
SW10-02	Upstream and downstream sites connected. Moderate flow, high water level. Incoming tide therefore SW10-02 is upstream. Weather, fine.	22/11/2017		8.94	0.84	7.16	24.4	26	2	16	0.14	0.56	*25*	*50*	*50*													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	15/12/2017		7.11	7.48	7.36	29.0	180																				
SW10-02	Upstream and downstream sites connected. High flow, high water level. Incoming tide, therefore SW10-02 is upstream. Weather fine.	23/01/2018		6.36	8.41	6.89	28.5	23	2	23	0.13	0.73	*25*	*50*	*50*													
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	14/02/2018		5.96	22.30	7.54	27.6	14																				
SW10-01	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	15/03/2018		4.41	0.32	6.97	24.7	69	*1*	18	0.25	0.75	*25*	*50*	*50*													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Wave action stirring up sediment. Weather fine.	5/04/2018		6.92	0.25	7.34	25.3	179																				
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	3/05/2018		8.33	0.43	7.38	21.0	27	4	18	0.13	0.25	*30*	*250*	*250*													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	15/06/2018	14:03	7.08	7.88	6.88	17.6	52																				
SW10-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	17/07/2018	12:37	8.40	16.70	6.91	15.9	34	6	44	0.11	0.26	*30*	*250*	*250*													
SW10-01	Upstream and downstream sites connected. Low flow. Could not obtain turbidity reading due to very low water level and loose river bed sediment. Outgoing tide. Weather fine.	9/08/2018	13:23	7.05	13.20	7.06	17.5																					
SW10-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	24/09/2018	9:46	5.61	23.40	7.00	20.8	25	5	17	0.07	0.20	*30*	*250*	*250*													
SW10-02	Upstream and downstream sites connected. High flow, high water level. Incoming tide. Strong wave action. Weather fine.	3/10/2018	13:43	7.04	16.80	7.22	21.8	60																				
SW10-01	Upstream and downstream sites connected. Low flow, outgoing tide. Sampled within inundated mangrove vegetation due to high water level. Drizzle.	8/11/2018	12:09	2.44	4.73	6.90	24.7	74	*1*	7	0.16	0.47	*30*	*100*	*50*													

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-02	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	11/12/2018	9:28	7.37	10.20	7.05	26.4	40																					
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Wave action. Weather fine.	15/01/2019	10:58	7.17	29.30	7.88	28.8	58	*1*	13	0.15	0.35	*30*	*100*	*100*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	13/02/2019	14:17	7.21	35.60	7.92	30.5	17																					
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	14/03/2019	15:33	5.29	35.40	7.04	27.4	22	2	18	0.01	0.39	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Drizzle.	11/04/2019	12:55	7.12	18.80	7.48	23.1	54																					
SW10-01	Connected. Medium water level. Low flow. Outgoing tide. Weather fine.	6/05/2019	15:32	6.84	17.60	7.60	22.4	67	*1*	24	*0.01*	0.38	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	5/06/2019	14:15	9.01	27.10	7.13	16.9	60																					
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	9/07/2019	16:08	5.04	0.48	6.55	17.1	38	*1*	14	0.11	0.86	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	16/08/2019	8:36	6.00	16.80	7.34	17.1	3																					
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Wave action. Overcast.	11/09/2019	10:15	7.23	28.70	7.50	17.3	284	2	505	0.72	0.55	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/10/2019	11:44	6.75	28.10	7.52	21.4	32																					
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	6/11/2019	11:40	5.70	33.40	7.70	27.6	76	*1*	34	0.13	0.25	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	5/12/2019	10:02	5.60	40.30	7.59	26.5	18																					
SW10-01	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	9/01/2020	8:43	5.11	42.40	7.62	28.5	14	3	7	0.11	0.25	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Strong odour. Weather fine.	17/02/2020	15:38	0.00	0.21	5.88	28.0	49																					
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	12/03/2020	8:51	4.44	0.37	6.71	24.1	42	4	16	0.15	1.10	*30*	*100*	*50*														

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	1/04/2020	10:49	6.21	11.00	7.12	25.3	54																					
SW10-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	14/05/2020	16:07	8.14	16.50	7.01	20.0	78	4	29	0.09	0.37	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Drizzle.	8/07/2020	10:25	7.65	12.60	6.40	16.1	36																					
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	19/11/2020	11:37	6.43	23.20	7.44	25.0	8	2	18	0.04	0.33	*30*	*100*	*50*	0.065	*0.001*	*0.0005*	*0.001*	0.001	0.127	*0.001*	0.087	*0.0003*	0.002	0.001	*0.0050*	0.003
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	18/05/2021	11:25	6.49	1.75	7.19	18.4	24	1	11	0.07	0.49	*30*	*100*	*50*	0.291	*0.001*	*0.0005*	*0.001*	0.001	0.745	*0.001*	0.050	*0.0003*	0.002	*0.001*	*0.0005*	0.003

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-02	Photo taken	4/08/2016		6.87	11.90	7.20	16.5	122																					
SW10-02		10/11/2016		6.30	23.80	7.22	29.1	56	2	28	0.12	0.31	*25*	*50*	*50*														
SW10-02		7/12/2016		8.65	19.30	7.28	28.3	216																					
SW10-02	High tide	3/01/2017		5.12	24.20	7.13	27.9	40	*1*	21	0.09	0.29	*25*	*50*	*50*														
SW10-01	Inflowing tide therefore SW10-01 is downstream. Near high.	28/02/2017		4.44	28.90	6.80	25.0	58																					
SW10-02	Low, outflowing tide. Still conditions.	16/03/2017		5.00	0.34	6.97	25.1	41	*1*	27	0.20	0.81	*25*	*50*	*50*														
SW10-02	Debris present and indications of recent flooding. Very high water level. U/s and d/s monitoring sites connected.	4/04/2017		2.64	0.11	6.38	20.2	51																					
SW10-02	Low flow. Outgoing, almost low tide. U/s and d/s sites connected. Overcast.	5/05/2017		6.09	5.76	7.16	20.6	32	3	34	0.15	0.54	*25*	*50*	*50*														
SW10-01	Upstream and downstream sites connected. Moderate flow. High water level. Incoming tide, therefore SW10-01 is downstream. Drizzle.	14/06/2017		6.54	0.10	6.18	16.4	77																					
SW10-02	Upstream and downstream sites connected. Outgoing tide, gentle flow, medium water level. Showers.	3/10/2017		5.26	24.70	7.55	21.7	11	*1*	5	0.05	0.26	*25*	*50*	*50*														
SW10-01	Upstream and downstream sites connected. Low - medium flow. Incoming tide, therefore SW10-01 is downstream. Very high water level. Overcast.	6/11/2017		4.35	8.12	6.64	24.9	51																					
SW10-02	Upstream and downstream sites connected. Slight flow, high water level, tide running out. Overcast.	2/12/2017		4.39	8.57	6.75	26.6	132	*1*	121	0.30	1.00	*25*	*50*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	4/01/2018		6.38	0.22	6.79	27.0	22																					
SW10-01	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Rain.	2/02/2018		3.99	20.70	6.62	26.1	92	2	34	0.17	0.62	*25*	*50*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	8/03/2018		5.72	0.18	7.08	24.3	37																					
SW10-02	Upstream and downstream sites connected. Medium flow, high water level, outgoing tide. Weather fine.	18/04/2018		6.73	10.10	7.45	24.0	72	3	48	0.18	0.59	30	250	250														
SW10-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	1/05/2018		7.22	2.08	7.33	20.7	26																					
SW10-01	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	8/06/2018	11:02	7.38	13.40	7.04	17.4	62	2	47	0.10	0.31	*30*	*250*	*250*														

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	5/07/2018	14:59	6.95	14.40	7.01	17.9	13																					
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	28/08/2018	11:17	6.87	27.20	7.36	17.7	16	2	13	0.06	0.21	*30*	*250*	*250*														
SW10-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	4/09/2018	14:29	7.19	28.00	6.62	17.6	**183**																					
SW10-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Rain.	11/10/2018	10:42	5.66	19.20	7.02	21.9	**111**	*1*	**92**	0.15	0.31	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Wave action. Weather fine.	20/11/2018	12:12	5.38	12.90	6.71	26.1	37																					
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	24/12/2018	12:03	5.35	26.80	7.24	26.3	33																					
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	24/01/2019	11:36	4.20	31.20	7.01	27.5	64	*1*	8	0.12	0.39	*30*	*100*	*100*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level, wave action. Incoming tide. Overcast.	22/02/2019	9:21	5.95	39.20	7.63	26.5	**109**	**7**	32	0.15	0.30	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Drizzle.	16/03/2019	10:21	5.00	38.00	7.23	27.2	63																					
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	3/04/2019	10:25	5.74	27.10	7.49	23.5	45	*1*	7	0.02	0.50	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	3/06/2019	10:57	6.71	30.50	7.65	17.4	8																					
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Wave action. Outgoing tide. Drizzle.	5/07/2019	14:18	8.91	1.44	6.96	17.3	113	3	82	0.17	0.86	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	2/08/2019	13:26	5.55	17.90	7.27	18.4	57																					
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/12/2019	11:00	5.15	39.20	7.50	27.0	42	5	50	0.15	0.46	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	18/01/2020	14:32	5.31	39.20	7.36	26.6	55																					
SW10-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/02/2020	10:54	4.43	17.50	7.56	26.8	**106**	*1*	**80**	0.08	0.33	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	29/04/2020	11:15	6.64	15.40	7.56	23.4	65																					

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-01	Upstream and downstream sites connected. Low flow, very low water level. Incoming tide. Overcast.	18/05/2020	13:30	8.13	18.20	7.13	20.4	202	10	86	0.14	0.39	*30*	*100*	*50*													
SW10-02	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Wave action. Weather fine.	1/06/2020	9:38	6.67	19.70	7.09	18.8	86																				
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Drizzle.	10/09/2020	12:58	8.96	13.40	7.13	19.7	25																				
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	9/11/2020	10:40	7.39	22.30	7.39	24.9	39	*1*	33	0.04	0.32	*30*	*100*	*50*	0.172	0.001	*0.0005*	*0.001*	0.001	0.230	*0.001*	0.087	*0.0003*	0.001	*0.001*	*0.0050*	0.003
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	4/02/2021	11:02	5.63	1.72	7.04	28.0	**160**																				
SW10-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	3/05/2021	13:29	**4.93**	0.33	6.56	20.6	26	6	22	0.09	0.32	*30*	*100*	*50*	**0.784**	*0.001*	*0.0005*	*0.001*	0.001	**1.637**	*0.001*	**0.185**	*0.0003*	**0.004**	*0.001*	*0.0005*	**0.010**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					25.98	7.32		95	4	63	0.21	0.80	30	100	50	0.482	0.001	0.0005	0.001	0.001	0.857	0.001	0.128	0.0003	0.002	0.001	0.0041	0.009
P20				5.08	0.57	6.70																						
St Dev					12.38	0.43																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW11		31/01/2013		N/A	0.12	N/A	N/A	N/A	*3*	32	0.02	0.80																
SW11		1/03/2013		1.70	0.14	5.78	23.3	N/A	*3*	38	0.34	0.70																
SW11		28/05/2013		9.90	0.55	7.11	16.6	52	*3*	28	0.15	0.60																
SW11		5/07/2013		5.70	0.15	5.70	16.3	107	*3*	158	0.31	0.90																
SW11		30/07/2013		9.90	0.65	6.70	19.4	130	*3*	150	0.38	0.90																
SW11		19/11/2013		7.20	19.30	6.50	25.1	24	*3*	24	0.06	0.05																
SW11		25/11/2013		9.10	4.20	7.20	26.2	12	*3*	16	0.10	0.40																
Upstream Monitoring																												
SW10-01	Photo taken	4/08/2016		7.11	11.90	7.48	16.9	110																				
SW10-01		10/11/2016		6.10	23.00	7.05	28.1	45	2	48	0.15	0.34	*25*	*50*	*50*													
SW10-01		7/12/2016		6.59	18.40	7.01	28.1	65																				

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-01	High tide	3/01/2017		5.90	20.10	6.88	27.5	300	2	141	0.21	0.36	*25*	*50*	*50*														
SW10-02	Incoming tide therefore SW10-02 is upstream. Near high.	28/02/2017		5.08	27.10	7.09	25.3	38																				
SW10-01	Low, outflowing tide. Still conditions.	16/03/2017		4.96	0.28	6.66	25.2	55	*1*	22	0.20	0.80	*25*	*50*	*50*														
SW10-01	Debris suggests recent flooding, very high water level. U/s and d/s monitoring sites connected.	4/04/2017		2.80	0.12	6.50	19.9	41																				
SW10-01	Low flow. Outgoing, almost low tide. U/s and d/s sites connected. Overcast.	5/05/2017		6.32	5.64	7.14	20.7	31	3	15	0.11	0.52	*25*	*50*	*50*														
SW10-02	Upstream and downstream sites connected. Moderate flow. Incoming tide, therefore SW10-02 is upstream. High water level. Drizzle.	14/06/2017		6.67	0.11	6.29	16.4	84																				
SW10-01	Upstream and downstream sites connected. Outgoing tide, gentle flow, medium water level. Showers.	3/10/2017		5.39	25.40	7.34	22.0	26	*1*	20	0.09	0.34	*25*	*50*	*50*														
SW10-02	Upstream and downstream sites connected. Low - medium flow. Incoming tide, therefore SW10-02 is upstream. Very high water level. Overcast.	6/11/2017		4.42	7.94	6.81	24.8	38																				
SW10-01	Upstream and downstream sites connected. Slight flow, high water level, tide running out. Overcast.	2/12/2017		3.21	7.55	6.95	26.3	60	5	62	0.19	0.59	*25*	*50*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	4/01/2018		6.46	0.22	7.03	27.4	23																				
SW10-02	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Rain.	2/02/2018		4.34	21.70	7.05	26.1	115	3	63	0.19	0.62	*25*	*50*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	8/03/2018		5.28	0.17	7.10	24.5	61																				
SW10-01	No access - crane lifting overhead	18/04/2018																										
SW10-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	1/05/2018		6.98	2.44	6.91	20.5	43																				
SW10-02	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	8/06/2018	10:51	7.29	14.20	6.76	17.5	19	*1*	36	0.07	0.23	*30*	*250*	*250*														
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	5/07/2018	15:08	7.54	12.50	7.23	18.1	13																				
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	28/08/2018	11:05	7.01	26.40	7.04	17.3	30	4	16	0.04	0.22	*30*	*250*	*250*														
SW10-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	4/09/2018	14:21	7.23	32.80	6.08	18.1	22																				

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Rain.	11/10/2018	10:33	5.53	20.20	6.67	22.7	64	2	27	0.05	0.16	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Wave action. Weather fine.	20/11/2018	12:23	5.53	15.20	7.18	26.7	128																					
SW10-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	24/12/2018	11:57	5.58	26.10	7.07	26.5	25																					
SW10-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	24/01/2019	11:46	4.62	31.00	7.18	28.0	22	*1*	11	0.11	0.36	*30*	*100*	*100*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level, wave action. Incoming tide. Overcast.	22/02/2019	9:37	5.60	39.30	7.64	26.7	66	3	11	0.12	0.30	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	16/03/2019	10:16	4.52	36.10	6.84	26.6	100																					
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	3/04/2019	10:13	5.60	25.50	7.23	23.2	62	*1*	5	0.02	0.49	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	3/06/2019	10:51	7.29	29.00	7.32	17.6	8																					
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level, wave action. Outgoing tide. Overcast.	5/07/2019	14:26	8.58	1.36	7.12	17.2	325	4	320	0.43	1.08	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	2/08/2019	13:19	6.16	18.60	7.25	18.4	29																					
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/12/2019	11:11	5.30	39.20	7.56	26.9	33	4	55	0.17	0.42	*30*	*100*	*50*														
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	18/01/2020	14:35	6.11	37.60	7.46	26.1	21																					
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/02/2020	10:49	4.60	18.00	7.55	27.5	94	*1*	44	0.06	0.36	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	29/04/2020	11:09	6.88	14.70	7.38	23.5	30																					
SW10-02	Upstream and downstream sites connected. Low flow, very low water level. Incoming tide. Wave action. Overcast.	18/05/2020	13:22	8.35	18.90	6.87	20.1	434	10	286	0.42	0.84	*30*	*100*	*50*														
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	1/06/2020	9:30	7.29	19.30	6.97	18.8	41																					
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Drizzle.	10/09/2020	12:54	8.54	13.00	6.89	19.4	54																					

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	9/11/2020	10:55	7.89	22.60	7.54	25.1	48	3	23	0.04	0.30	*30*	*100*	*50*	0.147	0.001	*0.0005*	*0.001*	0.001	0.256	*0.001*	0.113	*0.0003*	0.001	*0.001*	*0.0050*	0.005
SW10-02	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	4/02/2021	11:10	6.40	2.14	7.45	28.3	88																				
SW10-02	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	3/05/2021	13:37	6.57	0.35	6.48	20.5	68	5	18	0.08	0.29	*30*	*100*	*50*	0.565	*0.001*	*0.0005*	*0.001*	*0.001*	1.007	*0.001*	0.132	*0.0003*	0.003	*0.001*	*0.0005*	0.010

GDE07 - Pond / wetland

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
GDE07	Photo taken	10/08/2016		3.17	0.13	6.85	15.5	11																					
GDE07		9/09/2016		2.04	0.16	5.92	16.4	17	3	9	0.05	0.51	25	50	50														
GDE07		11/10/2016		2.71	0.17	6.76	19.3	3																					
GDE07		3/11/2016		0.64	0.18	6.51	20.0	4	4	5	0.05	0.66	25	50	50														
GDE07		15/12/2016		0.44	0.20	6.32	22.7	16																					
GDE07	Very low water level, stagnant pool, tannin stained.	18/01/2017		0.14	0.19	6.89	24.1	41	1	10	0.11	1.29	25	50	50														
GED07	Very low water level. Unable to obtain accurate DO and turbidity readings.	3/02/2017			0.47	7.54	27.3																						
GDE07	Low to medium water level. No observed inflow.	13/03/2017		2.06	0.22	6.55	22.6	8	1	1	0.04	0.76	25	50	50														
GDE07	No visible flow. Overcast.	26/04/2017		0.52	0.15	5.80	19.1	18																					
GDE07	Overcast. High water level.	10/05/2017		2.87	0.16	5.87	17.9	24	1	18	0.05	0.46	25	50	50														
GDE07	No visible flow. High water level. Weather fine.	28/06/2017		0.45	0.13	5.88	16.1	16																					
GDE07	No visible flow. Medium to high water level. Weather fine.	13/07/2017		1.08	0.16	5.66	14.7	14	3	8	0.04	0.42	25	50	50														
GDE07	No visible flow. Mid water level. Surface dust layer. Weather fine.	4/08/2017		0.82	0.15	4.77	12.8	4																					
GDE07	Weather fine. Low water level. Very recent bushfire.	7/09/2017		0.35	0.17	5.98	14.0	2	2	3	0.06	0.70	25	50	50														
GDE07	Water level medium to high. No inflow. Weather fine. Recent bushfire.	26/10/2017		2.00	0.24	6.43	20.2	9																					
GDE07	No inflow. Water level medium-high. Weather fine.	22/11/2017		2.48	0.19	6.07	20.9	56	4	10	0.07	0.91	25	50	50														
GDE07	No visible flow, medium water level. Weather fine.	15/12/2017		1.15	0.19	6.66	24.3	6																					
GDE07	No inflow, low water level. Weather fine.	23/01/2018		6.14	0.20	7.08	27.0	16	4	13	0.07	0.98	25	50	50														
GDE07	No visible flow, medium water level. Overcast.	14/02/2018		0.82	0.20	6.52	25.7	7																					
GDE07	No visible flow, medium water level. Weather fine.	15/03/2018		2.86	0.22	6.12	22.5	14	1	10	0.05	1.25	25	50	50														
GDE07	Very low flow, medium water level. Weather fine.	5/04/2018		4.50	0.25	6.39	24.3	8																					
GDE07	No visible flow, medium water level. Weather fine.	3/05/2018		3.26	0.25	6.17	20.1	67	2	73	0.04	2.81	30	250	250														
GDE07	No visible flow, medium water level. Dust layer on surface. Weather fine.	15/06/2018	14:26	3.64	0.23	6.03	16.4	20																					
GDE07	No visible flow, low water level. Weather fine.	17/07/2018	11:33	1.31	0.20	6.30	12.3	4	1	4	0.04	0.65	30	250	250														
GDE07	No visible flow, very low water level. Weather fine.	9/08/2018	13:47	2.61	0.20	6.75	14.3	5																					
GDE07	No visible flow, low water level. Weather fine.	24/09/2018	10:12	3.20	0.27	7.14	17.6	10	3	4	0.03	0.79	30	250	250														
GDE07	No visible flow, low water level. Weather fine.	3/10/2018	14:16	4.67	0.29	7.44	21.4	17																					

GDE07 - Pond / wetland

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total		
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
GDE07	No visible flow, low water level. Drizzle.	8/11/2018	12:35	1.84	0.22	6.64	23.5	46	*1*	8	0.08	0.95	*30*	*100*	*50*															
GDE07	No visible flow, low water level. Weather fine.	11/12/2018	10:38	1.18	0.26	6.85	24.0	7																						
GDE07	Insufficient water to sample.	15/01/2019	11:37																											
GDE07	Dry, not sampled.	13/02/2019	13:42																											
GDE07	Dry, not sampled.	14/03/2019	15:57																											
GDE07	No visible flow, low water level. Drizzle.	11/04/2019	13:14	1.22	0.44	6.53	21.4	43																						
GDE07	No visible flow, low water level. Fine.	6/05/2019	16:09	1.10	0.41	6.94	19.1	16	*1*	8	0.07	0.84	*30*	*100*	*50*															
GDE07	No visible flow, medium water level. Light scum layer. Weather fine.	5/06/2019	14:44	1.33	0.39	7.06	14.9	42																						
GDE07	No visible flow, medium water level. Weather fine.	9/07/2019	15:19	1.35	0.33	5.71	16.8	15	3	5	0.03	0.72	*30*	*100*	*50*															
GDE07	No visible flow, medium water level. Dust layer on surface. Weather fine.	16/08/2019	9:07	0.00	0.37	6.09	14.0	1																						
GDE07	No visible flow, low water level. Odour. Weather fine.	11/09/2019	10:37	0.00	0.38	7.06	15.4	2	*1*	11	0.05	0.66	*30*	*100*	*50*															
GDE07	No visible flow, very low water level. Weather fine.	2/10/2019	12:07	0.22	0.51	6.53	21.2	6																						
GDE07	Dry, not sampled.	6/11/2019	12:20																											
GDE07	Dry, not sampled.	5/12/2019	10:38																											
GDE07	Dry, not sampled.	9/01/2020	8:29																											
GDE07	No visible flow, medium water level. Weather fine.	17/02/2020	16:06	2.77	0.20	5.82	28.2	5																						
GDE07	No visible flow, high water level. Overcast.	12/03/2020	9:20	0.12	0.30	5.76	22.7	14	*1*	8	0.06	0.66	*30*	*100*	*50*															
GDE07	No visible flow, medium water level. Weather fine.	1/04/2020	10:25	2.49	0.30	6.19	22.5	7																						
GDE07	No visible flow, low water level. Weather fine.	14/05/2020	16:40	0.31	0.32	6.57	17.8	14	3	4	0.06	0.82	*30*	210	*50*															
GDE07	No visible flow, high water level. Rain.	8/07/2020	10:50	2.71	0.27	6.23	13.7	5																						
GDE07	Insufficient water to sample.	19/11/2020																												
GDE07	No visible flow, medium flow. Overcast.	18/05/2021	10:32	1.63	0.16	6.08	15.7	7	6	3	0.04	0.48	*30*	*100*	*50*	0.291	*0.001*	*0.0005*	*0.001*	*0.001*	0.682	*0.001*	0.028	*0.0003*	*0.001*	*0.001*	*0.0005*	0.001		
P80 & P20 Values (calculated from baseline and upstream data below)																														
P80					0.19	7.30		31	3	21	0.07	1.00	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!		
P20				2.46	0.16	6.30																								
St Dev					0.05	0.80																								
Threshold				0.50				10	2	10	0.02	0.20																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																														

GDE07 - Pond / wetland

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GDE07		3/04/2013		2.46	0.16	7.30	24.3	20	*3*	18	0.07	0.80																
GDE07		30/04/2013		1.60	0.14	8.30	18.4	18	*3*	14	0.02	0.60																
GDE07		27/08/2013		9.00	0.16	6.10	19.1	12	*3*	10	0.02	0.60																
GDE07		23/09/2013		6.60	0.16	6.30	25.1	9	*3*	6	*0.01*	0.70																
GDE07		28/10/2013		7.10	0.19	6.60	N/A	295	*3*	275	0.63	1.20																
GDE07		16/12/2013		6.70	0.27	7.00	29.3	31	*3*	21	0.07	1.00																
Upstream Monitoring																												
No upstream monitoring site																												

GDE-07 - Pond / wetland

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
GDE07	Private property - no access	4/08/2016																											
GDE07		10/11/2016		0.72	0.19	6.77	25.0	12	3	7	0.06	0.80	25	50	50														
GDE07		7/12/2016		2.15	0.20	6.05	22.9	63																					
GDE07	Low water level	3/01/2017		1.89	0.18	6.91	26.6	14	2	12	0.07	1.01	25	50	50														
GDE07	Very high water level. Light rain.	28/02/2017		5.41	0.22	6.66	22.6	51																					
GDE07	Strong inflow. Very high water level.	16/03/2017		1.54	0.18	5.66	22.6	41	1	33	0.08	1.48	25	50	50														
GDE07	Very high water level, steady inflow	4/04/2017		1.87	0.16	5.61	20.6	25																					
GDE07	No visible flow, stagnant, high water level. Overcast.	5/05/2017		0.77	0.16	6.30	18.2	27	2	14	0.04	0.50	25	50	50														
GDE07	No visible flow. High water level. Overcast.	14/06/2017		1.67	0.08	5.34	16.9	45																					
GDE07	No visible flow, water level very low. Recent bushfire. Showers.	3/10/2017		3.17	0.19	7.40	17.6	12	2	11	0.23	2.37	59	50	50														
GDE07	No inflow, high water level. Weather clearing.	6/11/2017		7.76	0.26	5.71	20.8	88																					
GDE07	No inflow, high water level. Overcast.	2/12/2017		1.72	0.17	6.03	24.1	12	6	14	0.05	0.67	25	50	50														
GDE07	No visible flow, very high water level. Weather fine.	4/01/2018		4.63	0.21	6.10	26.0	24																					
GDE07	No visible inflow, low water level. Overcast.	2/02/2018		0.93	0.20	6.90	22.0	12	5	8	0.06	0.92	25	50	50														
GDE07	No visible flow, very high water level. Overcast.	8/03/2018		1.58	0.29	5.95	22.7	19																					
GDE07	High water level. Overcast	18/04/2018		2.79	0.23	6.63	21.9	5	3	1	0.04	0.61	30	250	250														
GDE07	Very high water level. Weather fine.	1/05/2018		2.81	0.29	6.14	20.2	27																					
GDE07	No visible flow, medium water level. Drizzle.	8/06/2018	9:34	1.53	0.25	5.96	15.7	17	5	44	0.06	3.84	30	250	250														
GDE07	No visible flow, high water level. Overcast.	5/07/2018	15:29	1.83	0.17	6.78	16.7	6																					
GDE07	No visible flow, low water level. Weather fine.	28/08/2018	11:37	3.75	0.22	7.86	14.9	11	1	5	0.05	0.35	30	250	250														
GDE07	No visible flow, low water level. Overcast.	4/09/2018	15:09	4.33	0.34	6.30	16.6	8																					
GDE07	No visible flow, medium water level. Rain.	11/10/2018	9:33	2.73	0.22	6.67	19.7	40	4	3	0.04	0.67	30	100	50														
GDE07	No visible flow, medium water level. Brown algae present. Weather fine.	20/11/2018	12:49	2.99	0.26	7.07	25.0	12																					
GDE07	No visible flow, very low water level. Odour. Overcast.	24/12/2018	12:20	1.80	0.29	6.99	24.8	16																					
GDE07	Insufficient water to sample.	24/01/2019	11:10																										
GDE07	Insufficient water to sample.	22/02/2019	9:00																										
GDE07	Insufficient water to sample.	16/03/2019	9:57																										
GDE07	No visible flow, high water level. Overcast.	3/04/2019	10:51	5.14	0.45	6.49	20.5	93	1	26	0.06	2.76	30	230	50														
GDE07	No visible flow, medium water level. Weather fine.	3/06/2019	11:21	4.00	0.37	7.11	14.8	18																					

GDE-07 - Pond / wetland

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GDE07	No visible flow, medium water level. Weather fine.	3/06/2019	11:21	4.00	0.37	7.11	14.8	18																					
GDE07	No visible flow, high water level. Overcast.	5/07/2019	13:39	6.28	0.28	6.12	17.5	11	3	6	0.03	0.94	*30*	*100*	*50*														
GDE07	No visible flow, medium water level. Weather fine.	2/08/2019	13:50	1.95	0.38	6.26	16.6	1																					
GDE07	Dry, not sampled.	2/12/2019	10:45																										
GDE07	No visible flow, very low water level. Drizzle.	18/01/2020	14:53	4.81	0.36	6.17	23.7	57																					
GDE07	Insufficient water to sample.	4/02/2020	10:45																										
GDE07	No visible flow, high water level. Overcast.	29/04/2020	10:48	0.37	0.30	6.43	19.8	22																					
GDE07	No visible flow, high water level. Overcast.	18/05/2020	13:48	3.98	0.38	6.83	19.1	15	5	8	0.06	0.81	*30*	*100*	*50*														
GDE07	No visible flow, medium water level. Weather fine.	1/06/2020	9:10	0.31	0.31	5.95	16.7	15																					
GDE07	No visible flow, high water level. Rain.	10/09/2020	12:01	5.69	0.25	5.86	17.4	5																					
GDE07	No visible flow, very low water level. Overcast.	9/11/2020	11:49	3.39	0.44	6.84	23.0	26	3	11	0.04	0.98	*30*	280	*50*	0.126	0.001	*0.0005*	*0.001*	*0.001*	0.408	*0.001*	0.031	*0.0003*	*0.001*	*0.001*	*0.0050*	*0.001*
GDE07	No visible flow, medium water level. Weather fine.	4/02/2021	11:35	1.49	0.25	6.49	24.7	7																					
GDE07	No visible flow, very low water level. Drizzle.	3/05/2021	12:19	2.06	0.19	5.86	19.6	14	*1*	18	0.12	0.90	*30*	*100*	*50*	0.697	*0.001*	*0.0005*	*0.001*	*0.001*	2.412	*0.001*	0.049	*0.0003*	*0.001*	*0.001*	*0.0005*	0.009
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.23	7.00		27	3	40	0.12	1.34	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				3.99	0.12	5.25																							
St Dev					0.07	1.11																							
Threshold				0.50				10	2	10	0.02	0.20																	

GDE-07 - Pond / wetland

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
GDE07		1/02/2013		N/A	0.14	N/A	N/A	N/A	*3*	7	0.03	0.50																	
GDE07		1/03/2013		3.99	0.11	5.25	22.3	N/A	*3*	*3*	0.04	0.50																	
GDE07		28/05/2013		2.99	0.16	5.30	15.6	26	*3*	9	0.12	0.70																	
GDE07		5/07/2013		8.10	0.10	4.80	18.6	20	*3*	18	*0.01*	0.50																	
GDE07		30/07/2013		7.20	0.15	5.60	18.5	21	*3*	7	0.10	0.50																	
GDE07		19/11/2013		6.80	0.28	7.00	25.7	31	*3*	45	0.12	1.50																	
GDE07		25/11/2013		6.30	0.24	7.60	258.0	15	*3*	55	0.32	2.90																	
Upstream Monitoring																													
No upstream monitoring site																													

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-04	Water too shallow to take readings in waterway. Readings taken from sample collected in jug. DO reading not possible. Photo taken.	10/08/2016			0.66	7.03	16.1	66																					
SW10-04		9/09/2016		1.74	0.96	6.23	15.1	89	*1*	32	0.35	0.46	*25*	*50*	*50*														
SW10-04	Significant drain augmentation works have been undertaken	12/10/2016		6.93	0.92	6.91	21.4	146																					
SW10-04		3/11/2016		7.15	0.99	6.93	22.8	**129**	**6**	10	0.11	0.66	*25*	*50*	*50*														
SW10-04	Adjacent sediment basin was discharging into waterway	15/12/2016		6.17	0.56	6.52	24.4	**162**																					
SW10-04	No flow, low water level.	18/01/2017		5.93	1.01	7.32	28.4	109	3	24	0.17	0.66	*25*	*50*	*50*														
SW10-04	Green stain due to high algae concentration. Medium water level. No observed flow.	3/02/2017		9.53	1.04	9.51	29.8	150																					
SW10-04	Low to medium water level. Upstream and downstream sites connected.	13/03/2017		6.05	0.83	6.96	25.6	32	2	9	0.05	0.67	*25*	*50*	*50*														
SW10-04	No visible flow. U/s and d/s sites connected. Overcast.	26/04/2017		6.05	0.69	6.41	20.4	65																					
SW10-04	Light rain. U/s and d/s connected. No observed flow. Medium water level. Dirty water discharging from adjacent quarry sediment basin.	10/05/2017		2.74	**0.50**	6.27	18.5	108	*1*	**94**	**0.37**	**0.81**	*25*	*50*	*50*														
SW10-04	Upstream and downstream sites connected. Low flow. Medium water level. Sediment laden water from quarry basin entering waterway. Weather fine.	28/06/2017		6.83	0.58	6.18	18.3	17																					
SW10-04	Upstream and downstream sites connected. No observed flow. Medium water level. Weather fine.	13/07/2017		8.65	0.75	6.27	17.8	66	2	10	0.11	0.32	*25*	*50*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	4/08/2017		8.32	0.87	6.28	14.7	19																					
SW10-04	Weather fine. U/S and D/S sites connected. No observed flow. Medium water level.	7/09/2017		9.10	1.00	6.96	17.3	14	2	10	0.09	0.56	*25*	*50*	*50*														
SW10-04	U/S and D/s connected. No observed flow. Weather fine. Water level high	26/10/2017		8.53	0.64	6.74	22.3	19																					
SW10-04	No access due to safety issues.	22/11/2017																											
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/12/2017		8.02	0.60	6.80	27.7	18																					
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Reddish-brown colour to water. Weather fine.	23/01/2018		8.11	**0.55**	6.98	30.2	69	*1*	29	**0.37**	**1.36**	*25*	*50*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	14/02/2018		5.77	0.83	6.64	26.9	34																					

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/03/2018		4.89	0.56	6.36	25.3	31	*1*	20	0.16	0.57	*25*	*50*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/04/2018		2.45	0.73	6.71	24.6	60																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/05/2018		**1.53**	0.44	6.44	19.9	88	3	**63**	**0.33**	0.73	*30*	*250*	*250*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Slight layer of red algae present. Weather fine.	15/06/2018	14:37	**1.88**	0.64	6.22	17.3	39																				
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/07/2018	11:50	3.57	0.71	6.37	12.6	15	*1*	9	0.22	0.23	*30*	*250*	*250*														
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Brown algae present. Weather fine.	9/08/2018	13:57	5.21	0.83	6.60	16.0	28																				
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Slight dust layer present. Weather fine.	24/09/2018	10:26	**1.31**	0.73	6.59	18.0	31	*1*	6	0.09	0.35	*30*	**250**	**250**														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Green/brown algae present with a surface dust layer. Weather fine.	3/10/2018	14:28	3.15	0.77	6.83	19.8	54																				
SW10-04	No visible flow, medium water level. Dust layer present. Drizzle.	8/11/2018	12:49	4.66	0.89	6.64	23.4	68	*1*	18	0.19	**0.96**	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. Very low flow, low water level. Algae present. Weather fine.	11/12/2018	10:22	4.23	**1.08**	**7.15**	25.3	13																				
SW10-04	Very low flow, low water level. Algae present. Weather fine.	15/01/2019	10:08	2.61	0.96	**7.15**	25.5	10	*1*	11	0.21	0.75	*30*	*100*	**100**														
SW10-04	No visible flow, low water level. Green algae present. Weather fine.	13/02/2019	13:30	12.50	0.70	**7.66**	31.7	97																				
SW10-04	No visible flow, medium water level. Overcast.	14/03/2019	16:14	3.70	0.99	**7.32**	28.1	68	*1*	9	0.12	0.73	*30*	*100*	*50*														
SW10-04	No visible flow, medium water level. Slight odour. Drizzle.	11/04/2019	13:32	8.17	0.69	6.87	22.7	**146**																				
SW10-04	Connected. Very low flow. Medium water level. Fine	6/05/2019	14:58	5.67	0.84	6.99	21.1	21	*1*	4	0.04	0.50	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/06/2019	14:59	6.14	0.70	7.00	15.8	35																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	9/07/2019	16:37	4.04	0.43	6.43	17.0	59	*1*	8	0.21	**1.27**	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Brown and green algae, slight surface bacteria. Weather fine.	16/08/2019	9:31	4.07	0.96	6.69	14.1	3																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	11/09/2019	10:53	2.85	0.71	6.64	15.1	6	*1*	7	0.05	0.49	*30*	*100*	*50*														

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Green algae. Weather fine.	2/10/2019	12:21	6.27	0.91	6.59	20.4	10																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	6/11/2019	12:54	2.02	1.19	6.79	22.2	20	*1*	5	0.06	0.51	*30*	280	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Slight bacteria layer on surface. Weather fine.	5/12/2019	9:25	0.56	1.26	6.73	22.6	15																				
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Green algae. Weather fine.	9/01/2020	8:07	0.00	1.15	6.89	24.5	14	2	260	0.38	2.08	*30*	*100*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	17/02/2020	16:22	0.00	0.42	6.29	27.3	15																				
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	12/03/2020	9:48	0.61	0.35	6.29	22.5	33	5	21	0.41	0.77	*30*	*100*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	1/04/2020	10:08	0.19	0.58	6.45	23.0	21																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	14/05/2020	17:08	3.44	0.73	6.60	17.9	18	*1*	4	0.12	0.41	*30*	*100*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	8/07/2020	11:23	3.51	0.79	6.29	13.4	11																				
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/11/2020	11:00	2.61	1.06	6.65	22.6	26	2	27	0.37	1.54	*30*	*100*	*50*	0.045	0.001	*0.0005*	*0.001*	*0.001*	1.843	*0.001*	0.860	*0.0003*	*0.001*	0.001	*0.0050*	0.006
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	18/05/2021	11:01	4.05	0.78	6.57	14.9	18	3	4	0.09	0.32	*30*	*100*	*50*	0.305	*0.001*	*0.0005*	*0.001*	*0.001*	1.009	*0.001*	0.354	*0.0003*	*0.001*	0.001	*0.0005*	0.003
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					1.07	7.09		113	3	61	0.27	0.80	30	100	50	0.100	0.003	0.0005	0.001	0.001	15.750	0.001	1.183	0.0003	0.001	0.001	0.0041	0.005
P20				2.39	0.58	6.32																						
St Dev					0.40	0.60																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW12		3/04/2013		7.90	0.09	7.60	29.3	355	*3*	77	0.27	0.80																
SW12		30/04/2013		7.10	0.13	7.90	19.7	668	*3*	202	0.23	0.20																
SW12		27/08/2013		9.60	0.18	7.10	23.6	292	*3*	94	0.15	0.90																

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW12		23/09/2013		8.90	0.19	7.30	29.1	147	*3*	42	0.07	0.60																	
SW12		28/10/2013		9.30	0.24	7.20	25.2	130	*3*	64	0.02	1.00																	
SW12		16/12/2013		8.70	0.38	7.10	32.7	63	*3*	33	0.06	0.80																	
Upstream Monitoring																													
SW10-03	Photo taken	10/08/2016		0.95	1.13	7.17	14.9	0																					
SW10-03		9/09/2016		2.12	2.02	6.34	16.1	84	2	57	1.40	0.70	*25*	*50*	*50*														
SW10-03	Significant drain works have been undertaken	12/10/2016		7.05	0.97	7.04	26.5	966																					
SW10-03		3/11/2016		7.85	0.99	6.99	24.3	113	*1*	11	0.10	0.60	*25*	*50*	*50*														
SW10-03		15/12/2016		5.69	0.64	6.55	26.4	149																					
SW10-03	Low water level, no flow. Turbidity data error.	18/01/2017		5.46	1.03	7.23	27.9		*1*	50	0.22	0.91	*25*	*50*	*50*														
SW10-03	Green stain due to high algae concentration. Algae scum layer. Medium water level. No observed flow.	3/02/2017		9.71	1.06	9.51	34.6	275																					
SW10-03	Low to medium water level. Upstream and downstream sites connected.	13/03/2017		7.00	1.01	6.93	25.5	89	*1*	16	0.06	0.74	*25*	*50*	*50*														
SW10-03	No visible flow. U/s and d/s sites connected. Overcast.	26/04/2017		5.18	0.78	6.26	20.8	54																					
SW10-03	Light rain. U/s and d/s connected. No observed flow. Medium water level.	10/05/2017		2.11	1.34	6.36	18.5	55	*1*	15	0.20	0.37	*25*	*50*	*50*														
SW10-03	Upstream and downstream sites connected. Low water level moderate flow. Weather fine.	28/06/2017		6.34	0.68	6.32	17.8	13																					
SW10-03	Upstream and downstream sites connected. No observed flow. Medium water level. Weather fine.	13/07/2017		9.40	0.91	6.22	17.7	35	2	23	0.24	0.46	*25*	*50*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	4/08/2017		6.98	0.98	6.24	15.2	16																					
SW10-03	No construction observed. Weather fine. U/S and D/S sites connected. No observed flow. Medium water level.	7/09/2017		9.87	1.00	7.03	16.9	25	*1*	12	0.14	0.62	*25*	*50*	*50*														
SW10-03	U/S and D/s connected. No observed flow. Weather fine. Water level high	26/10/2017		7.39	0.83	6.59	24.9	29																					
SW10-03	No access due to safety issues	22/11/2017																											
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/12/2017		7.83	0.68	6.93	33.2	48																					
SW10-03	Insufficient water to sample. Weather fine.	23/01/2018																											
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	14/02/2018		5.32	0.90	6.52	27.3	36																					

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/03/2018		5.47	0.81	6.38	24.7	92	2	23	0.12	0.49	*25*	*50*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Bubbles and brown algae present. Weather fine.	5/04/2018		5.66	1.09	6.53	28.4	70																				
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/05/2018		3.83	0.65	6.55	22.4	49	4	13	0.17	0.29	*30*	*250*	*250*														
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/06/2018	14:42	2.78	1.07	6.22	16.2	27																				
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/07/2018	12:09	4.49	1.07	6.51	13.1	17	*1*	21	0.27	0.07	*30*	*250*	*250*														
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Brown algae present. Weather fine.	9/08/2018	14:05	9.53	1.16	6.55	15.9	50																				
SW10-03	Insufficient water to sample upstream of works area.	24/09/2018	10:35																									
SW10-03	Insufficient water to sample upstream of works area.	3/10/2018	14:34																									
SW10-03	Insufficient water to monitor upstream of works area.	8/11/2018	12:58																									
SW10-03	Insufficient water to sample.	11/12/2018	10:16																									
SW10-03	Dry, not sampled.	15/01/2019	10:09																									
SW10-03	Dry, not sampled.	13/02/2019	13:15																									
SW10-03	Dry, not sampled.	14/03/2019	15:58																									
SW10-03	Insufficient water to sample.	11/04/2019	13:35																									
SW10-03	Connected. Very low flow. Medium water level. Fine.	6/05/2019	14:50	7.82	0.82	7.00	18.7	36	*1*	15	0.22	0.53	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	5/06/2019	15:04	6.73	1.05	6.57	14.9	15																				
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	9/07/2019	16:31	5.14	0.56	6.43	15.5	50	*1*	13	0.18	0.70	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Brown and green algae. Weather fine.	16/08/2019	9:24	4.90	1.15	6.45	13.2	4																				
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Brown algae. Weather fine.	11/09/2019	11:02	6.31	1.20	6.49	16.6	7	2	18	0.12	0.37	*30*	*100*	*50*														
SW10-03	Insufficient water to monitor	2/10/2019	12:23																									
SW10-03	Insufficient water to sample. Sample obstructed by macrophytes.	6/11/2019	12:45																									

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	5/12/2019	9:20	2.26	0.84	6.60	20.7	19																					
SW10-03	Insufficient water to sample.	9/01/2020	8:17																										
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	17/02/2020	16:28	0.00	0.56	6.21	26.9	12																					
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	12/03/2020	9:39	0.49	0.48	6.36	21.6	15	4	9	0.36	0.64	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	1/04/2020	10:01	0.73	0.84	6.57	21.8	16																					
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	14/05/2020	16:59	0.18	0.73	6.32	17.4	18	2	10	0.21	0.49	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	8/07/2020	11:18	2.38	1.00	6.10	13.6	19																					
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/11/2020	10:52	2.41	1.82	6.54	22.2	94	2	35	0.64	1.05	*30*	*100*	*50*	0.023	0.001	*0.0005*	*0.001*	*0.001*	3.145	*0.001*	0.749	*0.0003*	0.001	0.002	*0.0050*	0.005
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	18/05/2021	10:55	2.57	0.96	6.14	14.8	0	2	85	0.68	0.41	*30*	*100*	*50*	0.119	0.003	*0.0005*	*0.001*	*0.001*	18.901	*0.001*	1.291	*0.0003*	*0.001*	*0.001*	*0.0005*	0.004

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-04	Private property - no access	4/08/2016																											
SW10-04	Adjacent quarry sediment basin discharging into waterway.	25/08/2016		1.62	0.19	**5.74**	16.4	12	12	9	**0.60**	0.79	*25*	*50*	*50*														
SW10-04		10/11/2016		6.92	1.05	7.36	33.9	459	10	42	0.17	0.92	*25*	*50*	*50*														
SW10-04	Adjacent quarry sediment basin discharging into waterway.	7/12/2016		**1.71**	0.53	6.09	25.0	**414**																					
SW10-04		8/12/2016		**1.98**	0.73	6.09	24.4	180																					
SW10-04	No visible flow	3/01/2017		9.05	0.72	7.78	28.6	207	*1*	51	0.26	0.97	*25*	*50*	*50*														
SW10-04	High water level. Activity in the quarry. Adjacent sediment basin discharging highly turbid water into waterway. Sample taken upstream of discharge point.	28/02/2017		4.91	0.37	6.35	24.4	**623**																					
SW10-04	Low flow, upstream and downstream sites connected.	16/03/2017		3.53	0.32	6.12	23.9	99	*1*	39	0.33	**3.76**	*25*	*50*	*50*														
SW10-04	Water level in channel relatively high. Upstream and downstream sites connected, but no visible flow.	20/03/2017		2.93	0.23	6.04	24.7	44	*1*	11	**0.46**	1.92	*25*	*50*	*50*														
SW10-04	Steady flow. Sediment basin from adjacent quarry was discharging into waterbody. Measurement taken upstream from discharge plume.	4/04/2017		5.52	0.28	6.25	19.9	124																					
SW10-04	No visible flow. Moderate water level. U/s and d/s sites connected. Brown colour to water. Overcast.	5/05/2017		2.24	0.75	6.53		62	2	46	0.39	1.18	*25*	*50*	*50*														
SW10-04	Fine weather. U/s and d/s connected. No visible flow. Medium water level. Adjacent quarry sediment basin discharging dirty water. Sample taken away from dirty water plume.	15/05/2017		4.78	0.37	6.60	21.3	57	*1*	10	0.25	0.63	*25*	*50*	*50*														
SW10-04	Upstream and downstream sites connected. Slight flow. Water level moderate to high. Sediment laden water from quarry sediment basin discharging into waterway 10 m upstream of sample point. Overcast.	14/06/2017		6.41	0.25	6.09	17.1	103																					
SW10-04	Upstream and downstream sites connected. Slight flow. Very high water level. Rain. Sediment laden water from quarry sediment basin discharging into waterway upstream of sample point. Overcast.	17/06/2017		6.01	0.16	5.97	18.1	154	*1*	38	0.31	0.68	*25*	*50*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow. Water level low. Showers.	3/10/2017		6.43	0.94	7.39	19.5	24	*4*	14	0.07	0.65	*25*	*50*	*50*														

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-04	Upstream and downstream sites not connected due to new rock/gravel access track intersecting waterway. No visible flow, high water level. Sediment basin from quarry discharging into waterway. Overcast.	16/10/2017		**0.23**	0.58	6.46	20.0	240																				
SW10-04	Upstream and downstream sites connected. High water level. No visible flow. Sediment basin from quarry overflowing into stream adjacent sample site. Water has overtopped access track which intercepts upstream and downstream sites. Weather clearing.	6/11/2017		4.02	0.22	5.91	19.2	**389**																				
SW10-04	Upstream and downstream sites connected. Slight flow, very high water level. Water from quarry basin and drainage line overtopping bank into waterway. Weather, fine.	11/11/2017		3.99	0.15	6.27	22.6	255	2	94	**0.83**	1.35	*25*	*50*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow. Low water level. Overcast.	2/12/2017		4.03	0.54	6.33	25.2	51	*1*	16	0.23	0.69	*25*	*50*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	22/12/2017		7.82	0.60	6.87	30.1	144																				
SW10-04	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	4/01/2018		7.29	0.38	6.53	29.4	233																				
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	2/02/2018		3.98	0.69	6.87	22.6	35	*1*	8	0.20	0.71	*25*	*50*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/02/2018		8.80	0.78	6.64	26.2	88	2	18	0.15	0.65	*25*	*50*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	8/03/2018		2.78	0.38	6.32	22.5	191																				
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	23/03/2018		2.47	0.57	6.50	23.4	43																				
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	18/04/2018		7.74	0.69	**7.04**	23.5	89	**7**	39	0.31	**1.43**	*30*	**250**	**250**													
SW10-04	Upstream and downstream sites connected. Very low flow, very high water level. Overcast.	23/04/2018		3.19	0.24	6.13	21.3	**320**	**4**	**118**	0.41	0.84	*25*	*50*	*50*													
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	1/05/2018		2.89	0.35	6.46	20.5	119																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	9/05/2018		**1.12**	0.36	6.91	21.1	109																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	8/06/2018	9:53	5.91	0.33	6.09	15.2	137	*1*	97	0.21	0.48	*30*	*250*	*250*													
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	5/07/2018	15:43	**0.00**	0.39	6.05	18.1	117																				

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	28/08/2018	11:54	7.03	0.91	7.22	15.6	11	2	8	0.04	0.34	*30*	*250*	*250*														
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	4/09/2018	14:53	4.62	0.94	6.29	15.3	391																				
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	7/09/2018	10:36	**0.10**	0.91	5.80	20.0	68	3	52	0.22	0.77	*30*	*250*	*250*														
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Rain.	11/10/2018	9:54	**1.85**	0.63	6.34	19.7	**455**	3	**184**	0.31	**2.11**	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. Low flow, very high water level. Drizzle.	15/10/2018	9:55	0.75	0.24	6.70	18.3	204																				
SW10-04	No visible flow, medium water level. Brownish red stain to water. Algae present. Weather fine.	20/11/2018	13:03	5.47	**0.95**	**6.72**	25.7	84																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	22/11/2018	12:21	4.51	0.91	6.95	24.1	33	*1*	9	0.14	0.62	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Small amount of brown algae present. Overcast.	24/12/2018	12:33	0.00	0.83	6.74	25.8	249																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Turbidity exceeded measuring range of probe. Overcast.	24/01/2019	10:29	**0.60**	0.39	**5.99**	24.6	**>800**	*1*	**740**	**1.81**	**2.25**	*30*	*100*	**100**														
SW10-04	No visible flow, medium water level. Overcast.	22/02/2019	10:13	4.28	0.94	**7.68**	24.6	85	1	28	0.16	0.79	*30*	*100*	*50*														
SW10-04	No visible flow, medium water level. Overcast.	25/02/2019	17:05	9.92	**0.94**	**7.58**	26.6	134																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Rain. Turbidity exceeded maximum measuring range of probe.	16/03/2019	9:39	5.49	**0.21**	6.43	21.9	**>800**																				
SW10-04	No visible flow, medium water level. Weather, fine.	18/03/2019	16:01	4.83	0.47	**6.89**	25.1	**324**	2	**123**	0.17	**2.39**	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	3/04/2019	9:47	2.99	0.37	6.43	20.2	399	2	176	0.28	**2.83**	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	17/04/2019	15:29	8.02	1.02	6.86	22.6	28																				
SW10-04	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	3/06/2019	11:35	4.75	0.56	**6.99**	16.0	92																				
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	17/06/2019	9:22	4.22	0.84	6.42	16.8	11	3	5	0.04	0.47	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/07/2019	14:56	5.52	0.40	6.58	16.7	133																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	8/07/2019	14:48	5.59	0.32	6.49	17.0	66	5	40	0.29	**1.52**	*30*	*100*	*50*														

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-04	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	2/08/2019	14:05	7.55	0.80	6.73	18.2	22																					
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	2/12/2019	10:10	2.21	1.24	6.80	24.9	33	3	17	0.13	1.11	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Green algae. Weather fine.	27/12/2019	14:03	4.71	1.11	6.87	27.8	24																					
SW10-04	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	18/01/2020	15:10	4.86	0.34	6.25	23.3	714																					
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Green algae. Overcast.	25/01/2020	15:51	1.86	0.71	6.51	27.0	14	3	7	0.15	0.95	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	4/02/2020	10:03	0.00	0.76	6.55	25.5	34	*1*	18	0.22	0.96	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. Very high flow, very high water level. Drizzle.	7/02/2020	8:36	4.50	0.16	6.09	22.6	255	3	99	0.37	3.06	*30*	240	100														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	29/04/2020	10:30	0.46	0.74	6.48	20.1	75																					
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	18/05/2020	14:09	3.75	0.29	6.20	19.2	110	4	48	0.36	1.01	*30*	*100*	*50*														
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	1/06/2020	8:49	1.75	0.53	6.03	16.6	42																					
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	10/06/2020	8:58	3.13	0.62	6.42	16.1	39																					
SW10-04	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	10/09/2020	12:20	7.40	0.99	6.23	17.7	26																					
SW10-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	9/11/2020	11:33	2.29	1.12	6.57	19.3	17	*1*	27	0.20	2.63	*30*	*100*	*50*	0.040	*0.001*	*0.0005*	*0.001*	*0.001*	0.590	*0.001*	0.271	*0.0003*	*0.001*	*0.001*	*0.0050*	*0.001*
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/02/2021	11:54	2.49	0.80	6.86	25.4	30																					
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	3/05/2021	12:45	5.42	0.43	6.27	21.3	23	*1*	27	0.21	0.64	*30*	*100*	*50*	0.338	0.001	*0.0005*	*0.001*	0.001	1.278	*0.001*	0.517	*0.0003*	*0.001*	*0.001*	*0.0005*	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.94	6.68		300	3	109	0.35	1.40	30	100	50	0.301	0.001	0.0005	0.001	0.001	3.640	0.001	0.604	0.0003	0.001	0.001	0.0041	0.004
P20				2.38	0.35	6.14																							
St Dev					0.39	0.52																							
Threshold				0.50				10	2	10	0.02	0.20																	

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW12		1/02/2013		N/A	0.14	N/A	N/A	N/A	*3*	37	0.04	0.60																	
SW12		2/03/2013		4.50	0.03	5.88	22.6	N/A	*3*	66	0.41	0.90																	
SW12		28/05/2013		9.40	0.16	5.50	16.2	671	*3*	230	0.37	2.00																	
SW12		5/07/2013		10.20	0.15	5.10	19.9	697	*3*	298	0.27	2.00																	
SW12		30/07/2013		8.40	0.16	6.20	18.8	449	*3*	109	0.20	0.80																	
SW12		19/11/2013		8.80	0.26	7.40	29.3	254	*3*	334	0.33	3.60																	
SW12		25/11/2013		10.10	0.24	8.50	31.2	218	*3*	92	0.20	3.00																	
Upstream Monitoring																													
SW10-03	Private property - no access	4/08/2016																											
SW10-03		25/08/2016		1.33	0.49	6.33	17.2	35	16	23	0.35	0.60	*25*	*50*	*50*														
SW10-03		10/11/2016		7.90	1.18	7.37	35.3	454	12	28	0.15	0.76	*25*	*50*	*50*														
SW10-03	Accurate turbidity reading could not be obtained.	7/12/2016		4.38	0.47	6.14	27.2																						
SW10-03		8/12/2016		7.59	0.71	6.34	26.4	350																					
SW10-03	No visible flow	3/01/2017		9.07	1.14	7.40	28.0	204	*1*	49	0.21	0.93	*25*	*50*	*50*														
SW10-03	High water level. Activity in the quarry.	28/02/2017		4.45	0.66	6.32	23.4	134																					
SW10-03	Low flow upstream and downstream sites connected.	16/03/2017		4.05	0.42	6.14	22.9	43	3	26	0.20	2.95	*25*	*50*	*50*														
SW10-03	Water level in channel relatively high. Upstream and downstream sites connected, but no visible flow.	20/03/2017		4.21	0.25	6.34	24.8	55	3	17	0.42	1.90	*25*	*50*	*50*														
SW10-03	Steady flow. Indications of recent flood event. Gentle rain.	4/04/2017		5.38	0.36	6.27	19.4	268																					
SW10-03	No visible flow. Moderate water level. U/s and d/s sites connected. Brown colour to water. Overcast.	5/05/2017		0.09	0.81	6.52	19.9	59	4	60	0.50	1.14	*25*	*50*	*50*														
SW10-03	Fine weather. U/s and d/s connected. No visible flow. Medium water level. Scum layer.	15/05/2017		5.47	0.45	6.56	24.9	90	*1*	11	0.26	0.73	*25*	*50*	*50*														
SW10-03	Upstream and downstream sites connected. Slight flow. Moderate to high water level. Overcast.	14/06/2017		6.20	0.28	6.24	17.6	72																					
SW10-03	Upstream and downstream sites connected. Slight flow. Very high water level. Rain.	17/06/2017		5.70	0.23	6.26	18.4	87	*1*	85	0.28	0.63	*25*	*50*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow. Water level low. Showers.	3/10/2017		7.12	0.89	7.42	19.5	45	2	24	0.11	0.68	*25*	*50*	*50*														

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-03	Upstream and downstream sites not connected due to new rock/gravel access track intersecting waterway. No visible flow, high water level. Adjacent catch drain appears to have overflowed into waterway. Overcast.	16/10/2017		4.50	0.54	6.45	22.1	242																				
SW10-03	Upstream and downstream sites connected. High water level. No visible flow. Water has overtopped access track which intercepts upstream and downstream sites. Weather clearing.	6/11/2017		3.09	0.34	5.88	21.9	170																				
SW10-03	Upstream and downstream sites connected. Slight flow, very high water level. Water from drainaige line overtopping bank into waterway. Weather, fine.	11/11/2017		3.90	0.18	6.19	22.8	116	*1*	38	0.34	1.26	*25*	*50*	*50*													
SW10-03	Upstream and downstream sites connected. No visible flow. Low water level. Overcast.	2/12/2017		9.22	0.61	6.72	29.3	95	2	18	0.20	0.58	*25*	*50*	*50*													
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	22/12/2017		7.12	0.66	6.67	31.2	115																				
SW10-03	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	4/01/2018		9.26	0.56	6.43	29.6	307																				
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	2/02/2018		6.01	0.79	6.70	22.3	145	2	66	0.23	0.89	*25*	*50*	*50*													
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/02/2018		6.99	0.98	6.07	25.0	153	2	46	0.18	0.54	*25*	*50*	*50*													
SW10-03	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	8/03/2018		5.66	0.51	6.39	23.6	306																				
SW10-03	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	23/03/2018		0.56	1.11	6.47	22.7	63																				
SW10-03	Upstream and downstream sites connected. No visible flow, insufficient water. Weather fine.	18/04/2018																										
SW10-03	Upstream and downstream sites connected. No visible flow, very high water level. Overcast.	23/04/2018		1.99	0.37	6.24	22.2	226	*1*	43	0.46	1.06	*25*	*50*	*50*													
SW10-03	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	1/05/2018		3.98	0.39	6.44	22.4	110																				
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	9/05/2018		3.32	0.42	6.82	22.3	99																				
SW10-03	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	8/06/2018	10:03	3.96	0.66	6.42	14.9	186	*1*	87	0.29	0.51	*30*	*250*	*250*													
SW10-03	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	5/07/2018	15:49	0.86	0.52	6.26	19.0	167																				
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	28/08/2018	12:11	8.42	1.31	7.03	17.9	39	3	18	0.11	0.27	*30*	*250*	*250*													

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-03	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	4/09/2018	15:00	4.31	0.83	6.14	16.8	426																					
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	7/09/2018	10:50	1.55	1.57	6.01	17.5	84	*1*	47	0.18	1.36	*30*	*250*	*250*														
SW10-03	Upstream and downstream sites connected. Very low flow, high water level. Rain.	11/10/2018	10:08	3.75	0.84	6.39	18.5	406	2	153	0.27	1.07	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. Very low flow, very high water level. Drizzle.	15/10/2018	10:05	0.00	0.36	6.49	18.1	103																					
SW10-03	Dry upstream of works area, not sampled.	20/11/2018	13:08																										
SW10-03	Upstream and downstream sites connected. Very low flow, very low water level. Drizzle.	22/11/2018	12:08	3.32	0.81	6.89	23.6	54	2	24	0.43	0.70	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Bacteria layer present, odour, heavy aquatic vegetation. Overcast.	24/12/2018	12:39	0.14	1.07	6.65	26.3	278																					
SW10-03	Insufficient water to sample.	24/01/2019	10:56																										
SW10-03	Dry, not sampled.	22/02/2019	10:04																										
SW10-03	Insufficient water to monitor.	25/02/2019	17:05																										
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Rain.	16/03/2019	9:46	2.64	1.54	5.35	21.9	192																					
SW10-03	Insufficient water to sample.	18/03/2019	16:04																										
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	3/04/2019	9:39	4.65	0.63	5.98	20.0	443	2	231	0.21	0.91	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Heavy aquatic vegetation. Overcast.	17/04/2019	15:25	6.64	0.72	7.09	23.5	56																					
SW10-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	3/06/2019	11:41	5.07	1.01	6.47	15.4	38																					
SW10-03	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	17/06/2019	9:05	5.81	0.64	6.38	15.6	29	2	15	0.19	0.77	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/07/2019	14:51	6.55	0.35	6.65	16.8	105																					
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	8/07/2019	14:52	5.75	0.41	6.56	16.3	69	3	31	0.34	1.11	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	2/08/2019	14:01	7.08	1.57	6.21	15.9	2																					
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	2/12/2019	10:22	0.00	0.51	6.49	25.2	523	5	193	0.54	1.40	*30*	*100*	*50*														

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Surface bacteria layer. Weather fine.	27/12/2019	13:56	5.81	0.93	6.90	26.5	12																					
SW10-03	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	18/01/2020	15:16	4.51	0.55	5.84	23.4	421																					
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	25/01/2020	16:05	4.19	0.76	6.43	25.9	68	*1*	20	0.27	1.10	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	4/02/2020	10:11	0.00	0.79	6.45	24.8	46	*2*	22	0.35	0.64	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. Very high flow, very high water level. Drizzle.	7/02/2020	8:29	4.17	0.21	5.71	22.6	379	*1*	182	0.31	3.47	*30*	250	110														
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	29/04/2020	10:24	2.96	0.85	6.38	20.1	33																					
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	18/05/2020	14:03	4.10	0.46	6.45	18.9	116	6	60	0.33	0.89	*30*	*100*	*50*														
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	1/06/2020	8:55	1.91	0.80	6.18	15.0	41																					
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	10/06/2020	8:51	7.40	0.77	6.27	15.5	100																					
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Rain.	10/09/2020	12:32	0.70	1.52	5.92	16.0	81																					
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	9/11/2020	11:24	3.84	1.49	6.65	19.2	50	*1*	84	0.10	0.42	*30*	*100*	*50*	0.036	*0.001*	*0.0005*	*0.001*	*0.001*	1.037	*0.001*	0.317	*0.0003*	*0.001*	0.001	*0.0050*	0.004
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/02/2021	11:50	1.11	1.05	6.79	23.2	26																					
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	3/05/2021	12:38	3.29	0.55	6.14	19.9	130	4	26	0.32	0.10	*30*	*100*	*50*	0.367	0.001	*0.0005*	*0.001*	*0.001*	4.291	*0.001*	0.675	*0.0003*	*0.001*	*0.001*	*0.0005*	0.004

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-06	Photo taken. Accurate turbidity reading could not be obtained	10/08/2016		4.25	0.15	7.03	13.6																						
SW10-06		12/09/2016		2.06	0.20	6.49	21.2	64	5	35	0.47	0.46	25	50	50														
SW10-06		11/10/2016		2.38	0.23	6.34	21.0	146																					
SW10-06	Dry	2/11/2016																											
SW10-06	Low water level.	15/12/2016		1.45	0.16	5.62	21.7	8																					
SW10-06	Very low water level, no visible flow. Tannin stain and scum layer visible.	18/01/2017		0.57	0.19	6.33	23.9	15	2	42	0.54	0.55	25	50	50														
SW10-06	Insufficient water for sampling	3/02/2017																											
SW10-06	Very low water level. No flow. Insufficient water to take reading in waterbody - reading taken from sample in bucket. Unable to obtain accurate DO or turbidity measurement.	13/03/2017			0.24	5.79	22.3		2	22	0.26	1.94	25	50	50														
SW10-06	Medium flow. Drizzle	26/04/2017		2.34	0.15	6.18	19.3	12																					
SW10-06	Unable to confirm u/s and d/s connection. Fine weather. Medium water level. Slight odour and foam on surface.	11/05/2017		4.47	0.14	5.99	18.5	4	2	2	0.04	0.24	25	50	50														
SW10-06	Upstream and downstream sites appear likely to be connected, but cannot access to confirm. Moderate to high flow, medium water level. Weather fine.	28/06/2017		6.66	0.14	6.29	16.6	5																					
SW10-06	Unable to determine if upstream and downstream sites were connected. Steady flow, medium water level. Weather fine.	13/07/2017		6.37	0.14	5.91	15.2	0	2	1	0.03	0.15	25	50	50														
SW10-06	No connection between upstream and downstream sites. Low flow. Low water level. Weather fine.	4/08/2017		4.79	0.16	5.58	13.9	1																					
SW10-06	Weather fine. U/S and D/S sites not connected. Gentle flow. Very low water level. Brown stain with scum layer.	7/09/2017		1.15	0.20	6.17	13.6	20	3	7	0.09	0.28	25	50	50														
SW10-06	U/S and D/s connection unclear. gentle flow. Weather fine. Water level medium. Some surface scum	26/10/2017		4.53	0.16	6.20	20.0	3																					
SW10-06	Unable to determine connection. Medium flow, medium water level. Weather fine.	22/11/2017		4.63	0.16	6.37	21.5	3	16	1	0.05	0.65	25	50	50														
SW10-06	Unable to determine if upstream and downstream sites connected. Medium flow, very low water level. Weather fine. Surface scum and bacteria layer, algae present.	15/12/2017		1.70	0.16	6.18	24.7	23																					

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-06	Upstream and downstream sites not connected. Very low flow, low water level. Surface bacteria layer and light algae growth. Weather fine.	23/01/2018		1.40	0.16	5.73	24.4	17	*1*	38	0.09	0.22	*25*	*50*	*50*														
SW10-06	Upstream and downstream sites not connected. Very low flow, very low water level. Overcast.	14/02/2018		2.14	0.15	6.13	22.7	2																				
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	15/03/2018		2.72	0.17	6.53	21.5	4	*1*	3	0.05	0.52	*25*	*50*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, low water level. Surface sheen in patches appears to be bacteria but lab sample taken for oil & grease/hydrocarbon analysis. Red algae present and foamy surface scum in patches. Weather fine.	5/04/2018		0.19	0.23	6.60	20.9	8	11				*25*	*50*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Overcast.	3/05/2018		4.25	0.14	6.43	17.9	12	*1*	5	0.05	0.27	*30*	*250*	*250*														
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	15/06/2018	14:58	5.08	0.15	6.46	14.3	4																				
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	17/07/2018	11:10	7.14	0.15	6.86	10.7	1	*1*	*1*	0.04	0.13	*30*	*250*	*250*														

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-06	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	9/08/2018	14:33	4.22	0.19	6.56	13.1	6																				
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Overcast.	24/09/2018	11:02	5.41	0.18	6.74	15.6	11	3	3	0.02	0.29	*30*	*250*	*250*													
SW10-06	Unable to determine if upstream and downstream sites were connected. Low flow, very low water level. Weather fine.	3/10/2018	15:33	**3.17**	0.21	6.74	16.2	10																				
SW10-06	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Red/brown colour to water, brown algae present. Overcast.	8/11/2018	13:18	**0.59**	0.27	6.74	21.8	**41**	2	**20**	0.06	**0.71**	*30*	*100*	*50*													
SW10-06	Upstream and downstream sites not connected. Low flow, low water level. Red/brown colour to water, algae present. Weather fine.	11/12/2018	11:04	1.55	0.20	6.32	22.7	47																				
SW10-06	Insufficient water to sample	15/01/2019	12:30																									
SW10-06	Dry, not sampled.	13/02/2019	14:47																									
SW10-06	Dry, not sampled.	14/03/2019	16:34																									
SW10-06	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Overcast.	11/04/2019	13:58	4.33	0.23	6.13	20.8	21																				
SW10-06	Unable to determine if connected. Very low flow. Low water level. Fine.	6/05/2019	16:30	**2.60**	0.23	6.88	18.2	9	*1*	3	0.02	**0.81**	*30*	*100*	*50*													
SW10-06	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	5/06/2019	16:10	5.16	0.22	6.76	14.6	6																				
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	9/07/2019	17:32	4.76	0.16	6.46	15.2	13	*1*	2	0.03	0.36	*30*	*100*	*50*													
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Green and brown algae. Weather fine.	16/08/2019	10:07	**0.98**	0.21	6.56	13.3	2																				
SW10-06	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Red algae. Weather fine.	11/09/2019	11:45	**0.00**	0.23	**5.87**	14.5	4	*1*	5	0.04	0.34	*30*	*100*	*50*													
SW10-06	Insufficient water to monitor	2/10/2019	13:41																									
SW10-06	Dry, not sampled.	6/11/2019	13:32																									
SW10-06	Insufficient water to sample.	5/12/2019	8:43																									
SW10-06	Dry, not sampled.	9/01/2020	7:31																									

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Weather fine.	17/02/2020	16:47	**0.00**	0.23	6.34	25.8	2																					
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Overcast.	12/03/2020	10:34	6.36	0.17	6.68	21.4	26	*1*	3	**0.10**	0.39	*30*	*100*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	1/04/2020	9:11	**0.51**	0.22	6.46	21.6	9																					
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	20/05/2020	8:59	**3.50**	0.16	**6.08**	17.6	5	3	0	0.03	0.35	*30*	*100*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	8/07/2020	11:41	3.87	0.16	6.32	13.9	5																					
SW10-06	Unable to determine if upstream and downstream sites were connected. Very low flow, very low water level. Weather fine.	19/11/2020	12:38	**2.23**	0.23	**6.17**	21.1	8	2	11	**0.10**	0.31	*30*	*100*	*50*	**0.265**	**0.001**	*0.0005*	*0.001*	*0.001*	**5.893**	*0.001*	**0.323**	*0.0003*	*0.001*	**0.001**	**0.0050**	0.003
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Overcast.	18/05/2021	10:04	**2.03**	0.17	5.98	16.2	**40**	3	**20**	**0.13**	0.21	*30*	*100*	*50*	**0.323**	**0.002**	*0.0005*	*0.001*	*0.001*	**9.123**	*0.001*	**0.219**	*0.0003*	*0.001*	0.001	*0.0005*	0.003
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.28	7.16		30	3	16	0.07	0.51	30	130	90	0.140	0.001	0.0005	0.001	0.001	0.603	0.001	0.024	0.0003	0.001	0.001	0.0005	0.004
P20				3.85	0.17	6.45																							
St Dev					0.21	0.77																							
Threshold				0.50				10	2	10	0.02	0.20																	

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW13		4/04/2013		3.97	0.60	4.10	21.5	11	*3*	10	0.03	0.40																
SW13		30/04/2013		0.80	0.17	9.20	21.5	33	*3*	19	0.16	0.50																
SW13		27/08/2013		7.50	0.20	6.00	26.5	23	*3*	10	0.06	0.60																
SW13		23/09/2013		7.50	0.18	6.50	29.1	19	*3*	17	0.04	0.50																
SW13		28/10/2013		16.40	0.20	5.90	22.9	30	6	44	0.13	0.90																
SW13		16/12/2013		8.20	0.18	6.00	29.6	43	*3*	218	2.02	2.60																
Upstream Monitoring																												
SW10-05	Dry	10/08/2016																										
SW10-05	Dry	12/09/2016																										
SW10-05	Dry	10/10/2016																										
SW10-05	Dry	2/11/2016																										
SW10-05	Dry	15/12/2016																										
SW10-05	Dry	18/01/2017																										
SW10-05	Dry	3/02/2017																										
SW10-05	Dry	13/03/2017																										
SW10-05	Dry	26/04/2017																										
SW10-05	Sample location moved 200m north-east. Unable to confirm u/s and d/s connection. Fine weather. Very slight flow. Low water level. Milky colour.	11/05/2017		3.85	0.24	5.81	18.3	29	*1*	5	0.07	0.33	*25*	*50*	*50*													
SW10-05	Upstream and downstream sites appear likely to be connected, but cannot access to confirm. Moderate flow, medium water level. Weather fine.	28/06/2017		6.59	0.24	6.54	17.5	30																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	13/07/2017		5.08	0.27	5.85	15.1	15	2	4	0.03	0.14	*25*	*50*	*50*													
SW10-05	No connection between upstream and downstream sites. Stagnant pool with no visible flow. Low water level. Weather fine.	4/08/2017		2.78	0.32	5.77	14.4	2																				
SW10-05	Weather fine. U/S and D/S sites not connected. Dry.	7/09/2017																										
SW10-05	U/S and D/s connection unclear. gentle flow. Weather fine. Water level medium.	26/10/2017		5.99	0.25	7.08	19.7	10																				

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-05	Unable to determine connection. Medium flow, medium water level. Weather fine.	22/11/2017		8.04	0.16	6.97	19.5	15	2	5	0.06	0.39	*25*	*50*	*50*														
SW10-05	Unable to determine if upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	15/12/2017		4.68	0.28	7.16	25.0	3																				
SW10-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	23/01/2018		1.68	0.37	6.81	22.7	4	*1*	5	0.07	0.38	*25*	*50*	*50*														
SW10-05	Upstream and downstream sites not connected. Very low water level. Sampled in small pool, water trickling in from upstream pool. Overcast.	14/02/2018		4.97	0.33	7.42	23.1	4																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Sample taken in a small pool with high flow and high water level. Weather fine.	15/03/2018		7.97	0.15	7.07	20.8	13	*1*	8	0.06	0.47	*25*	*50*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Oil & grease sample taken for comparison to downstream site. Weather fine.	5/04/2018		8.40	0.18	7.28	21.2	20	11				*25*	*50*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	3/05/2018		6.96	0.16	7.34	18.2	26	2	13	0.08	0.46	*30*	*250*	*250*														
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	15/06/2018	15:18	8.45	0.16	6.82	14.4	26																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	17/07/2018	10:57	8.98	0.19	7.16	12.0	22	*1*	6	0.07	0.24	*30*	*250*	*250*														
SW10-05	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	9/08/2018	14:42	7.55	0.26	6.97	13.5	19																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, very low water level. Overcast.	24/09/2018	11:14	6.24	0.21	7.09	16.7	27	3	4	0.05	0.27	*30*	*250*	*250*														
SW10-05	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	3/10/2018	15:01	6.10	0.28	7.43	17.9	23																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Sampled in a small pool with low flow, low water level. Overcast.	8/11/2018	13:26	4.68	0.22	7.21	20.6	27	*1*	9	0.06	0.40	*30*	*100*	*50*														
SW10-05	Upstream and downstream sites not connected. Sampled in a small pool with no visible flow, very low water level. Water cloudy. Weather fine.	11/12/2018	11:18	0.00	1.39	6.83	21.0	51																				
SW10-05	Dry, not sampled.	15/01/2019	12:36																									
SW10-05	Dry, not sampled.	13/02/2019	14:57																									

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-05	Dry, not sampled.	14/03/2019	16:36																										
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, very low water level. Overcast.	11/04/2019	14:05	3.35	0.34	6.73	20.3	16																					
SW10-05	Unable to determine if connected. Very low flow. Low water level. Fine.	6/05/2019	16:45	5.97	0.26	7.16	17.7	23	*1*	5	0.01	0.21	*30*	*100*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	5/06/2019	15:59	5.86	0.24	7.10	14.2	16																					
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather, fine.	9/07/2019	17:44	8.90	0.16	6.74	15.6	37	*1*	7	0.05	0.47	*30*	*100*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	16/08/2019	10:40	3.45	0.29	6.86	14.7	4																					
SW10-05	Dry, not sampled.	11/09/2019	12:13																										
SW10-05	Dry, not sampled.	2/10/2019	14:00																										
SW10-05	Dry, not sampled.	6/11/2019	13:31																										
SW10-05	Dry, not sampled.	5/12/2019	8:47																										
SW10-05	Dry, not sampled.	9/01/2020	7:32																										
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Weather fine.	17/02/2020	16:53	6.10	0.17	6.49	25.0	14																					
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	12/03/2020	10:24	0.29	0.21	6.45	22.6	3	4	3	0.07	0.45	*30*	*100*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	1/04/2020	9:18	5.66	0.19	6.82	21.1	32																					
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	20/05/2020	8:23	9.94	0.16	7.13	16.9	35	4	16	0.07	0.56	*30*	*100*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	8/07/2020	11:47	7.16	0.19	6.81	13.7	25																					
SW10-05	Dry, not sampled.	19/11/2020																											
SW10-05	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level.	18/05/2021	9:49	8.17	0.22	6.68	14.7	12	3	5	0.04	0.21	*30*	*100*	*50*	0.140	*0.001*	*0.0005*	*0.001*	*0.001*	0.603	*0.001*	0.024	*0.0003*	*0.001*	*0.001*	*0.0005*	0.004

SW10-06 - Saltwater Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-06	Photo taken	4/08/2016		5.47	0.18	7.08	14.7	9																					
SW10-06		10/11/2016		3.10	0.28	6.12	32.0	23	10	26	0.28	0.44	*25*	*50*	*50*														
SW10-06		7/12/2016		4.75	0.17	5.31	26.0	5																					
SW10-06	Very low water level. No visible flow.	3/01/2017		1.00	0.16	5.96	23.2	53	3	42	0.26	0.48	*25*	*50*	*50*														
SW10-06	Strong flow. Overcast weather.	28/02/2017		3.59	0.32	5.10	23.5	15																					
SW10-06	Very high flow, high water level.	16/03/2017		4.04	0.13	5.49	23.2	12	4	6	0.07	0.71	*25*	*50*	*50*														
SW10-06	Steady flow. Gentle rain. Indications of recent flood event.	4/04/2017		4.45	0.13	5.84	20.1	9																					
SW10-06	Moderate flow, low water level. U/s and d/s sites connected. Overcast.	5/05/2017		5.10	0.13	6.54	18.6	13	*1*	3	0.05	0.31	*25*	*50*	*50*														
SW10-06	Upstream and downstream sites connected. High flow. Moderate to high water level. Overcast.	14/06/2017		5.74	0.11	5.78	17.5	14																					
SW10-06	Unable to determine if upstream and downstream sites were connected. Steady flow, low water level. Weather fine.	3/10/2017		2.84	0.24	6.02	17.6	14	*1*	7	0.06	0.27	*25*	*50*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Overcast.	6/11/2017		3.52	0.11	5.90	19.3	20																					
SW10-06	Unable to determine connection. Medium to high flow, low water level. Overcast.	2/12/2017		2.45	0.21	6.53	24.3	0	9	7	0.10	0.98	*25*	*50*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	4/01/2018		3.46	0.14	6.51	25.0	0																					
SW10-06	Upstream and downstream sites connected. High flow, medium water level. Overcast.	2/02/2018		3.39	0.22	5.79	21.3	8	3	4	0.06	0.37	*25*	*50*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Weather fine.	8/03/2018		3.57	0.13	6.09	21.5	20																					
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Overcast.	18/04/2018		3.22	0.17	6.33	20.2	70	*1*	16	0.06	0.27	*30*	*250*	*250*														
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Weather fine.	1/05/2018		4.74	0.12	6.51	18.4	29																					
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Slightly turbid water with red colour observed entering waterway upstream of sample point. Overcast.	8/06/2018	8:57	5.93	0.13	6.56	15.1	21	3	18	0.07	0.34	*30*	*250*	*250*														

SW10-06 - Saltwater Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	5/07/2018	16:09	5.48	0.14	6.56	16.8	36																				
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	28/08/2018	13:08	5.70	0.21	6.93	14.7	0	2	4	0.02	0.17	*30*	*250*	*250*													
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, very high water level. Overcast.	5/09/2018	7:15	5.71	0.25	5.90	14.4	59																				
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Rain.	11/10/2018	8:55	3.69	0.15	6.75	18.3	283	2	161	0.16	0.42	*30*	*100*	*50*													
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Brown algae present. Weather fine.	20/11/2018	13:29	3.61	0.20	7.00	22.1	10																				
SW10-06	Upstream and downstream sites connected. Very low flow, very low water level. Water slightly cloudy, brown algae present. Weather fine.	24/12/2018	13:21	1.97	0.29	5.93	22.7	5																				
SW10-06	Insufficient water to sample.	24/01/2019	12:51																									
SW10-06	Insufficient water to sample.	22/02/2019	8:25																									
SW10-06	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Drizzle.	16/03/2019	10:42	1.66	0.48	5.90	22.2	77																				
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Overcast.	3/04/2019	9:05	2.61	0.21	5.93	20.5	32	2	5	0.06	0.79	*30*	*100*	*50*													
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, high water level. Weather fine.	3/06/2019	9:39	4.42	0.38	6.83	15.7	8																				
SW10-06	Upstream and downstream sites connected. High flow, high water level. Drizzle.	5/07/2019	16:15	4.26	0.17	6.59	16.3	15	3	1	0.03	0.42	*30*	*100*	*50*													
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	2/08/2019	14:28	1.97	0.18	6.30	14.8	1																				
SW10-06	Sampled in an isolated pool with no visible flow, very low water level. Weather fine.	2/12/2019	9:24	0.00	0.33	6.19	23.6	30	0	29	0.27	1.52	61	510	*50*													
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Drizzle.	18/01/2020	15:40	5.05	0.60	5.69	22.5	17																				
SW10-06	Insufficient water to sample.	4/02/2020	8:45																									
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Overcast.	29/04/2020	9:30	1.62	0.22	5.58	19.6	5																				

SW10-06 - Saltwater Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Overcast.	18/05/2020	15:04	2.80	0.14	5.93	18.4	14	6	6	0.06	0.45	*30*	*100*	*50*														
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	1/06/2020	8:06	3.58	0.17	6.19	16.3	3																				
SW10-06	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Rain.	10/09/2020	11:17	4.38	0.24	6.45	16.0	16																				
SW10-06	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Overcast.	9/11/2020	12:11	2.90	0.21	6.23	19.7	16	*1*	43	0.08	0.52	*30*	*100*	*50*	0.196	*0.001*	*0.0005*	*0.001*	*0.001*	4.095	*0.001*	0.073	*0.0003*	*0.001*	*0.001*	*0.0050*	0.001
SW10-06	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Weather fine.	4/02/2021	12:14	1.87	0.13	6.51	23.4	11																				
SW10-06	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Drizzle.	3/05/2021	11:48	3.33	0.15	6.17	19.0	10	*1*	2	0.05	0.13	*30*	*100*	*50*	0.195	*0.001*	*0.0005*	*0.001*	*0.001*	0.823	*0.001*	0.039	*0.0003*	*0.001*	*0.001*	*0.0005*	0.008
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.22	7.08		54	3	19	0.09	0.67	30	250	250	0.274	0.001	0.0005	0.001	0.001	0.707	0.001	0.016	0.0003	0.001	0.001	0.0041	0.003
P20				6.29	0.14	6.42																						
St Dev					0.13	0.46																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW13		31/01/2013		N/A	0.14	N/A	N/A	N/A	*3*	15	0.02	0.40																
SW13		1/03/2013		3.27	0.12	5.34	21.8	N/A	*3*	*3*	0.30	1.30																
SW13		28/05/2013		7.50	0.15	6.10	18.3	26	*3*	7	0.06	0.40																
SW13		5/07/2013		7.40	0.14	5.90	22.7	23	*3*	*3*	0.03	0.30																
SW13		30/07/2013		8.40	0.17	6.30	22.1	23	*3*	*3*	0.02	0.30																
SW13		19/11/2013		8.60	0.18	6.70	28.9	51	*3*	57	0.04	0.60																
SW13		25/11/2013		9.30	0.18	7.30	30.5	16	*3*	19	0.07	0.60																
Upstream Monitoring																												
SW10-05	Dry	4/08/2016																										

SW10-06 - Saltwater Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-05	Dry	10/11/2016																											
SW10-05	Dry	7/12/2016																											
SW10-05	Dry	3/01/2017																											
SW10-05	Dry	28/02/2017																											
SW10-05	Dry	16/03/2017																											
SW10-05	Low flow. Steady rain. Indications of recent flood event.	4/04/2017		7.06	0.18	6.55	20.5	41																					
SW10-05	Moderate flow, low water level. U/s and d/s sites connected. Light brown/ grey colour to water. Monitoring undertaken at alternate location on the north side of Coolgardie Rd at Chainage 157500. Cloudy weather.	5/05/2017		7.75	0.20	6.66	18.9	73	4	21	0.15	0.92	*25*	*50*	*50*														
SW10-05	Upstream and downstream sites connected. Moderate flow. Moderate to high water level. Overcast.	14/06/2017		9.83	0.13	6.55	17.7	82																					
SW10-05	Unable to determine if upstream and downstream sites were connected. Steady flow, low water level. Weather fine.	3/10/2017		6.43	0.61	7.40	18.2	16	3	6	0.06	0.67	*25*	*50*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Overcast.	6/11/2017		7.93	0.14	6.60	19.1	45																					
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium to high flow, low water level. Overcast.	2/12/2017		6.27	0.18	6.98	22.5	10	*1*	6	0.08	0.41	*25*	*50*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	4/01/2018		7.26	0.15	6.93	22.9	18																					
SW10-05	Upstream and downstream sites connected. High flow, medium water level. Overcast.	2/02/2018		7.40	0.19	7.14	20.2	25	3	5	0.07	0.42	*25*	*50*	*50*														
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, high water level. Overcast.	8/03/2018		8.28	0.13	6.71	20.9	19																					
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	18/04/2018		7.68	0.17	7.23	20.3	37	4	13	0.08	0.48	*30*	*250*	*250*														
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Overcast.	1/05/2018		8.92	0.13	6.96	17.8	36																					
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Overcast.	8/06/2018	8:44	10.05	0.14	6.95	14.9	55	3	29	0.10	0.57	*30*	*250*	*250*														
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Overcast.	5/07/2018	16:35	8.54	0.13	6.85	16.8	56																					

SW10-06 - Saltwater Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	28/08/2018	13:24	9.26	0.23	7.34	14.4	26	4	18	0.05	0.26	*30*	*250*	*250*													
SW10-05	Unable to determine if upstream and downstream sites were connected. Very high flow, very high water level. Overcast.	5/09/2018	6:49	9.73	0.19	6.23	13.9	110																				
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Rain.	11/10/2018	8:10	9.31	0.12	7.76	18.5	115	2	49	0.11	0.82	*30*	*100*	*50*													
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	20/11/2018	13:39	5.67	0.22	7.38	20.8	14																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Very low flow, very low water level. Weather fine.	24/12/2018	13:29	7.49	0.26	6.93	21.2	6																				
SW10-05	Insufficient water to sample.	24/01/2019	12:52																									
SW10-05	Dry, not sampled.	22/02/2019	8:35																									
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Drizzle.	16/03/2019	10:52	3.90	0.56	6.55	21.8	21																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	3/04/2019	8:52	8.11	0.23	6.98	20.1	20	3	1	0.04	0.57	*30*	*100*	*50*													
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	3/06/2019	9:51	8.03	0.22	6.79	15.3	26																				
SW10-05	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	16:24	9.12	0.16	6.91	16.0	36	3	12	0.04	0.37	*30*	*100*	*50*													
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	2/08/2019	14:36	3.04	0.21	6.40	15.4	25																				
SW10-05	Dry, not sampled.	2/12/2019	9:35																									
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Drizzle.	18/01/2020	15:46	6.61	0.36	6.23	22.7	22																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Low flow, very low water level. Overcast.	4/02/2020	9:00	1.94	0.72	6.60	24.2	3	2	16	0.02	0.48	140	680	340													
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Overcast.	29/04/2020	9:39	6.32	0.18	6.70	19.4	34																				
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Overcast.	18/05/2020	14:30	8.26	0.15	6.79	17.9	59	6	12	0.09	0.92	*30*	*100*	*50*													

SW10-06 - Saltwater Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	1/06/2020	8:12	8.57	0.19	6.68	16.3	23																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Very high flow, very high water level. Drizzle.	10/09/2020	11:25	11.15	0.16	6.43	16.0	158																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Very low flow, very low water level. Overcast.	9/11/2020	12:25	4.79	0.36	6.41	19.0	13	*1*	1	0.03	0.26	*30*	*100*	*50*	0.117	0.001	*0.0005*	*0.001*	0.001	0.112	*0.001*	0.006	*0.0003*	*0.001*	*0.001*	*0.0050*	0.001
SW10-05	Unable to determine if upstream and downstream sites were connected. Very low flow, very low water level. Weather fine.	4/02/2021	12:27	5.06	0.17	7.18	22.6	29																				
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	3/05/2021	10:59	7.55	0.19	6.72	18.8	21	*1*	4	0.05	0.21	*30*	*100*	*50*	0.313	*0.001*	*0.0005*	*0.001*	0.001	0.855	*0.001*	0.019	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

SW10-08 - Randles Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-08	Photo taken.	10/08/2016		6.67	0.14	7.51	14.1	13																					
SW10-08		12/09/2016		6.01	0.14	6.94	16.8	19	4	12	0.11	0.22	*25*	*50*	*50*														
SW10-08		11/10/2016		**1.34**	0.17	6.48	18.1	14																					
SW10-08		2/11/2016		0.66	0.19	7.06	21.0	21	6	15	**0.12**	0.45	*25*	*50*	*50*														
SW10-08		15/12/2016		0.59	0.17	6.28	22.0	10																					
SW10-08	Low water level, no visible flow.	18/01/2017		0.67	0.20	6.63	25.0	7	2	11	**0.17**	0.36	*25*	*50*	*50*														
SW10-08	Dry	3/02/2017																											
SW10-08	Dry	13/03/2017																											
SW10-08	Medium flow, u/s and d/s sites connected. Overcast.	26/04/2017		4.99	0.13	6.37	18.6	24																					
SW10-08	Fine weather. U/s and d/s connected. Moderate flow. Moderate water level.	11/05/2017		5.62	0.14	6.32	16.9	30	*1*	9	0.05	0.14	*25*	*50*	*50*														
SW10-08	Upstream and downstream sites connected. Moderate flow, medium water level. Weather fine.	28/06/2017		8.34	0.13	6.44	16.0	26																					
SW10-08	Upstream and downstream sites connected. Medium flow. Medium water level. Weather fine.	14/07/2017		8.30	0.15	6.31	13.5	26	**7**	**18**	0.05	0.20	*25*	*50*	*50*														
SW10-08	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	4/08/2017		5.38	0.17	6.11	13.6	25																					
SW10-08	Weather fine. Low flow and low water level. Unable to determine if upstream and downstream sites are connected	7/09/2017		2.29	0.19	6.55	14.2	24	3	15	0.10	0.34	*25*	*50*	*50*														
SW10-08	U/S and D/s connected. Gentle flow. Weather fine. Water level medium.	26/10/2017		3.41	0.14	6.58	19.3	16																					
SW10-08	Unable to determine connection. Medium flow, medium water level. Weather, fine.	22/11/2017		4.12	0.13	6.53	19.7	**30**	2	**30**	0.07	0.29	*25*	*50*	*50*														
SW10-08	Unable to determine if upstream and downstream sites connected. Main waterbody near dry, creek appears to blocked/diverted. Water flowing over access track approx. 20 m west of normal sample point, sample taken from this area. Photos taken.	15/12/2017		**1.70**	0.16	6.43	26.0	**58**																					
SW10-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	23/01/2018		**0.54**	0.16	6.50	24.1	14	2	26	0.09	0.39	*25*	*50*	*50*														
SW10-08	Upstream and downstream sites not connected. Low flow, very low water level. Overcast.	14/02/2018		1.71	0.15	6.62	24.5	13																					
SW10-08	Upstream and downstream sites connected. High flow, high water level. Weather fine.	15/03/2018		4.40	0.12	6.54	20.9	10	*1*	7	0.05	0.27	*25*	*50*	*50*														
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	5/04/2018		5.03	**0.12**	6.86	23.8	**29**																					

SW10-08 - Randles Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	3/05/2018		7.14	0.11	6.72	18.2	17	*2*	9	0.05	0.24	*30*	*250*	*250*													
SW10-08	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	15/06/2018	15:04	7.56	0.12	6.53	15.2	13																				
SW10-08	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	17/07/2018	10:43	8.81	0.12	7.22	11.4	27	*1*	9	0.09	0.18	*30*	*250*	*250*													
SW10-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	9/08/2018	14:57	7.18	0.13	6.75	12.7	22																				
SW10-08	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	24/09/2018	11:38	5.13	0.12	6.80	16.7	39	2	12	0.06	0.23	*30*	*250*	*250*													
SW10-08	Upstream and downstream sites connected. Medium flow, very low water level. Weather fine.	3/10/2018	15:18	4.14	0.11	7.01	17.1	22																				
SW10-08	Upstream and downstream sites connected. Low flow, very low water level. Overcast.	8/11/2018	13:53	2.57	0.13	6.72	21.3	**38**	*1*	**55**	**0.09**	0.43	*30*	*100*	*50*													
SW10-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/12/2018	11:35	**1.48**	0.16	6.89	23.0	15																				
SW10-08	Dry, not sampled.	15/01/2019	12:44																									
SW10-08	Dry, not sampled.	13/02/2019	15:02																									
SW10-08	Dry, not sampled.	14/03/2019	16:35																									
SW10-08	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Water slightly orange, algae growth. Overcast.	11/04/2019	14:23	**1.27**	0.22	5.93	20.6	**41**																				
SW10-08	Dry, not sampled.	6/05/2019																										
SW10-08	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Overcast.	5/06/2019	15:45	4.14	0.14	6.72	13.4	11																				
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	9/07/2019	17:13	7.23	0.13	6.38	15.9	23	*1*	4	0.04	0.26	*30*	*100*	*50*													
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	16/08/2019	10:26	**1.01**	0.14	6.35	14.1	15																				
SW10-08	Insufficient water to monitor.	11/09/2019	11:56																									
SW10-08	Dry, not sampled.	2/10/2019	13:39																									
SW10-08	Dry, not sampled.	6/11/2019	13:41																									
SW10-08	Dry, not sampled.	5/12/2019	8:58																									
SW10-08	Dry, not sampled.	9/01/2020	7:39																									

SW10-08 - Randles Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-08	Upstream and downstream sites connected. High flow, high water level. Weather fine.	17/02/2020	17:06	2.79	0.16	5.71	25.6	10																					
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	12/03/2020	11:01	2.30	0.16	5.91	21.2	7	*1*	4	0.05	0.20	*30*	*100*	*50*														
SW10-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	1/04/2020	9:34	1.01	0.16	5.95	21.6	14																					
SW10-08	Upstream and downstream sites connected. Low flow, low water level. Overcast.	20/05/2020	8:39	6.20	0.14	6.34	17.0	17	2	7	0.04	0.22	*30*	*100*	*50*														
SW10-08	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	8/07/2020	11:59	5.39	0.14	6.08	13.5	18																					
SW10-08	Insufficient water to sample.	19/11/2020																											
SW10-08	Upstream and downstream sites connected. Low flow, low water level. Sampled approx. 100 m NW due to access issues Overcast.	18/05/2021	9:36	8.14	0.16	6.17	14.5	15	4	15	0.04	0.13	*30*	*100*	*50*	0.158	*0.001*	0.0005	0.001	0.001	1.186	0.001	0.042	0.0003	0.001	0.001	0.0005	0.003
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.18	6.93		28	3	15	0.09	0.40	30	100	50	0.135	0.001	0.0005	0.001	0.001	3.957	0.001	0.315	0.0003	0.001	0.001	0.0041	0.003
P20				2.37	0.13	6.13																							
St Dev					0.03	0.60																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW14		4/04/2013		0.17	0.09	4.30	22.2	16	*3*	36	0.19	1.20																	
SW14	pH result from lab sample	30/04/2013		6.70	0.15	6.90	18.0	19	*3*	12	0.03	0.40																	
SW14		27/08/2013		7.60	0.20	4.70	19.8	20	*3*	16	0.02	0.40																	
SW14		23/09/2013		7.50	0.18	5.80	23.6	18	*3*	8	0.02	0.20																	
SW14		28/10/2013		2.20	0.19	5.60	18.7	15	*3*	21	0.04	0.20																	
SW14		16/12/2013		6.20	0.19	6.10	24.7	51	*3*	217	0.08	0.40																	
Upstream Monitoring																													
SW10-07	Photo taken	10/08/2016		7.48	0.14	7.40	14.1	8																					
SW10-07		12/09/2016		6.61	0.14	6.85	16.8	28	5	9	0.09	0.26	*25*	*50*	*50*														
SW10-07		11/10/2016		2.37	0.16	6.51	17.9	17																					

SW10-08 - Randles Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-07		2/11/2016		0.69	0.19	6.85	19.8	10	8	8	0.09	0.34	*25*	*50*	*50*														
SW10-07		15/12/2016		0.58	0.16	6.19	21.5	53																				
SW10-07	Low water level, no visible flow.	18/01/2017		0.43	0.20	6.58	24.2	13	3	8	0.11	0.20	*25*	*50*	*50*														
SW10-07	Insufficient water for sampling	3/02/2017																											
SW10-07	Very low water level. No flow. Insufficient water to take reading in waterbody - reading taken from sample in bucket. Could not obtain accurate DO or turbidity measurement.	13/03/2017			0.24	5.89	22.1		*1*	2	0.08	0.49	*25*	*50*	*50*														
SW10-07	Slight flow. U/s and d/s sites connected. Overcast.	26/04/2017		6.74	0.13	6.49	18.7	28																				
SW10-07	Fine weather. U/s and d/s connected. Slight flow. Moderate water level.	11/05/2017		7.00	0.14	6.36	17.2	28	*1*	6	0.04	0.13	*25*	*50*	*50*														
SW10-07	Upstream and downstream sites connected. Medium to high water level. Low flow. Weather fine.	28/06/2017		9.31	0.13	6.52	16.2	24																				
SW10-07	Upstream and downstream sites connected. Slight flow, low to medium water level.Slight dust layer on surface of water. Weather fine.	14/07/2017		9.31	0.15	6.40	13.6	26	2	7	0.04	0.18	*25*	*50*	*50*														
SW10-07	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	4/08/2017		6.46	0.17	6.14	13.6	24																				
SW10-07	Weather fine. Low flow and low water level. Unable to determine if upstream and downstream sites are connected	7/09/2017		2.47	0.20	7.01	14.0	26	2	14	0.08	0.37	*25*	*50*	*50*														
SW10-07	U/S and D/S connected. Gentle flow. Weather fine. Water level medium.	26/10/2017		3.72	0.15	6.66	19.3	19																				
SW10-07	Unable to determine connection. No visible flow, medium water level. Weather, fine.	22/11/2017		6.14	0.13	6.60	19.3	17	3	5	0.05	0.20	*25*	*50*	*50*														
SW10-07	Cannot access, trucks tipping rocks, etc. in work area. Weather fine.	15/12/2017																										
SW10-07	Upstream and downstream sites connected. Low flow, low water level. Bright green algae present. Weather fine.	23/01/2018		6.61	0.15	6.71	26.3	40	*1*	183	1.06	3.34	*25*	*50*	*50*														
SW10-07	Upstream and downstream sites connected. Low flow, medium water level. Some algae present. Overcast.	14/02/2018		1.00	0.15	6.62	24.1	10																				
SW10-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	15/03/2018		5.62	0.11	6.59	21.1	15	*1*	8	0.05	0.24	*25*	*50*	*50*														
SW10-07	No access- LV track blocked by earth mound, attempted access on foot but could not get through due to very busy work area - moxys, trucks, earthworks etc.	5/04/2018																										
SW10-07	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	3/05/2018		7.67	0.11	6.95	18.1	16	*2*	8	0.05	0.21	*30*	*250*	*250*														

SW10-08 - Randles Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-07	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	15/06/2018	15:11	8.07	0.12	6.65	14.7	18																					
SW10-07	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	17/07/2018	10:33	9.65	0.12	7.48	11.8	24	*1*	5	0.06	0.16	*30*	*250*	*250*														
SW10-07	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	9/08/2018	14:50	8.14	0.13	6.95	13.2	21																					
SW10-07	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	24/09/2018	11:26	6.47	0.12	6.92	17.4	31	*1*	12	0.05	0.24	*30*	*250*	*250*														
SW10-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/10/2018	15:10	6.07	0.13	7.11	16.9	31																					
SW10-07	Upstream and downstream sites connected. Low flow, low water level. Dust layer. Overcast.	8/11/2018	13:39	4.29	0.12	6.97	20.7	25	*1*	7	0.05	0.24	*30*	*100*	*50*														
SW10-07	Upstream and downstream sites connected. Low flow, low water level. Red/brown colour to water. Weather fine.	11/12/2018	11:28	2.36	0.16	7.08	24.8	35																					
SW10-07	Dry, not sampled.	15/01/2019	12:44																										
SW10-07	Dry, not sampled.	13/02/2019	14:59																										
SW10-07	Dry, not sampled.	14/03/2019	16:37																										
SW10-07	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Drizzle.	11/04/2019	14:15	2.06	0.21	6.28	20.5	24																					
SW10-07	Unable to determine if connected. No visible flow. Medium water level. Fine.	6/05/2019	16:57	2.83	0.16	6.73	17.1	21	*1*	2	0.02	0.18	*30*	*100*	*50*														
SW10-07	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	5/06/2019	15:32	5.76	0.14	6.98	13.8	17																					
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	9/07/2019	17:04	5.67	0.13	6.55	15.8	19	*1*	4	0.02	0.23	*30*	*100*	*50*														
SW10-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	16/08/2019	10:16	3.95	0.14	6.57	13.7	6																					
SW10-07	No visible flow, medium water level. Heavy aquatic vegetation, brown and green algae present. Weather fine.	11/09/2019	12:01	1.46	0.16	6.30	14.7	7	*1*	8	0.06	0.36	*30*	*100*	*50*														
SW10-07	Insufficient water to monitor	2/10/2019	13:38																										
SW10-07	Dry, not sampled.	6/11/2019	13:40																										
SW10-07	Dry, not sampled.	5/12/2019	8:57																										
SW10-07	Dry, not sampled.	9/01/2020	7:39																										
SW10-07	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	17/02/2020	17:01	4.67	0.16	5.78	25.1	5																					

SW10-08 - Randles Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	12/03/2020	10:55	4.65	0.15	5.99	21.2	7	*1*	4	0.03	0.14	*30*	*100*	*50*														
SW10-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	1/04/2020	9:27	3.00	0.16	5.91	21.3	23																					
SW10-07	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	20/05/2020	8:49	6.90	0.14	6.29	17.0	20	2	5	0.04	0.19	*30*	*100*	*50*														
SW10-07	Unable to determine if upstream and downstream sites were connected. Low flow, high water level. Overcast.	8/07/2020	11:54	6.69	0.14	6.18	13.5	16																					
SW10-07	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/11/2020	13:12	2.40	0.19	6.35	24.2	38	2	15	0.09	0.47	*30*	*100*	*50*	0.093	*0.001*	*0.0005*	*0.001*	*0.001*	4.654	*0.001*	0.384	*0.0003*	*0.001*	0.001	*0.0050*	0.003
SW10-07	Upstream and downstream sites connected. Low flow, low water level. Overcast.	18/05/2021	9:28	7.70	0.16	6.25	14.5	14	3	5	0.04	0.15	*30*	*100*	*50*	0.145	*0.001*	*0.0005*	*0.001*	*0.001*	1.169	*0.001*	0.040	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW10-08	Photo taken	4/08/2016		8.38	0.15	8.07	14.5	43																					
SW10-08		10/11/2016		2.09	0.18	6.43	22.3	11	4	9	0.08	0.46	*25*	*50*	*50*														
SW10-08		7/12/2016		3.77	0.13	6.11	23.3	23																					
SW10-08		3/01/2017		2.32	0.19	6.32	23.2	13	3	7	0.07	0.46	*25*	*50*	*50*														
SW10-08		28/02/2017		4.29	0.18	5.76	21.5	33																					
SW10-08	Very high water level. Steady flow. Upstream and downstream sites connected.	16/03/2017		5.90	0.12	5.99	22.2	20	3	8	0.04	0.46	*25*	*50*	*50*														
SW10-08	No access - house demolition exclusion zone fencing	4/04/2017																											
SW10-08	Moderate flow, moderate water level. U/s and d/s sites connected. Weather cloudy	5/05/2017		6.38	0.12	6.40	17.7	39	*1*	16	0.05	0.24	*25*	*50*	*50*														
SW10-08	Upstream and downstream sites connected. Moderate flow. Moderate water level. Overcast.	14/06/2017		8.64	0.12	6.08	17.3	35																					
SW10-08	Upstream and downstream connected. Steady flow, medium - high water level. Drizzle.	3/10/2017		3.99	0.19	6.64	17.4	29	*1*	15	0.09	0.45	*25*	*50*	*50*														
SW10-08	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Overcast.	6/11/2017		6.17	0.11	6.53	19.4	33																					
SW10-08	Upstream and downstream sites not connected. Medium low, low water level. Overcast.	2/12/2017		2.87	0.11	6.51	23.0	7	3	12	0.07	0.29	*25*	*50*	*50*														
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	4/01/2018		5.58	0.12	6.53	24.5	16																					
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Overcast.	2/02/2018		5.48	0.15	6.43	20.7	22	2	12	0.06	0.29	*25*	*50*	*50*														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Weather fine.	8/03/2018		6.40	0.12	6.49	21.2	20																					
SW10-08	Upstream and downstream sites connected. High flow, High water level. Overcast.	18/04/2018		6.49	0.12	6.75	20.5	52	*1*	27	0.08	0.32	*30*	*250*	*250*														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Overcast.	1/05/2018		7.42	0.11	6.56	18.4	24																					
SW10-08	Upstream and downstream sites were connected. High flow, medium water level. Overcast.	8/06/2018	8:12	8.27	0.10	7.03	14.9	35	2	15	0.06	0.29	*30*	*250*	*250*														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Overcast.	5/07/2018	16:23	7.75	0.10	6.58	17.0	46																					
SW10-08	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	28/08/2018	13:37	7.81	0.12	7.09	14.4	40	2	10	0.06	0.22	*30*	*250*	*250*														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Overcast.	5/09/2018	6:56	8.98	0.17	6.09	14.1	68																					

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-08	Upstream and downstream sites connected. High flow, high water level. Rain.	11/10/2018	8:39	7.53	0.10	6.93	18.0	120	5	53	0.08	0.53	*30*	*100*	*50*														
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	20/11/2018	13:57	5.36	0.12	6.97	21.3	18																					
SW10-08	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	24/12/2018	13:46	3.40	0.15	6.67	22.2	22																					
SW10-08	Dry, not sampled.	24/01/2019	12:52																										
SW10-08	Insufficient water to monitor.	22/02/2019	8:43																										
SW10-08	Insufficient water to monitor.	16/03/2019	11:02																										
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	3/04/2019	8:40	5.01	0.18	6.58	19.9	26	5	6	0.03	0.41	*30*	*100*	*50*														
SW10-08	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	3/06/2019	10:01	5.61	0.14	6.43	14.8	17																					
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	5/07/2019	15:43	7.85	0.12	6.68	16.4	42	2	149	0.04	0.32	*30*	*100*	*50*														
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	2/08/2019	14:49	5.65	0.12	6.12	15.7	8																					
SW10-08	Dry, not sampled.	2/12/2019	10:32																										
SW10-08	Upstream and downstream sites not connected. Low flow, low water level. Drizzle.	18/01/2020	16:00	5.84	0.12	6.46	24.4	70																					
SW10-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/02/2020	9:23	0.58	0.18	6.47	24.0	104	2	46	0.12	1.28	*30*	320	*50*														
SW10-08	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	29/04/2020	9:56	3.98	0.15	6.05	19.3	14																					
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	18/05/2020	14:49	6.83	0.13	6.07	17.8	33	4	11	0.05	0.33	*30*	*100*	*50*														
SW10-08	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	1/06/2020	8:26	4.04	0.15	6.04	16.3	11																					
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Drizzle.	10/09/2020	11:37	7.71	0.13	5.61	16.5	58																					
SW10-08	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Overcast.	9/11/2020	12:47	2.65	0.18	6.25	19.2	15	*1*	5	0.07	0.34	*30*	*100*	*50*	0.149	*0.001*	*0.0005*	*0.001*	*0.001*	1.222	*0.001*	0.033	*0.0003*	*0.001*	0.001	*0.0050*	0.001
SW10-08	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	4/02/2021	12:46	3.26	0.12	6.63	22.6	14																					
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Drizzle.	3/05/2021	11:27	7.43	0.14	6.54	18.4	17	3	5	0.04	0.12	*30*	*100*	*50*	0.162	*0.001*	*0.0005*	*0.001*	*0.001*	1.468	*0.001*	0.044	*0.0003*	*0.001*	*0.001*	*0.0005*	0.005

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.17	6.79		41	3	29	0.08	0.52	30	220	98	0.178	0.001	0.0005	0.001	0.001	1.211	0.001	0.029	0.0003	0.001	0.001	0.0041	0.002
P20				4.56	0.12	6.04																							
St Dev					0.06	0.51																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW14		1/02/2013		N/A	0.13	N/A	N/A	N/A	*3*	*3*	*0.01*	0.30																	
SW14		1/03/2013		6.49	0.12	5.21	23.3	N/A	*3*	134	0.09	1.00																	
SW14		28/05/2013		8.70	0.16	5.70	15.3	23	*3*	13	0.05	0.30																	
SW14		5/07/2013		7.70	0.14	6.10	17.7	23	*3*	10	0.08	0.20																	
SW14		30/07/2013		8.70	0.16	6.50	18.2	17	*3*	10	0.01	0.05																	
SW14		19/11/2013		5.50	0.18	6.80	23.0	20	*3*	6	0.03	0.40																	
SW14		25/11/2013		6.00	0.16	7.00	24.7	14	*3*	27	0.08	0.70																	
Upstream Monitoring																													
SW10-07	Photo taken	4/08/2016		8.54	0.13	7.64	14.4	45																					
SW10-07		10/11/2016		2.19	0.18	6.37	22.9	116	*1*	8	0.07	0.54	*25*	*50*	*50*														
SW10-07		7/12/2016		4.46	0.13	6.22	23.4	23																					
SW10-07		3/01/2017		3.06	0.18	6.33	23.2	19	3	5	0.06	0.38	*25*	*50*	*50*														
SW10-07		28/02/2017		4.19	0.18	5.83	21.7	30																					
SW10-07	Steady flow. Very high water level. Upstream and downstream sites connected.	16/03/2017		5.58	0.13	5.92	22.3	28	4	49	0.04	0.50	*25*	*50*	*50*														
SW10-07	No access - house demolition exclusion zone fencing	4/04/2017																											
SW10-07	Slight flow, moderate water level. U/s and d/s sites connected. Weather cloudy.	5/05/2017		7.58	0.12	6.67	17.8	38	2	33	0.05	0.29	*25*	*50*	*50*														
SW10-07	Upstream and downstream sites connected. Low flow. Moderate water level. Overcast.	14/06/2017		9.10	0.12	6.11	17.3	58																					
SW10-07	Upstream and downstream connected. Low flow, medium - high water level. Drizzle.	3/10/2017		5.22	0.19	6.64	17.6	32	*1*	11	0.07	0.50	*25*	*50*	*50*														
SW10-07	Unable to determine if upstream and downstream sites were connected. Low flow, medium - high water level. Overcast.	6/11/2017		6.94	0.11	6.84	19.5	50																					

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-07	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	2/12/2017		4.71	0.13	6.65	22.2	11	2	5	0.06	0.25	*25*	*50*	*50*														
SW10-07	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/01/2018		6.93	0.12	6.60	23.8	15																				
SW10-07	Upstream and downstream sites connected. High flow, high water level. Rain.	2/02/2018		6.49	0.14	6.55	20.8	27	5	62	0.08	0.43	*25*	*50*	*50*														
SW10-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	8/03/2018		7.21	0.12	6.23	21.2	19																				
SW10-07	Upstream and downstream sites connected. High flow, High water level. Overcast.	18/04/2018		7.16	0.11	7.25	20.3	23	*1*	6	0.06	0.25	*30*	*250*	*250*														
SW10-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	1/05/2018		7.33	0.11	6.64	18.1	26																				
SW10-07	Upstream and downstream sites connected. High flow, medium water level. Overcast.	8/06/2018	8:29	8.56	0.10	6.70	15.0	35	3	15	0.06	0.23	*30*	*250*	*250*														
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	5/07/2018	16:18	5.96	0.10	6.64	16.8	44																				
SW10-07	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	28/08/2018	13:46	8.78	0.12	7.11	13.9	33	*1*	13	0.04	0.18	*30*	*250*	*250*														
SW10-07	Upstream and downstream sites connected. High flow, high water level. Overcast.	5/09/2018	7:04	8.72	0.16	6.23	14.0	51																				
SW10-07	Upstream and downstream sites connected. High flow, high water level. Rain.	11/10/2018	8:32	7.64	0.10	7.14	18.0	71	*1*	42	0.08	0.62	*30*	*100*	*50*														
SW10-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	20/11/2018	13:48	9.30	0.12	7.18	21.1	42																				
SW10-07	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	24/12/2018	13:38	4.45	0.14	6.73	23.0	11																				
SW10-07	Dry, not monitored.	24/01/2019	12:53																									
SW10-07	Dry, not sampled.	22/02/2019	8:37																									
SW10-07	Unable to determine if upstream and downstream sites were connected. low flow, low water level. Drizzle.	16/03/2019	11:01	5.48	0.32	6.13	21.7	21																				
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	3/04/2019	8:25	5.88	0.18	6.97	19.9	16	4	3	0.03	0.29	*30*	*100*	*50*														
SW10-07	Unable to determine if upstream and downstream sites were connected. Low flow, medium water level. Heavy aquatic vegetation. Weather fine.	3/06/2019	10:10	6.31	0.13	6.37	14.9	16																				
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	15:34	7.69	0.11	6.77	16.3	31	3	5	0.03	0.23	*30*	*100*	*50*														
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	2/08/2019	14:55	4.25	0.12	6.54	15.3	18																				
SW10-07	Dry, not sampled.	2/12/2019	10:32																									

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW10-07	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	18/01/2020	15:52	3.59	0.36	5.36	24.0	39																					
SW10-07	Upstream and downstream sites not connected. No visible flow, very low water level. Strong odour, black colouration, surface bacteria. Overcast.	4/02/2020	9:12	0.03	0.38	6.39	23.5	38	*1*	4	0.40	1.50	*30*	270	110														
SW10-07	Unable to determine if upstream and downstream sites were connected. No visible flow, high water level. Overcast.	29/04/2020	9:51	5.32	0.15	5.99	19.2	14																					
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	18/05/2020	14:41	7.50	0.13	6.00	17.6	31	4	11	0.04	0.31	*30*	*100*	*50*														
SW10-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	1/06/2020	8:20	5.70	0.15	5.84	16.1	10																					
SW10-07	Upstream and downstream sites connected. High flow, medium water level. Drizzle.	10/09/2020	11:32	7.58	0.15	5.70	16.0	54																					
SW10-07	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	9/11/2020	12:37	3.87	0.16	6.24	18.7	19	*1*	6	0.06	0.37	*30*	*100*	*50*	0.162	*0.001*	*0.0005*	*0.001*	*0.001*	0.958	*0.001*	0.021	*0.0003*	*0.001*	*0.001*	*0.0050*	0.002
SW10-07	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	4/02/2021	12:36	5.10	0.12	6.75	23.0	15																					
SW10-07	Upstream and downstream sites connected. High flow, medium water level. Drizzle.	3/05/2021	10:43	7.77	0.15	6.58	18.5	20	*1*	4	0.04	0.12	*30*	*100*	*50*	0.182	*0.001*	*0.0005*	*0.001*	*0.001*	1.274	*0.001*	0.031	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002

SW11-02 - Duck Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW11-02	Sample taken 100m downstream due to access issues	4/08/2016		6.42	28.60	7.52	17.3	2																					
SW11-02		10/11/2016		5.65	35.00	7.27	27.2	18	5	3	0.07	0.37	*25*	*50*	*50*														
SW11-02		7/12/2016		5.19	30.10	6.96	27.4	67																					
SW11-02		3/01/2017		4.66	36.40	7.19	27.4	30	3	28	0.08	0.41	*25*	*50*	*50*														
SW11-02	Low tide. Flowing out.	28/02/2017		2.81	26.80	6.83	24.3	26																					
SW11-02	Very high water level. High, outflowing tide. Upstream and downstream sites connected.	16/03/2017		4.11	1.53	6.35	23.5	63	2	35	0.16	3.35	*25*	*50*	*50*														
SW11-02	Mid tide. Steady flow out. U/s and d/s sites connected.	4/04/2017		5.25	0.31	6.43	19.9	31																					
SW11-02	Tidal - low tide, slight flow from u/s to d/s. Weather overcast.	5/05/2017		5.89	1.81	6.54	19.3	61	*1*	57	0.15	0.79	*25*	*50*	*50*														
SW11-02	Upstream and downstream sites connected. Low flow, outgoing tide. High water level. Partly cloudy.	14/06/2017		6.15	0.20	6.11	17.0	34																					
SW11-02	Upstream and downstream connected. High flow, outgoing tide. Low to medium water level. Drizzle.	3/10/2017		4.22	23.40	6.72	20.6	32	*1*	23	0.05	0.41	*25*	*50*	*50*														
SW11-01	Upstream and downstream sites connected, Low flow. Incoming tide, therefore SW11-01 is downstream. High water level. Overcast.	6/11/2017		3.74	5.50	6.48	21.2	165																					
SW11-02	Upstream and downstream sites connected. Very high water level, moderate flow. Tide outgoing. Weather, fine.	6/12/2017		6.34	26.20	7.55	24.5	20	5	20	0.10	0.45	*25*	*50*	*50*														
SW11-01	Upstream and downstream sites connected. Incoming tide, therefore SW11-01 is downstream. Slight flow, high water level. Weather fine.	2/01/2018		3.42	5.63	6.66	26.8	34																					
SW11-02	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	2/02/2018		4.03	31.20	6.69	24.9	38	*1*	15	0.09	0.36	*25*	*50*	*50*														
SW11-02	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Drizzle.	6/03/2018		4.37	1.48	6.55	24.2	104																					
SW11-02	Upstream and downstream sites connected. Low flow, outgoing tide, low water level. Fine.	18/04/2018		5.70	15.70	6.88	23.0	17	*1*	11	0.06	0.49	*30*	*250*	*250*														
SW11-02	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Overcast.	1/05/2018		4.95	0.32	6.51	19.2	68																					
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	8/06/2018	7:49	5.28	2.16	6.58	16.1	66	*1*	51	0.16	0.77	*30*	*250*	*250*														

SW11-02 - Duck Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-01	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	4/07/2018	8:16	7.83	4.75	6.84	16.1	15																					
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	28/08/2018	14:02	7.45	24.90	6.97	17.8	39	2	14	0.02	0.30	*30*	*250*	*250*														
SW11-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	4/09/2018	16:37	5.18	11.70	6.05	17.1	**86**																					
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	11/10/2018	7:45	4.39	9.13	6.79	20.8	78	2	48	0.17	0.65	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	19/11/2018	14:45	**3.01**	1.67	7.03	24.2	33																					
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine. Type B parameters not sampled due to lab closure.	22/12/2018	14:03	5.33	33.10	6.88	27.9	18																					
SW11-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	22/02/2019	7:39	**2.76**	42.30	7.03	26.0	89	2	22	0.10	0.41	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	16/03/2019	11:21	2.88	41.70	6.65	24.7	**104**	*1*	25	0.02	0.67	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Low flow, very high water level. Outgoing tide. Overcast.	3/04/2019	8:08	5.62	24.30	6.97	22.1	63																					
SW11-02	Upstream and downstream sites connected. Very low flow, very high water level. Outgoing tide. Weather fine.	3/06/2019	9:13	6.28	12.80	6.68	16.3	76	2	24	0.11	**2.65**	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Overcast.	5/07/2019	16:01	6.89	1.09	6.32	17.1	**192**																					
SW11-02	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Weather fine.	1/08/2019	14:07	5.21	12.40	6.97	17.1	3	**3**	7	0.04	0.48	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/12/2019	8:32	**1.10**	41.20	6.91	24.7	9																					
SW11-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	18/01/2020	16:17	6.37	18.60	6.76	24.9	**94**	2	**56**	**0.21**	**3.96**	*50*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/02/2020	8:43	4.62	32.00	**7.66**	28.1	33																					
SW11-02	Upstream and downstream sites connected. Low flow, very high water level. Outgoing tide. Drizzle.	9/03/2020	8:53	3.99	12.50	6.89	24.9	44	2	26	0.11	0.68	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	29/04/2020	9:19	5.03	8.26	**6.13**	21.0	53																					

SW11-02 - Duck Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-01	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Overcast.	18/05/2020	15:42	5.25	0.72	6.29	18.3	87	6	27	0.21	0.78	*30*	*100*	*50*													
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	1/06/2020	7:53	5.73	17.60	6.64	17.7	10																				
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Rain.	10/09/2020	10:49	13.83	9.20	6.67	17.7	20																				
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Overcast.	9/11/2020	13:11	4.49	18.30	6.67	22.5	23	*1*	16	0.07	0.56	*30*	*100*	*50*	0.032	*0.001*	*0.0005*	*0.001*	*0.001*	0.160	*0.001*	0.239	*0.0003*	0.001	0.001	*0.0050*	0.002
SW11-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Weather fine.	3/02/2021	15:22	6.44	11.80	7.65	27.6	17																				
SW11-01	Upstream and downstream sites connected. Very low flow, very low water level. Incoming tide. Weather fine.	3/05/2021	13:35	9.71	0.35	6.44	20.5	40	*2*	6	0.04	0.59	*30*	*100*	*50*	0.119	*0.001*	*0.0005*	*0.001*	*0.001*	0.705	*0.001*	0.050	*0.0003*	*0.001*	*0.001*	*0.0005*	0.002
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					26.44	7.06		63	3	26	0.15	0.84	30	100	50	0.249	0.001	0.0005	0.001	0.001	1.185	0.001	0.268	0.0003	0.004	0.001	0.0041	0.007
P20				3.97	0.66	6.49																						
St Dev					13.16	0.39																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW15		1/02/2013		N/A	0.50	N/A	N/A	N/A	*3*	19	0.05	0.80																
SW15		1/03/2013		4.00	0.31	5.99	23.3	N/A	*3*	8	0.15	0.70																
SW15		28/05/2013		8.40	6.60	6.50	16.2	18	*3*	11	0.06	0.70																
SW15		5/07/2013		6.80	0.25	5.60	20.6	39	*3*	16	0.10	0.70																
SW15		30/07/2013		8.90	8.38	6.60	20.6	11	*3*	8	0.04	0.40																
SW15		19/11/2013		6.40	27.80	6.90	29.2	7	*3*	12	0.03	0.70																
SW15		25/11/2013		8.30	23.20	7.30	27.6	6	*3*	*3*	0.46	0.05																
Upstream Monitoring																												
SW11-01	Photo taken	4/08/2016		6.33	5.48	6.97	15.8	39																				
SW11-01		10/11/2016		5.43	35.20	7.00	27.0	24	5	17	0.06	0.28	*25*	*50*	*50*													

SW11-02 - Duck Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-01		7/12/2016		4.89	28.60	6.70	27.6	77																				
SW11-01		3/01/2017		4.69	35.80	6.86	27.3	55	3	14	0.08	0.43	*25*	*50*	*50*													
SW11-01	Low tide. Flowing out.	28/02/2017		3.15	25.60	6.46	24.2	29																				
SW11-01	Very high water level. High, outflowing tide. Upstream and downstream sites connected.	16/03/2017		4.04	1.29	6.25	23.6	66	3	31	0.15	3.56	*25*	*50*	*50*													
SW11-01	Mid tide. Steady flow out. U/s and d/s sites connected.	4/04/2017		4.85	0.35	6.34	20.0	26																				
SW11-01	Tidal - low tide, slight flow from u/s to d/s. Monitoring undertaken 200 m u/s from standard location due to access restrictions with new contractor on site. Weather overcast.	5/05/2017		5.65	0.56	6.57	18.8	63	2	33	0.10	0.83	*25*	*50*	*50*													
SW11-01	Upstream and downstream sites connected. Low flow. Outgoing tide. High water level. Partly cloudy. Monitoring undertaken 200 m u/s from standard location due to access restrictions with new contractor on site. Weather overcast.	14/06/2017		7.59	0.15	6.23	17.4	21																				
SW11-01	Upstream and downstream connected. High flow, outgoing tide. Low - medium water level. Drizzle.	3/10/2017		2.95	22.30	7.07	20.6	12	*1*	4	0.05	0.42	*25*	*50*	*50*													
SW11-02	Upstream and downstream sites connected, Low flow. Incoming tide, therefore SW11-02 is upstream. High water level. Overcast.	6/11/2017		4.11	15.70	6.70	23.1	95																				
SW11-01	Upstream and downstream sites connected. Very high water level, moderate flow. Tide outgoing. Weather, fine.	6/12/2017		4.70	20.10	7.25	25.9	13	6	13	0.07	0.41	*25*	*50*	*50*													
SW11-02	Upstream and downstream sites connected. Incoming tide. Slight flow, high water level. Weather fine.	2/01/2018		4.55	14.70	6.61	27.6	11																				
SW11-01	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Overcast.	2/02/2018		3.57	21.80	6.87	24.4	16	4	9	0.08	0.43	*25*	*50*	*50*													
SW11-01	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Rain.	6/03/2018		4.95	0.52	6.55	23.2	58																				
SW11-01	Upstream and downstream sites connected. Low flow, outgoing tide, low water level. Fine.	18/04/2018		5.44	7.43	7.07	22.0	8	*1*	4	0.06	0.45	*30*	*250*	*250*													
SW11-01	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Overcast.	1/05/2018		5.09	0.26	6.67	18.5	27																				
SW11-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	8/06/2018	7:31	6.23	0.82	6.83	16.1	58	*1*	25	0.15	0.71	*30*	*250*	*250*													
SW11-02	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Rain.	4/07/2018	8:35	6.17	9.86	6.82	16.1	32																				

SW11-02 - Duck Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	28/08/2018	14:14	7.34	20.90	7.13	16.8	13	*1*	4	0.03	0.30	*30*	*250*	*250*													
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	4/09/2018	16:24	4.86	9.19	5.99	16.0	54																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	11/10/2018	6:33	6.16	5.08	6.79	19.7	542	2	227	0.42	1.22	*30*	*100*	*50*													
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	19/11/2018	14:37	3.73	5.04	6.87	24.2	49																				
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine. Type B parameters not sampled due to lab closure.	22/12/2018	14:11	3.18	27.50	6.79	27.7	11																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	22/02/2019	7:58	3.66	46.30	7.35	26.9	101	3	49	0.13	0.42	*30*	*100*	*50*													
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	16/03/2019	11:33	1.65	40.80	6.90	25.6	53	*1*	7	0.03	0.60	*30*	*100*	*50*													
SW11-01	Upstream and downstream sites connected. Low flow, very high water level. Outgoing tide. Overcast.	3/04/2019	7:57	5.62	9.65	6.95	20.8	74																				
SW11-01	Upstream and downstream sites connected. Very low flow, very high water level. Outgoing tide. Weather fine.	3/06/2019	8:55	8.70	7.87	6.60	16.2	111	*1*	32	0.17	1.71	*30*	*100*	*50*													
SW11-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Rain.	5/07/2019	17:34	9.54	0.46	6.49	16.8	86																				
SW11-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	1/08/2019	14:32	5.30	6.69	6.87	16.1	2	*1*	9	0.03	0.42	*30*	*100*	*50*													
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/12/2019	8:46	3.71	44.20	7.34	26.4	22																				
SW11-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	18/01/2020	16:39	7.72	19.00	7.13	24.4	43	6	27	0.19	1.82	*50*	*100*	*50*													
SW11-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/02/2020	8:30	3.96	29.90	7.25	28.3	41																				
SW11-01	Upstream and downstream sites connected. Low flow, very high water level. Outgoing tide. Overcast.	9/03/2020	9:14	3.59	4.63	6.81	25.4	36	3	14	0.09	0.37	*30*	*100*	*50*													
SW11-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	29/04/2020	9:06	5.32	4.95	6.55	20.4	33																				

SW11-02 - Duck Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Overcast.	18/05/2020	15:20	5.71	6.63	6.13	19.2	80	4	24	0.12	0.84	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	1/06/2020	7:40	5.89	12.60	6.31	17.3	8																				
SW11-02	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Rain.	10/09/2020	11:02	10.78	22.30	6.85	19.5	44																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	9/11/2020	10:13	6.22	27.00	6.92	22.9	30	*1*	15	0.09	0.90	96	*100*	*50*	0.064	0.001	*0.0005*	*0.001*	0.001	0.186	*0.001*	0.312	*0.0003*	0.004	0.001	*0.0050*	0.005
SW11-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Overcast.	3/02/2021	15:12	5.90	5.35	7.53	25.9	13																				
SW11-02	Upstream and downstream sites connected. Low flow, very low water level. Incoming tide. Weather fine.	3/05/2021	10:28	6.44	0.55	6.63	20.0	25	*1*	20	0.07	0.37	*30*	*100*	*50*	0.296	*0.001*	*0.0005*	*0.001*	0.001	1.435	*0.001*	0.089	*0.0003*	0.002	*0.001*	*0.0005*	0.008

SW11-02 - Duck Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Downstream Monitoring																													
SW11-02	Low tide. Photo taken.	10/08/2016		5.77	0.75	7.57	15.4	14																					
SW11-02		9/09/2016		7.80	5.93	6.67	19.6	11	2	11	0.08	0.67	*25*	*50*	*50*														
SW11-02		11/10/2016		6.34	21.30	7.05	21.3	20																					
SW11-02		3/11/2016		5.93	36.70	7.40	23.8	11	4	17	0.07	0.25	*25*	*50*	*50*														
SW11-02	High tide.	15/12/2016		6.62	38.30	7.61	25.6	26																					
SW11-01	Mid tide, flowing in - therefore SW11-01 is downstream.	18/01/2017		6.41	29.00	7.64	29.5	47	2	15	0.10	0.30	*25*	*50*	*50*														
SW11-02	High tide. Minimal flow.	3/02/2017		6.08	33.00	7.87	30.1	11																					
SW11-02	Mid, outflowing tide. Steady flow.	13/03/2017		4.29	32.80	7.19	25.8	32	**5**	**28**	0.07	0.51	*25*	*50*	*50*														
SW11-02	Low, outflowing tide. U/s and d/s sites connected. Overcast.	26/04/2017		5.60	3.33	6.67	20.3	34																					
SW11-02	Fine weather. U/s and d/s connected. Low tide flowing out. Low-medium water level.	11/05/2017		5.99	5.52	6.34	19.0	25	*1*	11	0.06	0.48	*25*	*50*	*50*														
SW11-02	Upstream and downstream sites connected. Outflowing tide, moderate flow. Medium water level. Weather fine.	28/06/2017		8.62	0.23	6.74	16.9	14																					
SW11-02	Upstream and downstream sites connected. Outgoing tide, steady flow, high water level. Weather fine.	14/07/2017		8.61	6.83	6.67	15.9	14	2	9	0.05	0.47	*25*	*50*	*50*														
SW11-01	Upstream and downstream sites connected. Incoming tide, SW11-01 is downstream. Moderate flow. Low water level. Fine.	4/08/2017		8.24	7.18	7.42	15.6	4																					
SW11-02	Upstream and downstream sites connected. Low Flow. High Tide.	7/09/2017		6.89	37.40	**7.79**	18.4	6	6	10	0.06	0.27	*25*	*50*	*50*														
SW11-01	U/S and D/s connected. Gentle flow. Incoming tide, therefore SW11-01 is downstream. Weather fine. Water level medium.	26/10/2017		**4.42**	5.81	7.01	21.8	18																					
SW11-02	Upstream and downstream sites connected. Outgoing tide, high water level, moderate flow. Weather fine.	22/11/2017		5.72	12.10	6.67	24.0	**38**	2	17	0.07	0.50	*25*	*50*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide, therefore SW11-01 is downstream. Weather fine.	15/12/2017		4.13	7.16	6.78	26.7	6																					
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	23/01/2018		6.26	19.10	6.73	27.9	26	*1*	**33**	0.07	0.47	*25*	*50*	*50*														
SW11-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	14/02/2018		5.59	28.70	**7.48**	27.4	26																					
SW11-02	Upstream and downstream sites connected. Very low flow, very high water level. Outgoing tide. Weather fine.	15/03/2018		3.83	3.96	6.77	23.4	32	*1*	15	0.14	0.74	*25*	*50*	*50*														

SW11-02 - Duck Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	5/04/2018		5.30	2.46	6.84	24.0	33																				
SW11-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	3/05/2018		5.15	0.95	7.03	19.2	30	*1*	18	0.12	0.55	*30*	*250*	*250*													
SW11-02	Upstream and downstream sites connected. Medium flow, very low water level. Outgoing tide. Weather fine.	15/06/2018	15:37	5.76	7.70	6.68	16.3	36																				
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	17/07/2018	10:08	7.30	18.60	6.85	13.9	7	*1*	9	0.03	0.36	*30*	*250*	*250*													
SW11-01	Upstream and downstream sites connected. High flow, low water level. Incoming tide. Weather fine.	9/08/2018	15:20	6.95	24.50	7.15	17.2	35																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	24/09/2018	11:58	5.35	19.50	6.52	19.9	35	2	6	0.05	0.31	*30*	*250*	*250*													
SW11-02	Upstream and downstream sites connected. Low flow, very high water level. Outgoing tide. Weather fine.	3/10/2018	15:50	7.52	28.90	7.28	21.4	**58**																				

SW11-02 - Duck Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	8/11/2018	14:16	3.98	15.10	6.74	25.0	65	*1*	12	0.06	0.40	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	6/12/2018	14:48	5.01	23.70	6.97	25.4	78																				
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	15/01/2019	13:15	5.76	33.00	7.55	27.6	8	*1*	10	0.09	0.41	*30*	*100*	*100*														
SW11-02	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Weather fine.	11/02/2019	14:54	5.50	43.80	7.69	29.1	64																				
SW11-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	13/03/2019	14:57	4.93	44.00	7.46	28.6	50	4	10	0.06	0.38	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	11/04/2019	14:39	5.14	25.50	6.76	23.1	42																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Fine.	8/05/2019	8:15	5.32	30.10	7.33	20.4	71	*1*	20	0.01	0.34	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	4/06/2019	16:37	5.10	16.10	7.10	16.1	46																				
SW11-02	Upstream and downstream sites connected. Medium flow, very low water level, odour. Outgoing tide.	9/07/2019	9:20	6.20	0.85	6.52	16.0	35	4	11	0.09	0.68	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	8/08/2019	13:51	5.20	26.00	7.31	18.7	5																				
SW11-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	11/09/2019	12:44	5.02	28.50	7.18	19.0	4	*1*	9	0.03	0.26	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	1/10/2019	15:17	3.79	36.20	7.31	22.3	33																				
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	6/11/2019	2:20	5.47	43.60	7.73	24.6	14	3	9	0.07	0.24	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	5/12/2019	8:28	7.18	43.50	7.65	25.3	14																				
SW11-01	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Weather fine.	9/01/2020	7:03	5.19	47.10	7.51	28.4	62	2	38	0.15	0.39	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	17/02/2020	17:24	1.56	0.76	6.10	28.6	23																				
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	5/03/2020	15:11	5.84	0.25	6.54	24.3	19	6	2	0.05	0.16	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	1/04/2020	8:51	5.72	5.01	6.88	23.1	20																				

SW11-02 - Duck Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-02	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Overcast.	5/05/2020	13:49	7.17	16.50	7.37	18.0	**137**	5	**102**	**0.21**	**0.72**	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	8/07/2020	8:34	7.17	10.10	6.58	14.7	7																				
SW11-02	Upstream and downstream sites connected. Low flow, very low water level. Outgoing tide. Weather fine.	13/11/2020	14:41	5.17	28.30	7.17	24.5	27	*1*	**32**	0.03	0.47	*30*	*100*	*50*	**0.385**	0.001	*0.0005*	**0.001**	**0.001**	**1.377**	*0.001*	**0.271**	*0.0003*	**0.002**	**0.001**	*0.0050*	**0.005**
SW11-02	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Drizzle.	18/05/2021	9:08	7.25	3.53	6.73	16.4	9	*4*	3	0.04	0.49	*30*	*100*	*50*	**0.104**	*0.001*	*0.0005*	*0.001*	*0.001*	0.591	*0.001*	0.093	*0.0003*	0.001	*0.001*	*0.0005*	**0.004**
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					31.18	7.35		37	3	25	0.12	0.54	30	100	50	0.089	0.001	0.0005	0.001	0.001	0.620	0.001	0.188	0.0003	0.001	0.001	0.0041	0.003
P20				4.58	2.36	6.73																						
St Dev					14.08	0.42																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW15		4/04/2013		0.50	0.15	6.00	21.6	22	*3*	*3*	0.01	0.20																
SW15		30/04/2013		6.90	3.94	7.30	20.7	13	*3*	107	0.07	0.50																
SW15		27/08/2013		8.60	16.50	7.00	22.8	7	*3*	25	0.81	0.60																
SW15		23/09/2013		8.30	21.50	7.50	26.7	13	*3*	26	*0.01*	0.05																
SW15		28/10/2013		8.60	29.50	7.20	24.3	7	*3*	58	0.22	0.40																

SW11-02 - Duck Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW15		16/12/2013		5.90	23.00	7.70	24.3	12	*3*	12	0.08	0.80																	
Upstream Monitoring																													
SW11-01	Photo taken	10/08/2016		5.64	0.67	7.29	15.4	4																					
SW11-01		9/09/2016		7.33	6.28	6.37	19.5	14	*1*	14	0.07	0.59	*25*	*50*	*50*														
SW11-01		11/10/2016		6.15	16.60	6.64	20.8	11																					
SW11-01		3/11/2016		5.63	36.20	7.27	23.7	12	7	12	0.08	0.31	*25*	*50*	*50*														
SW11-01	High tide.	15/12/2016		6.39	37.60	7.44	25.5	36																					
SW11-02	Mid tide, flowing in therefore SW11-02 is upstream.	18/01/2017		6.95	28.10	7.82	29.6	26	6	24	0.11	0.31	*25*	*50*	*50*														
SW11-01	High tide. Minimal flow.	3/02/2017		6.18	32.50	7.87	30.4	12																					
SW11-01	Mid, outflowing tide. Steady flow.	13/03/2017		4.06	32.60	6.94	25.8	66	3	16	0.07	0.53	*25*	*50*	*50*														
SW11-01	Low, outflowing tide. U/s and d/s sites connected. Overcast.	26/04/2017		5.56	2.58	6.53	20.2	44																					
SW11-01	Fine weather. U/s and d/s connected. Low tide flowing out. Low-medium water level.	11/05/2017		6.00	2.15	6.54	18.3	25	*1*	10	0.06	0.48	*25*	*50*	*50*														
SW11-01	Upstream and downstream sites connected. Outflowing tide, moderate flow. Medium water level. Weather fine.	28/06/2017		6.91	0.77	6.54	17.0	26																					
SW11-01	Upstream and downstream sites connected. Outgoing tide, steady flow, high water level. Weather fine.	14/07/2017		9.01	1.73	6.74	15.3	12	*1*	5	0.04	0.60	*25*	*50*	*50*														
SW11-02	Upstream and downstream sites connected. Incoming tide, SW11-02 is upstream. Moderate flow. Low water level. Weather fine.	4/08/2017		8.93	16.80	7.42	16.7	7																					
SW11-01	Upstream and downstream sites connected. Low Flow. High Tide.	7/09/2017		6.48	31.50	7.34	18.2	5	4	10	0.05	0.26	*25*	*50*	*50*														
SW11-02	U/S and D/s connected. Gentle flow. Incoming tide, SW11-02 is upstream. Weather fine. Water level medium.	26/10/2017		6.02	8.52	6.97	22.3	16																					
SW11-01	Upstream and downstream sites connected. Outgoing tide, high water level, moderate flow. Weather fine.	22/11/2017		5.07	4.81	6.80	22.8	12	2	8	0.06	0.39	*25*	*50*	*50*														
SW11-02	Upstream and downstream sites connected. High flow, incoming tide, medium water level.	15/12/2017		3.95	11.20	6.53	28.2	18																					
SW11-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	23/01/2018		5.09	13.60	6.98	26.9	11	*1*	16	0.06	0.41	*25*	*50*	*50*														
SW11-01	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	14/02/2018		5.42	21.30	6.99	27.4	50																					

SW11-02 - Duck Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-01	Upstream and downstream sites connected. Very low flow, very high water level. Outgoing tide. Weather fine.	15/03/2018		3.54	0.82	6.85	23.2	24	*1*	17	0.13	0.58	*25*	*50*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	5/04/2018		5.78	0.29	7.02	22.3	19																				
SW11-02	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Weather fine.	3/05/2018		5.23	2.98	6.96	19.7	30	2	17	0.12	0.53	*30*	*250*	*250*														
SW11-01	Upstream and downstream sites connected. Medium flow, very low water level. Outgoing tide. Weather fine.	15/06/2018	15:48	6.47	3.32	6.75	15.6	13																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	17/07/2018	9:54	7.29	24.60	6.81	14.9	18	3	25	0.07	0.33	*30*	*250*	*250*														
SW11-02	Upstream and downstream sites connected. High flow, low water level. Incoming tide. Weather fine.	9/08/2018	15:11	7.82	27.70	7.06	17.8	52																				
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	24/09/2018	12:18	4.78	14.70	6.79	19.7	21	3	4	0.06	0.35	*30*	*250*	*250*														
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	3/10/2018	15:59	7.52	21.60	7.35	21.0	40																				
SW11-01	Upstream and downstream sites not connected. Medium flow, medium water level. Outgoing tide. Overcast.	8/11/2018	14:28	3.33	8.39	6.83	24.4	46	2	11	0.06	0.37	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/12/2018	15:01	5.70	2.41	7.01	24.2	52																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	15/01/2019	13:02	7.20	37.40	7.86	28.5	16	*1*	12	0.09	0.42	*30*	*100*	*100*														
SW11-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	11/02/2019	15:01	5.50	41.50	7.64	27.7	13																				
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	13/03/2019	15:06	3.96	39.00	7.35	27.7	8	4	2	0.08	0.54	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	11/04/2019	15:04	4.73	22.60	7.04	22.7	7																				
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Fine.	8/05/2019	8:00	4.29	22.10	6.92	19.1	67	3	5	0.02	0.31	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	4/06/2019	16:24	5.44	10.70	7.15	15.6	40																				

SW11-02 - Duck Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW11-01	Upstream and downstream sites connected. Medium flow, low water level, odour. Outgoing tide. Weather fine.	9/07/2019	9:02	5.67	0.53	6.57	15.4	71	2	52	0.15	0.78	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	8/08/2019	14:13	4.82	14.40	7.04	17.9	3																				
SW11-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	11/09/2019	13:07	4.95	22.50	7.16	18.0	8	*1*	5	*0.01*	0.25	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	1/10/2019	15:41	2.99	31.10	7.13	21.6	18																				
SW11-02	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	6/11/2019	1:56	4.43	41.50	7.51	25.1	14	3	10	0.06	0.22	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. High flow, low water level. Outgoing tide. Weather fine.	5/12/2019	8:11	4.62	40.70	7.23	23.9	9																				
SW11-02	Upstream and downstream sites connected. High flow, very high water level. Incoming tide. Weather fine.	9/01/2020	7:19	4.72	50.10	7.74	27.2	35	3	35	0.14	0.29	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	17/02/2020	17:39	0.17	0.34	6.28	27.3	14																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	5/03/2020	14:53	3.87	0.87	6.24	27.6	33	12	1	0.12	0.28	*30*	*100*	*50*														
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	1/04/2020	8:36	5.26	2.91	6.77	22.6	22																				
SW11-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Rain.	5/05/2020	14:09	6.87	9.52	7.31	17.3	68	6	35	0.12	0.50	*30*	*100*	*50*														
SW11-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	8/07/2020	8:46	7.18	18.40	6.88	15.7	11																				
SW11-01	Upstream and downstream sites connected. Very low flow, very low water level. Outgoing tide. Weather fine.	13/11/2020	15:09	4.91	20.90	7.15	23.7	31	2	15	0.10	0.51	*30*	*100*	*50*	0.071	0.001	*0.0005*	*0.001*	*0.001*	0.640	*0.001*	0.218	*0.0003*	0.001	0.001	*0.0050*	0.003
SW11-01	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Drizzle.	18/05/2021	8:40	8.71	1.16	6.69	15.4	8	2	*1*	0.03	0.52	*30*	*100*	*50*	0.094	*0.001*	*0.0005*	*0.001*	*0.001*	0.540	*0.001*	0.067	*0.0003*	*0.001*	*0.001*	*0.0005*	0.003

Appendix D

Groundwater Quality: Results of Interest

Groundwater Quality Table of Results of Interest

Portion	*Bore*	*Date*	*Results of Interest*	*P20 / P80*
A	GWB3-06	26/08/2020	TP = 0.21 mg/L	0.16
A	GWB3-06	1/03/2021	EC = 7.17 mS/cm pH = 6.34 TN = 1.49 mg/L TP = 0.41 mg/L	9.16 6.65 1.39 0.18
A	GWB3-08	26/08/2020	Bicarbonate = 120 mg/L	71
A	GWB3-08	1/03/2021	Bicarbonate = 118 mg/L	74
A	GWB3-14	25/08/2020	EC = 0.22 mS/cm pH = 5.33 Aluminium = 0.031 mg/L Copper = 0.067 mg/L	0.48 6.16 0.005 0.011
A	GWB3-14	2/03/2021	EC = 0.23 mS/cm TN = 2.96 mg/L Aluminium = 0.049 mg/L Copper = 0.023 mg/L	0.50 2.75 0.005 0.009
A	GWB3-21	25/08/2020	EC = 0.33 mS/cm pH = 4.31 Chloride = 92 mg/L Aluminium = 0.042 mg/L	0.25 4.46 50 0.022
A	GWB3-21	2/03/2021	Aluminium = 0.250 mg/L Copper = 0.390 mg/L	0.032 0.360
A	GWB3-32	26/08/2020	pH = 6.15	4.07
A	GWB3-32	2/03/2021	pH = 6.32	4.07
A	GWB3-33	2/03/2021	EC = 0.14 mS/cm pH = 5.67	0.49 5.37
A	GWB3-38	26/08/2020	pH = 6.18 Bicarbonate = 61 mg/L Magnesium = 8.2 mg/L	5.61 18 5.0
A	GWB3-38	2/03/2021	pH = 5.97 Bicarbonate = 66 mg/L Calcium = 12.0 mg/L Magnesium = 11.0 mg/L	5.58 16 8.1 5.0
A	GWB3-45	6/08/2020	EC = 1.15 mS/cm pH = 6.05	0.86 6.68
A	GWB3-45	1/03/2021	EC = 0.99 mS/cm pH = 6.34	0.86 6.68
A	GWB3-47	6/08/2020	EC = 0.64 mS/cm	0.54
A	GWB3-47	1/03/2021	EC = 0.23 mS/cm pH = 6.59	0.42 5.22
A	GWB3-51	1/03/2021	EC = 0.14 mS/cm pH = 5.38 Copper = 0.006 mg/L	0.46 5.70 0.004
A	GWB4-02	25/08/2020	EC = 0.62 mS/cm pH = 6.66 Bicarbonate = 288 mg/L Calcium = 59.0 mg/L Magnesium = 19.0 mg/L Zinc = 0.028 mg/L	0.53 7.38 115 23.2 3.4 0.019
A	GWB4-02	1/03/2021	EC = 0.54 mS/cm pH = 6.55 Bicarbonate = 298 mg/L TP = 0.31 mg/L Calcium 62.0 mg/L Magnesium 20.0 mg/L	0.53 7.38 115 0.12 23.2 3.4
B	GWB5-01	24/08/2020	pH = 7.14 Sulfate = 3060 mg/L Calcium = 443.2 mg/L Magnesium = 1120.0 mg/L Copper = 1.480 mg/L Zinc = 0.083 mg/L	7.15 1039 289.5 1020.0 0.001 0.008

Portion	*Bore*	*Date*	*Results of Interest*	*P20 / P80*
B	GWB5-01	1/02/2021	Sulfate = 2901 mg/L Calcium = 452.0 mg/L Magnesium 1097.0 mg/L TRH>C16 - C34 Fraction = 730 µg/L TRH>C34 - C40 Fraction = 300 µg/L	1041 288.9 1019.7 626 238
C	GWB8-07	24/08/2020	pH = 6.29	5.48
C	GWB8-07	26/02/2021	pH = 5.83	5.48
C	GWB8-08	24/08/2020	pH = 6.18	6.02
C	GWB8-16	24/08/2020	pH = 5.85 TN = 0.43 mg/L TP = 0.34 mg/L Sulfate = 32 mg/L Potassium = 3.5 mg/L Cadmium = 0.001 mg/L Zinc = 0.024 mg/L	5.68 0.40 0.09 24 3.0 0.000 0.013
C	GWB8-16	1/02/2021	EC = 0.65 mS/cm pH = 6.96 TN = 2.73 mg/L TP = 0.34 mg/L Chloride = 379 mg/L Sulfate = 62 mg/L Sodium = 72 mg/L Potassium = 11.8 mg/L Magnesium = 8.9 mg/L TRH>C16 - C34 Fraction = 210 µg/L	0.37 5.68 0.40 0.09 87 24 64 3.0 5.0 116
C	GWB8-22	24/08/2020	EC = 2.36 mS/cm pH = 6.65 TP = 0.31 mg/L Sulfate = 145 mg/L Sodium = 477 mg/L TRH >C16 - C34 Fraction = 220 µg/L	2.62 6.62 0.29 9 422 100
C	GWB8-22	26/02/2021	EC = 2.33 mS/cm pH = 6.77 Bicarbonate = 256 mg/L TN = 8.13 mg/L TP = 0.83 mg/L Sulfate = 68 mg/L TRH>C16 - C34 Fraction = 490 µg/L	2.62 6.62 232 3.02 0.34 11 100
D	GW03	4/03/2021	EC = 0.60 mS/cm pH = 6.14 Sulfate = 98 mg/L TRH>C10 - C16 Fraction = 130 µg/L TRH>C16 - C34 Fraction = 510 µg/L TRH>C34 - C40 Fraction = 690 µg/L	2.13 7.11 77 30 258 130
D	GWB10-05	4/03/2021	EC = 0.58 mS/cm pH = 6.24 Bicarbonate = 42 mg/L Chloride = 127 mg/L Sulfate = 63 mg/L Sodium = 68 mg/L Potassium = 5.1 mg/L Calcium = 9.6 mg/L Magnesium = 3.2 mg/L TRH>C10 - C16 Fraction = 110 µg/L TRH>C16 - C34 Fraction = 200 µg/L TRH>C34 - C40 Fraction = 310 µg/L	0.29 5.42 6 89 13 44 2.3 1.0 4.6 28 80 50

Appendix E

Groundwater Quality: Data

(Note: Italicised values in the following tables are below the practical quantification limit and have been halved to enable the calculation of statistics)

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-06		31/08/2016	9.84	**6.57**	19.63	767	**2.07**	0.10	3330	183	1640	9.2	**217.0**	236.0	**0.051**	*0.001*	0.028	*0.005*	0.110	**50**	**280**	*50*
GWB3-06		30/11/2016	9.72	**5.24**	23.58																	
GWB3-06		6/02/2017	12.30	**7.03**	28.33	747	**3.44**	**0.90**	3830	246	1890	**27.0**	**262.0**	**279.0**	*0.005*	**0.002**	0.014	*0.005*	0.047	*13*	*50*	*50*
GWB3-06		15/05/2017	9.65	6.84	21.23																	
GWB3-06	Weather fine.	9/08/2017	11.40	6.86	18.70	736	1.14	0.05	3550	217	1720	**14.0**	**254.0**	269.0	*0.005*	*0.001*	0.014	*0.005*	0.070	**13**	*50*	*50*
GWB3-06	Weather fine.	9/11/2017	**6.83**	**7.10**	21.57	602	**1.43**	0.09	1740	139	1090	5.4	126.0	133.0	**0.031**	*0.001*	0.017	*0.005*	0.049	*13*	*50*	*50*
GWB3-06	Overcast	22/02/2018	11.30	6.72	21.70	744	0.72	0.07	3650	168	1950	**23.0**	**280.0**	**290.0**	*0.003*	*0.001*	0.033	*0.001*	0.030	*13*	*50*	*50*
GWB3-06	Weather fine.	18/05/2018	11.50	**6.26**	19.39																	
GWB3-06	Fine weather.	14/08/2018	**7.27**	6.82	19.44	702	**2.12**	0.12	1950	149	1100	**13.0**	140.0	141.0	0.018	*0.001*	0.009	*0.005*	0.076	*13*	*50*	*50*
GWB3-06	Weather fine.	13/11/2018	**7.99**	**6.46**	22.24																	
GWB3-06	Weather fine.	11/02/2019	**4.95**	**7.36**	23.75	639	**1.49**	0.17	1410	97	849	6.2	117.0	98.0	**0.024**	*0.001*	*0.002*	*0.005*	0.011	*13*	*50*	*50*
GWB3-06	Weather, fine.	19/06/2019	**5.63**	6.76	22.84																	
GWB3-06	Weather fine.	20/08/2019	**7.33**	6.81	21.67	765	1.16	**0.23**	2180	180	1130	**13.0**	163.0	157.0	**0.025**	*0.001*	*0.002*	*0.005*	0.005	*13*	*50*	*50*
GWB3-06	Weather fine.	19/11/2019	10.00	**6.62**	23.14																	
GWB3-06	Overcast.	12/02/2020	**5.40**	**7.14**	22.48	566	**2.54**	**1.28**	1510	142	934	5.9	99.0	110.0	0.010	*0.001*	*0.002*	*0.005*	0.020	*13*	*50*	*50*
GWB3-06	Weather fine.	27/05/2020	**9.09**	6.81	21.71																	
GWB3-06	Weather, fine.	26/08/2020	9.24	6.67	21.13	800	0.85	**0.21**	2840	201	1480	7.2	205.0	215.0	0.018	*0.001*	*0.002*	*0.005*	0.053	*13*	*50*	*50*
GWB3-06	Weather, fine.	1/03/2021	**7.17**	**6.34**	23.89	775	**1.49**	**0.41**	2480	158	1310	5.8	175.0	186.0	*0.005*	*0.001*	0.005	*0.005*	0.062	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			13.10	7.01		958	1.39	0.18	4330	345	2230	12.0	213.0	277.0	0.023	0.001	0.100	0.005	0.150	13	50	50
P20			9.16	6.65																		

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ10		13/02/2013	7.59	6.80																		
PZ10		7/05/2013	8.22	6.65																		
PZ10		27/08/2013	9.42	7.01																		
PZ10		6/01/2014	9.17	6.76																		
Up-gradient (construction) Monitoring																						
GWB3-05		31/08/2016	13.70	6.66	19.76	880	1.39	0.10	4640	345	2460	12.0	227.0	292.0	0.032	*0.001*	0.053	*0.005*	0.150	*50*	*50*	*50*
GWB3-05		30/11/2016	12.70	5.23	24.71																	
GWB3-05		6/02/2017	12.80	7.13	25.36	800	3.38	0.30	4060	449	2200	12.0	205.0	255.0	*0.005*	0.002	0.080	*0.005*	0.190	*13*	*50*	*50*
GWB3-05		15/05/2017	14.10	6.87	21.06																	
GWB3-05	Weather fine.	9/08/2017	12.90	7.01	19.06	893	0.44	0.04	4020	285	2180	11.0	213.0	277.0	*0.019*	*0.001*	0.120	*0.005*	0.015	*13*	*50*	*50*
GWB3-05	Weather fine.	9/11/2017	13.10	7.10	21.41	865	0.61	0.05	3620	317	2230	9.1	199.0	250.0	0.012	*0.001*	0.042	*0.005*	0.017	*13*	*50*	*50*
GWB3-05	Overcast	22/02/2018	15.00	6.62	20.87	872	0.60	0.15	4690	390	210	40.0	270.0	340.0	*0.003*	*0.001*	0.170	*0.001*	0.023	*13*	*50*	*50*
GWB3-05	Weather fine.	18/05/2018	14.10	6.46	19.16																	
GWB3-05	Fine weather.	14/08/2018	13.60	6.89	20.53	858	1.17	0.05	4330	286	2230	10.0	212.0	267.0	0.018	*0.001*	0.053	*0.005*	0.045	*13*	*50*	*50*
GWB3-05	Weather fine.	13/11/2018	0.00	6.05	27.65																	
GWB3-05	Weather fine.	11/02/2019	0.92	7.01	28.09	989	0.67	0.03	3680	221	2080	12.0	172.0	204.0	0.023	*0.001*	0.100	*0.005*	0.070	*13*	*50*	*50*
GWB3-05	Weather, fine.	19/06/2019	11.40	6.72	22.82																	
GWB3-05	Weather fine.	20/08/2019	12.70	6.80	21.87	939	0.68	0.12	4070	251	2230	9.8	198.0	234.0	0.025	*0.001*	0.005	*0.005*	0.290	*13*	*50*	*50*
GWB3-05	Weather fine.	19/11/2019	12.30	6.72	24.02																	
GWB3-05	Weather fine.	14/02/2020	11.30	7.42	23.96	842	0.43	0.12	3630	255	2020	7.4	169.0	203.0	0.016	*0.001*	0.010	*0.005*	0.076	*13*	*50*	*50*
GWB3-05	Weather fine.	27/05/2020	12.10	6.85	22.00																	

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-05	Weather, fine.	26/08/2020	11.60	6.89	21.01	958	0.74	0.18	3410	304	2050	8.0	168.0	200.0	*0.005*	*0.001*	*0.002*	*0.005*	0.100	*13*	*50*	*50*
GWB3-05	Weather, fine.	2/03/2021	10.00	6.47	23.18	1251	46.60	3.07	3630	114	2030	14.0	176.0	209.0	*0.005*	*0.001*	*0.002*	*0.005*	0.012	*13*	*50*	*50*

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ09		13/02/2013	9.53	6.91																		
PZ09		7/05/2013	8.55	6.74																		
PZ09		27/08/2013	9.16	7.18																		
PZ09		6/01/2014	9.19	6.81																		

GWB3-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-07		31/08/2016	3.51	6.09	16.31	**91**	1.55	0.10	784	599	590	4.5	39.9	57.9	*0.005*	*0.001*	0.009	*0.005*	0.220	**50**	*50*	*50*
GWB3-07		30/11/2016	2.72	**5.53**	23.43																	
GWB3-07		6/02/2017	**7.74**	5.73	25.49	*1*	2.41	0.10	**2230**	1100	**1220**	7.0	**135.0**	**180.0**	**0.170**	**0.002**	0.071	*0.005*	0.290	*13*	*50*	*50*
GWB3-07		15/05/2017	**8.01**	5.65	21.13																	
GWB3-07	Weather fine.	9/08/2017	**7.37**	5.86	18.71	*56*	1.07	*0.02*	**2220**	891	1210	7.2	**131.0**	**178.0**	*0.005*	*0.001*	*0.002*	*0.005*	**0.740**	**13**	*50*	*50*
GWB3-07	Weather fine.	9/11/2017	**7.32**	5.92	20.28	57	1.88	*0.02*	**1930**	1020	1140	4.8	**115.0**	**155.0**	**0.014**	*0.001*	*0.002*	*0.005*	0.320	*13*	*50*	*50*
GWB3-07	Overcast	22/02/2018	**8.10**	**5.49**	21.42	39	0.90	0.04	**2390**	1020	210	**13.0**	**150.0**	**190.0**	**0.076**	*0.000*	**1.450**	*0.005*	0.310	*13*	*50*	*50*
GWB3-07	Weather fine.	18/05/2018	**8.30**	**5.21**	20.82																	
GWB3-07	Fine weather.	14/08/2018	**8.24**	**5.57**	19.58	49	1.69	*0.02*	**2460**	914	**1330**	6.7	**140.0**	**186.0**	0.012	*0.001*	*0.002*	*0.005*	0.130	*13*	*50*	*50*
GWB3-07	Weather fine.	13/11/2018	**7.68**	**5.28**	21.19																	
GWB3-07	Weather fine.	11/02/2019	**7.84**	**7.34**	23.06	49	3.10	**0.22**	**2420**	900	**1330**	5.6	**143.0**	**187.0**	*0.005*	*0.001*	*0.002*	*0.005*	0.062	*13*	*50*	*50*
GWB3-07	Weather, fine.	19/06/2019	**8.29**	**5.23**	20.44																	
GWB3-07	Weather fine.	23/08/2019	**8.42**	**5.22**	19.62	11	2.44	**0.37**	**2470**	906	**1370**	5.5	**144.0**	**192.0**	**0.061**	*0.001*	*0.560*	**0.011**	**0.850**	*13*	*50*	*50*
GWB3-07	Weather fine.	19/11/2019	**7.54**	**5.17**	20.79																	
GWB3-07	Overcast.	12/02/2020	4.61	**6.56**	22.80	**130**	1.66	**0.23**	1240	535	788	3.1	67.0	92.0	*0.005*	*0.001*	*0.002*	*0.005*	0.028	*13*	*50*	*50*
GWB3-08	Weather fine.	26/05/2020	1.79	6.23	22.25																	
GWB3-08	Weather, fine.	26/08/2020	1.62	6.52	20.58	**120**	0.85	0.05	274	168	240	1.8	8.0	13.0	*0.005*	*0.001*	0.140	*0.005*	0.100	*13*	*50*	*50*
GWB3-08	Weather, fine.	1/03/2021	3.56	6.22	25.25	**118**	1.72	0.18	852	684	717	3.3	29.0	55.0	*0.005*	*0.001*	*0.002*	*0.005*	0.070	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			6.72	6.53		74	3.45	0.18	1710	1240	1210	8.2	71.0	140.0	0.013	0.001	1.300	0.005	0.400	13	50	50
P20			1.36	5.58																		

GWB3-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ13		13/02/2013	0.14	6.48																		
PZ13		7/05/2013	0.59	7.03																		
PZ13		27/08/2013	1.30	6.77																		
PZ13		6/01/2014	1.36	6.37																		
Up-gradient (construction) Monitoring																						
GWB3-08		31/08/2016	6.40	5.93	16.22	61	2.83	0.10	1630	1070	1150	8.2	59.1	121.0	*0.005*	*0.001*	0.190	*0.005*	0.170	*50*	130	*50*
GWB3-08		30/11/2016	5.75	5.26	23.73																	
GWB3-08		6/02/2017	6.43	6.53	26.82	6	3.45	0.30	1530	1240	1150	7.2	54.4	115.0	0.120	*0.001*	1.300	*0.005*	0.440	*13*	*50*	*50*
GWB3-08		15/05/2017	6.66	6.11	21.86																	
GWB3-08	Weather fine.	9/08/2017	6.20	6.07	19.16	48	1.07	*0.02*	1470	1150	1120	5.6	54.5	118.0	0.010	*0.001*	0.450	*0.005*	0.520	*13*	*50*	*50*
GWB3-08	Weather fine.	9/11/2017	6.47	6.31	21.50	70	1.82	0.18	1420	1370	1130	5.0	50.1	108.0	*0.005*	*0.001*	*0.002*	*0.005*	0.160	*13*	*50*	*50*
GWB3-08	Overcast	22/02/2018	6.88	5.98	22.49	47	1.29	0.15	1710	1290	220	14.0	71.0	140.0	*0.003*	*0.000*	1.240	*0.001*	0.140	*13*	*50*	*50*
GWB3-08	Weather fine.	18/05/2018	6.72	5.49	21.11																	
GWB3-08	Fine weather.	14/08/2018	6.91	5.52	20.59	17	1.06	0.05	1680	1180	1210	6.0	64.0	125.0	0.032	*0.001*	22.300	*0.005*	0.220	*13*	*50*	*50*
GWB3-08	Weather fine.	13/11/2018	6.21	6.05	22.83																	
GWB3-08	Bore cap open. Weather fine.	11/02/2019	6.61	7.40	23.99	74	6.56	0.13	1580	1210	1230	7.9	65.0	128.0	0.010	*0.001*	*0.002*	*0.005*	0.150	*13*	*50*	*50*
GWB3-08	Weather, fine.	19/06/2019	6.89	5.79	21.65																	
GWB3-08	Weather fine.	23/08/2019	6.50	5.46	19.84	19	1.28	0.13	1500	1220	1190	27.0	56.0	118.0	0.011	*0.001*	*1.910*	*0.005*	0.380	*13*	*50*	*50*
GWB3-08	Weather fine.	19/11/2019	6.28	5.49	22.21																	
GWB3-08	Overcast.	12/02/2020	1.56	6.50	23.94	121	1.58	0.17	283	222	259	1.5	19.0	29.0	*0.005*	*0.001*	0.004	*0.005*	0.043	*13*	*50*	*50*
GWB3-07	Weather fine.	26/05/2020	6.67	5.76	21.31																	

GWB3-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-07	Weather, fine.	26/08/2020	7.51	5.72	19.50	55	1.74	*0.02*	1980	742	1090	4.3	113.0	148.0	*0.013*	*0.001*	0.045	*0.005*	0.400	*13*	*50*	*50*
GWB3-07	Weather, fine.	1/03/2021	7.18	5.58	23.33	147	4.98	0.42	2370	830	1290	4.6	137.0	188.0	0.011	*0.001*	*0.002*	*0.005*	0.069	*13*	*50*	*50*
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ14		13/02/2013	0.12	6.64																		
PZ14		7/05/2013	0.311	7.04																		
PZ14		27/08/2013	3.33	6.13																		
PZ14		6/01/2014	3.53	5.84																		

GWB3-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-14		3/11/2016	**0.34**	**6.68**	21.99	48	1.55	0.03	73	*0*	43	1.1	1.9	**10.8**	**0.016**	*0.001*	**0.200**	*0.005*	**0.053**	**50**	*50*	*50*
GWB3-14		30/11/2016	**0.38**	**6.05**	20.88																	
GWB3-14		7/02/2017	**0.42**	**6.78**	22.91	33	1.38	0.10	78	**52**	47	1.4	2.2	**11.7**	*0.005*	*0.001*	*0.002*	*0.005*	**0.045**	*13*	*50*	*50*
GWB3-14	Could not collect sample from bore - hydrasleeve is caught in bore pipe.	15/05/2017																				
GWB3-14	Weather fine.	9/08/2017	**0.26**	**5.99**	18.48	23	0.45	0.03	59	7	40	0.5	1.1	5.9	*0.005*	*0.001*	**0.550**	*0.005*	0.022	**13**	*50*	*50*
GWB3-14	Bore pipe broken, difficult to sample. Weather fine.	9/11/2017	**0.38**	**6.78**	21.03	45	1.30	0.08	72	2	48	0.5	1.2	**9.5**	*0.005*	*0.001*	**0.050**	*0.005*	0.009	*13*	*50*	*50*
GWB3-14	Unable to sample due to bore damage.	22/02/2018																				
GWB3-14	Unable to sample due to bore damage.	18/05/2018																				
GWB3-14	Fine weather.	15/08/2018	**0.43**	6.50	18.16	49	1.63	0.04	88	5	54	3.5	2.4	**12.0**	*0.005*	*0.001*	**0.025**	*0.005*	0.006	*13*	*50*	*50*
GWB3-14	Overcast.	16/11/2018	**0.32**	6.36	20.57																	
GWB3-14	Weather fine.	12/02/2019	**0.37**	**7.05**	23.69	47	1.89	0.09	69	1	44	1.8	1.8	**9.8**	*0.005*	*0.001*	*0.002*	*0.005*	0.010	*13*	*50*	*50*
GWB3-14	Weather, fine.	26/06/2019	0.56	6.66	19.61																	
GWB3-14	Weather fine.	23/08/2019	**0.42**	6.49	19.35	56	1.02	0.11	71	1	46	0.6	1.9	**11.0**	*0.005*	*0.001*	*0.002*	*0.005*	0.016	*13*	*50*	*50*
GWB3-14	Weather fine.	19/11/2019	**0.39**	6.43	22.44																	
GWB3-14	Drizzle.	14/02/2020	**0.19**	**5.85**	22.47	13	1.28	0.06	43	5	28	0.5	1.4	3.3	**0.120**	*0.001*	**0.010**	*0.005*	0.032	*13*	*50*	*50*
GWB3-14	Weather fine.	26/05/2020	**0.31**	**5.48**	19.78																	
GWB3-14	Weather, fine.	25/08/2020	**0.22**	**5.33**	19.42	12	1.29	0.03	52	9	31	1.7	1.2	4.5	**0.031**	*0.001*	**0.067**	*0.005*	0.025	*13*	*50*	*50*
GWB3-14	Weather, fine.	2/03/2021	**0.23**	6.17	24.08	19	**2.96**	0.19	47	3	29	1.2	1.0	4.5	**0.049**	*0.001*	**0.023**	*0.005*	0.028	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.64	6.66		125	2.75	1.11	90	11	68	5.4	5.8	8.5	0.005	0.001	0.009	0.005	0.043	13	50	50

GWB3-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
P20			0.50	6.17																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ20		14/03/2013	1.11	11.51																		
PZ20		8/09/2013	0.39	6.77																		
PZ20		28/08/2013	1.15	6.34																		
PZ20		7/01/2014	0.55	6.00																		
Up-gradient (construction) Monitoring																						
GWB3-13		3/11/2016	0.56	6.52	21.49	108	2.75	0.50	69	4	58	2.4	5.2	7.9	*0.005*	*0.001*	*0.002*	*0.005*	0.043	*50*	440	*50*
GWB3-13		30/11/2016	0.53	5.80	21.02																	
GWB3-13		7/02/2017	0.53	6.66	23.19	70	2.89	1.11	75	60	68	6.1	5.8	7.7	*0.005*	0.002	0.020	*0.005*	0.072	*13*	*50*	*50*
GWB3-13		15/05/2017	0.56	6.41	21.93																	
GWB3-13	Weather fine.	9/08/2017	0.64	6.56	18.58	98	0.79	0.50	77	6	67	3.1	5.2	8.2	*0.005*	*0.001*	0.005	*0.005*	0.012	*13*	*50*	*50*
GWB3-13	Hydrasleeve double-dipped. Weather fine.	9/11/2017	0.67	6.55	21.10	140	1.96	1.07	92	2	63	3.4	5.0	8.6	*0.005*	*0.001*	*0.002*	*0.005*	0.022	*13*	*50*	*50*
GWB3-13	Overcast	22/02/2018	0.63	6.31	22.27	82	0.59	0.97	91	213	71	4.9	6.2	8.5	*0.003*	*0.000*	0.006	*0.001*	0.017	*13*	*50*	*50*
GWB3-13	Weather fine.	18/05/2018	0.61	6.14	20.84																	
GWB3-13	Fine weather.	15/08/2018	0.56	6.51	17.86	108	1.78	0.85	72	2	62	2.9	5.3	8.2	*0.005*	*0.001*	0.030	*0.005*	0.022	*13*	*50*	*50*
GWB3-13	Overcast.	16/11/2018	0.63	6.22	20.37																	
GWB3-13	Weather fine.	12/02/2019	0.55	6.72	23.66	130	3.45	1.83	69	1	58	5.4	5.7	7.3	*0.005*	*0.001*	*0.002*	*0.005*	0.019	*13*	*50*	*50*
GWB3-13	Overcast.	26/06/2019	0.52	6.23	19.42																	
GWB3-13	Weather fine.	23/08/2019	0.69	6.23	18.64	125	2.00	1.18	90	11	74	3.1	7.1	10.0	*0.005*	*0.001*	0.009	*0.005*	0.023	*13*	*50*	*50*
GWB3-13	Weather fine.	19/11/2019	0.68	6.29	25.32																	

GWB3-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-13	Drizzle.	14/02/2020	0.38	6.38	21.95	64	1.56	0.91	68	6	47	8.2	4.0	4.1	*0.005*	*0.001*	*0.002*	*0.005*	0.053	*13*	*50*	*50*
GWB3-13	Weather fine.	26/05/2020	0.42	5.21	19.44																	
GWB3-13	Weather, fine.	25/08/2020	0.51	6.02	18.72	116	1.09	0.36	68	*0*	55	2.3	4.7	6.9	*0.005*	*0.001*	*0.002*	*0.005*	0.014	*13*	*50*	*50*
GWB3-13	Weather, fine.	2/03/2021	0.50	6.17	22.97	124	2.63	0.93	66	*0*	56	2.7	5.5	8.0	*0.005*	*0.001*	*0.002*	*0.005*	0.026	*13*	*50*	*50*
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ19		14/03/2013	0.10	6.77																		
PZ19		8/09/2013	0.373	6.85																		
PZ19		28/08/2013	0.535	6.53																		
PZ19		7/01/2014	0.50	6.17																		

GWB3-18

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-18		3/11/2016	**0.12**	5.28	22.70	5	0.56	*0.02*	**110**	**68**	**82**	1.1	**1.7**	**5.8**	**0.030**	*0.001*	**0.730**	*0.005*	0.050	**50**	*50*	*50*
GWB3-18		30/11/2016	**0.46**	6.18	21.49																	
GWB3-18	Bore damaged, unable to obtain sample	7/02/2017																				
GWB3-18	Bore damaged, unable to obtain sample	16/05/2017																				
GWB3-18	Bore damaged, unable to obtain sample	9/08/2017																				
GWB3-18	Bore damaged, unable to obtain sample	13/11/2017																				
GWB3-18	Bore damaged, unable to obtain sample	22/02/2018																				
GWB3-18	Bore damaged, unable to obtain sample	21/05/2018																				
GWB3-18	Bore damaged.	15/08/2018	**0.52**	**5.11**	19.08	5	0.77	0.03	**104**	**64**	**83**	1.3	**1.8**	**5.1**	**0.034**	*0.001*	**1.020**	*0.005*	0.028	*13*	*50*	*50*
GWB3-18	Weather fine.	16/11/2018	**0.51**	**4.77**	22.75																	
GWB3-18	Weather fine.	12/02/2019	**0.51**	5.63	25.23	**10**	1.07	**0.11**	**91**	**66**	**84**	**1.8**	**2.7**	**5.8**	**0.023**	*0.001*	0.098	*0.005*	0.034	*13*	*50*	*50*
GWB3-18	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.32	6.18		9	1.60	0.10	29	38	20	1.5	1.6	1.8	0.018	0.001	0.479	0.005	0.054	13	50	50
P20			0.12	5.24																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ24		14/03/2013	0.69	5.60																		
PZ24		8/09/2013	0.54	6.26																		
PZ24		28/08/2013	0.49	5.43																		
PZ24		7/01/2014	0.49	4.81																		

GWB3-18

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB3-17		3/11/2016	0.12	5.28	22.70	27	1.19	0.07	30	6	22	1.5	1.1	2.7	*0.005*	*0.001*	0.023	*0.005*	0.047	*50*	50	*50*
GWB3-17		30/11/2016	0.13	6.15	21.42																	
GWB3-17		7/02/2017	0.13	5.79	25.13	1	1.70	0.10	26	75	21	1.8	1.6	1.7	0.031	*0.001*	0.050	*0.005*	0.068	*13*	*50*	*50*
GWB3-17		16/05/2017	0.11	5.04	21.22																	
GWB3-17	Weather fine.	9/08/2017	0.10	5.36	19.10	9	0.43	0.03	18	9	16	0.6	1.0	1.3	*0.005*	*0.001*	0.580	*0.005*	0.013	*13*	*50*	*50*
GWB3-17	Weather fine.	13/11/2017	0.12	5.47	21.39	8	0.65	0.09	20	7	16	1.0	0.9	1.3	*0.005*	*0.001*	0.075	*0.005*	0.016	*13*	*50*	*50*
GWB3-17	Overcast	22/02/2018	0.14	5.68	23.55	8	0.53	0.12	23	45	15	1.3	1.4	1.8	0.021	*0.000*	0.025	*0.001*	0.024	*13*	*50*	*50*
GWB3-17	Weather fine.	21/05/2018	0.14	5.07	18.80																	
GWB3-17	Fine weather.	15/08/2018	0.13	5.56	17.97	9	1.75	0.10	27	7	17	1.5	1.6	1.6	*0.005*	*0.001*	0.930	*0.005*	0.056	*13*	*50*	*50*
GWB3-17	Overcast.	16/11/2018	0.15	5.43	21.61																	
GWB3-17	Weather fine.	12/02/2019	0.14	5.88	24.45	8	1.08	0.08	30	5	17	0.9	2.0	1.7	*0.005*	*0.001*	0.039	*0.005*	0.029	*13*	*50*	*50*
GWB3-17	Monitoring ceased in May 2019.																					
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ23		14/03/2013	0.20	8.53																		
PZ23		8/09/2013	0.182	6.71																		
PZ23		28/08/2013	0.187	6.23																		
PZ23		7/01/2014	0.14	5.19																		

GWB3-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-21		30/08/2016	0.20	5.09	20.99	5	1.18	0.08	53	2	27	3.0	1.9	4.2	0.150	*0.001*	0.021	*0.005*	0.130	50	*50*	*50*
GWB3-21		1/12/2016	0.25	6.54	19.95																	
GWB3-21		6/02/2017	0.28	5.12	24.13	*1*	1.73	0.40	78	35	38	4.4	1.0	7.5	0.400	*0.001*	2.240	*0.005*	0.042	*13*	*50*	*50*
GWB3-21		16/05/2017	0.23	4.93	19.71																	
GWB3-21		10/08/2017	0.26	4.92	19.59	6	0.43	0.04	73	2	38	3.5	1.0	5.9	0.059	*0.001*	0.200	*0.005*	0.020	13	*50*	*50*
GWB3-21	Weather fine.	13/11/2017	0.30	5.00	22.11	5	0.71	0.08	81	2	40	2.9	0.6	6.3	0.029	*0.001*	1.320	*0.005*	0.028	*13*	*50*	*50*
GWB3-21	Overcast	22/02/2018	0.29	4.81	21.64	5	0.36	0.05	80	111	37	8.2	1.0	7.0	0.220	*0.000*	0.180	*0.001*	0.037	*13*	*50*	*50*
GWB3-21	Weather fine.	21/05/2018	0.25	4.75	19.68																	
GWB3-21	Fine weather.	15/08/2018	0.33	5.00	21.12	4	2.57	0.12	90	2	42	3.9	1.2	7.1	0.060	*0.001*	0.550	*0.005*	0.087	*13*	*50*	*50*
GWB3-21	Weather fine.	16/11/2018	0.33	4.50	22.93																	
GWB3-21	Weather fine.	11/02/2019	0.45	5.37	24.90	4	0.64	0.06	117	9	52	7.4	2.0	8.7	0.056	*0.001*	0.031	*0.005*	0.034	*13*	*50*	*50*
GWB3-21	Overcast.	26/06/2019	0.36	4.55	19.99																	
GWB3-21	Weather fine.	23/08/2019	0.36	4.66	20.48	3	0.82	0.31	100	3	46	3.6	1.2	8.4	0.071	*0.001*	0.120	*0.005*	0.028	*13*	*50*	*50*
GWB3-21	Weather fine.	19/11/2019	0.33	4.69	24.97																	
GWB3-21	Overcast.	12/02/2020	0.24	5.57	24.64	9	0.71	0.15	61	6	35	2.1	2.7	4.8	0.260	*0.001*	0.041	*0.005*	0.030	*13*	*50*	*50*
GWB3-21	Weather fine.	26/05/2020	0.34	4.46	20.15																	
GWB3-21	Weather, fine.	25/08/2020	0.33	4.31	20.22	4	0.66	0.09	92	2	20	1.3	0.7	3.7	0.042	*0.001*	0.220	*0.005*	0.018	*13*	*50*	*50*
GWB3-21	Weather, fine.	2/03/2021	0.16	5.47	22.59	7	1.50	0.14	47	2	25	1.8	0.8	3.3	0.250	*0.001*	0.390	*0.005*	0.039	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.25	6.20		60	2.04	0.42	55	51	31	4.0	12.0	8.5	0.032	0.001	0.360	0.005	0.087	13	50	50
P20			0.16	4.47																		

GWB3-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ27		13/02/2013	0.16	4.89																		
PZ27		8/09/2013	0.10	5.63																		
PZ27		29/08/2013	0.13	5.37																		
PZ27		8/01/2014	0.15	4.00																		
Up-gradient (construction) Monitoring																						
GWB3-22		30/08/2016	0.28	6.65	21.14	61	1.48	0.13	49	5	34	3.4	11.0	8.1	0.022	*0.001*	0.009	*0.005*	0.087	*50*	*50*	*50*
GWB3-22	Bore was relatively dry - under half of hydrasleeve	1/12/2016	0.24	6.40	20.14																	
GWB3-22		7/02/2017	0.24	5.94	25.92	*1*	3.06	0.50	78	74	46	3.0	6.8	4.8	0.034	*0.001*	0.240	*0.005*	0.580	*13*	*50*	*50*
GWB3-22		16/05/2017	0.29	6.06	20.16																	
GWB3-22		10/08/2017	0.25	6.42	19.82	55	0.55	0.11	44	3	22	3.8	11.9	8.6	0.017	*0.001*	0.120	*0.005*	0.011	*13*	*50*	*50*
GWB3-22	Weather fine.	13/11/2017	0.25	6.37	22.97	47	1.14	0.10	45	1	22	2.0	11.2	7.9	*0.005*	*0.001*	0.390	*0.005*	0.017	*13*	*50*	*50*
GWB3-22	Overcast	22/02/2018	0.24	5.92	22.01	28	0.98	0.24	50	63	21	3.3	12.0	8.2	*0.005*	*0.000*	0.210	*0.001*	0.086	*13*	*50*	*50*
GWB3-22	Weather fine.	21/05/2018	0.26	5.75	19.68																	
GWB3-22	Fine weather.	15/08/2018	0.25	6.08	21.67	22	2.18	0.47	50	3	21	4.1	8.3	5.5	0.014	*0.001*	0.550	*0.005*	0.038	*13*	*50*	*50*
GWB3-22	Weather fine.	16/11/2018	0.11	4.51	27.85																	
GWB3-22	Insufficient water to sample. Weather fine.	11/02/2019																				
GWB3-22	Bore dry. Weather, fine.	26/06/2019																				
GWB3-22	Bore dry. Weather, fine.	23/08/2019																				
GWB3-22	Bore dry. Overcast.	19/11/2019																				
GWB3-22	Bore dry. Overcast.	12/02/2020																				
GWB3-22	Bore dry. Weather fine.	26/05/2020																				

GWB3-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-22	Bore dry. Weather, fine.	25/08/2020																				
GWB3-22	Weather, fine.	2/03/2021	0.28	6.09	24.21	73	0.95	0.08	56	1	18	4.1	18.0	15.0	0.150	*0.001*	0.098	*0.005*	0.026	*13*	*50*	*50*
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ28		13/02/2013	0.17	4.42																		
PZ28		8/09/2013	0.16	4.33																		
PZ28		29/08/2013	0.187	4.53																		
PZ28		8/01/2014	0.17	3.63																		

GWB3-29

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-29	Dry	30/08/2016																				
GWB3-29	Dry	1/12/2016																				
GWB3-29	Dry	7/02/2017																				
GWB3-29	Insufficient water to sample	16/05/2017																				
GWB3-29	Dry	11/08/2017																				
GWB3-29	Dry	13/11/2017																				
GWB3-29	Dry	22/02/2018																				
GWB3-29	Dry	21/05/2018																				
GWB3-29	Dry	15/08/2018																				
GWB3-29	Dry.	16/11/2018																				
GWB3-29	Dry. Weather fine.	11/02/2019																				
GWB3-29	Bore dry. Weather fine.	26/06/2019																				
GWB3-29	Bore dry. Weather fine.	23/08/2019																				
GWB3-29	Bore dry. Overcast.	19/11/2019																				
GWB3-29	Bore dry. Overcast.	12/02/2020																				
GWB3-29	Bore dry.	26/05/2020																				
GWB3-29	Bore dry. Weather, fine.	25/08/2020																				
GWB3-29	Dry, not sampled	2/03/2021																				
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.34	5.95		32	1.79	0.24	78	4	32	2.7	5.8	6.9	0.320	0.001	0.009	0.005	0.046	13	50	50
P20			0.18	5.01																		

GWB3-29

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-29

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ36		14/02/2013	1.57	5.92																		
PZ36		9/05/2013	0.81	5.02																		
PZ36		29/08/2013	1.03	5.42																		
PZ36		8/01/2014	1.09	4.69																		
Up-gradient (construction) Monitoring																						
GWB3-28		30/08/2016	0.12	5.78	19.03	21	1.73	0.10	23	4	14	2.4	3.3	3.6	0.460	*0.001*	*0.002*	*0.005*	0.140	*50*	170	*50*
GWB3-28		1/12/2016	0.19	6.52	20.91																	
GWB3-28		7/02/2017	0.31	5.01	27.51	*1*	1.79	0.30	81	64	44	2.0	4.8	7.6	0.140	*0.001*	0.011	*0.005*	0.066	*13*	*50*	*50*
GWB3-28		16/05/2017	0.30	5.97	23.20																	
GWB3-28		11/08/2017	0.19	5.68	21.26	*32*	0.64	0.08	35	4	24	2.2	5.8	5.8	0.320	*0.001*	*0.002*	*0.005*	0.007	*13*	*50*	*50*
GWB3-28	Weather fine.	13/11/2017	0.20	5.95	22.99	24	1.04	0.09	49	3	29	1.4	4.7	5.7	0.087	*0.001*	*0.002*	*0.005*	0.003	*13*	*50*	*50*
GWB3-28	Overcast	22/02/2018	0.23	5.48	23.02	33	0.64	0.10	51	81	27	3.4	8.5	8.6	0.680	*0.000*	*0.002*	*0.001*	0.023	*13*	*50*	*50*
GWB3-28	Weather fine.	21/05/2018	0.31	5.45	19.87																	
GWB3-28	Fine weather.	15/08/2018	0.26	5.53	21.84	25	2.02	0.13	78	3	32	2.8	5.1	5.5	0.032	*0.001*	0.010	*0.005*	0.046	*13*	*50*	*50*
GWB3-28	Overcast.	16/11/2018	0.23	5.53	22.78																	
GWB3-28	Weather fine.	11/02/2019	0.23	5.87	24.82	33	2.41	0.29	59	3	30	1.8	6.0	6.3	0.078	*0.001*	*0.002*	*0.005*	0.012	*13*	*50*	*50*
GWB3-28	Overcast.	26/06/2019	0.36	4.98	20.18																	
GWB3-28	Weather fine.	23/08/2019	0.33	5.38	21.34	26	1.27	0.24	84	3	42	2.7	5.3	6.9	0.028	*0.001*	0.009	*0.005*	0.040	*13*	*50*	*50*
GWB3-28	Weather fine.	19/11/2019	0.34	4.87	23.96																	
GWB3-28	Overcast.	12/02/2020	0.19	6.56	24.21	28	1.67	0.24	42	3	25	1.6	5.2	5.5	0.068	*0.001*	*0.002*	*0.005*	0.017	*13*	*50*	*50*
GWB3-28	Weather fine.	26/05/2020	0.24	5.85	21.23																	

GWB3-29

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-28	Weather, fine.	25/08/2020	0.15	6.30	20.56	32	1.04	0.09	24	3	18	1.5	5.7	4.7	0.100	*0.001*	0.008	*0.005*	0.019	*13*	*50*	*50*
GWB3-28	Weather, fine.	2/03/2021	0.09	6.10	23.59	25	1.57	0.21	9	2	7	1.0	3.0	2.9	0.092	*0.001*	0.004	*0.005*	0.007	*13*	*50*	*50*
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ35		14/02/2013	0.20	4.99																		
PZ35		9/05/2013	0.171	5.11																		
PZ35		29/08/2013	0.169	5.26																		
PZ35		8/01/2014	0.18	4.00																		

GWB3-31

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-31	Dry	29/08/2016																				
GWB3-31		1/12/2016	**2.99**	6.39	22.03																	
GWB3-31	Dry	7/02/2017																				
GWB3-31		16/05/2017	**6.57**	**6.99**	21.33																	
GWB3-31	Weather fine.	16/08/2017	**2.33**	**7.13**	22.29	**560**	1.15	0.21	**483**	1	**364**	2.4	**81.0**	**40.4**	0.018	*0.001*	*0.002*	0.005	0.010	**13**	*50*	*50*
GWB3-31	Weather fine.	13/11/2017	**2.91**	**7.14**	24.62	**608**	0.93	0.03	**603**	3	**421**	2.5	**107.0**	**51.0**	*0.005*	*0.001*	*0.002*	*0.005*	0.047	*13*	*50*	*50*
GWB3-31	Overcast	23/02/2018	**3.88**	6.75	21.46	**688**	1.36	**0.41**	**890**	36	45	**9.2**	**3.6**	**9.6**	0.031	*0.001*	*0.002*	*0.005*	0.046	*13*	*50*	*50*
GWB3-31	Weather fine.	21/05/2018	**5.21**	6.56	20.79																	
GWB3-31	Fine weather.	16/08/2018	**7.10**	**6.98**	20.27	**879**	1.57	**0.41**	**1900**	5	**963**	6.0	**268.0**	**142.0**	0.015	*0.001*	*0.002*	*0.005*	0.015	*13*	*50*	*50*
GWB3-31	Overcast.	16/11/2018	**6.75**	6.43	22.68																	
GWB3-31	Weather fine.	12/02/2019	**6.51**	**7.25**	24.84	**826**	0.76	0.13	**1710**	2	**981**	5.2	**305.0**	**156.0**	0.012	*0.001*	*0.002*	*0.005*	0.010	*13*	*50*	*50*
GWB3-31	Monitoring ceased May 2019.																					
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			1.29	6.85		177	2.08	0.27	102	44	116	6.7	2.5	9.2	1.788	0.001	0.007	0.005	0.100	13	50	50
P20			0.51	6.26																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ38		15/02/2013	2.45	6.83																		
PZ38		9/05/2013	2.09	6.67																		
PZ38		30/08/2013	2.25	6.88																		
PZ38		9/01/2014	1.35	6.49																		

GWB3-31

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB3-30		3/11/2016	0.53	6.58	24.09	153	2.03	0.09	66	11	97	3.3	1.4	5.4	0.140	*0.001*	0.019	*0.005*	0.120	*50*	320	*50*
GWB3-30		1/12/2016	0.54	6.53	22.41																	
GWB3-30		7/02/2017	0.76	6.69	26.75	179	1.71	0.26	100	52	120	4.1	2.1	5.4	0.010	0.002	0.005	*0.005*	0.790	*13*	*50*	*50*
GWB3-30		16/05/2017	0.48	6.91	22.05																	
GWB3-30	Weather fine.	16/08/2017	0.32	6.90	22.75	105	1.31	0.09	32	5	60	3.6	1.1	3.0	0.130	*0.001*	*0.002*	*0.005*	0.005	*13*	*50*	*50*
GWB3-30	Weather fine.	13/11/2017	0.00	5.89	27.04	167	1.65	0.08	44	3	91	2.0	0.7	3.4	0.024	*0.001*	0.007	*0.005*	0.009	*13*	*50*	*50*
GWB3-30	Drizzle	23/02/2018	0.68	6.43	21.42	135	2.50	0.18	103	60	100	19.0	3.7	23.0	2.200	*0.001*	*0.002*	*0.005*	0.020	*13*	*50*	*50*
GWB3-30	Weather fine.	21/05/2018	0.76	6.13	20.38																	
GWB3-30	Fine weather.	16/08/2018	0.88	6.65	19.51	210	1.48	0.27	131	1	140	7.0	2.2	10.0	0.020	*0.001*	*0.002*	*0.005*	0.010	*13*	*50*	*50*
GWB3-30	Weather fine.	16/11/2018	0.98	6.60	22.38																	
GWB3-30	Weather fine.	12/02/2019	0.47	6.89	27.47	119	2.09	0.27	63	5	84	5.7	2.6	6.0	2.800	*0.001*	*0.002*	*0.005*	0.009	*13*	*50*	*50*
GWB3-30	Monitoring ceased May 2019.																					
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ37		15/02/2013	1.11	6.29																		
PZ37		9/05/2013	1.1	6.21																		
PZ37		30/08/2013	1.246	6.33																		
PZ37		9/01/2014	0.82	5.63																		

GWB3-32

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-32		29/08/2016	0.27	4.79	20.39	*1*	1.37	0.10	77	3	37	3.3	0.6	5.5	0.170	*0.001*	0.069	*0.005*	0.410	*50*	210	*50*
GWB3-32		1/12/2016	0.30	6.11	22.09																	
GWB3-32		7/02/2017	0.31	4.84	25.04	*1*	2.07	0.20	83	55	41	2.5	4.7	6.1	0.270	*0.001*	0.400	*0.005*	0.200	*13*	*50*	*50*
GWB3-32		16/05/2017	0.28	4.92	21.28																	
GWB3-32		10/08/2017	0.26	4.89	20.21	*13*	0.50	0.04	75	3	32	1.8	2.0	6.0	0.038	*0.001*	6.970	*0.005*	0.020	*13*	*50*	*50*
GWB3-32	Weather fine.	13/11/2017	0.31	5.03	23.17	*1*	0.64	0.05	79	3	39	1.4	0.9	5.5	0.089	*0.001*	0.220	*0.005*	0.022	*13*	*50*	*50*
GWB3-32	Drizzle	23/02/2018	0.28	4.69	20.87	2	0.71	0.11	73	4	27	5.2	1.5	3.6	0.110	*0.001*	0.130	*0.005*	0.022	*13*	*50*	*50*
GWB3-32	Weather fine.	21/05/2018	0.36	4.89	20.79																	
GWB3-32	Fine weather.	16/08/2018	0.41	6.05	21.02	2	1.16	0.15	94	3	48	4.1	1.5	6.4	0.130	*0.001*	0.170	*0.005*	0.053	*13*	*50*	*50*
GWB3-32	Weather fine.	16/11/2018	0.27	4.89	21.73																	
GWB3-32	Weather fine.	11/02/2019	0.22	5.68	25.07	13	0.55	0.04	58	4	31	3.5	1.9	3.8	0.063	*0.001*	0.007	*0.005*	0.021	*13*	*50*	*50*
GWB3-32	Weather, fine.	28/06/2019	0.28	4.85	20.40																	
GWB3-32	Insufficient water to monitor.	23/08/2019																				
GWB3-32	Insufficient water to monitor.	19/11/2019																				
GWB3-32	Overcast.	12/02/2020	0.18	6.39	24.18	48	0.49	0.03	26	4	19	1.4	7.9	8.1	0.150	*0.001*	0.015	*0.005*	0.019	*13*	*50*	*50*
GWB3-32	Insufficient water to sample.	27/05/2020																				
GWB3-32	Weather, fine.	26/08/2020	0.20	6.15	20.39	37	1.04	0.14	27	4	21	1.9	3.4	4.5	0.044	*0.001*	0.130	*0.005*	0.036	*13*	*50*	*50*
GWB3-32	Weather, fine.	2/03/2021	0.20	6.32	22.86	89	1.31	0.09	17	4	13	0.6	15.0	12.0	0.065	*0.001*	0.930	*0.005*	0.110	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80			0.29	4.07																		
P20			0.16	3.60																		

GWB3-32

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-32

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ39		15/02/2013	0.28	4.15																		
PZ39		9/05/2013	0.27	3.91																		
PZ39		30/08/2013	0.30	4.01																		
PZ39		9/01/2014	0.00	3.13																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-33

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-33	Dry	29/08/2016																				
GWB3-33	Dry	1/12/2016																				
GWB3-33	Dry	7/02/2017																				
GWB3-33	Dry	18/05/2017																				
GWB3-33	Dry	10/08/2017																				
GWB3-33	Insufficient water to sample.	15/11/2017																				
GWB3-33	Dry	22/02/2018																				
GWB3-33	Dry	21/05/2018																				
GWB3-33	Insufficient water to sample.	16/08/2018																				
GWB3-33	Dry.	16/11/2018																				
GWB3-33	Dry. Weather fine.	11/02/2019																				
GWB3-33	Dry. Weather fine.	28/06/2019																				
GWB3-33	Dry. Weather fine.	23/08/2019																				
GWB3-33	Bore dry. Overcast.	19/11/2019																				
GWB3-33	Overcast.	12/02/2020	**0.20**	**5.54**	23.27	6	0.63	0.06	51	4	36	0.5	1.0	0.6	0.081	*0.001*	0.007	*0.005*	0.014	*13*	*50*	*50*
GWB3-33	Insufficient water to sample.	27/05/2020																				
GWB3-33	Insufficient water to sample. Weather, fine.	26/08/2020																				
GWB3-33	Weather, fine.	2/03/2021	**0.14**	**5.67**	22.79	17	7.53	0.83	31	3	24	0.6	*0.1*	0.2	0.190	*0.001*	0.029	*0.005*	0.014	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80			0.84	5.37																		
P20			0.49	5.08																		

GWB3-33

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-33

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ40		15/02/2013	0.37	5.47																		
PZ40		9/05/2013	0.95	4.98																		
PZ40	Dry	30/08/2013																				
PZ40	Dry	9/01/2014																				

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-34

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-34		29/08/2016	**0.46**	6.34	18.69	169.00	4.19	0.70	38.00	18.80	59.90	9.10	13.80	16.30	0.09	0.00	0.01	0.01	0.16	50.00	280.00	160.00
GWB3-34		1/12/2016	**0.44**	6.40	21.77																	
GWB3-34		8/02/2017	**0.50**	**6.82**	24.31	134	3.52	0.50	44	82	64	9.6	12.9	18.0	0.052	*0.001*	*0.002*	*0.005*	0.030	*13*	*50*	*50*
GWB3-34		18/05/2017	**0.52**	6.50	20.59																	
GWB3-34		10/08/2017	**0.44**	6.60	19.63	30	26.30	0.12	39	48	58	7.7	11.9	16.7	0.050	*0.001*	0.400	*0.005*	0.900	*13*	*50*	*50*
GWB3-34	Weather fine.	15/11/2017	**0.53**	6.58	20.61	162	1.78	0.27	42	39	65	8.3	12.5	18.1	0.028	*0.001*	0.340	*0.005*	0.640	*13*	*50*	*50*
GWB3-34	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80			0.41	6.66																		
P20			0.32	6.01																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ41		15/02/2013	0.41	6.22																		
PZ41		10/05/2013	0.20	6.85																		
PZ41		30/08/2013	0.41	6.53																		
PZ41		9/01/2014	0.42	5.70																		

Note: This bore is not part of a bore pair

GWB3-36

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-36		29/08/2016	**0.12**	**5.46**	19.11	9	0.78	*0.02*	28	3	19	1.4	0.3	1.8	0.027	*0.001*	0.019	*0.005*	0.120	**50**	*50*	*50*
GWB3-36		1/12/2016	**0.14**	**6.45**	22.70																	
GWB3-36		8/02/2017	**0.36**	**6.51**	22.88	**30**	1.11	0.10	70	45	44	**7.6**	**3.7**	9.6	0.050	*0.001*	*0.002*	*0.005*	0.053	*13*	*50*	*50*
GWB3-36		18/05/2017	**0.20**	**6.31**	20.98																	
GWB3-36		10/08/2017	**0.21**	**6.35**	20.52	**33**	0.38	0.02	32	3	26	1.0	1.0	3.5	*0.005*	*0.001*	0.015	*0.005*	0.019	**13**	*50*	*50*
GWB3-36	Weather fine.	15/11/2017	**0.20**	**6.27**	20.98	10	1.32	0.05	39	3	24	0.5	1.1	1.9	*0.005*	*0.001*	0.035	*0.005*	0.034	*13*	*50*	*50*
GWB3-36	Overcast	23/02/2018	**0.24**	**5.85**	21.67	6	0.95	0.07	46	36	45	**9.2**	**3.5**	9.5	**0.090**	*0.001*	0.084	*0.005*	0.026	*13*	*50*	*50*
GWB3-36	Weather fine.	22/05/2018	**0.38**	**5.54**	17.67																	
GWB3-36	Fine weather.	16/08/2018	**0.23**	**6.10**	20.89	12	0.99	0.11	45	2	26	1.1	1.1	2.3	0.023	*0.001*	0.031	*0.005*	0.041	*13*	*50*	*50*
GWB3-36	Weather fine.	20/11/2018	**0.28**	**5.86**	22.26																	
GWB3-36	Weather fine.	12/02/2019	**0.31**	**6.93**	24.82	**28**	1.96	0.10	53	1	28	1.2	2.4	3.5	*0.005*	*0.001*	*0.002*	*0.005*	0.005	*13*	*50*	*50*
GWB3-36	Monitoring ceased May 2019.																					
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.69	5.40		17	2.11	0.38	191	52	98	6.6	3.3	11.6	0.072	0.001	1.066	0.005	0.128	13	50	50
P20			0.39	4.72																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ44		15/02/2013	0.11	5.21																		
PZ44		10/05/2013	0.10	5.41																		
PZ44		30/08/2013	0.15	4.75																		
PZ44		9/01/2014	0.15	3.94																		

GWB3-36

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB3-35		29/08/2016	0.69	4.70	19.73	*1*	0.89	0.10	197	13	99	6.6	2.2	11.6	0.078	*0.001*	0.230	*0.005*	0.240	*50*	1430	570
GWB3-35		1/12/2016	0.61	6.51	23.32																	
GWB3-35		8/02/2017	0.64	5.24	23.36	*1*	2.19	0.30	191	97	96	6.6	2.3	11.6	0.360	*0.001*	0.640	*0.005*	0.140	*13*	*50*	*50*
GWB3-35		18/05/2017	0.64	5.09	20.37																	
GWB3-35		10/08/2017	0.64	4.84	20.45	*17*	0.51	0.09	184	15	94	5.0	2.3	11.8	0.047	*0.001*	2.850	*0.005*	0.074	*13*	*50*	*50*
GWB3-35	Weather fine.	15/11/2017	0.66	5.24	21.55	9	1.51	0.24	189	15	96	4.6	1.4	11.3	0.050	*0.001*	0.810	*0.005*	0.066	*13*	*50*	*50*
GWB3-35	Rain	23/02/2018	0.66	5.15	21.14	4	2.20	0.40	179	36	45	9.2	3.6	9.6	0.035	*0.001*	1.130	*0.005*	0.064	*13*	*50*	*50*
GWB3-35	Weather fine.	22/05/2018	0.74	5.11	18.99																	
GWB3-35	Odour to water. Weather, fine.	16/08/2018	0.69	5.47	20.71	18	1.40	0.45	185	12	93	4.8	2.0	10.0	0.030	*0.001*	0.330	*0.005*	0.080	*13*	*50*	*50*
GWB3-35	Weather fine.	20/11/2018	0.70	5.40	21.67																	
GWB3-35	Weather fine.	12/02/2019	0.72	5.86	23.99	15	1.78	0.30	170	56	120	4.9	4.4	9.5	0.029	*0.001*	*0.002*	*0.005*	0.034	*13*	*50*	*50*
GWB3-35	Monitoring ceased in May 2019.																					
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ43		15/02/2013	0.55	4.75																		
PZ43		10/05/2013	0.565	4.58																		
PZ43		30/08/2013	0.63	4.74																		
PZ43		9/01/2014	0.62	3.92																		

GWB3-38

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-38		29/08/2016	0.27	**6.13**	16.39	10	1.05	0.00	64	5	28	**10.0**	1.1	4.9	0.012	*0.001*	0.009	*0.005*	0.099	**50**	*50*	*50*
GWB3-38		1/12/2016	0.26	**6.66**	22.46																	
GWB3-38		8/02/2017	0.28	**6.09**	23.55	*1*	1.01	0.00	75	**69**	44	4.2	2.2	3.9	0.140	*0.001*	*0.002*	*0.005*	0.096	*13*	*50*	*50*
GWB3-38		18/05/2017	0.32	**6.14**	20.07																	
GWB3-38		10/08/2017	**0.39**	**5.99**	20.28	**45**	0.16	*0.00*	89	6	**47**	1.9	**8.5**	**9.8**	*0.005*	*0.001*	*0.002*	*0.005*	0.005	**13**	*50*	*50*
GWB3-38	Weather fine.	15/11/2017	0.29	**5.91**	21.05	12	0.99	*0.02*	75	3	39	3.1	2.6	**5.6**	0.030	*0.001*	0.015	*0.005*	0.024	*13*	*50*	*50*
GWB3-38	Drizzle	23/02/2018	**0.35**	5.42	21.00	**21**	**1.28**	0.03	89	**11**	**120**	**20.0**	**8.4**	**26.0**	0.081	*0.001*	0.025	*0.005*	0.036	*13*	*50*	*50*
GWB3-38	Weather fine.	22/05/2018	**0.35**	5.30	19.16																	
GWB3-38	Fine weather.	16/08/2018	0.29	**5.88**	20.77	**29**	0.97	0.04	58	4	29	4.5	1.0	4.6	0.013	*0.001*	0.015	*0.005*	0.073	*13*	*50*	*50*
GWB3-38	Weather fine.	20/11/2018	0.29	**5.90**	22.12																	
GWB3-38	Weather fine.	13/02/2019	0.30	**6.20**	24.15	**22**	1.06	0.05	67	5	28	**9.3**	1.3	5.0	*0.005*	*0.001*	*0.002*	*0.005*	0.029	*13*	*50*	*50*
GWB3-38	Overcast.	28/06/2019	0.30	**5.68**	20.28																	
GWB3-38	Weather fine	27/08/2019	0.28	**5.72**	20.41	**26**	0.25	*0.02*	67	5	27	4.8	0.8	4.8	*0.005*	*0.001*	*0.002*	*0.005*	0.032	*13*	*50*	*50*
GWB3-38	Weather fine.	19/11/2019	0.26	5.55	22.69																	
GWB3-38	Overcast.	14/02/2020	**0.20**	**5.99**	21.73	**24**	0.31	*0.02*	42	4	23	0.6	5.6	**5.3**	*0.005*	*0.001*	0.005	*0.005*	0.027	*13*	*50*	*50*
GWB3-38	Weather fine.	26/05/2020	**0.39**	4.87	20.65																	
GWB3-38	Weather, fine.	26/08/2020	0.30	**6.18**	20.29	**61**	0.42	*0.02*	61	4	30	2.8	8.0	**8.2**	*0.005*	*0.001*	0.011	*0.005*	0.035	*13*	*50*	*50*
GWB3-38	Weather, fine.	2/03/2021	0.29	**5.97**	22.94	**66**	0.42	*0.02*	59	4	30	0.9	**12.0**	**11.0**	*0.005*	*0.001*	*0.002*	*0.005*	0.014	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.33	5.58		16	1.06	0.05	91	8	46	5.0	8.1	5.0	0.600	0.001	0.037	0.005	0.110	13	50	50
P20			0.23	4.48																		

GWB3-38

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-38

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ45		15/02/2013	0.26	5.12																		
PZ45		10/05/2013	0.24	5.70																		
PZ45		30/08/2013	0.26	4.89																		
PZ45		9/01/2014	0.19	4.66																		
Up-gradient (construction) Monitoring																						
GWB3-37		29/08/2016	0.29	5.76	19.14	16	1.91	*0.02*	75	5	43	5.0	2.1	3.7	0.017	*0.001*	0.045	*0.005*	0.220	290	380	*50*
GWB3-37		1/12/2016	0.24	6.58	21.66																	
GWB3-37		8/02/2017	0.54	3.41	22.91	*1*	1.00	0.10	56	36	28	4.8	1.8	5.0	0.018	*0.001*	0.020	*0.005*	0.055	*13*	*50*	*50*
GWB3-37		18/05/2017	0.31	5.19	20.52																	
GWB3-37		10/08/2017	0.29	5.53	20.36	*24*	0.71	*0.02*	73	5	42	1.9	11.5	2.9	0.012	*0.001*	0.023	*0.005*	0.017	*13*	*50*	*50*
GWB3-37	Weather fine.	15/11/2017	0.31	5.32	21.20	10	0.53	*0.02*	81	4	44	11.2	3.2	3.1	0.026	*0.001*	0.031	*0.005*	0.062	*13*	*50*	*50*
GWB3-37	Overcast	23/02/2018	0.31	4.49	21.21	*1*	0.34	*0.02*	86	8	28	5.0	33.0	12.0	0.730	*0.001*	0.037	*0.005*	0.022	*13*	*50*	*50*
GWB3-37	Weather fine.	22/05/2018	0.37	4.26	18.72																	
GWB3-37	Fine weather.	16/08/2018	0.36	4.55	20.82	*1*	0.89	0.05	91	5	48	4.1	1.2	3.9	0.600	*0.001*	0.026	*0.005*	0.110	*13*	*50*	*50*
GWB3-37	Weather fine.	20/11/2018	0.35	4.45	22.40																	
GWB3-37	Weather fine.	13/02/2019	0.32	4.53	23.72	*1*	1.06	0.05	100	6	47	4.1	1.2	4.1	0.660	*0.001*	0.013	*0.005*	0.059	*13*	*50*	*50*
GWB3-37	Technical error, no data.	28/06/2019																				
GWB3-37	Weather fine	27/08/2019	0.42	4.40	20.23	*1*	1.56	0.04	111	6	46	29.0	0.9	4.1	0.460	*0.001*	0.049	*0.005*	0.074	*13*	*50*	*50*
GWB3-37	Weather fine.	19/11/2019	0.20	5.55	27.06																	
GWB3-37	Overcast.	14/02/2020	0.32	4.71	21.82	*1*	0.51	*0.02*	81	15	40	3.7	2.5	5.0	0.460	*0.001*	0.032	*0.005*	0.150	*13*	*50*	*50*
GWB3-37	Weather fine.	26/05/2020	0.32	6.24	21.41																	

GWB3-38

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-37	Weather, fine.	26/08/2020	0.23	5.85	20.04	39	0.23	*0.02*	46	4	25	0.4	8.1	1.1	*0.005*	*0.001*	*0.002*	*0.005*	0.018	*13*	*50*	*50*
GWB3-37	Weather, fine.	2/03/2021	0.19	5.27	23.86	6	0.49	*0.02*	58	4	30	0.7	4.2	1.9	0.042	*0.001*	0.017	*0.005*	0.086	*13*	*50*	*50*
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1139		15/02/2013	0.23	5.00																		
BH1139		10/05/2013	0.224	5.21																		
BH1139		30/08/2013	0.237	4.88																		
BH1139		9/01/2014	0.23	4.28																		

GWB3-40

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-40		26/08/2016	0.33	6.17	19.87	105	1.20	0.10	30	15	38	4.5	21.8	6.0	0.037	*0.001*	0.006	*0.005*	0.210	50	130	*50*
GWB3-40		1/12/2016	0.47	6.67	21.44																	
GWB3-40		8/02/2017	0.68	6.32	24.00	57	1.84	0.30	151	96	79	5.6	36.4	13.6	*0.005*	*0.001*	*0.002*	*0.005*	0.043	*13*	*50*	*50*
GWB3-40		18/05/2017	0.63	6.33	20.11																	
GWB3-40	Weather fine.	11/08/2017	0.46	6.43	19.68	144	1.14	0.08	53	12	52	7.1	31.0	9.8	*0.012*	*0.001*	0.012	*0.005*	0.015	13	*50*	*50*
GWB3-40	Weather fine.	15/11/2017	0.69	6.45	22.57	118	0.61	0.06	103	25	66	4.5	33.6	11.8	*0.005*	*0.001*	0.005	*0.005*	0.013	*13*	*50*	*50*
GWB3-40	Drizzle	23/02/2018	0.66	6.14	21.21	132	0.53	0.10	121	14	54	5.6	4.5	13.0	0.062	*0.001*	0.006	*0.005*	0.018	*13*	*50*	*50*
GWB3-40	Weather fine.	22/05/2018	0.87	6.39	19.49																	
GWB3-40	Fine weather.	17/08/2018	0.86	6.45	19.09	208	1.08	0.17	129	28	84	7.8	52.0	17.0	0.015	*0.001*	*0.002*	*0.005*	0.030	*13*	*50*	*50*
GWB3-40	Weather fine.	20/11/2018	0.83	6.36	22.12																	
GWB3-40	Weather fine.	13/02/2019	0.71	6.56	23.27	145	1.51	0.18	134	26	85	5.1	41.0	16.0	0.026	*0.001*	*0.002*	*0.005*	0.011	*13*	*50*	*50*
GWB3-40	Monitoring ceased in May 2019																					
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.63	6.64		34	1.78	0.09	110	13	68	4.1	4.4	12.6	0.132	0.001	0.009	0.005	0.090	13	50	50
P20			0.26	5.74																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ47		18/02/2013	1.08	6.65																		
PZ47		13/05/2013	0.89	6.42																		
PZ47		2/09/2013	0.83	6.63																		
PZ47		10/01/2014	0.68	5.79																		

GWB3-40

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB3-39		26/08/2016	0.14	5.64	20.21	24	1.12	0.10	26	14	27	1.9	2.4	2.9	0.140	*0.001*	0.008	*0.005*	0.080	*50*	280	*50*
GWB3-39		1/12/2016	0.16	6.71	21.74																	
GWB3-39		8/02/2017	0.55	3.39	23.66	*1*	1.95	0.10	54	92	34	3.3	4.0	5.5	0.086	*0.001*	0.004	*0.005*	0.240	*13*	*50*	*50*
GWB3-39		18/05/2017	0.22	6.13	20.26																	
GWB3-39	Weather fine. Damaged hydrasleeve	11/08/2017	0.18	6.81	19.92	*7*	7.10	0.06	27	9	24	3.4	3.1	5.3	0.100	*0.001*	0.032	*0.005*	0.093	*13*	*50*	*50*
GWB3-39	Weather fine.	15/11/2017	0.28	6.25	21.03	33	0.75	0.05	55	10	36	2.2	3.3	7.2	0.057	*0.001*	0.009	*0.005*	0.037	*13*	*50*	*50*
GWB3-39	Overcast	23/02/2018	0.41	5.85	21.07	24	0.71	0.06	100	5	79	7.6	9.1	18.0	0.300	*0.001*	0.006	*0.005*	0.054	*13*	*50*	*50*
GWB3-39	Weather fine.	22/05/2018	0.51	5.67	19.34																	
GWB3-39	Fine weather.	17/08/2018	0.53	6.21	19.52	34	0.92	0.05	113	11	64	4.3	4.1	11.0	0.022	*0.001*	*0.002*	*0.005*	0.036	*13*	*50*	*50*
GWB3-39	Weather fine.	20/11/2018	0.50	6.37	22.06																	
GWB3-39	Weather fine.	13/02/2019	0.50	6.72	22.86	36	0.70	0.04	125	8	69	3.0	4.5	13.0	0.032	*0.001*	*0.002*	*0.005*	0.007	*13*	*50*	*50*
GWB3-39	Monitoriong ceased in May 2019																					
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ46		18/02/2013	0.35	6.25																		
PZ46		13/05/2013	0.595	6.12																		
PZ46		2/09/2013	0.435	4.6																		
PZ46		10/01/2014	0.38	5.81																		

GWB3-41

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-41		26/08/2016	**0.46**	6.47	20.73	99	1.28	0.00	77	16	52	3.8	20.0	13.5	0.150	*0.001*	0.008	*0.005*	0.270	*50*	*50*	*50*
GWB3-41		2/12/2016	**0.88**	6.42	20.67																	
GWB3-41		9/02/2017	**0.55**	**3.39**	23.66	251	2.23	0.10	162	50	91	6.8	76.1	26.5	*0.005*	*0.001*	*0.002*	*0.005*	0.027	*13*	*50*	*50*
GWB3-41		19/05/2017	0.80	**6.77**	19.62																	
GWB3-41	Weather fine.	11/08/2017	0.71	**7.00**	20.75	230	0.50	0.04	81	3	53	3.2	47.4	26.8	0.014	*0.001*	0.004	*0.005*	0.011	*13*	*50*	*50*
GWB3-41	Weather fine.	15/11/2017	**0.01**	**5.32**	23.96	118	1.57	0.05	52	5	41	2.3	24.1	12.2	0.030	*0.001*	*0.002*	*0.005*	0.018	*13*	*50*	*50*
GWB3-41	Rain	23/02/2018	**0.57**	6.65	21.39	143	1.41	0.11	86	5	28	7.0	2.1	4.3	0.053	*0.001*	*0.002*	*0.005*	0.031	*13*	*50*	*50*
GWB3-41	Weather fine.	22/05/2018	0.67	6.56	19.98																	
GWB3-41	Fine weather.	17/08/2018	**1.69**	6.61	20.16	146	1.52	0.20	424	10	134	5.8	90.0	45.0	0.021	*0.001*	*0.002*	*0.005*	0.011	*13*	*50*	*50*
GWB3-41	Weather fine.	20/11/2018	**1.41**	6.60	21.98																	
GWB3-41	Weather fine.	13/02/2019	**1.57**	**7.00**	23.41	148	3.51	0.26	389	25	164	4.8	83.0	42.0	0.031	*0.001*	*0.002*	*0.005*	0.006	*13*	*50*	*50*
GWB3-41	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80			0.82	6.75																		
P20			0.59	6.16																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ48		15/02/2013	0.81	6.68																		
PZ48		10/05/2013	0.85	6.39																		
PZ48		2/09/2013	0.72	6.85																		
PZ48		10/01/2014	0.41	5.82																		

GWB3-41

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-42b

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-42a	Could not locate GWB3-42b	26/08/2016	**0.23**	**4.32**	20.53	*1*	1.04	0.03	43	21	22	7.5	1.6	3.6	0.620	*0.001*	0.058	*0.005*	0.530	*50*	360	*50*
GWB3-42b	Unable to locate.	2/12/2016																				
GWB3-42b	Unable to locate.	9/02/2017																				
GWB3-42b	Unable to locate.	19/05/2017																				
GWB3-42b	Unable to locate.	11/08/2017																				
GWB3-42b	Unable to locate.	15/11/2017																				
GWB3-42b	Unable to locate.	23/02/2018																				
GWB3-42b	Unable to locate.	22/05/2018																				
GWB3-42b	Unable to locate.	17/08/2018																				
GWB3-42b	Unable to locate.	20/11/2018																				
GWB3-42b	Unable to locate.	13/02/2019																				
GWB3-42b	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80			0.19	4.30																		
P20			0.18	3.73																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ49		15/02/2013	0.19	4.14																		
PZ49		10/05/2013	0.18	3.98																		
PZ49		2/09/2013	0.19	4.55																		
PZ49		10/01/2014	0.19	3.36																		

GWB3-42b

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-43

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-43	Bore has been capped - unable to measure/ sample	26/08/2016																				
GWB3-43	Unable to locate. PC representative confirmed	2/12/2016																				
GWB3-43	Cannot locate	9/02/2017																				
GWB3-43	Cannot locate	19/05/2017																				
GWB3-43	Cannot locate	11/08/2017																				
GWB3-43	Unable to locate.	15/11/2017																				
GWB3-43	Unable to locate.	23/02/2018																				
GWB3-43	Unable to locate.	22/05/2018																				
GWB3-43	Unable to locate.	17/08/2018																				
GWB3-43	Unable to locate.	20/11/2018																				
GWB3-43	Unable to locate.	13/02/2019																				
GWB3-43	Unable to locate.	27/06/2019																				
GWB3-43	Unable to locate.	27/08/2019																				
GWB3-43	Unable to locate.	19/11/2019																				
GWB3-43	Unable to locate.	14/02/2020																				
GWB3-43	Unable to locate.	26/05/2020																				
GWB3-43	Unable to locate.	26/08/2020																				
GWB3-43	Unable to locate.	2/03/2021																				
P80 & P20 Values (calculated from baseline data)																						
P80			0.19	4.30																		
P20			0.18	3.73																		

GWB3-43

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-43

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ49		15/02/2013	0.19	4.14																		
PZ49		10/05/2013	0.18	3.98																		
PZ49		2/09/2013	0.19	4.55																		
PZ49		10/01/2014	0.19	3.36																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-45

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-45		26/08/2016	**0.96**	6.76	21.58	248	1.99	0.00	157	8	85	8.8	86.9	18.3	0.014	*0.001*	0.008	*0.005*	0.190	*50*	200	*50*
GWB3-45		2/12/2016	**0.89**	**6.49**	22.47																	
GWB3-45		9/02/2017	**0.95**	**7.25**	24.13	199	1.67	0.20	174	54	86	7.9	82.3	18.4	*0.005*	*0.001*	*0.002*	*0.005*	0.068	*13*	*50*	*50*
GWB3-45		25/05/2017	**1.00**	6.88	20.78																	
GWB3-45	Weather fine.	16/08/2017	**1.04**	6.88	22.10	243	1.03	0.14	210	2	88	38.7	83.9	19.4	*0.005*	*0.001*	*0.002*	*0.005*	0.003	*13*	*50*	*50*
GWB3-45	Weather fine.	15/11/2017	**1.01**	**6.93**	22.89	233	1.23	*0.02*	163	4	86	7.6	81.6	18.8	*0.005*	*0.001*	*0.002*	*0.005*	0.031	*13*	*50*	*50*
GWB3-45	Overcast	24/02/2018	**1.00**	6.69	22.66	246	0.61	0.17	185	10	91	7.9	89.0	21.0	*0.005*	*0.001*	*0.002*	*0.005*	0.030	*50*	*50*	*50*
GWB3-45	Weather fine.	22/05/2018	**1.08**	**6.58**	20.90																	
GWB3-45	Fine weather.	17/08/2018	**1.04**	6.91	20.98	246	1.61	0.20	190	4	88	8.6	82.0	19.0	0.012	*0.001*	*0.002*	*0.005*	0.023	*13*	*50*	*50*
GWB3-45	Weather fine.	20/11/2018	**1.18**	**7.05**	23.17																	
GWB3-45	Weather fine.	13/02/2019	**1.08**	**7.16**	24.50	301	1.24	0.83	164	15	99	8.4	102.0	20.0	0.018	*0.001*	*0.002*	*0.005*	0.008	*13*	*50*	*50*
GWB3-45	Weather, fine.	27/06/2019	**1.13**	**6.60**	19.81																	
GWB3-45	Weather fine	27/08/2019	**1.12**	**6.53**	21.60	260	0.25	0.33	186	15	91	7.6	94.0	20.0	0.013	*0.001*	*0.002*	*0.005*	0.014	*13*	*50*	*50*
GWB3-45	Weather fine.	19/11/2019	**1.02**	**6.34**	24.50																	
GWB3-45	Overcast.	14/02/2020	**1.08**	**7.05**	22.64	255	0.34	1.05	179	13	89	6.7	91.0	20.0	*0.005*	*0.001*	*0.002*	*0.005*	0.038	*13*	*50*	*50*
GWB3-45	Weather fine.	26/05/2020	**1.09**	**6.34**	22.30																	
GWB3-45	Weather, fine.	6/08/2020	**1.15**	**6.05**	19.33	260	0.46	0.45	198	13	90	10.0	89.0	20.0	*0.005*	*0.001*	*0.002*	*0.005*	0.018	*13*	*50*	*50*
GWB3-45	Weather, fine.	1/03/2021	**0.99**	**6.34**	23.12	265	0.79	1.38	193	12	89	10.0	92.0	20.0	*0.005*	*0.001*	*0.002*	*0.005*	0.014	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80			0.86	6.93																		
P20			0.75	6.68																		

GWB3-45

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-45

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ50		18/02/2013	0.65	7.04																		
PZ50		13/05/2013	0.82	6.83																		
PZ50		2/09/2013	0.84	6.85																		
PZ50		10/01/2014	0.88	6.46																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-46

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-46	Dry	26/08/2016																				
GWB3-46	Dry	2/12/2016																				
GWB3-46	Dry	9/02/2017																				
GWB3-46	Insufficient water to sample	25/05/2017																				
GWB3-46	Weather fine. Dry	16/08/2017																				
GWB3-46	Dry. Weather fine.	15/11/2017																				
GWB3-46	Bore dry. Overcast weather.	23/02/2018																				
GWB3-46	Bore dry. Weather fine.	23/05/2018																				
GWB3-46	Bore dry. Weather fine.	17/08/2018																				
GWB3-46	Insufficient water to sample	22/11/2018																				
GWB3-46	Insufficient water to sample. Weather fine.	13/02/2019																				
GWB3-46	Bore dry. Weather fine.	28/06/2019																				
GWB3-46	Bore dry. Weather fine.	27/08/2019																				
GWB3-46	Insufficient water to monitor.	19/11/2019																				
GWB3-46	Bore dry. Overcast.	14/02/2020																				
GWB3-46	Bore dry. Weather fine.	26/05/2020																				
GWB3-46	Insufficient water to sample. Weather, fine.	6/08/2020																				
GWB3-46	Insufficient water to sample.	17/02/2021																				
P80 & P20 Values (calculated from baseline data)																						
P80			1.09	5.79																		
P20			0.74	5.65																		

GWB3-46

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-46

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ51		18/02/2013	0.60	5.87																		
PZ51		13/05/2013	1.17	5.65																		
PZ51	Dry	2/09/2013																				
PZ51		10/01/2014	0.96	5.66																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-47

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-47		26/08/2016	**0.19**	**5.38**	19.25	13	2.06	0.10	55	4	29	5.6	4.3	4.3	0.054	*0.001*	0.019	*0.005*	0.170	*50*	240	*50*
GWB3-47		2/12/2016	**0.25**	**6.70**	24.74																	
GWB3-47		9/02/2017	**0.65**	**3.74**	23.88	*1*	*1.00*	1.14	0	150	46	67.0	5.5	6.8	12.800	0.140	*0.001*	0.023	*0.005*	*13*	*13*	*50*
GWB3-47		25/05/2017	0.51	**6.16**	20.15																	
GWB3-47	Weather fine.	16/08/2017	0.51	5.20	21.62	4	0.66	0.05	150	4	64	6.6	5.7	11.6	0.018	*0.001*	0.011	*0.005*	0.037	*13*	*50*	*50*
GWB3-47	Weather fine.	22/11/2017	**0.63**	5.16	21.03	2	0.92	0.07	176	4	74	4.0	6.0	14.8	0.058	*0.001*	0.008	*0.005*	0.190	*13*	*50*	*50*
GWB3-47	Overcast	24/02/2018	**0.62**	4.86	24.09	4	1.08	0.07	182	5	79	7.6	9.1	21.0	0.120	*0.001*	*0.002*	*0.005*	0.200	*50*	*50*	*50*
GWB3-47	Weather fine.	23/05/2018	0.49	**7.65**	12.75																	
GWB3-47	Fine weather.	17/08/2018	**0.00**	**7.16**	22.58	5	1.81	0.07	172	3	74	7.6	7.4	14.0	0.061	*0.001*	0.005	*0.005*	0.530	*13*	*50*	*50*
GWB3-47	Drizzle.	22/11/2018	**0.65**	4.87	22.79																	
GWB3-47	Insufficient water to sample. Weather fine.	13/02/2019																				
GWB3-47	Overcast.	27/06/2019	**0.68**	4.87	19.27																	
GWB3-47	Bore dry. Weather, fine.	27/08/2019																				
GWB3-47	Bore dry. Overcast.	20/11/2019																				
GWB3-47	Overcast.	14/02/2020	**0.13**	**6.06**	22.37	11	0.31	*0.02*	27	5	16	2.3	4.0	2.2	0.037	*0.001*	*0.002*	*0.005*	0.036	*13*	*50*	*50*
GWB3-47	Weather fine.	27/05/2020	**0.67**	5.04	20.29																	
GWB3-47	Weather, fine.	6/08/2020	**0.64**	5.18	19.10	9	1.54	0.08	176	4	75	4.3	7.3	15.0	0.026	*0.001*	0.058	*0.005*	0.073	*13*	*50*	*50*
GWB3-47	Weather, fine.	1/03/2021	**0.23**	**6.59**	24.05	18	1.92	0.20	42	5	25	2.4	3.5	3.1	0.016	*0.001*	0.007	*0.005*	0.490	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80			0.54	5.22																		
P20			0.42	4.64																		

GWB3-47

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-47

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1187		18/02/2013	0.41	5.49																		
BH1187		13/05/2013	0.68	5.04																		
BH1187		2/09/2013	0.45	4.96																		
BH1187		10/01/2015	0.43	4.15																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-51

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB3-51		23/08/2016	**0.16**	**5.65**	20.57	11	0.25	*0.02*	36	5	23	1.5	1.5	1.9	**0.012**	*0.001*	**0.005**	*0.005*	0.022	*50*	**170**	*50*
GWB3-51		2/12/2016	**0.21**	**6.67**	25.37																	
GWB3-51	Dry	9/02/2017																				
GWB3-51		25/05/2017	**0.15**	**5.62**	21.82																	
GWB3-51	Weather fine.	24/08/2017	**0.16**	**5.31**	21.16	9	0.40	0.03	35	5	25	1.6	0.7	1.4	*0.005*	*0.001*	**0.110**	*0.005*	**0.130**	*13*	*50*	*50*
GWB3-51	Weather fine.	22/11/2017	**0.16**	**5.62**	21.74	9	0.41	0.04	35	5	24	0.5	0.6	1.5	*0.005*	*0.001*	**0.200**	*0.005*	**0.180**	*13*	*50*	*50*
GWB3-51	Bore dry. Overcast.	24/02/2018																				
GWB3-51	Insufficient water to sample. Weather fine.	23/05/2018																				
GWB3-51	Bore dry. Weather fine.	29/08/2018																				
GWB3-51	Dry.	23/11/2018																				
GWB3-51	Bore dry. Weather fine.	27/02/2019																				
GWB3-51	Insufficient water to sample. Weather fine.	27/06/2019																				
GWB3-51	Bore dry. Weather fine.	27/08/2019																				
GWB3-51	Bore dry. Overcast.	20/11/2019																				
GWB3-51	Weather fine.	20/02/2020	**0.15**	**5.64**	25.62	11	**1.51**	0.07	32	3	22	1.5	2.0	1.1	*0.005*	*0.001*	**0.007**	*0.005*	**0.680**	*13*	*50*	*50*
GWB3-51	Weather fine.	27/05/2020	**0.15**	**5.45**	21.48																	
GWB3-51	Insufficient water to sample. Weather, fine.	6/08/2020																				
GWB3-51	Weather, fine.	1/03/2021	**0.14**	**5.38**	23.63	9	0.73	0.07	37	3	24	1.0	1.1	1.2	*0.005*	*0.001*	**0.006**	*0.005*	0.100	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.66	6.33		82	0.93	0.20	150	17	78	12.0	17.6	14.8	0.005	0.001	0.004	0.005	0.120	50	50	50
P20			0.46	5.70																		

GWB3-51

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB3-51

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ53		19/02/2013	0.17	0.41																		
PZ53		14/05/2013	0.19	5.72																		
PZ53		3/09/2013	0.13	5.52																		
PZ53	Dry	13/01/2014																				
Up-gradient (construction) Monitoring																						
GWB3-50		23/08/2016	0.61	6.28	20.92	76	0.51	0.20	129	17	74	6.4	17.6	14.8	0.011	*0.001*	*0.002*	*0.005*	0.047	*50*	*50*	*50*
GWB3-50		2/12/2016	0.515	6.75	25.84																	
GWB3-50		9/02/2017	0.56	6.32	24.86	1	0.20	129.00	62	71	6	14.5	12.9	0.0	*0.001*	*0.002*	*0.005*	0.039	*12.500*	*50*	*50*	*50*
GWB3-50		25/05/2017	0.59	6.26	21.69																	
GWB3-50	Weather fine.	24/08/2017	0.58	6.19	22.13	75	0.46	0.18	143	8	65	13.5	15.9	13.8	*0.005*	*0.001*	*0.002*	*0.005*	0.072	*13*	*50*	*50*
GWB3-50	Weather fine.	22/11/2017	0.57	6.35	22.44	47	0.57	0.18	96	25	56	4.4	12.9	11.2	*0.005*	*0.001*	*0.002*	*0.005*	0.120	*13*	*50*	*50*
GWB3-50	Overcast	24/02/2018	0.46	5.94	22.12	52	0.54	0.13	97	16	52	3.8	13.0	11.0	*0.005*	*0.001*	*0.002*	*0.005*	0.040	*50*	*50*	*50*
GWB3-50	Weather fine.	23/05/2018	0.57	6.20	21.02																	
GWB3-50	Fine weather.	29/08/2018	0.55	6.54	20.91	78	1.05	0.14	107	14	65	6.4	16.0	12.0	*0.005*	*0.001*	0.004	*0.005*	0.061	*13*	*50*	*50*
GWB3-50	Weather fine.	23/11/2018	0.62	6.87	24.31																	
GWB3-50	Overcast.	27/02/2019	0.60	6.65	25.25	84	6.21	0.16	150	13	85	12.0	21.0	15.0	*0.005*	*0.001*	0.004	*0.005*	0.240	*13*	*50*	*50*
GWB3-50	Weather, fine.	27/06/2019	0.66	6.13	21.03																	
GWB3-50	Weather fine	27/08/2019	0.67	6.03	22.75	90	0.35	0.14	147	11	79	9.2	18.0	15.0	*0.005*	*0.001*	*0.002*	*0.005*	0.052	*13*	*50*	*50*
GWB3-50	Overcast.	20/11/2019	0.68	5.99	21.27																	
GWB3-50	Weather fine.	20/02/2020	0.63	5.60	25.50	81	0.93	0.11	150	8	78	5.6	16.0	14.0	*0.005*	*0.001*	*0.002*	*0.005*	0.046	*13*	*50*	*50*
GWB3-50	Weather fine.	27/05/2020	0.68	5.96	21.54																	

GWB3-51

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB3-50	Weather, fine.	6/08/2020	0.65	5.91	21.52	82	0.20	0.18	142	8	76	4.7	15.0	14.0	*0.005*	*0.001*	*0.002*	*0.005*	0.018	*13*	*50*	*50*
GWB3-50	Weather, fine.	1/03/2021	0.59	6.23	23.83	81	0.92	0.63	151	4	74	4.9	16.0	14.0	*0.005*	*0.001*	*0.002*	*0.005*	0.024	*13*	*50*	*50*
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1200		18/02/2013	0.94	0.28																		
BH1200		14/05/2013	0.72	6.05																		
BH1200		3/09/2013	0.463	6.12																		
BH1200		13/01/2014	0.45	5.40																		

GWB4-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB4-02		22/08/2016	**0.10**	7.60	20.97	25	1.43	0.00	14	5	13	3.3	4.2	1.8	**0.120**	*0.001*	**0.013**	*0.005*	**0.140**	120	100	*50*
GWB4-02		5/12/2016	0.48	**7.35**	22.17																	
GWB4-02		10/02/2017	0.44	7.54	23.94	**165**	1.02	0.00	20	46	38	5.5	**37.3**	**14.7**	*0.005*	*0.001*	*0.002*	*0.005*	0.018	*13*	*50*	*50*
GWB4-02		25/05/2017	0.26	7.40	21.32																	
GWB4-02	Weather fine.	16/08/2017	0.32	7.53	22.44	**144**	0.56	0.04	16	2	29	4.9	**25.7**	**10.2**	*0.005*	*0.001*	*0.002*	*0.005*	0.002	*13*	*50*	*50*
GWB4-02	Weather fine.	22/11/2017	0.28	7.77	21.41	**119**	0.65	0.06	13	3	23	2.6	**23.4**	**8.4**	*0.005*	*0.001*	*0.002*	*0.005*	0.005	*13*	*50*	*50*
GWB4-02	Drizzle	24/02/2018	0.35	7.47	22.50	**157**	0.91	0.12	14	9	28	5.0	**33.0**	**13.0**	**0.035**	*0.001*	*0.002*	*0.005*	0.008	*50*	*50*	*50*
GWB4-02	Spoke to contractor supervisor, unable to arrange safe access. Site has undergone significant change since last monitoring round. Weather fine.	23/05/2018																				
GWB4-02	Fine weather.	29/08/2018	**0.69**	7.63	19.95	**212**	1.45	0.12	32	38	47	**7.7**	**42.0**	**19.0**	0.010	*0.001*	*0.002*	*0.005*	0.011	*13*	*50*	*50*
GWB4-02	Weather fine.	22/11/2018	0.48	**7.27**	24.99																	
GWB4-02	Weather fine.	27/02/2019	0.49	**7.20**	21.79	**248**	1.75	0.09	24	10	48	**6.3**	**47.0**	**18.0**	0.015	*0.001*	*0.002*	*0.005*	**0.020**	*13*	*50*	*50*
GWB4-02	Weather, fine.	27/06/2019	**0.60**	**7.19**	20.71																	
GWB4-02	Weather fine	27/08/2019	**0.59**	**7.12**	22.49	**265**	0.65	0.06	28	16	46	5.1	**51.0**	**19.0**	0.005	*0.001*	*0.002*	*0.005*	0.008	*13*	*50*	*50*
GWB4-02	Weather fine.	20/11/2019	**0.55**	**7.08**	21.82																	
GWB4-02	Weather fine.	20/02/2020	**0.59**	**5.61**	24.37	**281**	1.00	0.04	25	13	46	4.5	**58.0**	**20.0**	*0.005*	*0.001*	*0.002*	*0.005*	**0.033**	*13*	*50*	*50*
GWB4-02	Weather fine.	27/05/2020	**0.61**	**6.80**	22.18																	
GWB4-02	Weather, fine.	25/08/2020	**0.62**	**6.66**	21.24	**288**	0.76	0.06	32	6	38	4.5	**59.0**	**19.0**	*0.005*	*0.001*	*0.002*	*0.005*	**0.028**	*13*	*50*	*50*
GWB4-02	Weather, fine.	1/03/2021	**0.54**	**6.55**	25.08	**298**	1.33	**0.31**	22	6	37	4.1	**62.0**	**20.0**	0.017	*0.001*	*0.002*	*0.005*	0.015	*13*	*50*	*50*
P80 & P20 Values (calculated from baseline and up-gradient data below)																						

GWB4-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
P80			0.53	10.52		115	4.20	0.12	50	62	68	6.0	23.2	3.4	0.031	0.001	0.007	0.005	0.019	570	214	50
P20			0.26	7.38																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ54		19/02/2013	0.56	7.11																		
PZ54		14/05/2013	0.55	7.14																		
PZ54		2/09/2013	0.58	7.33																		
PZ54		13/01/2014	0.05	4.97																		
Up-gradient (construction) Monitoring																						
GWB4-01		22/08/2016	0.58	10.52	22.00	216	13.00	0.20	169	64	186	12.0	31.9	5.1	0.025	*0.001*	0.023	*0.005*	*0.002*	3740	260	*50*
GWB4-01		5/12/2016	0.34	7.39	23.41																	
GWB4-01		10/02/2017	0.30	10.79	23.15	62	4.20	0.10	40	69	47	3.0	17.4	0.7	0.020	*0.001*	*0.002*	*0.005*	0.026	590	190	*50*
GWB4-01		25/05/2017	0.26	10.46	21.65																	
GWB4-01	Weather fine.	16/08/2017	0.26	10.31	22.84	28	2.61	0.04	40	54	48	2.8	9.2	0.5	0.032	*0.001*	*0.002*	*0.005*	0.003	*13*	*50*	*50*
GWB4-01	Weather fine.	22/11/2017	0.28	10.05	21.69	62	2.73	0.10	40	19	49	2.3	9.3	0.8	0.018	*0.001*	0.005	*0.005*	*0.002*	490	*50*	*50*
GWB4-01	Rain	24/02/2018	0.30	9.25	22.38	67	1.80	0.07	36	19	49	3.3	24.0	2.4	0.390	*0.001*	0.007	*0.005*	*0.002*	300	*50*	*50*
GWB4-01	Weather fine.	23/05/2018	0.52	9.20	20.55																	
GWB4-01	Fine weather.	29/08/2018	0.40	9.50	20.99	100	3.09	0.10	45	18	61	6.1	15.0	2.2	0.014	*0.001*	0.007	*0.005*	*0.002*	320	220	110
GWB4-01	Overcast.	22/11/2018	0.41	9.42	23.45																	
GWB4-01	Overcast.	27/02/2019	0.38	9.32	21.93	119	4.20	0.13	51	15	70	5.7	20.0	3.7	0.015	*0.001*	0.004	*0.005*	0.023	460	*50*	*50*
GWB4-01	Bore damaged below ground level. Weather, fine.	27/06/2019	0.46	9.07	21.16																	

GWB4-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-01	Bore damaged below ground level, unable to retrieve sample. Weather, fine.	27/08/2019																				
GWB4-01	Unable to sample.	20/11/2019																				
GWB4-01	Unable to sample.	20/02/2020																				
GWB4-01	Bore damaged, unable to retrieve sample. Appears to have been intereferred with since previous monitoring round.	27/05/2020																				
GWB4-01	Bore damaged, unable to retrieve sample.	6/08/2020																				
GWB4-01	Bore damaged, unable to retrieve sample.	1/03/2021																				
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1206		19/02/2013	0.25	10.55																		
BH1206		14/05/2013	0.127	10.52																		
BH1206		2/09/2013	0.372	10.73																		
BH1206		13/01/2014	0.23	9.35																		

GWB4-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB4-06		22/08/2016	**9.45**	6.77	21.10	387	**1.97**	0.10	1720	**4180**	**1636**	**94.0**	**351.0**	**538.0**	0.029	*0.001*	**0.047**	*0.005*	**0.140**	*50*	**130**	*50*
GWB4-06		5/12/2016	**8.74**	6.75	22.99																	
GWB4-06		10/02/2017	**11.20**	6.81	26.11	336	**2.45**	0.10	**2280**	**4620**	**1820**	**88.0**	**347.0**	**576.0**	*0.017*	*0.001*	*0.002*	*0.005*	0.054	*13*	*50*	*50*
GWB4-06		22/05/2017	**9.21**	6.65	21.41																	
GWB4-06	Weather fine.	24/08/2017	**10.70**	**6.38**	20.61	350	**2.54**	**0.16**	**2200**	**3960**	**1600**	73.7	**349.0**	**597.0**	**0.058**	*0.001*	*0.002*	*0.005*	**4.300**	*13*	*50*	*50*
GWB4-06	Weather fine.	22/11/2017	**9.90**	6.75	19.85	213	**1.88**	**0.18**	1340	2580	1030	48.6	223.0	362.0	0.015	*0.001*	*0.002*	*0.005*	**4.100**	*13*	*50*	*50*
GWB4-06	Drizzle	24/02/2018	**11.50**	**6.35**	22.92	352	**2.12**	0.09	**2320**	**4080**	**1760**	**130.0**	290.0	**680.0**	**0.040**	*0.001*	**0.035**	*0.005*	**1.900**	*50*	*50*	*50*
GWB4-06	Weather fine.	23/05/2018	**12.40**	**6.28**	18.65																	
GWB4-06	Fine weather.	29/08/2018	**11.00**	6.66	16.75	**452**	**4.03**	**0.18**	**1980**	**3780**	**1430**	80.0	**330.0**	**540.0**	**0.034**	*0.001*	*0.002*	*0.005*	**0.170**	*13*	*50*	*50*
GWB4-06	Overcast.	22/11/2018	**9.05**	6.66	21.55																	
GWB4-06	Weather fine.	13/02/2019	**8.42**	7.21	27.55	369	**3.91**	**0.14**	1370	1070	1330	75.0	290.0	**441.0**	0.026	*0.001*	*0.002*	*0.005*	0.033	*13*	*50*	*50*
GWB4-06	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			8.15	7.33		433	1.69	0.10	1810	2590	1334	86.0	319.0	397.0	0.033	0.001	0.018	0.005	0.056	50	50	50
P20			0.19	6.55																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ58		19/02/2013	0.09	6.67																		
PZ58		14/05/2013	5.33	6.95																		
PZ58		3/09/2013	5.80	7.27																		
PZ58		13/01/2014	8.16	6.13																		

GWB4-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB4-05		22/08/2016	8.37	7.41	19.50	433	1.69	0.10	1810	2590	1334	86.0	319.0	397.0	0.033	*0.001*	0.018	*0.005*	0.056	*50*	*50*	*50*
GWB4-05	Recently destroyed - within works footprint/road alignment	5/12/2016																				
GWB4-05	Destroyed - inspected and confirmed by PC	10/02/2017																				
GWB4-05	Destroyed - inspected and confirmed by PC	22/05/2017																				
GWB4-05	Destroyed - inspected and confirmed by PC	24/08/2017																				
GWB4-05	Destroyed	22/11/2017																				
GWB4-05	Destroyed	24/02/2018																				
GWB4-05	Destroyed	23/05/2018																				
GWB4-05	Destroyed	29/08/2018																				
GWB4-05	Destroyed	22/11/2018																				
GWB4-05	Destroyed	13/02/2019																				
GWB4-05	Monitoring ceased in May 2019.																					
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ57		19/02/2013	0.12	6.57																		
PZ57		14/05/2013	0.232	6.99																		
PZ57		3/09/2013	2.76	7.67																		
PZ57		13/01/2014	8.14	6.53																		

GWB4-09

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-09		26/08/2016	**1.63**	**6.79**	18.52	**830**	**2.18**	**0.10**	**646**	**94**	**585**	**6.6**	**107.0**	**64.6**	**0.016**	**0.001**	**0.005**	**0.005**	**0.120**	**50**	**140**	**50**
GWB4-09	Destroyed - within major cut (Greenhill)	5/12/2016																				
GWB4-09	Destroyed - within major cut (Greenhill)	10/02/2017																				
GWB4-09	Destroyed - within major cut (Greenhill)	22/05/2017																				
GWB4-09	Destroyed - within major cut (Greenhill)	24/08/2017																				
GWB4-09	Destroyed - within major cut (Greenhill)	22/11/2017																				
GWB4-09	Destroyed - within major cut (Greenhill)	24/02/2018																				
GWB4-09	Destroyed - within major cut (Greenhill)	23/05/2018																				
GWB4-09	Destroyed - within major cut (Greenhill)	29/08/2018																				
GWB4-09	Destroyed - within major cut (Greenhill)	22/11/2018																				
GWB4-09	Destroyed - within major cut (Greenhill)	13/02/2019																				
GWB4-09	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80			0.32	7.32																		
P20			0.28	6.91																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1251		20/02/2013	0.33	7.24																		
BH1251		15/05/2013	0.32	7.07																		
BH1251		4/09/2013	0.27	7.43																		
BH1251		15/01/2014	0.30	6.68																		

GWB4-09

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-10

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-10	Dry	26/08/2016																				
GWB4-10	Dry	5/12/2016																				
GWB4-10	Dry	10/02/2017																				
GWB4-10	Dry	22/05/2017																				
GWB4-10	Weather fine. Dry.	24/08/2017																				
GWB4-10	Weather fine. Dry.	22/11/2017																				
GWB4-10	Dry	24/02/2018																				
GWB4-10	Unable to access bore safely due to scraper circuit.	23/05/2018																				
GWB4-10	Dry. Weather fine.	29/08/2018																				
GWB4-10	Dry	22/11/2018																				
GWB4-10	Unsafe to access.	27/02/2019																				
GWB4-10	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80			2.35	6.79																		
P20			1.78	6.66																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1259		20/02/2013	1.60	6.61																		
BH1259		15/05/2013	2.54	6.84																		
BH1259	Dry	4/09/2013																				
BH1259	Dry	15/01/2014																				

GWB4-10

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-11

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-11	unable to locate bore	26/08/2016																				
GWB4-11	No bore - confirmed with PC	5/12/2016																				
GWB4-11	No bore - confirmed with PC	10/02/2017																				
GWB4-11	No bore - confirmed with PC	22/05/2017																				
GWB4-11	No bore - confirmed with PC	24/08/2017																				
GWB4-11	No bore - confirmed with PC	22/11/2017																				
GWB4-11	No bore - confirmed with PC	24/02/2018																				
GWB4-11	No bore	23/05/2018																				
GWB4-11	No bore	29/08/2018																				
GWB4-11	No bore	22/11/2018																				
GWB4-11	No bore	13/02/2019																				
GWB4-11	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80			3.56	7.53																		
P20			0.13	7.14																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1261		20/02/2013	0.13	7.32																		
BH1261		15/05/2013	0.14	7.52																		
BH1261		4/09/2013	4.11	7.55																		
BH1261		15/01/2014	3.19	6.86																		

GWB4-11

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-12

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-12	Dry	26/08/2016																				
GWB4-12	Dry	5/12/2016																				
GWB4-12	Dry	10/02/2017																				
GWB4-12	Dry	22/05/2017																				
GWB4-12	Weather fine. Dry.	24/08/2017																				
GWB4-12	Dry. Weather fine.	22/11/2017																				
GWB4-12	Dry. Weather fine.	24/02/2018																				
GWB4-12	Dry. Weather fine.	23/05/2018																				
GWB4-12	Dry. Weather fine.	29/08/2018																				
GWB4-12	Dry	22/11/2018																				
GWB4-12	Dry	27/02/2019																				
GWB4-12	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80			3.56	7.53																		
P20			0.13	7.14																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1261		20/02/2013	0.13	7.32																		
BH1261		15/05/2013	0.14	7.52																		
BH1261		4/09/2013	4.11	7.55																		
BH1261		15/01/2014	3.19	6.86																		

GWB4-12

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-17

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-17	Unable to locate	26/08/2016																				
GWB4-17	Unable to locate	2/01/1900																				
GWB4-17	Unable to locate	10/02/2017																				
GWB4-17	Unable to locate bore - confirmed with PC	22/05/2017																				
GWB4-17	Unable to locate bore - confirmed with PC	24/08/2017																				
GWB4-17	Unable to locate bore - confirmed with PC	22/11/2017																				
GWB4-17	Unable to locate bore	24/02/2018																				
GWB4-17	Unable to locate bore	23/05/2018																				
GWB4-17	Unable to locate bore	29/08/2018																				
GWB4-17	Unable to locate bore	22/11/2018																				
GWB4-17	Unable to locate bore	27/02/2019																				
GWB4-17	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ66	Dry	20/02/2013																				
PZ66	No access																					
PZ66	Dry	29/07/2013																				
PZ66	Dry	15/01/2014																				

GWB4-17

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-18

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-18	Bore has been capped - unable to sample	22/08/2016																				
GWB4-18	Unable to locate bore - confirmed with PC	5/12/2016																				
GWB4-18	Unable to locate bore - confirmed with PC	10/02/2017																				
GWB4-18	Unable to locate bore - confirmed with PC	22/05/2017																				
GWB4-18	Unable to locate bore - confirmed with PC	24/08/2017																				
GWB4-18	Unable to locate bore	22/11/2017																				
GWB4-18	Unable to locate bore	24/02/2018																				
GWB4-18	Unable to locate bore	23/05/2018																				
GWB4-18	Unable to locate bore	29/08/2018																				
GWB4-18	Unable to locate bore	22/11/2018																				
GWB4-18	Unable to locate bore	27/02/2019																				
GWB4-18	Monitoring ceased in May 2019																					
P80 & P20 Values (calculated from baseline data)																						
P80			0.64	6.98																		
P20			0.25	6.33																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1359		20/02/2013	0.15	7.18																		
BH1359	No access																					
BH1359		29/07/2013	0.80	6.68																		
BH1359		15/01/2014	0.40	6.10																		

GWB4-18

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB4-21		22/08/2016	**4.68**	**6.97**	18.93	651	2.57	0.50	1320	31	783	82.0	64.9	120.0	0.011	*0.001*	0.044	*0.005*	0.035	*50*	*50*	*50*
GWB4-21		5/12/2016	**4.72**	**6.75**	24.97																	
GWB4-21		13/02/2017	**5.34**	**6.97**	24.70	689	7.15	1.50	1490	59	879	49.0	68.9	134.0	*0.005*	*0.001*	*0.002*	*0.005*	0.011	*13*	*50*	*50*
GWB4-21		22/05/2017	**5.91**	**6.95**	21.35																	
GWB4-21	Bore destroyed - in the middle of newly constructed drain	24/08/2017																				
GWB4-21	Bore destroyed.	22/11/2017																				
GWB4-21	Bore destroyed	24/02/2018																				
GWB4-21	Bore destroyed	23/05/2018																				
GWB4-21	Bore destroyed	29/08/2018																				
GWB4-21	Bore destroyed	22/11/2018																				
GWB4-21	Bore destroyed	27/02/2019																				
GWB4-21	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80			4.56	8.13																		
P20			0.88	7.10																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ69		19/02/2013	0.32	9.07																		
PZ69		15/05/2013	1.25	7.51																		
PZ69		3/09/2013	4.75	7.41																		
PZ69		14/01/2014	4.44	6.63																		

GWB4-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

Note: This bore is not part of a bore pair

GWB5-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB5-01		19/08/2016	29.20	**7.90**	19.93	2020	6.26	5.70	10567	**2094**	5870	201.0	**385.0**	**1186.0**	**0.016**	*0.001*	**0.005**	*0.001*	0.005	*25*	*25*	*50*
GWB5-01		30/11/2016	30.40	**7.00**	20.53																	
GWB5-01		14/02/2017	26.80	**7.01**	26.06	2040	8.69	7.10	9724	**2097**	5930	183.0	**351.0**	**1116.0**	0.001	*0.001*	**0.001**	*0.001*	*0.005*	*25*	*50*	*50*
GWB5-01		26/05/2017	28.80	**7.11**	20.28																	
GWB5-01	Weather fine.	15/08/2017	28.60	**7.96**	17.33	1840	4.62	5.96	8492	**2232**	5342	169.0	**353.0**	**1092.0**	**0.013**	*0.001*	**0.003**	*0.001*	**0.008**	*25*	*50*	*50*
GWB5-01	Weather fine.	27/11/2017	30.20	**7.15**	20.16																	
GWB5-01	Rain.	23/02/2018	27.70	7.20	20.98	2100	5.83	6.48	9034	**2124**	5265	173.7	**333.2**	**1059.8**	*0.003*	*0.001*	**0.019**	*0.001*	**0.069**	*25*	*50*	*50*
GWB5-01	Weather fine.	28/05/2018	29.30	7.58	20.03																	
GWB5-01	Weather fine.	24/08/2018	28.40	7.58	19.33	1760	3.33	5.42	9368	**2463**	5596	185.1	**374.0**	**1077.8**	**0.007**	*0.001*	**0.844**	*0.001*	**0.037**	*30*	*250*	**250**
GWB5-01	Weather fine.	13/11/2018	28.20	7.20	19.59																	
GWB5-01	Odour. Weather fine.	19/02/2019	28.80	**9.95**	23.42	1880	5.23	6.21	9680	**2254**	5810	170.8	**359.8**	**1060.0**	*0.005*	*0.001*	**0.010**	*0.001*	**0.089**	*30*	*100*	*50*
GWB5-01	Weather, fine.	19/06/2019	30.20	**7.14**	19.38																	
GWB5-01	Bore damaged, unable to sample.	23/08/2019																				
GWB5-01	Replacement bore recently installed. Water overflowing from top of bore pipe, which is flush with current ground level.	22/11/2019	24.80	**6.12**	22.67																	
GWB5-01	Water level in bore higher than ground surface. Bore repair in progress, pipe not yet extended to full height. No hydrosleeve installed at this bore. Weather, fine.	18/02/2020	26.00	**6.55**	25.37	980	1.05	2.33	8787	**3270**	4862	151.0	**478.0**	**1082.0**	*0.003*	*0.001*	**0.183**	*0.001*	**0.210**	*30*	*100*	*50*
GWB5-01	Weather fine.	25/05/2020	24.70	**6.23**	21.31																	
GWB5-01	Weather, fine.	24/08/2020	26.80	**7.14**	18.83	1510	2.06	2.03	8390	**3060**	5390	157.9	**443.2**	**1120.0**	*0.003*	*0.001*	**1.480**	*0.001*	**0.083**	*30*	*100*	*50*
GWB5-01	Weather, fine.	1/02/2021	24.20	7.30	26.16	1330	7.81	3.42	9614	**2901**	4997	154.0	**452.0**	**1097.0**	*0.003*	*0.001*	*0.001*	*0.001*	0.004	*30*	**730**	**300**

GWB5-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			32.24	7.73		2724	26.26	11.20	10809	1041	6467	205.6	288.9	1019.7	0.007	0.001	0.001	0.001	0.008	30	626	238
P20			13.25	7.15																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ71		20/02/2013	7.28	7.39																		
PZ71		15/05/2013	16.25	7.23																		
PZ71		3/09/2013	22.30	7.37																		
PZ71		15/01/2014	20.60	7.23																		
Up-gradient (construction) Monitoring																						
GWB5-02	No access - buried / deconstructed																					
GWB5-02		30/11/2016	32.10	7.14	21.61																	
GWB5-02		16/02/2017	32.60	7.13	22.51	2700	27.10	11.00	10574	939	6481	203.0	290.0	1079.0	*0.005*	*0.001*	*0.001*	*0.001*	*0.005*	*25*	*50*	*50*
GWB5-02		26/05/2017	32.20	7.23	22.69																	
GWB5-02	Weather fine.	10/08/2017	33.40	8.11	18.33	2460	25.00	11.40	10161	783	6018	195.0	279.0	1019.0	0.011	*0.001*	0.001	*0.001*	0.004	*25*	*50*	*50*
GWB5-02	Weather fine.	27/11/2017	32.70	7.16	21.33																	
GWB5-02	Rain.	23/02/2018	32.30	7.35	21.84	3000	29.25	11.33	10672	515	6223	207.4	268.5	1020.2	0.007	*0.001*	*0.001*	*0.001*	0.008	*25*	*50*	*50*
GWB5-02	Overcast.	28/05/2018	31.80	7.40	20.80																	
GWB5-02	Weather fine.	24/08/2018	31.80	7.68	19.28	2740	22.00	10.50	10935	918	6446	212.9	296.6	1006.8	0.004	*0.001*	*0.001*	*0.001*	*0.001*	*30*	*250*	*250*
GWB5-02	Weather fine.	13/11/2018	32.20	7.32	20.33																	
GWB5-02	Weather fine.	19/02/2019	32.40	6.93	27.10	2670	23.50	10.20	10900	816	6480	188.8	269.8	1001.9	*0.005*	*0.001*	*0.001*	*0.001*	0.062	*30*	470	120
GWB5-02	Slight odour. Weather, fine.	19/06/2019	31.40	7.81	20.29																	

GWB5-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB5-02	Weather fine.	23/08/2019	28.50	7.75	17.47	2642	18.00	8.69	9305	1064	5821	202.1	287.4	988.1	*0.003*	*0.001*	*0.001*	*0.001*	0.007	*30*	620	440
GWB5-02	Weather fine.	22/11/2019	29.60	7.58	21.85																	
GWB5-02	Bore inundated with surface water. Unable to monitor.	18/02/2020																				
GWB5-02	Weather fine.	25/05/2020	28.10	7.34	20.52																	
GWB5-02	Weather, fine.	24/08/2020	26.20	7.46	17.22	2330	13.45	8.49	8200	1107	5200	185.7	273.5	894.5	0.005	*0.001*	*0.001*	*0.001*	0.003	*30*	630	110
GWB5-02	Weather, fine.	1/02/2021	23.70	7.71	24.16	2245	16.90	8.99	9878	1008	5220	181.0	284.0	917.0	*0.003*	*0.001*	*0.001*	*0.001*	0.005	140	680	220
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ72		20/02/2013	0.14	7.11																		
PZ72		15/05/2013	0.575	7.84																		
PZ72		3/09/2013	6.21	7.82																		
PZ72		15/01/2014	8.75	6.94																		

GWB5-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB5-03	Can't access - need key - photo taken																					
GWB5-03		30/11/2016	**39.30**	**6.73**	24.27																	
GWB5-03		16/02/2017	**39.50**	**6.77**	24.57	960	1.56	**3.10**	3517	**1572**	**2550**	88.0	200.0	335.0	*0.005*	*0.001*	*0.001*	*0.001*	*0.005*	*25*	*50*	*50*
GWB5-03		26/05/2017	**38.50**	**6.87**	22.88																	
GWB5-03	Weather fine.	15/08/2017	**39.80**	7.43	20.93	820	**28.90**	0.60	**14915**	40	**6746**	**105.0**	**1726.0**	**961.0**	**0.010**	*0.001*	0.001	*0.001*	0.009	**140**	*50*	*50*
GWB5-03	Weather fine.	27/11/2017	**39.50**	**6.82**	22.48																	
GWB5-03	Rain.	23/02/2018	**39.10**	**6.66**	21.80	**1100**	**29.70**	0.87	**14766**	33	**6542**	**106.8**	**1699.2**	**963.1**	0.002	*0.001*	*0.001*	*0.001*	0.015	*25*	*50*	*50*
GWB5-03	Weather fine.	28/05/2018	**39.80**	**6.97**	21.48																	
GWB5-03	Weather fine.	24/08/2018	**41.60**	**6.71**	19.91	860	**30.60**	0.95	**16585**	46	**7218**	**119.5**	**1912.9**	**993.1**	0.006	*0.001*	*0.001*	*0.001*	0.010	**160**	**250**	**250**
GWB5-03	Weather fine.	13/11/2018	**39.30**	**6.77**	22.23																	
GWB5-03	Odour. Weather fine.	19/02/2019	**39.20**	**8.47**	23.58	752	**31.20**	1.20	**16100**	66	**6800**	**104.5**	**1822.0**	**912.9**	*0.005*	*0.001*	*0.001*	*0.001*	**0.090**	*30*	*100*	*50*
GWB5-03	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			18.48	7.72		1060	4.92	2.88	3777	1551	2543	95.0	231.1	346.0	0.008	0.001	0.004	0.001	0.049	30	100	50
P20			7.75	7.23																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
GBH110		21/02/2013	28.40	7.14																		
GBH110		15/05/2013	28.60	7.14																		
GBH110		4/09/2013	22.80	7.46																		
GBH110		14/01/2014	25.30	7.25																		

GWB5-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB5-04		19/08/2016	11.10	8.02	21.99	980	1.72	2.20	3777	1533	2542	95.0	224.0	346.0	0.011	*0.001*	0.006	*0.001*	0.007	*25*	*25*	*50*
GWB5-04		30/11/2016	12.20	7.21	21.86																	
GWB5-04		16/02/2017	10.90	7.33	25.04	840	31.20	1.40	14475	91	6684	106.0	1607.0	963.0	*0.005*	*0.001*	*0.001*	*0.001*	*0.005*	290	*50*	*50*
GWB5-04		26/05/2017	14.00	7.29	22.95																	
GWB5-04	Weather fine.	15/08/2017	13.40	8.03	22.18	1060	3.05	2.83	3321	1551	2543	90.8	215.0	335.0	0.008	*0.001*	0.001	*0.001*	0.002	*25*	*50*	*50*
GWB5-04	Weather fine.	27/11/2017	15.60	7.52	22.99																	
GWB5-04	Rain.	23/02/2018	11.00	7.25	21.88	1200	2.34	2.96	2779	1440	2116	77.4	194.3	275.8	0.001	*0.001*	0.004	*0.001*	0.039	*25*	*50*	*50*
GWB5-04	Weather fine.	28/05/2018	13.40	7.34	21.26																	
GWB5-04	Weather fine.	24/08/2018	12.10	7.43	19.41	1000	1.75	2.88	3262	1556	2447	88.4	231.1	306.5	*0.003*	*0.001*	0.004	*0.001*	0.049	*30*	*250*	*250*
GWB5-04	Weather fine.	13/11/2018	10.40	7.39	20.40																	
GWB5-04	Weather fine.	19/02/2019	9.15	8.93	23.79	980	4.92	1.42	2620	1176	1860	63.7	173.5	225.0	*0.005*	*0.001*	*0.001*	*0.001*	0.096	*30*	*100*	*50*
GWB5-04	Monitoring ceased in May 2019.																					
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ73		21/02/2013	5.17	7.40																		
PZ73		15/05/2013	4.63	7.16																		
PZ73		4/09/2013	5.65	8.64																		
PZ73		14/01/2014	4.91	7.27																		

GWB8-04

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB8-04		23/08/2016	0.45	5.72	19.46	5	0.42	0.10	146	47	75	0.7	1.2	4.5	0.082	*0.001*	*0.001*	*0.001*	0.011	*25*	*50*	*50*
GWB8-04		30/11/2016	1.00	5.61	24.83																	
GWB8-04		16/02/2017	0.91	5.67	25.01	50	1.39	0.30	366	36	133	3.3	5.2	11.1	0.021	*0.001*	*0.001*	*0.001*	0.054	*25*	*50*	*50*
GWB8-04		29/05/2017	0.92	5.72	21.97																	
GWB8-04	Weather fine.	17/08/2017	0.92	**6.39**	20.71	45	0.83	0.60	241	16	147	1.1	6.3	12.2	0.036	*0.001*	*0.001*	*0.001*	0.012	*25*	*50*	*50*
GWB8-04	Weather fine.	27/11/2017	0.66	5.74	23.66																	
GWB8-04	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80				5.76																		
P20				5.12																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1231		26/02/2013		5.0																		
BH1231		2/07/2013		5.6																		
BH1231		18/09/2013		5.2																		
BH1231		Dec-13		6.0																		

Note: This bore is not part of a bore pair

GWB8-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB8-07	Sample disturbed due to double dipping HydraSleeve	23/08/2016	4.05	**5.54**	20.10	*3*	0.42	0.10	966	981	636	14.0	83.7	143.0	1.659	*0.001*	0.110	*0.001*	0.175	*25*	*50*	*50*
GWB8-07		30/11/2016	12.10	4.58	23.37																	
GWB8-07		16/02/2017	11.60	5.08	26.52	45	2.81	4.80	3221	2670	2230	32.0	159.0	407.0	0.196	*0.001*	*0.001*	*0.001*	0.077	*25*	*50*	*50*
GWB8-07		29/05/2017	7.46	5.33	21.02																	
GWB8-07	Weather fine.	17/08/2017	11.80	**6.12**	20.59	70	5.76	9.74	3252	2514	2092	32.3	140.7	382.3	0.104	*0.001*	0.001	*0.001*	0.112	*25*	*50*	*50*
GWB8-07	Weather fine.	27/11/2017	6.86	**5.81**	26.68																	
GWB8-07	Overcast.	26/02/2018	7.45	4.84	23.24	200	3.13	5.78	1774	1654	1325	22.9	100.9	251.6	3.694	0.002	0.162	0.006	0.437	*25*	*50*	*50*
GWB8-07	Overcast	28/05/2018	3.93	**5.78**	20.49																	
GWB8-07	Weather fine.	23/08/2018	5.08	5.05	19.53	40	0.79	4.60	1051	1333	806	14.3	92.4	189.3	0.404	*0.001*	*0.001*	*0.001*	0.214	*30*	*250*	*250*
GWB8-07	Weather fine.	13/11/2018	4.96	5.39	21.64																	
GWB8-07	Overcast.	20/02/2019	11.80	5.16	21.17	110	8.28	20.91	2927	2575	2158	32.5	144.7	395.8	0.109	*0.001*	*0.001*	*0.001*	0.075	98	*50*	*50*
GWB8-07	Overcast.	28/06/2019	3.75	**6.08**	19.50																	
GWB8-07	Weather fine.	22/08/2019	3.09	5.30	21.22	28	1.63	0.78	571	850	507	12.9	45.9	93.8	0.146	*0.001*	*0.001*	*0.001*	0.076	*30*	*100*	*50*
GWB8-07	Weather fine.	21/11/2019	10.60	5.12	24.09																	
GWB8-07	Weather, fine.	21/02/2020	8.03	**5.80**	22.32	110	2.85	4.93	2060	1813	1394	28.3	93.2	246.6	0.020	*0.001*	0.002	*0.001*	0.019	*30*	260	*50*
GWB8-07	Overcast.	20/05/2020	3.58	5.25	20.91																	
GWB8-07	Weather, fine.	24/08/2020	2.37	**6.29**	20.51	199	*0.50*	13.54	573	528	342	8.7	25.7	55.2	0.044	*0.001*	0.001	*0.001*	0.028	*30*	270	*50*
GWB8-07	Weather, fine.	26/02/2021	6.20	**5.83**	22.63	85	3.32	1.15	1514	1362	1089	19.1	73.4	198.4	0.006	*0.001*	*0.001*	*0.001*	0.053	*30*	*100*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80				5.48																		
P20				4.52																		

GWB8-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB8-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1234		28/02/2013		5.6																		
BH1234		4/07/2013		4.1																		
BH1234		18/09/2013		5.4																		
BH1234		Dec-13		4.8																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB8-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB8-08	Bore could not be located at the provided GPS point																					
GWB8-08		30/11/2016	11.30	5.61	23.74																	
GWB8-08		16/02/2017	10.50	5.70	28.24	120	1.66	0.20	1625	6084	1811	44.0	293.0	718.0	0.030	*0.001*	0.001	*0.001*	0.213	850	*50*	*50*
GWB8-08		29/05/2017	10.10	5.87	20.96																	
GWB8-08	Weather fine.	17/08/2017	10.40	**6.68**	20.72	110	3.85	2.18	1444	5457	1604	45.7	288.5	703.0	*0.001*	*0.001*	*0.001*	*0.001*	0.210	*25*	*50*	*50*
GWB8-08	Weather fine.	27/11/2017	10.20	6.00	22.58																	
GWB8-08	Overcast.	26/02/2018	9.49	5.82	24.83	400	0.92	0.79	1242	5110	1496	45.0	279.0	662.1	0.000	*0.001*	*0.001*	*0.001*	0.212	54	*50*	*50*
GWB8-08	Weather fine.	28/05/2018	10.30	**6.07**	21.14																	
GWB8-08	Weather fine.	23/08/2018	10.70	5.99	19.40	170	0.30	0.79	1283	5587	1605	49.7	304.0	688.9	0.020	*0.001*	0.004	*0.001*	0.137	*30*	*250*	*250*
GWB8-08	Weather fine.	13/11/2018	9.49	5.94	21.21																	
GWB8-08	Weather fine.	20/02/2019	10.40	5.79	21.06	135	0.17	0.91	1307	5333	1541	47.7	293.7	681.8	0.009	*0.001*	*0.001*	*0.001*	0.184	*30*	*50*	*50*
GWB8-08	Weather, fine.	28/06/2019	10.40	5.95	19.84																	
GWB8-08	Weather fine.	22/08/2019	9.11	5.99	21.74	117	1.55	2.59	1143	5118	1444	48.7	267.0	629.0	*0.003*	*0.001*	*0.001*	*0.001*	0.058	*30*	330	*50*
GWB8-08	Weather fine.	21/11/2019	8.93	5.97	28.60																	
GWB8-08	Weather fine.	21/02/2020	9.27	5.76	22.70	130	1.26	0.14	1161	4966	1354	46.9	264.9	597.0	*0.003*	*0.001*	0.001	*0.001*	0.101	*30*	280	*50*
GWB8-08	Weather fine.	20/05/2020	8.32	5.73	20.60																	
GWB8-08	Weather, fine.	24/08/2020	9.32	**6.18**	20.68	195	0.48	0.58	1110	4440	1500	46.9	254.4	614.5	*0.003*	*0.001*	*0.001*	*0.001*	0.083	*30*	660	330
GWB8-08	Weather, fine.	26/02/2021	8.53	5.94	23.24	71	1.09	0.43	1100	4847	1291	47.2	244.7	543.2	0.007	*0.001*	*0.001*	*0.001*	0.087	*30*	*100*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80				6.02																		
P20				5.00																		

GWB8-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB8-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1235		28/02/2013		5.4																		
BH1235		4/07/2013		6.2																		
BH1235		18/09/2013		4.4																		
BH1235		Dec-13		5.9																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB8-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB8-14		23/08/2016	1.94	6.11	21.12	14	0.21	0.10	652	90	26	13.0	5.8	42.8	0.006	*0.001*	0.005	*0.001*	0.012	*25*	*50*	*50*
GWB8-14		1/12/2016	1.98	5.45	22.48																	
GWB8-14		17/02/2017	2.04	5.33	24.97	22	0.42	0.30	580	123	342	15.0	4.0	36.3	*0.005*	*0.001*	*0.001*	*0.001*	0.019	*25*	*50*	*50*
GWB8-14		30/05/2017	2.22	5.60	21.87																	
GWB8-14	Weather fine.	17/08/2017	2.09	6.30	22.07	25	4.52	1.46	650	100	341	13.2	3.9	36.3	0.010	*0.001*	*0.001*	*0.001*	0.018	*25*	*50*	*50*
GWB8-14	Overcast.	28/11/2017	2.19	5.79	21.65																	
GWB8-14	Fine.	26/02/2018	1.89	5.62	24.90	60	1.70	0.76	539	95	310	13.1	3.5	31.9	0.012	*0.001*	*0.001*	*0.001*	0.077	180	120	*50*
GWB8-14	Bore could not be located, possibly removed/destroyed.	28/05/2018																				
GWB8-14	Bore could not be located, possibly removed/destroyed.	23/08/2018																				
GWB8-14	Bore could not be located.	14/11/2018																				
GWB8-14	Bore could not be located.	20/02/2019																				
GWB8-14	Bore could not be located.	27/06/2019																				
GWB8-14	Bore could not be located.	22/08/2019																				
GWB8-14	Unable to locate bore.	21/11/2019																				
GWB8-14	Unable to locate bore.	21/02/2020																				
GWB8-14	Unable to locate bore.	20/05/2020																				
GWB8-14	Unable to locate bore.	24/08/2020																				
GWB8-14	Bore damaged, unable to sample.	26/02/2021																				
P80 & P20 Values (calculated from baseline data)																						
P80			0.51	6.20		68	8.02	0.76	136	29	67	5.9	3.6	6.2	0.016	0.001	0.002	0.001	0.029	65	402	188
P20			0.38	5.32																		

GWB8-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB8-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1241		26/02/2013		3.8																		
BH1241		1/07/2013		5.3																		
BH1241		18/09/2013		5.6																		
BH1241		Dec-13		5.3																		
Up-gradient (construction) Monitoring																						
GWB8-17	No access - outside of project boundary	26/08/2016																				
GWB8-17	No access	29/11/2016																				
GWB8-17		23/02/2017	0.41	6.12	22.94	38	0.54	0.14	161	24	62	6.1	2.5	5.3	*0.025*	*0.001*	*0.005*	*0.001*	0.004	*25*	*50*	*50*
GWB8-17	Weather fine.	17/08/2017	0.49	6.90	21.21	60	13.20	0.58	99	4	67	4.8	2.9	6.1	0.014	*0.001*	0.001	*0.001*	0.011	80	130	*50*
GWB8-17	Overcast.	28/11/2017	0.54	6.03	20.94																	
GWB8-17	Fine.	26/02/2018	0.42	5.86	24.32	70	0.82	0.11	142	8	65	4.2	3.3	6.3	0.008	*0.001*	*0.001*	*0.001*	0.030	*25*	*50*	*50*
GWB8-17	Weather fine.	28/05/2018	0.58	6.34	20.04																	
GWB8-17	Weather fine.	23/08/2018	0.48	6.33	17.30	80	8.96	0.70	93	4	68	4.8	3.7	5.5	0.014	*0.001*	*0.003*	*0.001*	0.004	*110*	*250*	*250*
GWB8-17	Odour. Weather fine.	14/11/2018	0.43	6.08	19.94																	
GWB8-17	Weather fine.	20/02/2019	0.38	5.90	22.25	36	0.48	0.10	114	*0*	59	3.7	2.3	5.6	0.017	*0.001*	*0.001*	*0.001*	0.021	*30*	*50*	*50*
GWB8-17	Drizzle.	27/06/2019	0.41	6.10	19.47																	
GWB8-17	Ant nest in sample, odour present. Weather fine.	22/08/2019	0.39	6.03	21.40	42	3.21	0.77	87	2	63	4.5	3.6	5.3	0.016	*0.001*	*0.001*	*0.001*	0.026	69	440	210
GWB8-17	Weather fine.	21/11/2019	0.37	6.05	23.57																	
GWB8-17	Ants in sample. Weather, fine.	21/02/2020	3.14	5.86	23.26	60	2.72	1.29	82	20	66	6.3	5.2	7.5	0.010	*0.001*	*0.001*	*0.001*	0.067	*30*	810	210
GWB8-17	Overcast.	20/05/2020	0.48	6.22	20.91																	
GWB8-17	Weather, fine.	24/08/2020	0.46	6.07	21.01	46	4.26	0.62	92	13	73	5.0	2.8	6.1	0.011	*0.001*	*0.001*	*0.001*	0.022	*30*	240	*50*

GWB8-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB8-17	Weather, fine.	1/02/2021	0.53	6.79	22.60	110	24.20	2.60	220	22	61	11.8	3.6	6.3	0.012	*0.001*	0.002	*0.001*	0.045	*30*	610	100
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1244	Site inaccessible																					
BH1244		8/07/2013	0.41	5.4	19.40	28	0.60	0.03	72	30	62	3.0	2.0	3.0	0.010	*0.000*	*0.001*	*0.001*	*0.003*	*50*	*50*	*50*
BH1244		24/09/2013	0.29	5.3	18.60	24	0.30	0.02	76	32	64	3.0	2.0	3.0	0.010	*0.000*	0.001	*0.001*	*0.003*	*50*	*50*	*50*
BH1244		17/12/2013	0.36	5.3	20.00	27	0.30	0.02	70	30	60	2.0	1.0	4.0	0.010	*0.000*	*0.001*	*0.001*	0.006	*50*	*50*	*50*

GWB8-16

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB8-16		26/08/2016	0.29	**5.83**	18.03	16	0.26	0.00	41	**32**	43	**3.6**	3.0	3.8	0.024	**0.001**	**0.120**	*0.001*	**0.020**	*25*	*50*	*50*
GWB8-16		1/12/2016	0.28	**6.09**	22.50																	
GWB8-16		17/02/2017	0.27	**6.02**	30.13	24	0.23	0.00	41	**31**	29	**5.6**	2.4	3.5	*0.005*	**0.001**	*0.001*	*0.001*	*0.005*	*25*	*50*	*50*
GWB8-16	In-situ data download error.	30/05/2017																				
GWB8-16	Weather fine.	24/08/2017	**0.40**	**6.84**	17.83	40	**1.10**	**0.25**	56	**27**	49	**7.0**	3.4	**5.2**	0.005	**0.001**	**0.001**	*0.001*	**0.032**	*25*	*50*	*50*
GWB8-16	Overcast.	28/11/2017	0.29	**5.95**	21.04																	
GWB8-16	Fine.	26/02/2018	0.31	**5.84**	24.50	26	0.15	**0.77**	**92**	**35**	42	**3.3**	2.6	3.6	*0.003*	**0.001**	**0.002**	*0.001*	0.003	*25*	*50*	*50*
GWB8-16	Weather fine.	28/05/2018	0.31	5.62	20.30																	
GWB8-16	Weather fine.	23/08/2018	0.30	**5.89**	16.36	35	0.02	**0.29**	58	**28**	55	**3.1**	3.0	3.8	0.012	**0.001**	**0.003**	*0.001*	0.002	*30*	**250**	**250**
GWB8-16	Suspended red/brown particles in water column. Weather fine.	14/11/2018	0.35	**5.95**	19.81																	
GWB8-16	Overcast.	20/02/2019	0.33	**6.07**	22.56	**46**	*0.01*	**0.53**	**90**	**26**	30	**3.6**	2.6	4.4	0.007	**0.001**	**0.005**	*0.001*	**0.018**	*30*	*50*	*50*
GWB8-16	Overcast.	27/06/2019	**0.54**	**6.32**	20.36																	
GWB8-16	Weather fine.	22/08/2019	**0.39**	**5.86**	22.22	32	**1.27**	**0.21**	**94**	**25**	59	**5.0**	3.3	**5.7**	0.006	**0.001**	*0.001*	*0.001*	**0.018**	*30*	*100*	*50*
GWB8-16	Weather fine.	21/11/2019	0.29	**6.02**	25.51																	
GWB8-16	Orange colouration. Weather, fine.	21/02/2020	**0.56**	**6.06**	23.19	**65**	0.31	**0.50**	82	**29**	**68**	**5.9**	3.2	**6.2**	**0.051**	**0.001**	**0.002**	*0.001*	**0.073**	*30*	**250**	*50*
GWB8-16	Overcast.	20/05/2020	**0.47**	**6.07**	21.15																	
GWB8-16	Weather, fine.	24/08/2020	0.28	**5.85**	20.57	29	**0.43**	**0.34**	44	**32**	49	**3.5**	2.2	4.0	*0.003*	**0.001**	*0.001*	*0.001*	**0.024**	*30*	*100*	*50*
GWB8-16	Weather, fine.	1/02/2021	**0.65**	**6.96**	23.86	40	**2.73**	**0.34**	**379**	**62**	**72**	**11.8**	3.9	**8.9**	0.007	**0.001**	*0.001*	*0.001*	0.006	*30*	**210**	*50*
P80 & P20 Values (calculated from baseline data)																						
P80			0.37	5.68		40	0.40	0.09	87	24	64	3.0	4.0	5.0	0.040	0.000	0.001	0.001	0.013	194	116	50
P20			0.26	5.28																		

GWB8-16

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB8-16

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1243		4/03/2013	0.36	5.3	18.90	27	0.40	0.05	99	24	74	3.0	4.0	5.0	*0.005*	*0.000*	*0.001*	*0.001*	*0.003*	*50*	140	*50*
BH1243		8/07/2013	0.45	5.4	19.00	30	0.20	0.02	84	24	63	3.0	4.0	4.0	*0.005*	*0.000*	*0.001*	*0.001*	*0.003*	*50*	*50*	*50*
BH1243		24/09/2013	0.32	5.3	18.40	21	0.20	0.01	91	24	65	3.0	3.0	4.0	0.020	*0.000*	*0.001*	*0.001*	*0.006*	*50*	*50*	*50*
BH1243		17/12/2013	0.35	5.3	19.70	31	0.40	0.03	77	25	60	3.0	4.0	5.0	0.020	*0.000*	*0.001*	*0.001*	*0.012*	*50*	*50*	*50*
Up-gradient (construction) Monitoring																						
GWB8-15		23/08/2016	0.27	7.10	20.68	68	5.84	1.00	57	6	31	5.6	13.0	5.9	1.444	*0.001*	0.000	0.000	0.240	*25*	*50*	*50*
GWB8-15		1/12/2016	0.44	6.38	22.95																	
GWB8-15	Bore pipe broken below ground level. Unable to deploy hydrasleeve to collect sample.	17/02/2017																				
GWB8-15	Bore pipe broken below ground level. Unable to deploy hydrasleeve to collect sample.	30/05/2017																				
GWB8-15	Bore pipe broken below ground level. Unable to deploy hydrasleeve to collect sample.	17/08/2017																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	28/11/2017																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	26/02/2018																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	28/05/2018																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	23/08/2018																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	14/11/2018																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	20/02/2019																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	27/06/2019																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	22/08/2019																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	21/11/2019																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	21/02/2020																				

GWB8-16

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	20/05/2020																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	24/08/2020																				
GWB8-15	Bore pipe broken below ground, unable to obtain sample.	26/02/2021																				
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1242		4/03/2017	0.27	5.1	19.50	43	0.30	0.06	59	10	48	2.0	3.0	4.0	0.040	*0.000*	*0.001*	*0.001*	*0.003*	320	100	*50*
BH1242		8/07/2013	0.33	5.2	18.70	38	0.30	0.05	56	12	45	2.0	3.0	4.0	0.040	*0.000*	*0.001*	*0.001*	*0.003*	940	170	*50*
BH1242		24/09/2013	0.22	5.4	18.60	36	0.20	0.14	52	14	45	3.0	2.0	4.0	0.030	*0.000*	0.001	*0.001*	0.014	110	*50*	*50*
BH1242		17/12/2013	0.26	5.5	20.00	37	0.30	0.04	55	13	46	2.0	2.0	4.0	0.030	*0.000*	*0.001*	*0.001*	0.013	110	*50*	*50*

GWB8-22

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient monitoring																						
GWB8-22		26/08/2016	2.68	6.69	19.56	190	3.40	0.20	573	32	436	3.0	76.7	28.4	0.032	0.001	0.002	0.001	0.016	140	140	50
GWB8-22		1/12/2016	2.56	6.66	24.93																	
GWB8-22		17/02/2017	2.38	6.71	29.21	280	1.19	0.50	660	39	464	4.3	68.9	28.5	0.005	0.001	0.001	0.001	0.005	25	50	50
GWB8-22		24/05/2017	2.82	6.84	22.54																	
GWB8-22	Weather fine.	17/08/2017	2.59	7.41	21.85	370	11.70	1.42	685	10	438	3.4	78.6	29.7	0.014	0.001	0.001	0.001	0.011	190	50	50
GWB8-22	Overcast.	28/11/2017	2.61	6.60	23.33																	
GWB8-22	Fine.	26/02/2018	2.56	7.05	24.00	340	1.42	0.68	671	45	433	3.5	75.9	29.4	0.003	0.001	0.001	0.001	0.014	25	50	50
GWB8-22	Weather fine.	29/05/2018	2.36	6.80	20.85																	
GWB8-22	Weather fine.	22/08/2018	2.40	6.67	19.64	220	0.30	0.12	638	84	448	1.6	41.5	24.4	0.003	0.001	0.001	0.001	0.001	30	250	250
GWB8-22	Overcast.	14/11/2018	2.25	6.57	20.87																	
GWB8-22	Weather fine.	20/02/2019	2.26	6.62	23.45	255	5.37	0.77	547	56	419	2.5	35.3	22.5	0.005	0.001	0.001	0.001	0.001	30	50	50
GWB8-22	Weather, fine.	27/06/2019	2.49	6.68	19.72																	
GWB8-22	Replicate sleeve drawn twice. Strong odour. Weather fine.	21/08/2019	2.28	6.64	20.13	239	2.31	0.38	596	56	469	3.5	44.1	25.3	0.008	0.001	0.001	0.001	0.002	30	100	50
GWB8-22	Weather fine.	21/11/2019	2.39	6.62	22.62																	
GWB8-22	Weather fine.	21/02/2020	2.28	6.60	25.73	260	1.26	0.72	515	46	417	2.9	41.2	22.4	0.003	0.001	0.001	0.001	0.006	30	100	50
GWB8-22	Weather fine.	20/05/2020	2.36	6.93	20.37																	
GWB8-22	Weather, fine.	24/08/2020	2.36	6.65	19.02	230	0.47	0.31	617	145	477	2.0	40.8	25.5	0.003	0.001	0.001	0.001	0.011	30	220	50
GWB8-22	Weather, fine.	26/02/2021	2.33	6.77	25.34	256	8.13	0.83	590	68	392	4.4	35.7	20.1	0.008	0.001	0.001	0.001	0.008	64	490	50
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			2.80	6.62		232	3.02	0.34	794	11	420	4.8	73.9	59.6	0.016	0.001	0.001	0.001	0.0519	184	100	50
P20			2.62	6.21																		

GWB8-22

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB8-22

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1249																						
BH1249																						
BH1249																						
BH1249																						
Up-gradient (construction) Monitoring																						
GWB8-23		26/08/2016	2.64	6.64	20.26	270	2.96	0.20	611	*3*	372	2.8	56.2	48.0	0.006	*0.001*	0.001	*0.001*	0.004	370	*50*	*50*
GWB8-23		1/12/2016	2.71	6.28	24.19																	
GWB8-23		17/02/2017	2.63	6.37	28.65	200	0.53	0.20	819	8	430	5.1	70.6	61.2	*0.005*	*0.001*	*0.001*	*0.001*	*0.005*	180	*50*	*50*
GWB8-23		24/05/2017	2.86	6.61	22.22																	
GWB8-23	Weather fine.	17/08/2017	2.72	7.24	22.79	240	3.25	0.30	779	*1*	404	3.5	73.7	58.4	0.013	*0.001*	*0.001*	*0.001*	0.009	200	*50*	*50*
GWB8-23	Overcast.	28/11/2017	2.84	6.33	22.19																	
GWB8-23	Fine.	26/02/2018	2.73	6.95	24.27	230	3.31	0.19	787	8	407	5.6	77.3	59.2	0.050	*0.001*	*0.001*	*0.001*	0.049	170	*50*	*50*
GWB8-23	Weather fine.	29/05/2018	2.90	6.62	19.80																	
GWB8-23	Weather fine.	22/08/2018	2.71	6.58	19.80	170	1.27	0.24	741	11	384	2.7	57.7	53.4	0.016	*0.001*	*0.001*	*0.001*	0.008	81	*250*	*250*
GWB8-23	Overcast.	14/11/2018	2.62	6.16	21.54																	
GWB8-23	Weather fine.	20/02/2019	2.71	6.30	23.00	187	0.72	2.09	790	10	428	3.0	74.7	62.1	*0.003*	*0.001*	*0.001*	*0.001*	0.015	74	*50*	*50*
GWB8-23	Weather, fine.	27/06/2019	2.85	6.62	20.06																	
GWB8-23	Weather fine.	21/08/2019	2.56	6.49	21.07	161	1.43	0.29	690	2	418	3.9	63.2	57.2	*0.003*	*0.001*	*0.001*	*0.001*	0.011	74	*100*	*50*
GWB8-23	Weather fine.	21/11/2019	2.62	6.25	21.75																	
GWB8-23	Weather fine.	21/02/2020	2.56	6.11	24.06	180	0.07	0.11	688	3	397	2.8	51.7	55.0	*0.003*	*0.001*	*0.001*	*0.001*	0.087	*30*	*100*	*50*
GWB8-23	Overcast.	20/05/2020	2.70	6.30	20.91																	

GWB8-22

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB8-23	Weather, fine.	24/08/2020	2.50	6.10	19.98	106	0.28	0.09	696	*0*	417	2.3	41.8	53.4	0.015	*0.001*	*0.001*	*0.001*	0.023	*30*	*100*	*50*
GWB8-23	Weather, fine.	26/02/2021	2.68	6.19	23.02	126	*0.05*	0.53	810	18	391	4.8	50.1	54.4	*0.003*	*0.001*	*0.001*	*0.001*	0.064	*30*	*100*	*50*
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1250																						
BH1250																						
BH1250																						
BH1250																						

GWB8-26

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB8-26	Could not locate; need to slash long grass	26/08/2016																				
GWB8-26		1/12/2016	0.24	**5.82**	22.84																	
GWB8-26		17/02/2017	0.17	**6.77**	32.60	28	5.68	0.80	89	12	32	3.4	2.8	1.9	0.326	*0.001*	*0.001*	*0.001*	*0.005*	*25*	*50*	*50*
GWB8-26		24/05/2017	1.79	**6.91**	21.19																	
GWB8-26	Weather fine.	24/08/2017	0.33	**7.20**	17.44	60	2.79	0.23	38	18	28	1.5	32.2	2.4	0.240	*0.001*	0.001	*0.001*	*0.009*	*25*	*50*	*50*
GWB8-26	Overcast.	28/11/2017	0.28	**6.02**	23.23																	
GWB8-26	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80				5.62																		
P20				5.02																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1253		27/03/2013		4.6																		
BH1253		3/07/2013		5.8																		
BH1253		18/09/2013		5.3																		
BH1253		Dec-13		5.5																		

Note: This bore is not part of a bore pair

GWB9-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB9-01	Can't access - residents	26/08/2016																				
GWB9-01	No access	1/12/2016																				
GWB9-01	No access	17/02/2017																				
GWB9-01	No access	24/05/2017																				
GWB9-01	Weather fine. First access.	24/08/2017	0.10	6.08	19.00	15	0.68	0.09	19	3	14	0.5	0.9	2.3	0.659	*0.001*	*0.001*	*0.001*	0.008	*25*	*50*	*50*
GWB9-01	Overcast.	28/11/2017	0.11	5.30	21.57																	
GWB9-01	Probe error. No In-situ data recorded. - EC and pH sampled as lab parameters	22/02/2018	0.16	5.25		20	3.45	0.56	90	10	17	1.7	1.2	3.9	0.357	*0.001*	0.019	*0.001*	0.367	*25*	*50*	*50*
GWB9-01	Weather fine.	29/05/2018	0.14	5.05	20.76																	
GWB9-01	Weather fine.	22/08/2018	0.11	5.35	18.74	6	1.93	0.31	26	8	18	1.5	0.4	1.8	0.502	*0.001*	0.002	*0.001*	0.013	*30*	*250*	*250*
GWB9-01	Overcast	14/11/2018	0.10	5.25	21.13																	
GWB9-01	Weather fine.	20/02/2019	0.13	5.77	21.59	19	4.78	0.75	69	5	16	1.4	1.1	2.0	0.316	*0.001*	0.003	*0.001*	0.122	*30*	*50*	*50*
GWB9-01	Overcast.	27/06/2019	0.11	5.55	18.04																	
GWB9-01	Weather fine.	21/08/2019	0.11	5.09	19.51	7	0.46	0.04	29	3	17	1.8	0.4	2.2	0.507	*0.001*	*0.001*	*0.001*	0.019	*30*	*100*	*50*
GWB9-01	Weather fine.	21/11/2019	0.13	5.35	20.73																	
GWB9-01	Weather fine.	26/02/2020	0.86	4.82	21.48	6	0.18	0.04	246	24	102	8.3	6.6	20.7	0.944	*0.001*	0.004	*0.001*	0.092	*30*	*100*	*50*
GWB9-01	Overcast.	20/05/2020	0.14	5.16	19.31																	
GWB9-01	Weather, fine.	26/08/2020	0.19	5.32	18.06	6	0.80	0.05	85	83	18	6.7	0.8	2.4	0.400	*0.001*	0.004	*0.001*	0.136	*30*	360	*50*
GWB9-01	Weather, fine.	26/02/2021	0.34	5.52	24.40	5	0.49	0.33	147	18	70	3.1	4.0	12.4	0.470	*0.001*	0.016	*0.001*	0.077	*30*	*100*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80				5.64																		

GWB9-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
P20				4.62																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1254		26/02/2013		3.6																		
BH1254		3/07/2013		5.3																		
BH1254		18/09/2013		5.6																		
BH1254		Dec-13		5.7																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB9-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB9-02	Not safe to access	26/08/2016																				
GWB9-02	Not safe to access	1/12/2016																				
GWB9-02	Not safe to access	17/02/2017																				
GWB9-02	First monitoring round.	30/05/2017	0.33	5.45	19.17																	
GWB9-02	Weather fine.	24/08/2017	0.30	6.10	18.18	15	4.05	0.76	53	23	41	0.6	3.4	6.4	0.374	*0.001*	0.002	*0.001*	0.190	*25*	*50*	*50*
GWB9-02	Overcast.	28/11/2017	0.26	5.42	23.04																	
GWB9-02	Overcast.	22/02/2018	0.26	5.23	22.16	30	2.89	0.38	105	30	34	1.0	3.1	6.2	0.265	*0.001*	0.007	*0.001*	0.522	*25*	*50*	*50*
GWB9-02	Weather fine.	29/05/2018	0.31	5.49	21.50																	
GWB9-02	Weather fine.	22/08/2018	0.32	5.70	18.67	10	1.09	0.19	63	19	40	0.5	4.4	8.0	0.318	*0.001*	*0.001*	*0.001*	0.027	210	*250*	*250*
GWB9-02	Overcast	14/11/2018	0.33	5.68	22.91																	
GWB9-02	Overcast.	21/02/2019	0.32	5.67	23.00	10	1.09	0.07	67	36	47	2.0	4.5	7.3	0.449	*0.001*	0.002	*0.001*	0.081	*30*	*100*	*50*
GWB9-02	Overcast.	28/06/2019	0.40	5.96	19.53																	
GWB9-02	Weather fine.	21/08/2019	0.25	5.37	21.20	15	0.70	0.05	30	41	40	2.5	3.1	4.9	0.549	*0.001*	*0.001*	*0.001*	0.013	*30*	*100*	*50*
GWB9-02	Weather fine.	21/11/2019	0.26	5.42	24.17																	
GWB9-02	In-situ parameter data error.	26/02/2020				18	0.66	0.04	96	31	38	5.6	3.0	5.3	0.551	*0.001*	0.001	*0.001*	0.127	*30*	*100*	*50*
GWB9-02	Overcast.	20/05/2020	0.27	5.42	21.34																	
GWB9-02	Weather, fine.	26/08/2020	0.19	5.52	19.60	16	2.00	0.21	75	110	30	1.6	1.6	2.5	0.716	*0.001*	0.002	*0.001*	0.045	*30*	200	*50*
GWB9-02	Weather, fine.	16/02/2021	0.34	5.37	22.35	22	1.47	0.07	15	*2*	49	2.9	2.5	3.6	0.716	*0.001*	0.001	*0.001*	0.227	65	*100*	*50*
P80 & P20 Values (calculated from baseline data)																						
P80				6.82																		
P20				5.06																		

GWB9-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters															
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB9-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1255		27/02/2013		4.1																		
BH1255		3/07/2013		5.9																		
BH1255		18/09/2013		5.7																		
BH1255		Dec-13		8.2																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB9-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																					
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	TSS	TDS	Bicarbonate as CaCo3	Water Hardness as CaCO3	Ammonia	Nitrate	Nitrite	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	Arsenic - Filtered	Chromium - Filtered
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GWB9-03		26/08/2016	0.16	4.94	21.98			*1*					1.35	0.10	20	5	15	1.3	0.4	2.3	1.198	*0.001*	0.004	0.001	0.017		
GWB9-03		2/12/2016	0.12	4.62	25.47																						
GWB9-03		22/02/2017	0.14	4.61	23.10			*1*					1.88	0.07	80	25	15	6.1	0.5	2.1	1.211	*0.001*	*0.005*	*0.001*	0.010		
GWB9-03		30/05/2017	0.13	4.64	20.49																						
GWB9-03	No access due to asbestos risk.	24/08/2017																									
GWB9-03	Overcast.	28/11/2017	0.12	5.03	23.31																						
GWB9-03	Overcast.	22/02/2018	0.12	5.14	23.26	1914	100	20	25	0.423	*0.003*	0.062	5.02	0.52	76	9	19	1.7	4.2	2.4	0.998	*0.001*	0.022	0.001	0.037	0.003	0.001
GWB9-03	Bore could not be accessed in May due to locked gate. Accessed in June.	21/06/2018	0.17	5.08	21.70	98	148	15	18	0.418	*0.003*	0.046	2.41	0.14	16	18	21	4.5	3.8	2.1	0.801	*0.001*	0.004	*0.001*	0.018	*0.001*	0.001
GWB9-03	Weather fine.	22/08/2018	0.13	5.03	19.74	303	125	8	25	0.403	*0.003*	0.049	2.32	0.19	45	8	17	1.6	5.1	3.0	0.815	*0.001*	0.002	0.001	0.021	0.001	0.001
GWB9-03	Lab sample taken. Weather fine.	14/11/2018	0.13	4.99	23.07	136	190	8	23	0.624	*0.003*	0.058	2.27	0.20	137	125	20	1.7	4.2	3.0	1.086	*0.001*	0.001	*0.001*	0.057	0.002	0.001
GWB9-03	Overcast.	21/02/2019	0.17	5.30	24.86	106	184	21	23	4.434	*0.003*	0.053	6.77	0.29	30	4	20	2.7	4.6	2.9	1.006	*0.001*	0.002	*0.001*	0.039	0.001	0.002
GWB9-03	Odour. Drizzle.	25/06/2019	0.11	5.06	19.87	181	148	8	15	1.394	*0.003*	0.058	3.79	0.26	45	32	17	1.7	2.5	2.1	0.755	*0.001*	0.004	*0.001*	0.033	*0.001*	*0.001*
GWB9-03	Slight odour. Weather fine.	23/08/2019	0.19	5.20	22.56	40	206	9	17	0.382	*0.003*	0.061	1.38	0.22	31	19	20	2.7	2.2	2.8	0.822	*0.001*	*0.001*	*0.001*	0.012	0.002	*0.001*
GWB9-03	Yellow-orange colouration. Weather fine.	21/11/2019	0.16	4.75	25.01	64	170	*1*	21	0.477	5.655	0.036	3.55	0.12	19	27	22	1.5	2.6	3.6	0.705	*0.001*	0.003	*0.001*	0.026	0.001	0.001
GWB9-03	Weather fine.	26/02/2020	0.14	5.14	27.36	131	195	16	16	0.062	*0.003*	0.071	1.80	0.13	14	18	19	2.2	2.2	2.5	0.874	*0.001*	0.001	*0.001*	0.170	0.001	0.001
GWB9-03	Overcast.	19/05/2020	0.13	4.69	23.96	41	81	6	15	0.330	*0.003*	0.041	1.29	0.13	15	16	18	1.5	2.1	2.3	0.824	*0.001*	0.039	0.001	0.089	0.001	0.001
GWB9-03	Weather, fine.	26/08/2020	0.11	4.87	20.25			6					1.31	0.16	76	95	15	1.4	1.2	1.4	0.659	*0.001*	0.003	*0.001*	0.036		
GWB9-03	Weather, fine.	16/02/2021	0.15	4.99	23.73			6					1.18	0.11	4	*2*	22	2.8	1.7	2.3	0.869	*0.001*	*0.001*	*0.001*	0.073		
P80 & P20 Values (calculated from baseline data)																											
P80																											
P20																											
Baseline (pre-construction) Monitoring (identifier from pre-construction)																											
BH1256																											
BH1256																											
BH1256																											
BH1256																											

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB9-03

			Laboratory (Type B) Parameters																								
Monitoring Location	Field Notes	Date	Mercury - Filtered	Nickel - Filtered	Iron - Filtered	Manganese - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	BTEX - toluene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b) and (k) flouranthene	Benzo(g,h,i)perylene)	Chrysene	Dibenz(a.h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Sum of reported PAHs
			mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
GWB9-03		26/08/2016					*25*	*50*	*50*																	
GWB9-03		2/12/2016																								
GWB9-03		22/02/2017					*25*	*50*	*50*																	
GWB9-03		30/05/2017																								
GWB9-03	No access due to asbestos risk.	24/08/2017																								
GWB9-03	Overcast.	28/11/2017																								
GWB9-03	Overcast.	22/02/2018	*0.0003*	0.001	1.571	0.057	*25*	*50*	*50*	*5.0*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*1.0*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	Not Detected
GWB9-03	Bore could not be accessed in May due to locked gate. Accessed in June.	21/06/2018	*0.0003*	0.001	1.372	0.033	*30*	*250*	*250*	*0.3*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.5*
GWB9-03	Weather fine.	22/08/2018	*0.0003*	0.002	1.755	0.038	*30*	*250*	*250*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*1.0*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*1.0*
GWB9-03	Lab sample taken. Weather fine.	14/11/2018	*0.0003*	*0.001*	2.088	0.040	*30*	*250*	*250*	*0.3*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.5*
GWB9-03	Overcast.	21/02/2019	*0.0003*	0.001	2.587	0.049	95	420	100	3.1	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.5*
GWB9-03	Odour. Drizzle.	25/06/2019	*0.0003*	*0.001*	1.592	0.028	*30*	*100*	*50*	*0.3*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.3*	*0.1*	*0.1*	*0.5*
GWB9-03	Slight odour. Weather fine.	23/08/2019	*0.0050*	0.013	1.331	0.019	*30*	*100*	*50*	*0.3*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.1*	*0.1*	*0.5*
GWB9-03	Yellow-orange colouration. Weather fine.	21/11/2019	*0.0003*	0.001	1.796	0.026	*30*	*100*	*50*	*0.3*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.5*
GWB9-03	Weather fine.	26/02/2020	*0.0003*	0.002	2.904	0.051	*30*	*100*	*50*	*0.3*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.5*
GWB9-03	Overcast.	19/05/2020	*0.0005*	*0.001*	2.049	0.034	*30*	*100*	*50*	*0.3*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.3*	*0.1*	*0.1*	*0.5*
GWB9-03	Weather, fine.	26/08/2020					*30*	200	*50*																	
GWB9-03	Weather, fine.	16/02/2021					*30*	220	*50*																	
P80 & P20 Values (calculated from baseline data)																										
P80																										
P20																										
Baseline (pre-construction) Monitoring (identifier from pre-construction)																										
BH1256																										
BH1256																										
BH1256																										
BH1256																										

Note: Yet to be determined whether this is an up-gradient or down-gradient l

GWB9-04b

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB9-04b	Could not locate bore	26/08/2016																				
GWB9-04b	Could not locate bore	2/12/2016																				
GWB9-04b	Could not locate bore	22/07/2017																				
GWB9-04b	Could not locate bore	30/05/2017																				
GWB9-04b	No access due to asbestos risk.	24/08/2017																				
GWB9-04b	Could not locate bore	27/11/2017																				
GWB9-04b	Monitoring ceased in February 2018.	22/02/2018																				
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

Note: This bore is not part of a bore pair

GWB9-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB9-08	No access	26/08/2016																				
GWB9-08	No access	2/12/2016																				
GWB9-08	No access	22/02/2017																				
GWB9-08		29/05/2017	1.18	6.41	21.26																	
GWB9-08	Weather fine.	24/08/2017	1.11	7.36	19.89	175	0.62	0.98	52	358	77	16.7	56.8	90.6	0.031	*0.001*	*0.0005*	*0.001*	0.009	*25*	*50*	*50*
GWB9-08	Overcast.	28/11/2017	1.42	6.23	21.72																	
GWB9-08		22/02/2018	1.44	6.39	22.18	160	0.67	2.08	107	596	75	14.0	76.9	126.3	0.034	*0.001*	*0.0005*	*0.001*	0.007	*25*	*50*	*50*
GWB9-08	Weather fine.	29/05/2018	1.52	6.39	20.71																	
GWB9-08	Weather fine.	22/08/2018	1.56	6.76	16.91	165	0.43	1.31	61	585	76	19.6	76.4	115.3	0.027	*0.001*	0.0010	*0.001*	0.019	*30*	*250*	250
GWB9-08	Weather fine.	14/11/2018	1.43	6.32	21.38																	
GWB9-08	Weather fine.	20/02/2019	1.05	6.40	22.26	195	2.03	1.37	88	361	71	13.5	55.4	85.6	0.028	*0.001*	*0.0005*	*0.001*	1.349	*30*	*50*	*50*
GWB9-08	Weather, fine.	27/06/2019	1.34	6.44	18.41																	
GWB9-08	Bore damaged below ground level, unable to sample. Repairs required.	21/08/2019																				
GWB9-08	Bore damaged, unable to sample.	21/11/2019																				
GWB9-08	Bore damaged, unable to sample.	26/02/2020																				
GWB9-08	Bore damaged, unable to sample.	19/05/2020																				
GWB9-08	Bore damaged, unable to sample.	26/08/2020																				
GWB9-08	Bore damaged, unable to sample.	26/02/2021																				
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.24	5.87		20	2.48	0.30	90	14	33	5.3	2.2	3.5	0.502	0.001	0.0005	0.001	0.043	30	376	110
P20			0.20	5.02																		

GWB9-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L

GWB9-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1261		2/04/2013		6.00																		
BH1261		3/07/2013		6.40																		
BH1261		19/09/2013		6.60																		
BH1261		Dec-13		6.30																		
Up-gradient (construction) Monitoring																						
GWB9-07	No access	26/08/2016																				
GWB9-07	No access	2/12/2016																				
GWB9-07	No access	22/02/2017																				
GWB9-07		29/05/2017	0.22	5.04	22.89																	
GWB9-07	Weather fine.	24/08/2017	0.21	5.86	19.51	2	0.62	0.04	47	4	31	1.9	1.6	3.5	0.476	*0.001*	*0.0005*	*0.001*	0.008	*25*	*50*	*50*
GWB9-07	Overcast.	28/11/2017	0.20	5.00	22.93																	
GWB9-07	Overcast.	22/02/2018	0.22	5.15	22.18	30	2.75	0.25	93	16	38	2.1	1.7	3.6	0.360	*0.001*	*0.0005*	*0.001*	0.006	*25*	*50*	*50*
GWB9-07	Weather fine.	29/05/2018	0.23	5.46	21.50																	
GWB9-07	Weather fine.	22/08/2018	0.18	5.22	18.05	12	3.12	0.34	40	4	33	1.6	1.4	3.2	0.525	*0.001*	0.0006	*0.001*	0.010	*30*	*250*	*250*
GWB9-07	Water slightly higher than ground level. Weather fine.	14/11/2018	0.17	5.25	21.50																	
GWB9-07	Weather fine.	20/02/2019	0.20	5.32	23.58	11	2.05	0.24	87	*0*	28	1.7	1.5	3.4	0.437	*0.001*	*0.0005*	*0.001*	0.007	*30*	*50*	*50*
GWB9-07	Water level in bore is above ground level. Sand and small amount of soil in sleeve. Weather, fine.	27/06/2019	0.26	5.87	18.65																	
GWB9-07	Water level in bore higher than ground level. Weather fine.	21/08/2019	0.22	5.02	19.43	9	2.04	0.23	51	*3*	33	6.6	2.1	3.5	0.518	*0.001*	*0.0005*	*0.001*	0.169	*30*	*100*	*50*
GWB9-07	Weather fine.	21/11/2019	0.22	4.98	23.04																	
GWB9-07	Water level in bore pipe higher than ground level. Ants in sample. Weather, fine.	26/02/2020	0.27	5.22	23.14	24	1.60	0.09	82	*2*	32	5.8	2.5	3.6	0.316	*0.001*	*0.0005*	*0.001*	0.038	*30*	*870*	*50*

GWB9-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB9-07	Water level higher than ground level. Overcast.	19/05/2020	0.32	5.47	24.23																	
GWB9-07	Weather, fine.	26/08/2020	0.21	5.05	18.93	8	1.73	0.12	95	100	28	3.1	1.7	3.2	0.478	*0.001*	*0.0005*	*0.001*	0.012	*30*	210	*50*
GWB9-07	In-situ data error.	26/02/2021				13	2.07	0.41	39	12	31	4.5	2.3	2.9	0.239	*0.001*	*0.0005*	*0.001*	0.047	130	460	150
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1260		2/04/2013		4.80																		
BH1260		3/07/2013		5																		
BH1260		19/09/2013		5.4																		
BH1260		Dec-13		5.80																		

GWB10-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB10-02		25/08/2016	**0.27**	**5.08**	19.75	6	0.14	0.20	**50**	**11**	**34**	1.1	1.6	**6.1**	0.038	*0.001*	0.002	*0.001*	**0.023**	**260**	**290**	100
GWB10-02		2/12/2016	**0.26**	**5.20**	24.43																	
GWB10-02		22/02/2017	**0.27**	**5.02**	22.84	8	0.64	**0.40**	**119**	**34**	**33**	**3.1**	1.0	**6.2**	*0.025*	*0.001*	*0.005*	*0.001*	**0.031**	*25*	*50*	*50*
GWB10-02		24/05/2017	**0.28**	**5.13**	20.57																	
GWB10-02	Fine weather.	14/08/2017	**0.26**	**5.54**	20.84	4	0.18	0.15	**69**	7	**35**	0.4	1.6	**7.0**	0.029	*0.001*	0.003	*0.001*	0.012	*25*	*50*	*50*
GWB10-02	Overcast.	29/11/2017	**0.28**	**4.95**	21.87																	
GWB10-02	Bore has been damaged, foundation is loose. Unable to draw hydrasleeve.	21/02/2018																				
GWB10-02	Could not retrieve sample or logger. Bore is damaged.	30/05/2018																				
GWB10-02	Could not retrieve sample or logger. Bore is damaged.	21/08/2018																				
GWB10-02	Could not retrieve sample or logger. Bore is damaged.	15/11/2018																				
GWB10-02	Bore damaged.	21/02/2019																				
GWB10-02	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.20	6.23		60	1.23	0.37	30	8	31	1.9	7.6	4.9	0.852	0.001	0.005	0.001	0.021	30	200	100
P20			0.16	5.95																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1271																						

GWB10-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB10-01		25/08/2016	0.16	5.85	20.27	30	0.87	0.20	30	8	19	0.9	8.8	2.7	0.473	*0.001*	0.002	*0.001*	0.006	87	200	100
GWB10-01		2/12/2016	0.20	5.88	25.08																	
GWB10-01		22/02/2017	0.24	5.96	23.44	115	0.75	0.32	110	26	32	3.3	3.6	4.2	0.069	*0.001*	*0.005*	*0.001*	0.003	*25*	*50*	*50*
GWB10-01		24/05/2017	0.25	6.11	21.10																	
GWB10-01	Fine weather.	14/08/2017	0.16	6.76	21.61	45	2.04	0.24	29	6	31	0.5	7.6	3.4	0.852	*0.001*	0.005	0.002	0.004	*25*	*50*	*50*
GWB10-01	Overcast.	29/11/2017	0.15	6.02	22.18																	
GWB10-01		21/02/2018	0.19	6.23	22.57	60	1.23	0.21	22	8	24	1.0	6.9	4.9	0.124	*0.001*	0.001	*0.001*	0.021	*25*	*50*	*50*
GWB10-01	Weather fine.	30/05/2018	0.16	6.11	21.41																	
GWB10-01	Weather fine.	21/08/2018	0.17	6.27	19.22	60	0.91	0.56	21	0	30	1.3	6.4	4.7	0.988	*0.001*	0.002	0.001	0.003	*30*	*250*	*250*
GWB10-01	Weather fine.	15/11/2018	0.13	5.95	26.30																	
GWB10-01	Overcast.	21/02/2019	0.20	5.98	23.99	40	0.80	0.37	29	5	25	1.9	5.5	5.0	0.137	*0.001*	0.002	*0.001*	0.022	*30*	*100*	*50*
GWB10-01	Monitoring ceased in May 2019.																					
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1270																						

GWB10-05

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GWB10-05		27/06/2017	**0.52**	**6.18**	20.05	**55**	..	..	**96**	**21**	**77**	0.6	**9.5**	2.4	0.019	*0.001*	*0.001*	*0.001*	0.002	*25*	*50*	*50*
GWB10-05	No observed construction. Weather fine. No Type A parameters recorded due to probe error.	14/08/2017				**80**	..	..	**97**	**16**	**74**	0.8	**9.3**	**2.6**	*0.0*	*0.001*	*0.001*	*0.001*	*0.005*	*25*	*50*	*50*
GWB10-05	Weather fine.	26/10/2017	**0.50**	**6.65**	22.77	6	..	..	**91**	**15**	**77**	0.8	**6.1**	1.9	0.2	*0.001*	0.002	*0.001*	0.004	*25*	*50*	*50*
GWB10-05	Overcast.	29/11/2017	**0.54**	**6.06**	21.74																	
GWB10-05	Earth built up around bore. Overcast.	21/02/2018	**0.42**	**6.24**	21.95	**45**	..	..	72	**18**	**51**	0.9	**8.3**	**2.5**	0.0	*0.001*	*0.001*	*0.001*	0.017	*25*	*50*	*50*
GWB10-05	Weather fine.	30/05/2018	**0.39**	**6.11**	21.21																	
GWB10-05	Red colour and odour to water, weather fine.	21/08/2018	**0.53**	**6.45**	18.09	**35**	0.14	**6.14**	85	**19**	**62**	1.0	**7.5**	**2.7**	*0.0*	*0.001*	*0.001*	*0.001*	0.007	**30**	**250**	**250**
GWB10-05	Weather fine.	15/11/2018	**0.29**	**6.21**	28.06																	
GWB10-05	Weather fine.	21/02/2019	**0.35**	**5.92**	23.52	**44**	..	..	66	**17**	**50**	1.5	**5.1**	**3.1**	0.0	*0.001*	*0.001*	*0.001*	0.015	**30**	**100**	*50*
GWB10-05	Weather fine.	16/08/2019	**0.45**	**6.01**	20.81	**20**			83	**51**	**62**	0.2	**5.3**	**5.0**	0.1	*0.001*	0.001	*0.001*	**0.162**	**30**	**100**	*50*
GWB10-05	Overcast.	27/02/2020	**0.47**	5.10	24.56	**10**	..	..	**158**	**29**	**63**	**3.4**	**3.2**	**10.1**	0.1	*0.001*	0.002	*0.001*	0.059	**30**	**100**	*50*
GWB10-05	Weather, fine.	4/03/2021	**0.58**	**6.24**	22.09	**42**			**127**	**63**	**68**	**5.1**	**9.6**	**3.2**	*0.0*	0.002	*0.001*	*0.001*	0.036	**110**	**200**	**310**
P80 & P20 Values (calculated from baseline data)																						
P80			0.29	5.42		6	0.56	0.28	89	13	44	2.3	1.0	4.6	0.1	0.001	0.004	0.001	0.091	28	80	50
P20			0.27	4.78																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

GWB10-05

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GWB10-04	Could not access bore in August due to padlock; revisited and accessed on 27/10/2016	27/10/2016	0.30	5.11	24.66	1	0.34	0.20	82	15	48	3.5	1.5	4.6	0.099	*0.001*	0.006	*0.001*	0.044	25	50	50
GWB10-04		2/12/2016	0.28	5.01	24.19																	
GWB10-04		22/02/2017	0.28	4.72	22.73	8	0.16	0.18	112	44	42	3.2	0.5	4.2	0.025	*0.001*	*0.005*	*0.001*	0.010	*25*	*50*	*50*
GWB10-04		24/05/2017	0.29	5.09	20.87																	
GWB10-04		13/07/2017	0.29	5.06	19.71	4	..	..	61	9	42	0.5	0.8	4.3	0.035	*0.001*	0.002	*0.001*	0.066	*25*	*50*	*50*
GWB10-04	Fine weather. Bore damaged.	16/08/2017	0.28	5.80	20.95	1	0.61	0.12	71	10	44	0.7	0.8	4.7	0.119	*0.001*	0.001	0.001	0.141	*25*	*50*	*50*
GWB10-04	Weather fine.	24/10/2017	0.27	5.29	21.98	4	0.92	0.34	88	*2*	44	0.6	0.8	4.2	0.027	*0.001*	0.002	*0.001*	0.107	*25*	*50*	*50*
GWB10-04	Overcast.	29/11/2017	0.28	4.97	22.31																	
GWB10-04	Overcast.	21/02/2018	0.27	4.80	22.64	4	0.18	0.13	70	10	43	0.8	1.0	4.6	0.066	*0.001*	0.001	*0.001*	0.058	*25*	*50*	*50*
GWB10-04	Weather fine.	30/05/2018	0.29	5.51	21.29																	
GWB10-04	Weather fine.	21/08/2018	0.29	5.52	19.00	20	0.13	0.30	89	10	39	0.9	0.8	4.4	0.032	*0.001*	*0.001*	*0.001*	0.031	*30*	*250*	*250*
GWB10-04	Weather fine.	15/11/2018	0.25	4.72	23.01																	
GWB10-04	Weather fine.	21/02/2019	0.27	4.76	23.42	3	0.15	0.10	69	8	43	0.8	0.9	4.6	0.080	*0.001*	0.001	*0.001*	0.043	*30*	*100*	*50*
GWB10-04	Unable to retrieve hydrasleeve, bore pipe broken below ground level. Weather, fine.	14/06/2019																				
GWB10-04	Unable to retrieve hydrasleeve, bore pipe broken below ground level. Weather, fine.	16/08/2019																				
GWB10-04	Unable to retrieve hydrasleeve, bore pipe broken below ground level. Weather, fine.	20/11/2019																				
GWB10-04	Unable to retrieve hydrasleeve, bore pipe broken below ground level. Overcast.	27/02/2020																				
GWB10-04	Bore damaged, unable to sample.	19/05/2020																				
GWB10-04	Bore damaged, unable to sample.	28/08/2020																				
GWB10-04	Bore damaged, unable to sample.	4/03/2021																				

GWB10-05

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1273																						

GW03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
GW03		27/06/2017	**0.72**	**6.39**	19.74	100	..	..	102	64	95	0.7	8.0	7.7	0.004	*0.001*	*0.001*	*0.001*	**10.800**	*25*	*50*	*50*
GW03	Fine weather.	16/08/2017	**0.68**	**7.54**	19.83	70	..	..	111	36	96	1.0	16.6	8.3	**0.008**	*0.001*	*0.001*	*0.001*	**0.840**	*25*	*50*	*50*
GW03	Weather fine.	26/10/2017	**0.63**	**6.81**	21.13	60	..	..	85	35	90	0.9	7.7	6.3	**0.025**	*0.001*	*0.001*	*0.001*	0.007	*25*	*50*	*50*
GW03	Overcast.	29/11/2017	**0.63**	**6.54**	20.38																	
GW03	Overcast.	21/02/2018	**0.56**	**7.01**	21.43	85	..	..	81	5	76	1.0	4.9	6.1	0.002	*0.001*	*0.001*	*0.001*	0.007	*25*	*50*	*50*
GW03	Weather fine.	30/05/2018	**0.53**	**6.83**	20.76																	
GW03	Weather fine.	21/08/2018	**0.56**	**7.01**	17.19	125	**0.05**	**0.23**	74	20	80	1.6	5.6	6.8	*0.003*	*0.001*	*0.001*	*0.001*	0.004	*30*	*250*	**250**
GW03	Black residue on logger and hydrasleeve. Weather fine.	15/11/2018	**0.49**	**6.95**	25.53																	
GW03	Weather fine. Black residue, slight odour, cable rusty.	21/02/2019	**0.53**	**6.62**	23.02	88	..	..	90	4	74	1.0	4.7	6.1	**0.008**	*0.001*	*0.001*	*0.001*	0.012	*30*	*100*	*50*
GW03	Weather fine.	16/08/2019	**0.74**	**7.05**	19.44	96			57	77	104	0.3	6.9	9.1	**0.010**	*0.001*	*0.001*	*0.001*	**0.123**	*30*	*100*	**150**
GW03	Overcast.	27/02/2020	**0.73**	**6.16**	23.25	80	..	..	136	**93**	97	3.5	7.0	9.2	0.005	*0.001*	*0.001*	*0.001*	0.016	*30*	**660**	**370**
GW03	Weather, fine.	4/03/2021	**0.60**	**6.14**	21.26	50			110	**98**	85	2.7	7.8	7.9	0.005	*0.001*	*0.001*	*0.001*	0.039	**130**	**510**	**690**
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			2.46	7.51		314			612	77	367	8.3	99.9	33.4	0.006	0.001	0.001	0.001	0.075	30	258	130
P20			2.13	7.11																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

GW03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Up-gradient (construction) Monitoring																						
GW04		27/06/2017	2.54	7.10	19.65	305	..	..	592	55	366	7.3	105.0	32.9	0.003	*0.001*	*0.001*	*0.001*	0.295	*25*	*50*	*50*
GW04	Fine weather.	16/08/2017	1.38	7.66	21.80	320	..	..	625	39	368	7.0	99.1	34.2	0.002	*0.001*	*0.001*	*0.001*	0.002	*25*	*50*	*50*
GW04	Weather fine.	24/10/2017	2.58	7.53	23.19	264	..	..	626	60	426	10.8	101.0	39.2	*0.003*	*0.001*	*0.001*	*0.001*	0.005	*25*	*50*	*50*
GW04	Overcast.	29/11/2017	2.48	7.24	22.58																	
GW04	Overcast.	22/02/2018	2.40	7.19	21.11	310	..	..	603	32	362	7.0	90.2	32.7	0.0	*0.001*	*0.001*	*0.001*	0.006	*25*	*50*	*50*
GW04	Weather fine.	30/05/2018	2.33	7.45	21.28																	
GW04	Black residue on logger and Hydrasleeve. Weather fine.	21/08/2018	2.37	7.45	19.52	325	0.23	0.08	557	14	366	7.3	81.2	32.3	0.0	*0.001*	*0.001*	*0.001*	0.001	*30*	*250*	*250*
GW04	Weather fine.	15/11/2018	2.10	7.27	24.60																	
GW04	Weather fine.	21/02/2019	2.23	7.17	22.96	249	..	..	534	41	346	8.2	81.8	29.3	*0.0*	*0.001*	*0.001*	*0.001*	0.003	*30*	*100*	*50*
GW04	Weather fine.	16/08/2019	2.25	7.61	22.55	297			504	45	344	6.9	75.6	29.2	*0.0*	*0.001*	*0.001*	*0.001*	0.002	*30*	*100*	*50*
GW04	No hydrasleeve, bores appears to have been interefered with. Logger file shows logger was out of water in Nov for one logging event. New hydrasleeve installed.	27/02/2020	2.30	6.53	24.22	220	..	..	7	110	337	8.5	75.0	27.3	*0.0*	*0.001*	*0.001*	*0.001*	0.015	*30*	270	*50*
GW4	Weather, fine.	4/03/2021	0.21	6.06	22.32	265			554	102	330	8.1	76.5	26.0	0.0	*0.001*	*0.001*	*0.001*	0.164	90	530	710
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

GW056965

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GW056965		27/06/2017	0.18	6.23	20.38	20	..	..	34	9	26	1.7	1.1	1.9	0.182	*0.001*	0.030	0.005	0.037	*25*	*50*	*50*
GW056965	Weather fine. No Type A parameters due to probe error.	17/08/2017				45	..	..	29	4	23	2.7	1.8	2.6	0.112	*0.001*	0.039	0.008	0.024	25	*50*	*50*
GW056965	Landowner confirmed that no water had been pumped from bore since early 2017	24/10/2017	0.58	7.26	22.69	125	..	..	50	3	46	3.8	2.8	5.4	0.063	*0.001*	0.018	0.019	0.099	*25*	*50*	*50*
GW056965	Landowner states that bore has not been used. Overcast.	29/11/2017	0.59	6.90	23.12																	
GW056965	Overcast.	22/02/2018	0.75	6.89	21.56	150	..	..	157	9	77	5.5	3.7	8.9	0.018	*0.001*	0.003	0.006	0.043	*25*	*50*	*50*
GW056965	Weather fine.	30/05/2018	0.57	7.01	21.53																	
GW056965	Weather fine.	21/08/2018	0.52	6.89	19.29	105	9.95	3.26	89	0	59	4.4	2.7	5.2	0.047	*0.001*	0.003	0.012	0.006	*30*	*250*	*250*
GW056965	Weather fine.	15/11/2018	0.33	6.77	25.43																	
GW056965	Weather fine.	21/02/2019	0.54	7.10	23.79	157	..	..	36	*0*	33	5.4	4.1	4.1	0.020	*0.001*	0.001	0.005	0.008	*30*	*100*	*50*
GW056965	Weather fine.	16/08/2019	0.38	6.81	21.89	59			8	20	36	1.8	2.2	3.1	0.009	*0.001*	*0.001*	*0.001*	0.007	*30*	*100*	*50*
GW056965	Weather fine.	27/02/2020	0.22	6.26	24.29	45	..	..	47	*2*	23	4.0	1.9	2.1	0.184	*0.001*	0.002	0.004	0.038	*30*	*100*	*50*
GW056965	Weather, fine.	4/03/2021	2.15	6.58	21.86	27			48	*48*	19	2.4	1.2	1.4	0.114	*0.001*	0.002	0.002	0.011	*99*	*240*	*370*
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB10-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB10-08		13/07/2017	0.38	6.61	18.91	100	..	..	32	20	27	3.0	29.8	9.4	0.030	*0.001*	*0.001*	*0.001*	0.002	180	*50*	*50*
GWB10-08	Weather fine. Odour, black stain.	16/08/2017	0.36	7.52	19.46	130	..	..	37	10	38	2.7	29.4	11.7	0.097	*0.001*	*0.001*	*0.001*	0.001	140	*50*	*50*
GWB10-08	Weather fine.	26/10/2017	0.52	7.00	24.46	105	..	..	47	60	46	5.0	28.6	18.4	0.028	*0.001*	*0.001*	*0.001*	0.003	120	*50*	*50*
GWB10-08	Overcast.	29/11/2017	0.57	6.61	21.56																	
GWB10-08	Overcast.	21/02/2018	0.68	6.86	21.87	75	..	..	53	138	58	3.0	23.5	27.5	0.016	*0.001*	*0.001*	*0.001*	0.008	73	*50*	*50*
GWB10-08	Weather fine.	30/05/2018	0.62	6.18	21.36																	
GWB10-08	Replacement bore cap required. Weather fine.	21/08/2018	0.58	6.29	17.72	30	0.43	0.11	44	176	51	4.8	19.2	29.9	0.044	*0.001*	*0.001*	*0.001*	0.091	*30*	*250*	*250*
GWB10-08	Weather fine.	15/11/2018	0.49	6.01	29.55																	
GWB10-08	Weather fine.	21/02/2019	0.60	5.85	22.60	32	..	..	50	193	56	3.8	6.4	30.8	0.113	*0.001*	*0.001*	*0.001*	0.063	*30*	*100*	*50*
GWB10-08	Weather fine.	16/08/2019	0.38	6.07	20.07	16			17	114	33	4.8	2.4	18.0	0.014	*0.001*	*0.001*	*0.001*	0.048	*30*	310	*50*
GWB10-08	Weather fine.	27/02/2020	0.41	6.06	23.86	35	..	..	108	66	25	9.8	2.8	17.2	0.028	*0.001*	*0.001*	*0.001*	0.117	*30*	*100*	*50*
GWB10-08	Weather, fine.	4/03/2021	0.40	5.77	21.75	9			97	105	32	9.5	2.8	16.9	0.030	*0.001*	1.741	*0.001*	0.451	180	290	510
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

Note: The pair to this bore is not a quality bore

GWB10-09

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB10-09	cant locate; perhaps under grass- need to slash	26/08/2016																				
GWB10-09	Cannot locate	2/12/2016																				
GWB10-09		23/02/2017	0.99	6.17	23.67	92	0.15	0.17	276	59	202	4.9	6.6	8.7	*0.025*	*0.001*	*0.005*	*0.001*	0.011	*25*	*50*	*50*
GWB10-09		24/05/2017	1.04	6.33	21.54																	
GWB10-09	Fine weather.	14/08/2017	1.01	6.95	21.64	125	0.73	0.67	216	35	200	1.4	8.6	9.9	0.025	*0.001*	*0.005*	*0.001*	0.001	*25*	*50*	*50*
GWB10-09	Could not locate bore - potentially buried.	29/11/2017																				
GWB10-09	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1278																						

Note: This bore is not part of a bore pair

GWB10-11

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB10-11		26/08/2016	0.32	5.92	21.66	40	1.55	0.70	31	45	58	1.0	0.9	1.6	0.163	*0.001*	0.001	*0.001*	0.006	160	410	170
GWB10-11		2/12/2016	0.36	5.88	25.57																	
GWB10-11		23/02/2017	0.39	6.04	23.49	68	2.23	1.70	95	73	68	3.9	1.4	2.0	*0.025*	*0.001*	*0.005*	*0.001*	0.001	*25*	*50*	*50*
GWB10-11		24/05/2017	0.55	6.34	20.63																	
GWB10-11	Fine weather.	14/08/2017	0.68	7.04	23.17	35	2.96	1.35	61	47	68	1.3	2.2	4.4	0.021	*0.001*	0.011	*0.001*	0.038	*25*	*50*	*50*
GWB10-11	Overcast.	29/11/2017	0.39	5.84	21.91																	
GWB10-11	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1280																						

Note: This bore is not part of a bore pair

GWB11-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB11-03	No access in August; revisited and accessed on 27/10/2016	27/10/2016	9.32	**6.77**	23.88	860	2.49	0.60	2642	771	1594	68.0	198.0	291.0	0.008	*0.001*	*0.001*	*0.001*	0.013	*25*	*50*	*50*
GWB11-03		2/12/2016	9.06	**6.86**	25.30																	
GWB11-03		23/02/2017	9.14	**6.95**	23.82	970	2.72	0.52	2410	675	1666	63.6	191.0	289.0	*0.025*	*0.001*	*0.005*	*0.001*	0.003	*25*	*50*	*50*
GWB11-03		24/05/2017	16.10	**6.73**	20.04																	
GWB11-03	Weather Fine.	14/08/2017	10.70	**8.30**	23.58	665	2.22	0.59	4818	2178	2760	76.7	412.0	619.0	0.003	*0.001*	0.001	*0.001*	0.012	*25*	*50*	*50*
GWB11-03	Overcast.	29/11/2017	13.60	**6.72**	22.31																	
GWB11-03	Overcast.	21/02/2018	10.60	**6.96**	21.32	890	4.70	0.70	2797	874	1784	66.8	229.7	359.9	0.008	*0.001*	*0.001*	*0.001*	0.019	*25*	*50*	*50*
GWB11-03	Rain	30/05/2018	15.30	**6.82**	21.87																	
GWB11-03	Weather fine.	23/08/2018	14.30	**6.89**	20.63	855	3.77	1.38	3781	1790	2384	76.4	348.6	504.9	0.016	*0.001*	*0.001*	0.001	0.012	*30*	*250*	*250*
GWB11-03	Weather fine.	15/11/2018	5.26	7.57	27.92																	
GWB11-03	Weather fine.	21/02/2019	11.60	**6.85**	22.87	746	2.03	0.50	2806	1329	1891	64.3	278.9	384.1	0.004	*0.001*	*0.001*	*0.001*	0.004	*30*	*100*	*50*
GWB11-03	Bore damaged below ground level - Hydrasleeve became snagged when reinstalling and broke upon attempted removal. Weather fine.	28/06/2019	15.10	**6.72**	20.71																	
GWB11-03	Bore damaged below ground level. Unable to sample, repairs required.	21/08/2019																				
GWB11-03	Bore damaged below ground level. Unable to sample.	20/11/2019																				
GWB11-03	Bore damaged below ground level. Unable to sample.	27/02/2020																				
GWB11-03	Bore damaged, unable to sample.	19/05/2020																				
GWB11-03	Bore damaged, unable to sample.	28/08/2020																				
GWB11-03	Bore damaged, unable to sample.	4/03/2021																				

P80 & P20 Values (calculated from baseline data)

GWB11-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
P80				7.72																		
P20				7.04																		

GWB11-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	ºC	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1285		27/02/2013		6.8																		
BH1285		1/07/2013		7.2																		
BH1285		19/09/2013		8.2																		
BH1285		Dec-13		7.4																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB11-04

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
GWB11-04	No access	26/08/2016																				
GWB11-04	No access	2/12/2016																				
GWB11-04	No access	23/02/2017																				
GWB11-04	Unable to locate. Bore likely destroyed.	24/05/2017																				
GWB11-04	Unable to locate. Bore likely destroyed.	14/08/2017																				
GWB11-04	Unable to locate.	29/11/2017																				
GWB11-04	Unable to locate.	21/02/2018																				
GWB11-04	Unable to locate.	30/05/2018																				
GWB11-04	Unable to locate.	23/08/2018																				
GWB11-04	Unable to locate.	15/11/2018																				
GWB11-04	Unable to locate.	21/02/2016																				
GWB11-04	Monitoring ceased in May 2019.																					
P80 & P20 Values (calculated from baseline data)																						
P80				7.52																		
P20				6.96																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1286		1/03/2013		7.0																		
BH1286		1/07/2013		8.0																		
BH1286		19/09/2013		7.2																		
BH1286		Dec-13		6.9																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWBx-xx

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
Down-gradient Monitoring																						
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			#NUM!	#NUM!		#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20			#NUM!	#NUM!																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
Up-gradient (construction) Monitoring																						
Up-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

Appendix F

Groundwater Levels: Results of Interest

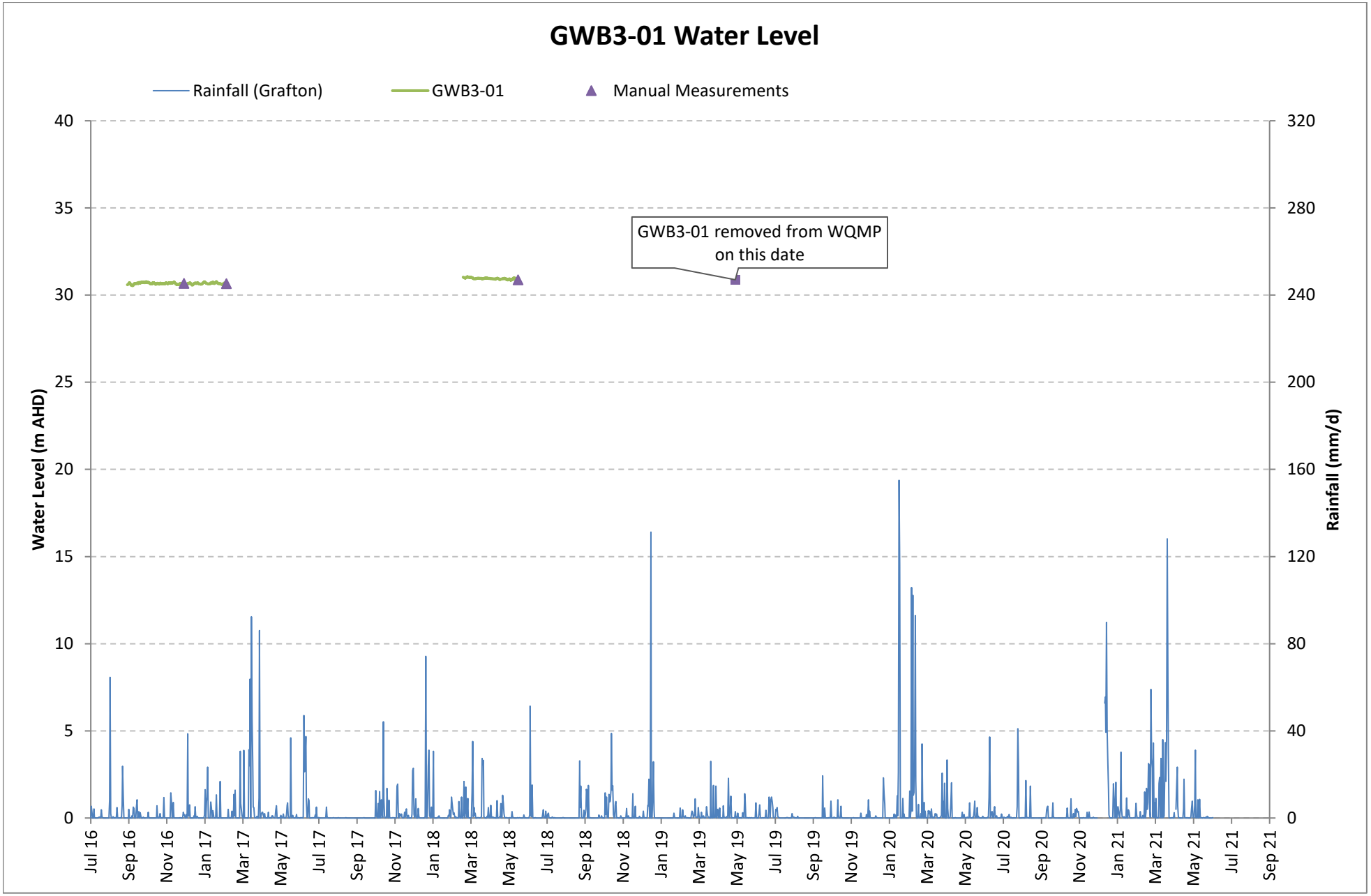
Groundwater Levels Table of Results of Interest

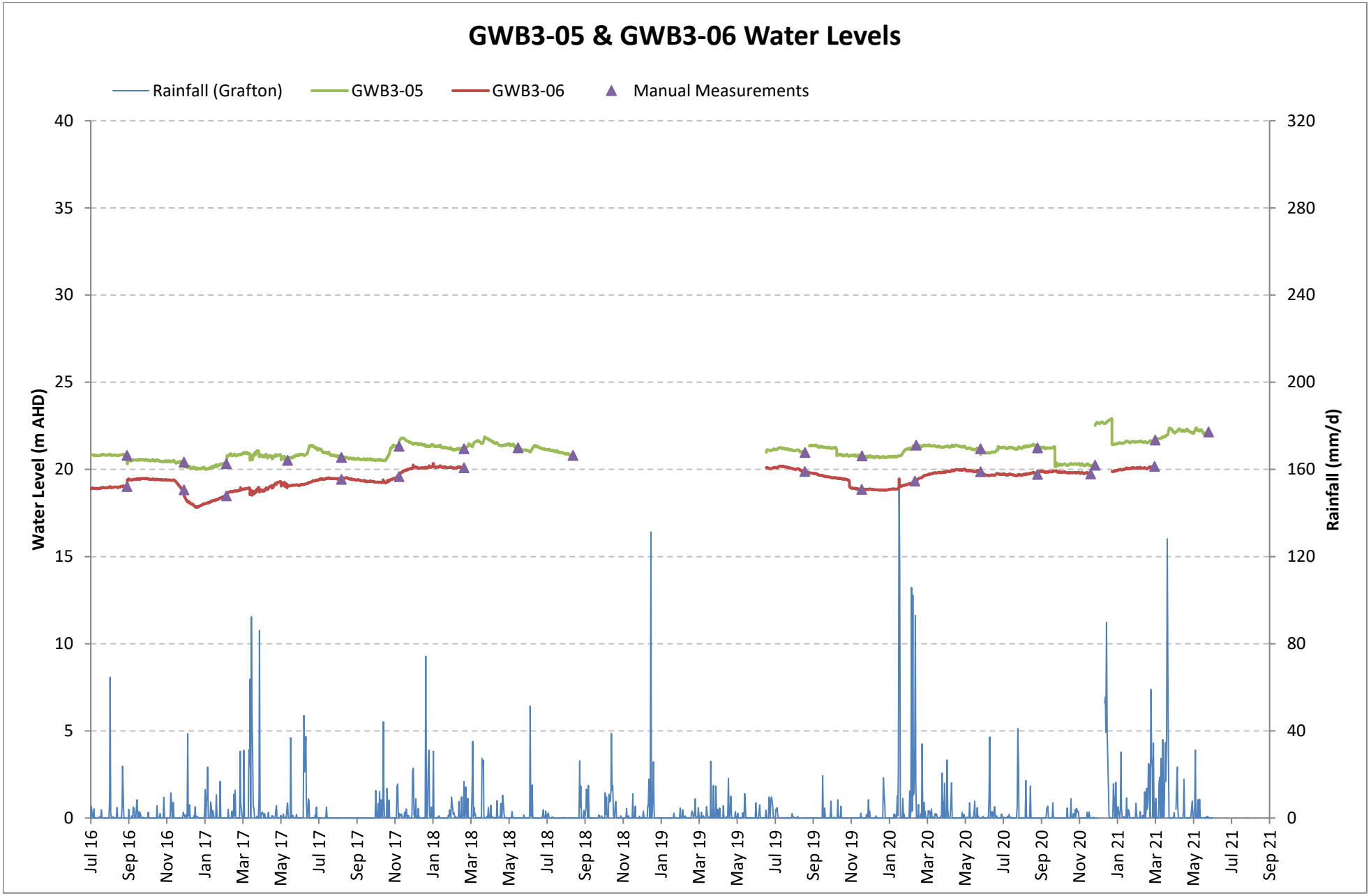
Portion	*Bore*	*P80 Level Difference*	*Results of Interest*
A	GWB3-21	2.035 m	15/12/20 - 23/12/20 (approx. 1 week) (max. level difference approx. 10.14 m)
A	GWB3-32	0.678 m	26/07/20 - 26/08/20 (approx. 1 month) (max level difference 6.60 m)
A	GWB3-38	14.202 m	12/08/20 - 29/08/20 (approx. 2 weeks) (max. level difference approx. 14.63 m) 05/09/20 - 21/09/20 (approx. 2 weeks) (max. level difference approx. 14.4 m) 24/04/21 - 27/05/21 (approx. 1 month) (max. level difference approx. 14.62 m)
B	GWB5-02	1.171 m	01/07/20 - 25/03/21 (approx. 9 month) (max. level difference approx. 2.9 m) 29/03/21 - 27/05/21 (approx. 2 month) (max. level difference approx. 1.20 m)
C	GWB8-22	0.746 m	08/07/20 - 13/07/20 (approx. 5 days) (max. level difference approx. 0.85 m) 24/07/20 - 29/07/20 (approx. 5 days) (max. level difference approx. 0.87m) 14/012/20 - 25/12/20 (approx. 2 weeks) (max. level difference approx. 1.15 m) 30/12/20 - 11/01/21 (approx. 2 weeks) (max. level difference approx. 0.92) 18/02/21 - 17/03/21 (approx. 1 month) (max. level difference approx. 0.93 m) 01/05/21 - 03/05/21 (approx. 3 days) (max. 0.77 m)
C	GWB8-25	0.121 m	01/07/20 - 24/07/20 (approx. 3 weeks) (max. level difference approx. 0.15 m) 30/07/20 - 26/08/20 (approx. 3 weeks) (max. level difference approx. 0.14 m) Three occurences over 29/08/20 - 01/09/20 (max. level difference 0.13 m) 10/09/20 - 23/09/20 (approx. 1 week) (max. level difference approx. 0.16 m) 19/10/20 (approx. 12 hrs) (max. level difference approx. 0.15 m) seven occurances over 26/10/20 - 30/10/20 (approx. 4 days) (max. level difference 0.16 m) 25/11/20 - 16/12/20 (approx. 3 weeks) (max. level difference 0.29 m) 18/12/20 - 26/02/21 (approx. 3 months) (max. level difference 0.22 m) Four occurances between 04/03/21 - 11/03/21 (max. level difference 0.13 m) Two occurances between 26/04/21 - 28/04/21 (max. level difference 0.12 m) Nine occurances between 17/05/21 - 28/05/21 (max. level difference 0.14 m)

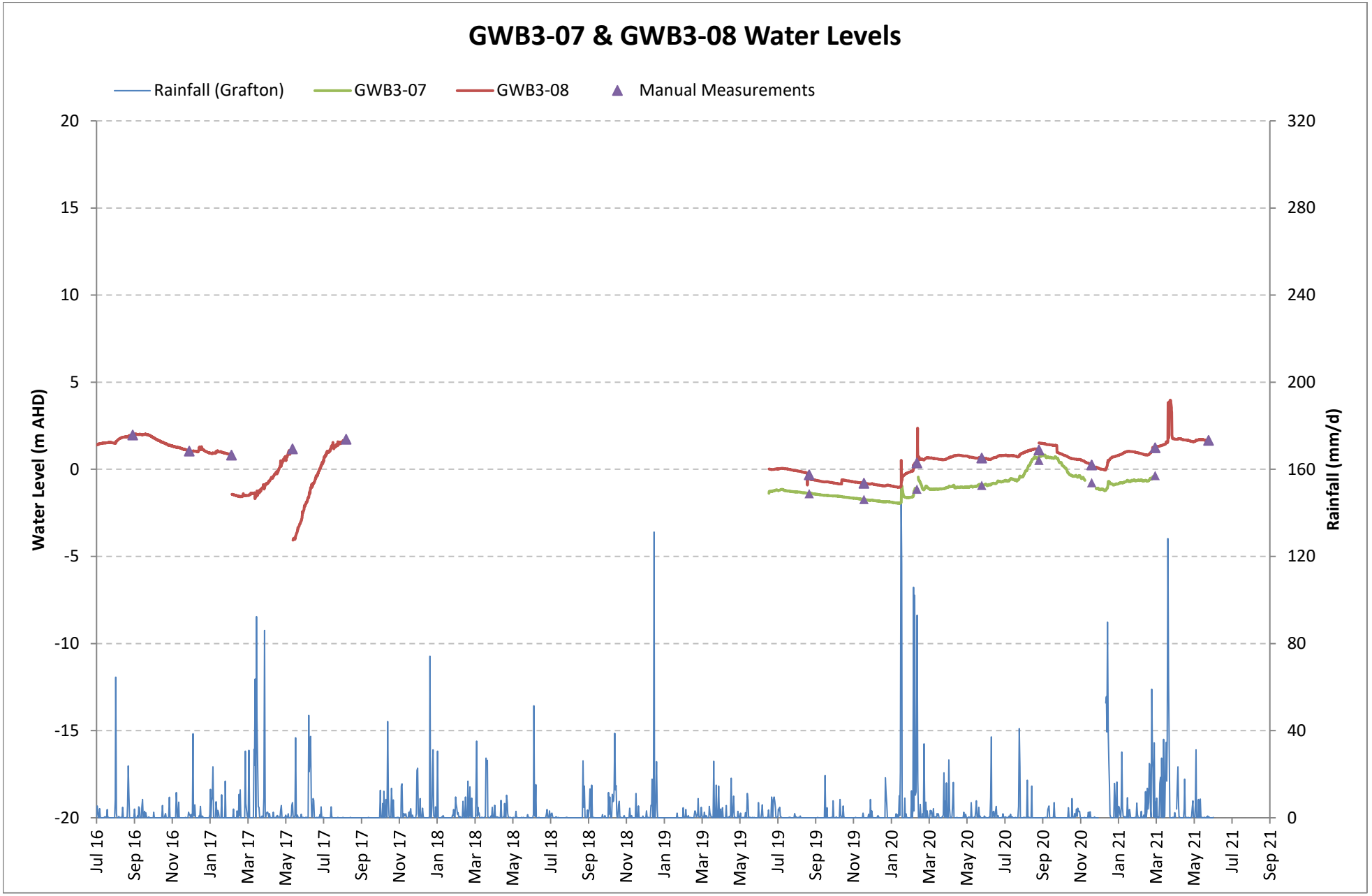
C	GWB9-02	0.135 m	24/07/20 - 30/07/20 (approx. 1 week) (max. level difference 0.23 m) 15/12/20 - 18/12/20 (approx. 3 days) (max. level difference 0.29 m) 20/12/20 - 23/12/20 (approx. 3 days) (max. level difference 0.25 m) 30/12/20 - 04/01/21 (approx. 5 days) (max. level difference 0.27m) 8/01/21 - 11/01/21 (approx. 3 days) (max. level difference 0.26 m) 20/02/21 - 27/02/21 (approx. 1 week) (max. level difference 0.27 m) 04/03/21 - 05/03/21 (approx. 2 days) (max. level difference 0.2 m) 9/03/21 - 13/04/21 (approx. 1 month) (max. level difference 0.25) 29/04/21 - 08/05/21 (approx. 10 days) (max. level difference 0.24)
C	GWB9-10	2.137 m	29/07/20 - 01/09/20 (approx. 1 month) (max. level difference 2.23) Seven occurances between 04/09/20 - 10/09/20 (max. level difference 2.14) Five occurances between 20/09/20 - 26/09/20 (max. level difference 2.15 m) 04/01/21 - 07/01/21 (approx. 4 days) (max. level difference 2.2 m) 11/01/21 - 20/01/21 (approx. 10 days) (max. level difference 2.22 m) 23/01/21 - 30/01/21 (approx. 1 week) (max. level difference 2.16 m) 28/02/21 - 01/03/21 (approx. 1 day) (max. level difference 2.15 m) 15/03/21 (6 hours) (max. level difference 2.14 m) 14/04/21 - 28/04/21 (approx. 2 weeks) (max. level difference 2.21 m) 03/05/21 - 14/05/21 (approx. 11 days) (max. level difference 2.20 m)
C	GWB9-14	1.255 m	26/07/20 (approx. 12hrs.) (max. level difference 1.50 m) 01/08/20 (approx. 1 day) (max. level difference 1.27 m) 15/12/20 - 16/12/20 (approx. 2 days) (max. level difference 1.84 m) 30/12/20 - 25/01/21 (approx. 3 weeks) (max. level difference 2.02 m) 20/02/21 - 17/05/21 (approx. 3 months) (max. level difference 1.88 m)
D	GWB10-03	1.121 m	11/04/21 - 03/06/21 (approx. 2 months) (max. level difference 1.37 m)

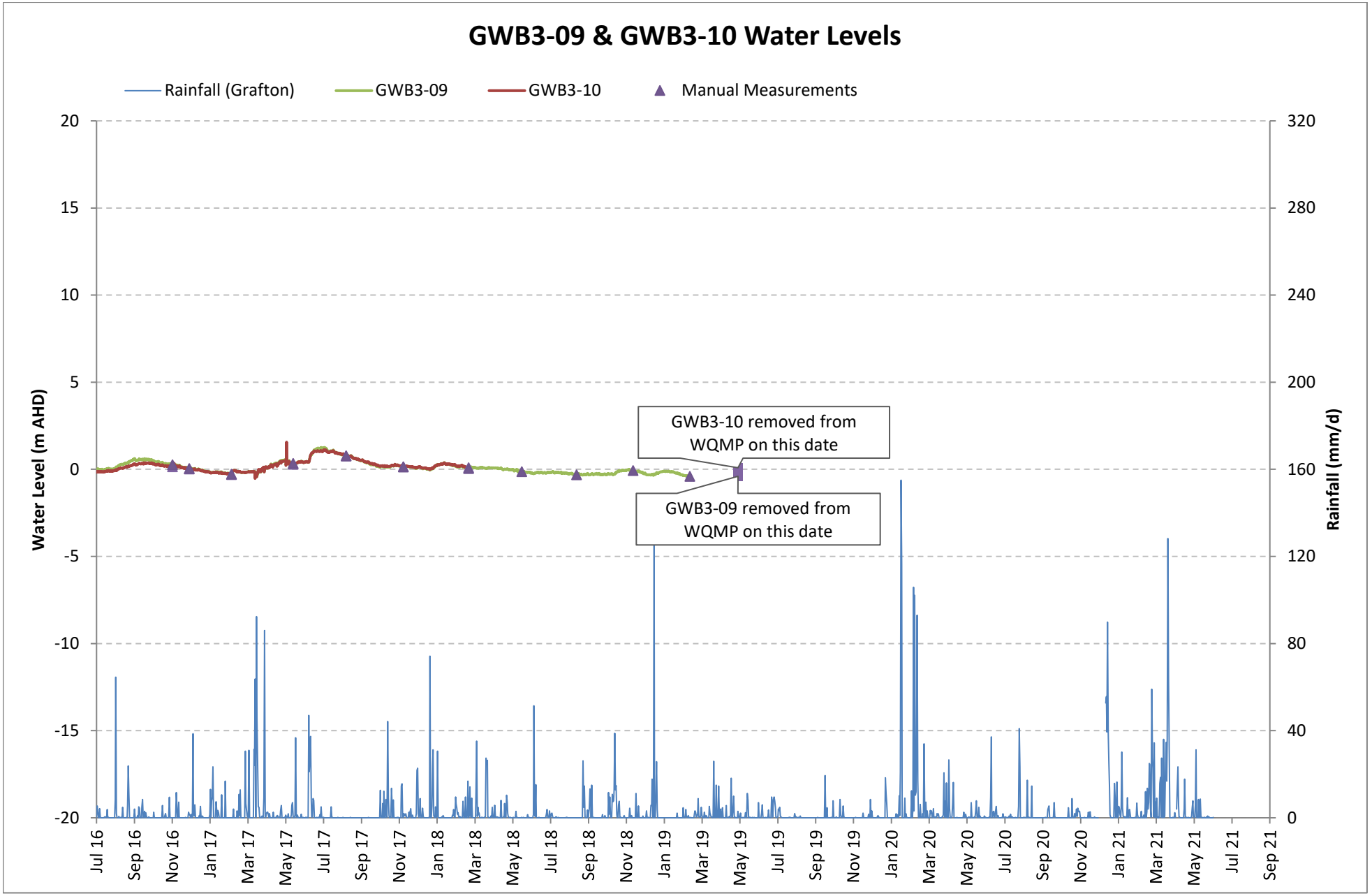
Appendix G

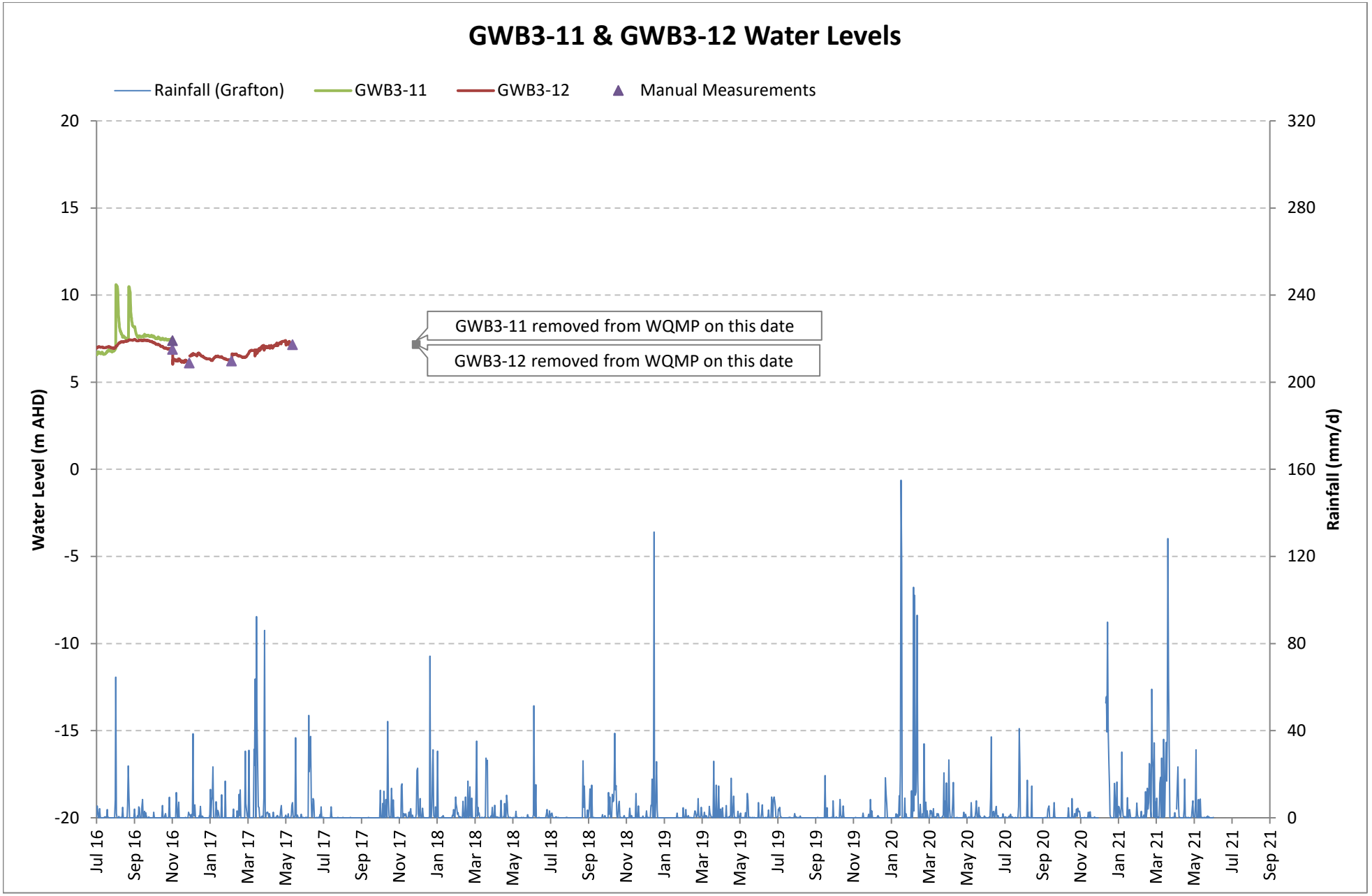
Groundwater Levels: Charts

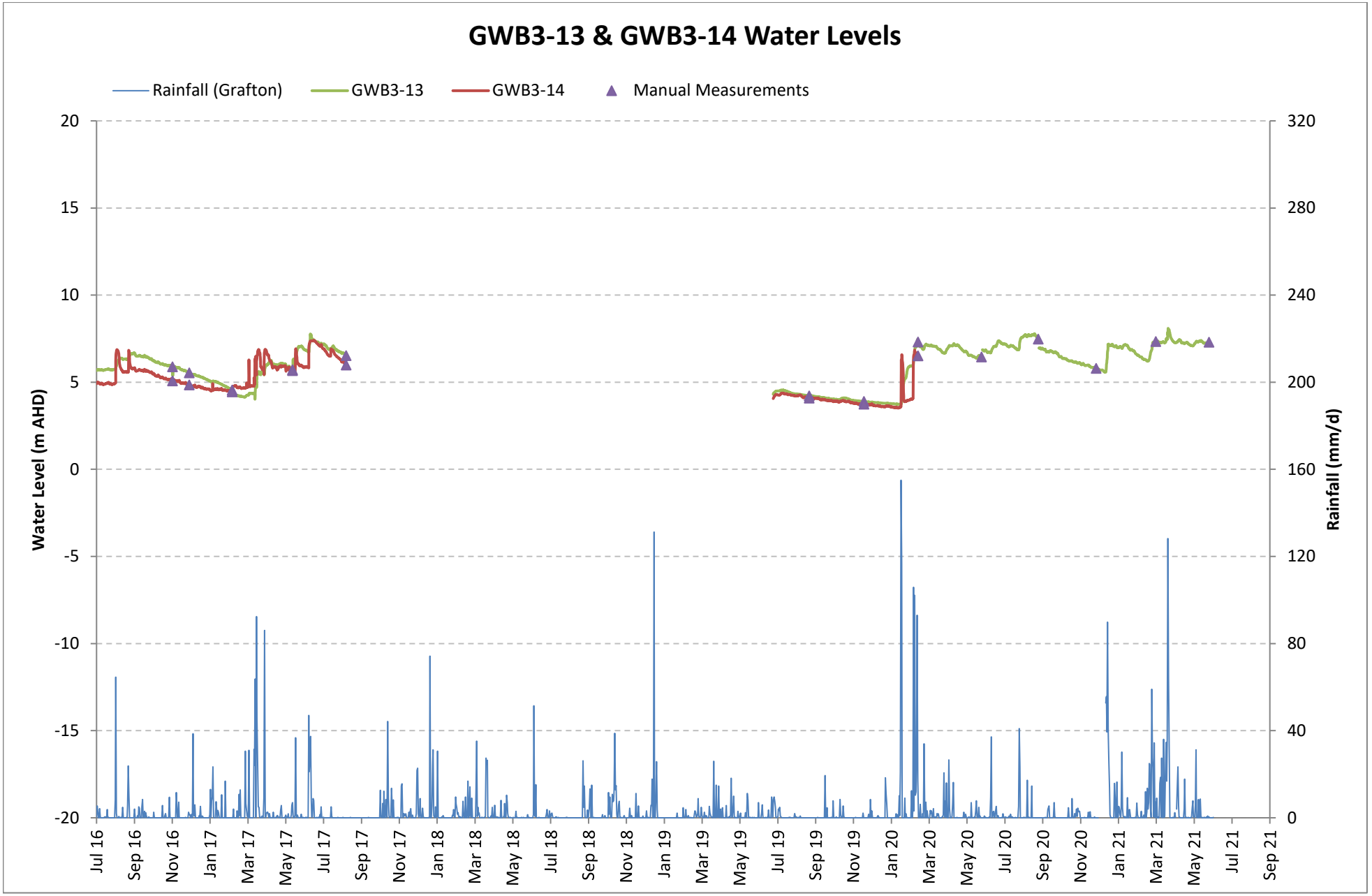

GWB3-01 Water Level
Rainfall (Grafton)
GWB3-01
Manual Measurements
GWB3-01 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
Mar 20
May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

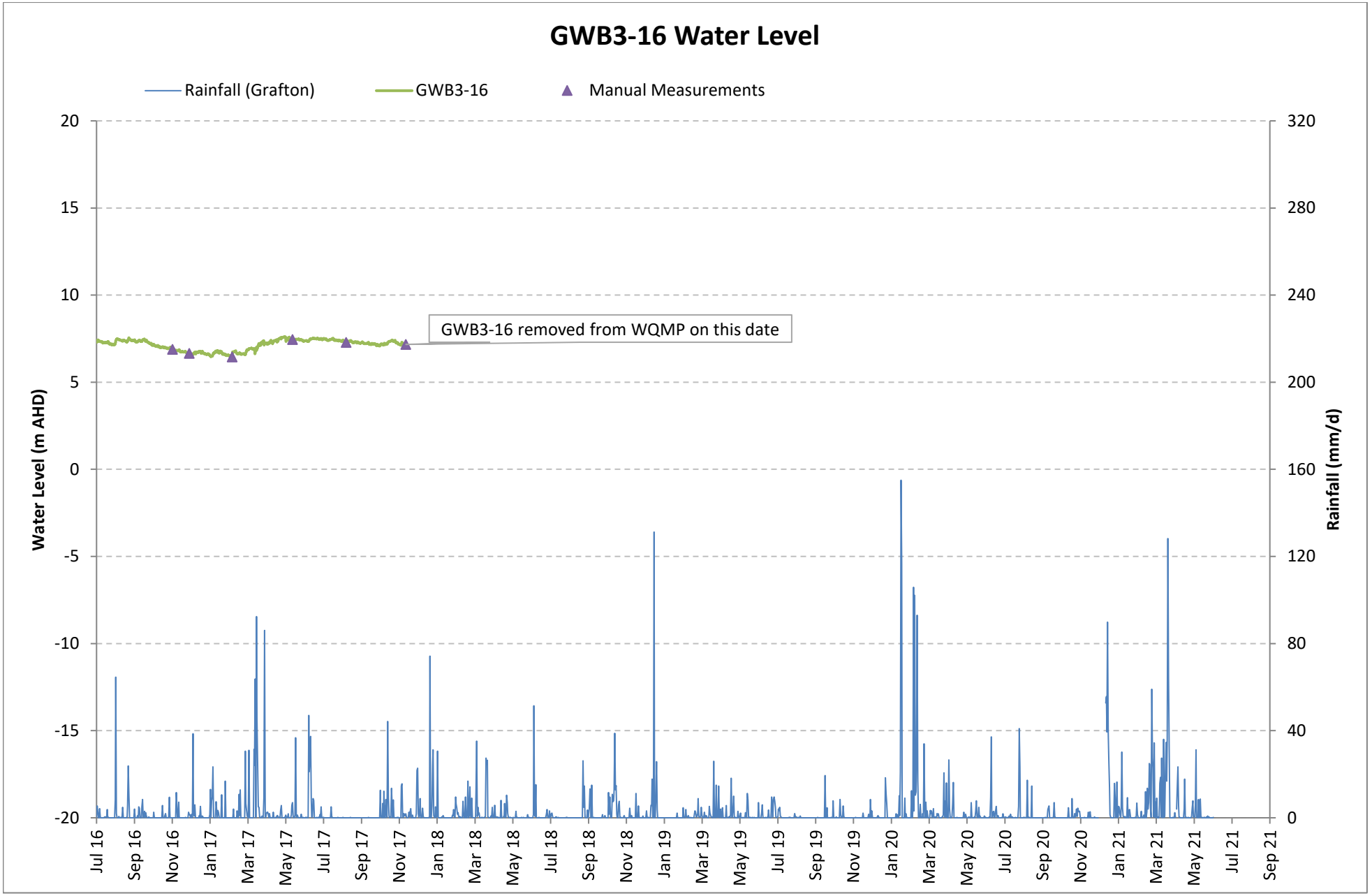

GWB3-05 & GWB3-06 Water Levels
Rainfall (Grafton)
GWB3-05
GWB3-06
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
Mar 20
May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

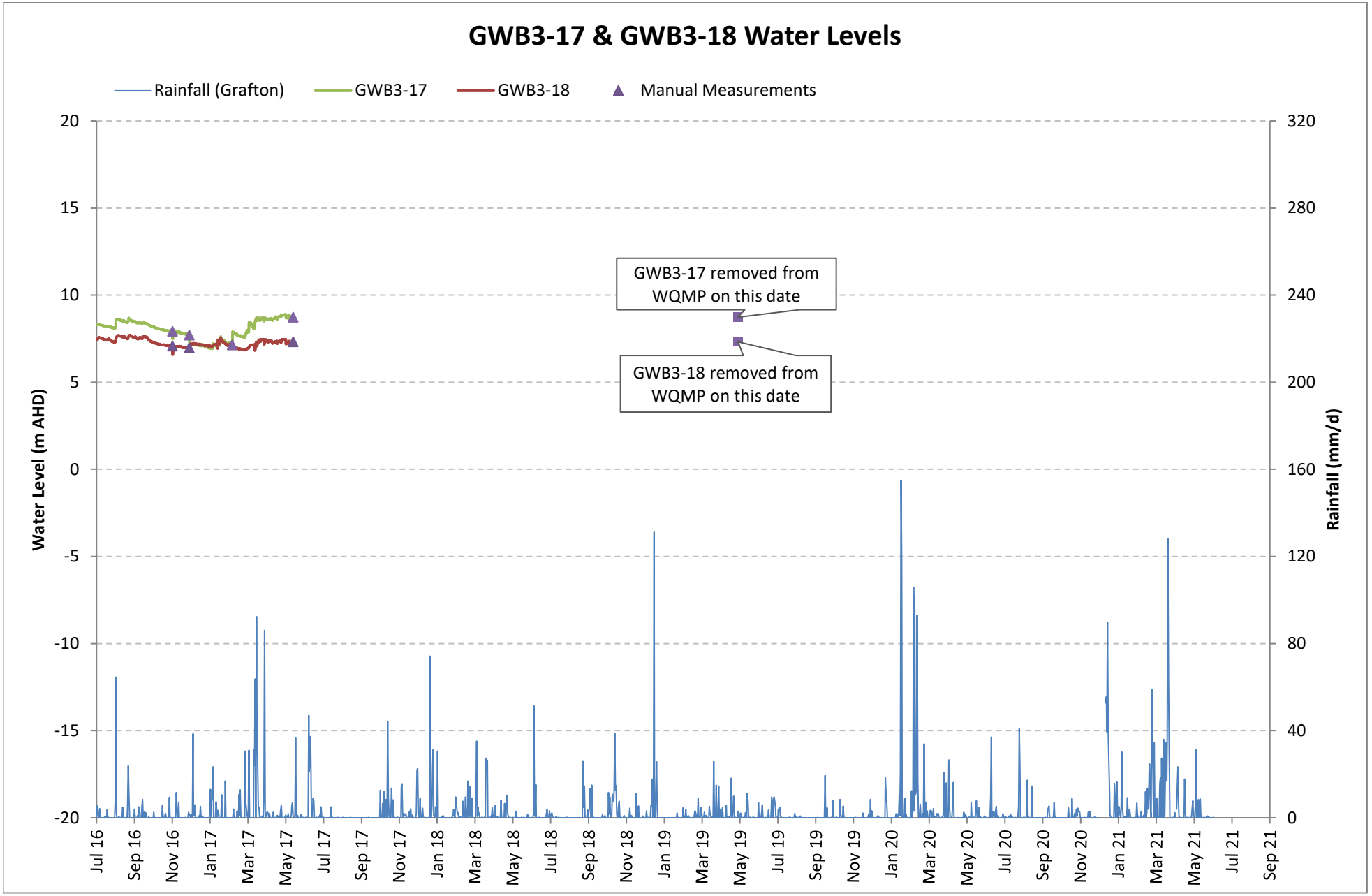

GWB3-07 & GWB3-08 Water Levels
Rainfall (Grafton)
GWB3-07
GWB3-08
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
Mar 20
May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

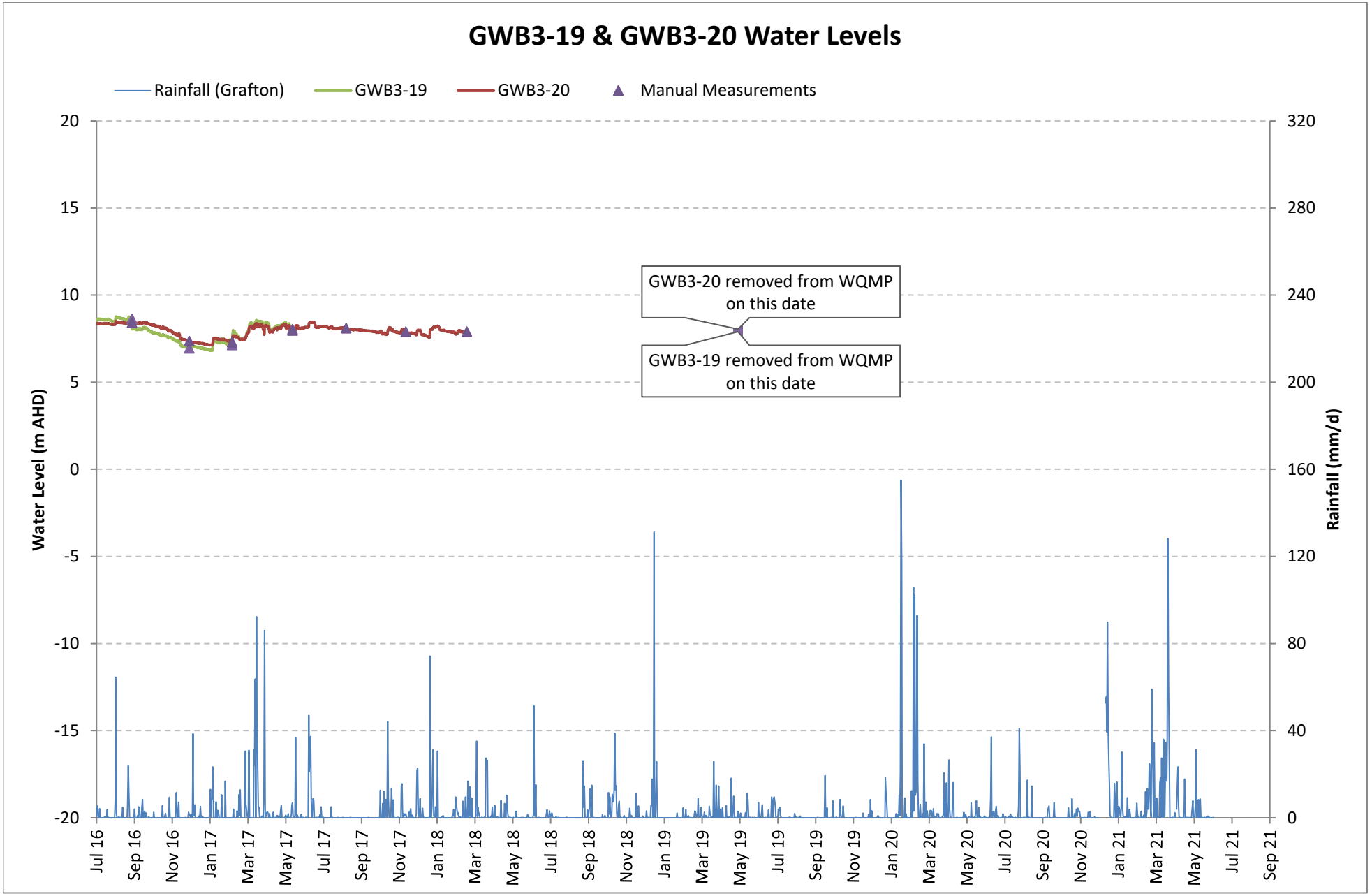

GWB3-09 & GWB3-10 Water Levels
Rainfall (Grafton)
GWB3-09
GWB3-10
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB3-10 removed from WQMP on this date
GWB3-09 removed from WQMP on this date
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Nov 19
Jan 20
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May 20
Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

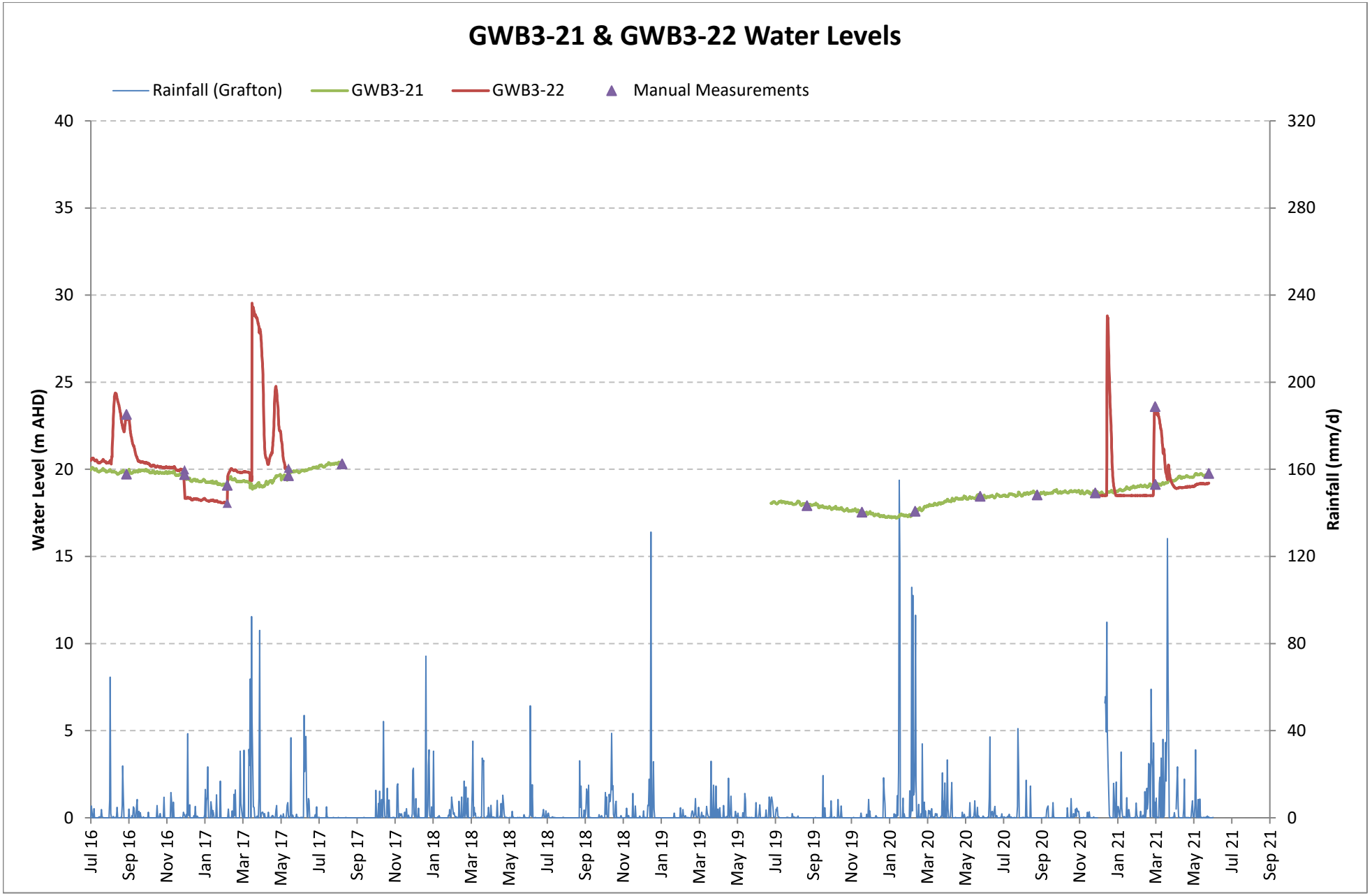

GWB3-11 & GWB3-12 Water Levels
Rainfall (Grafton)
GWB3-11
GWB3-12
Manual Measurements
GWB3-11 removed from WQMP on this date
GWB3-12 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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May 21
Jul 21
Sep 21

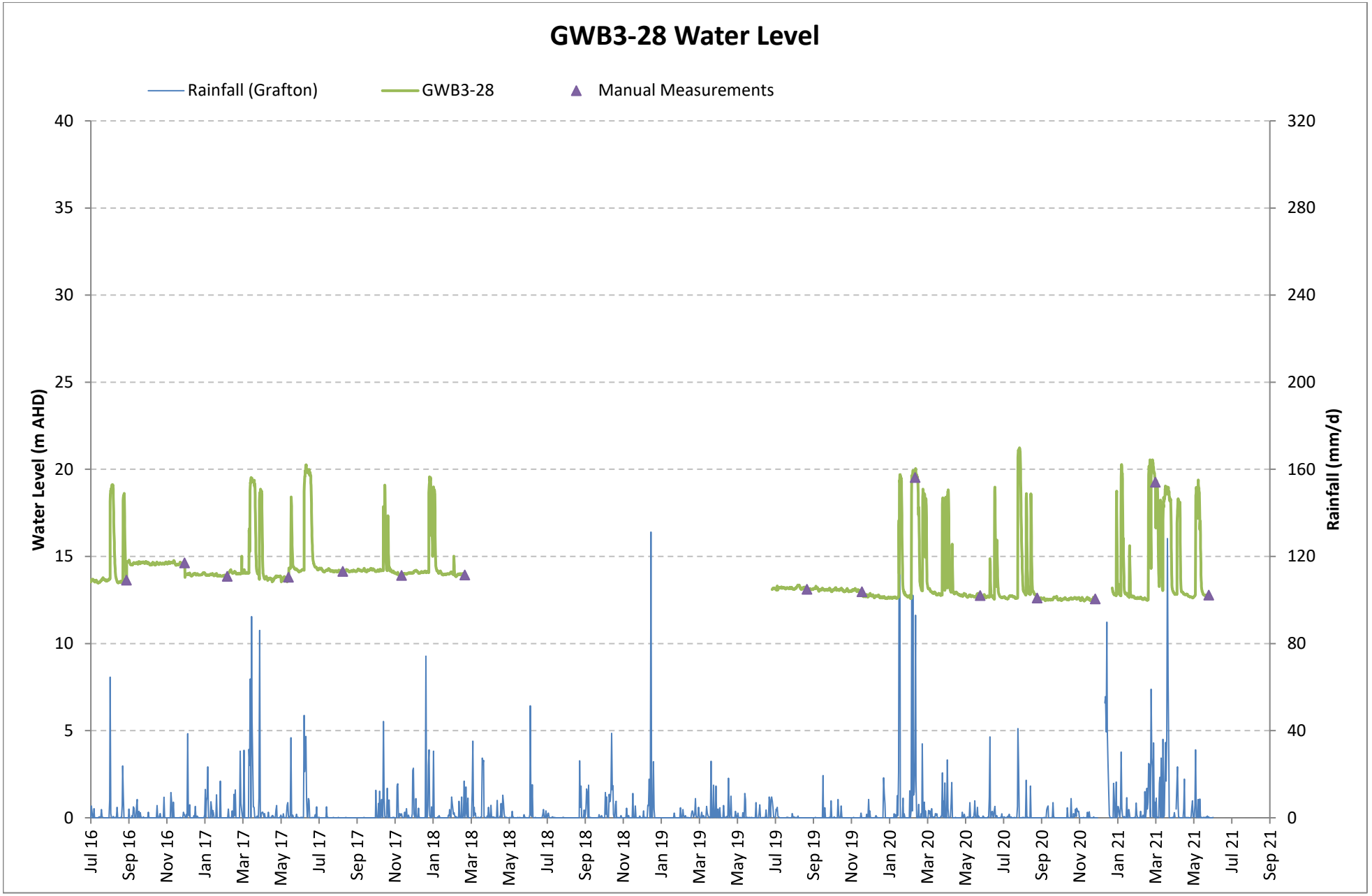

GWB3-13 & GWB3-14 Water Levels
Rainfall (Grafton)
GWB3-13
GWB3-14
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

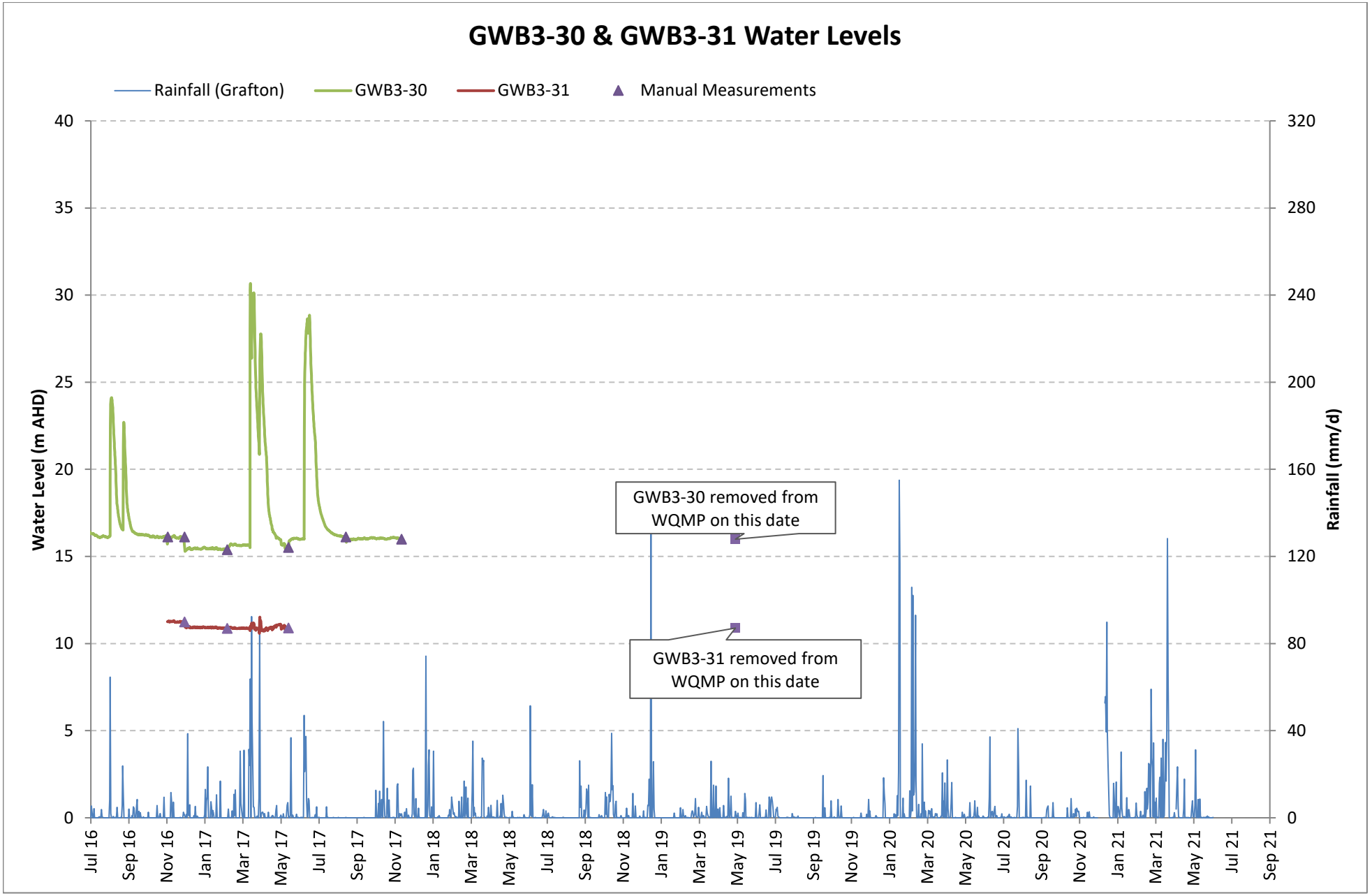

GWB3-16 Water Level
Rainfall (Grafton)
GWB3-16
Manual Measurements
GWB3-16 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Nov 19
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Mar 20
May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

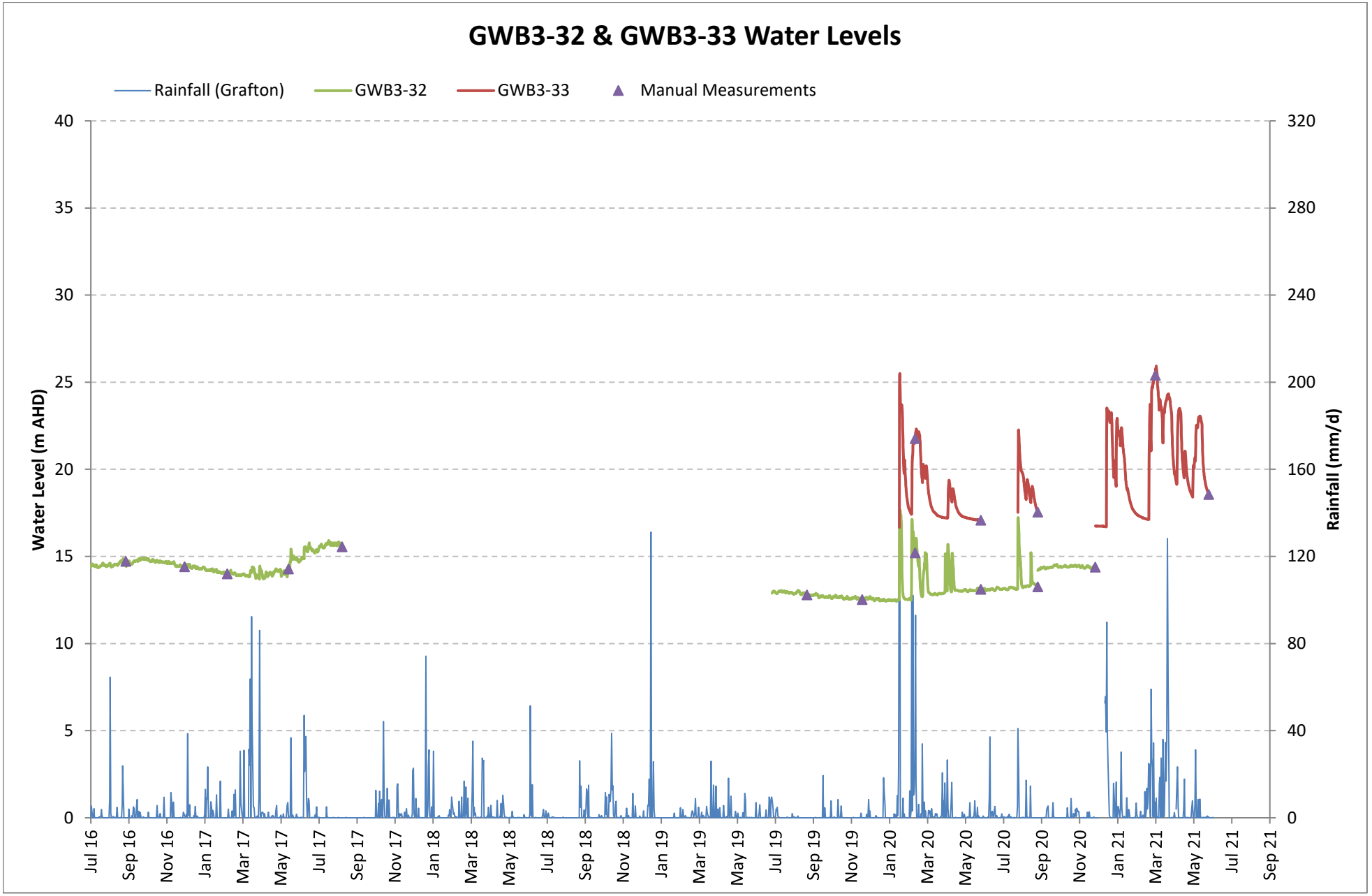

GWB3-17 & GWB3-18 Water Levels
Rainfall (Grafton)
GWB3-17
GWB3-18
Manual Measurements
GWB3-17 removed from WQMP on this date
GWB3-18 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

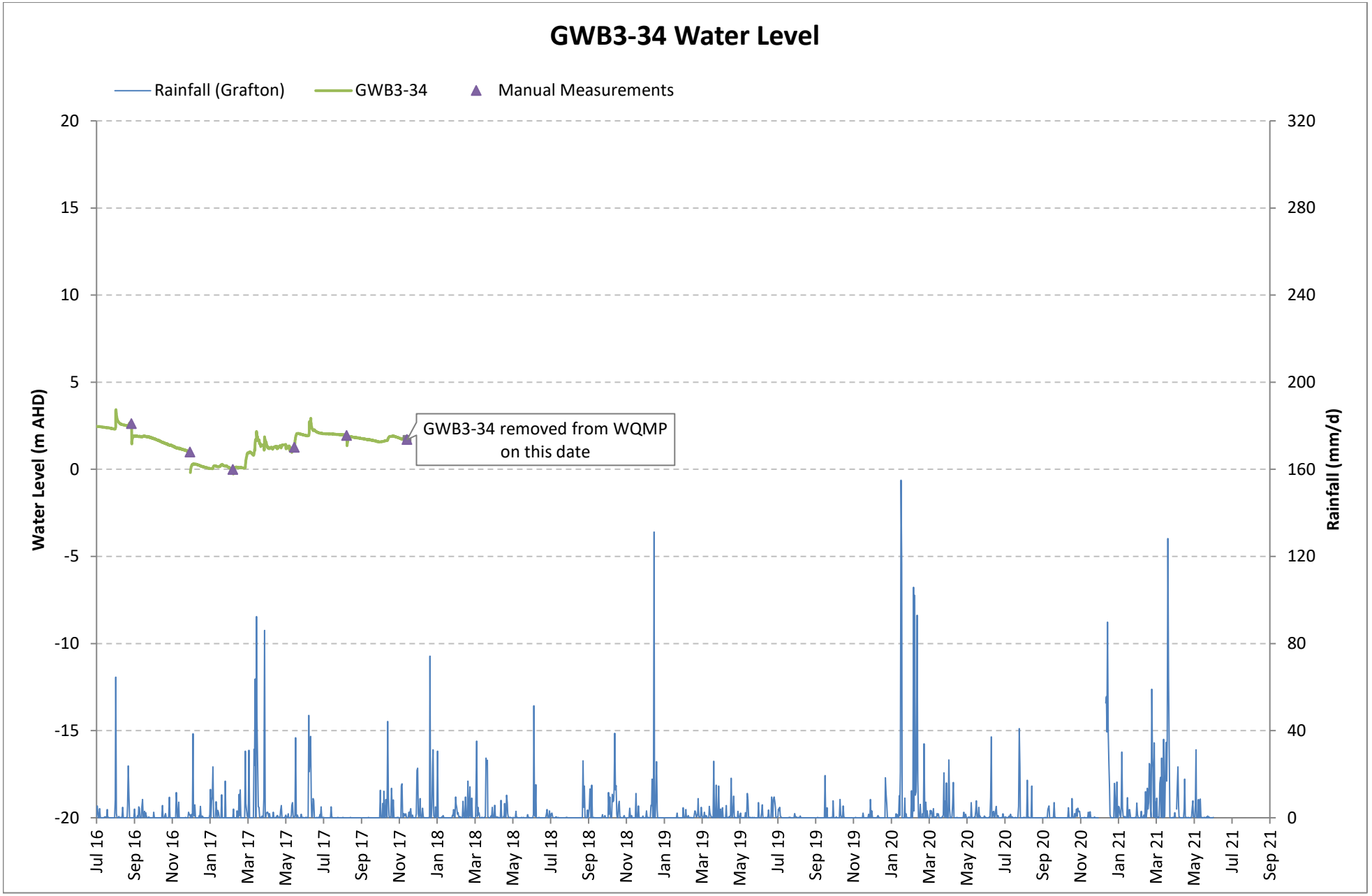

GWB3-19 & GWB3-20 Water Levels
Rainfall (Grafton)
GWB3-19
GWB3-20
Manual Measurements
GWB3-20 removed from WQMP on this date
GWB3-19 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
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Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

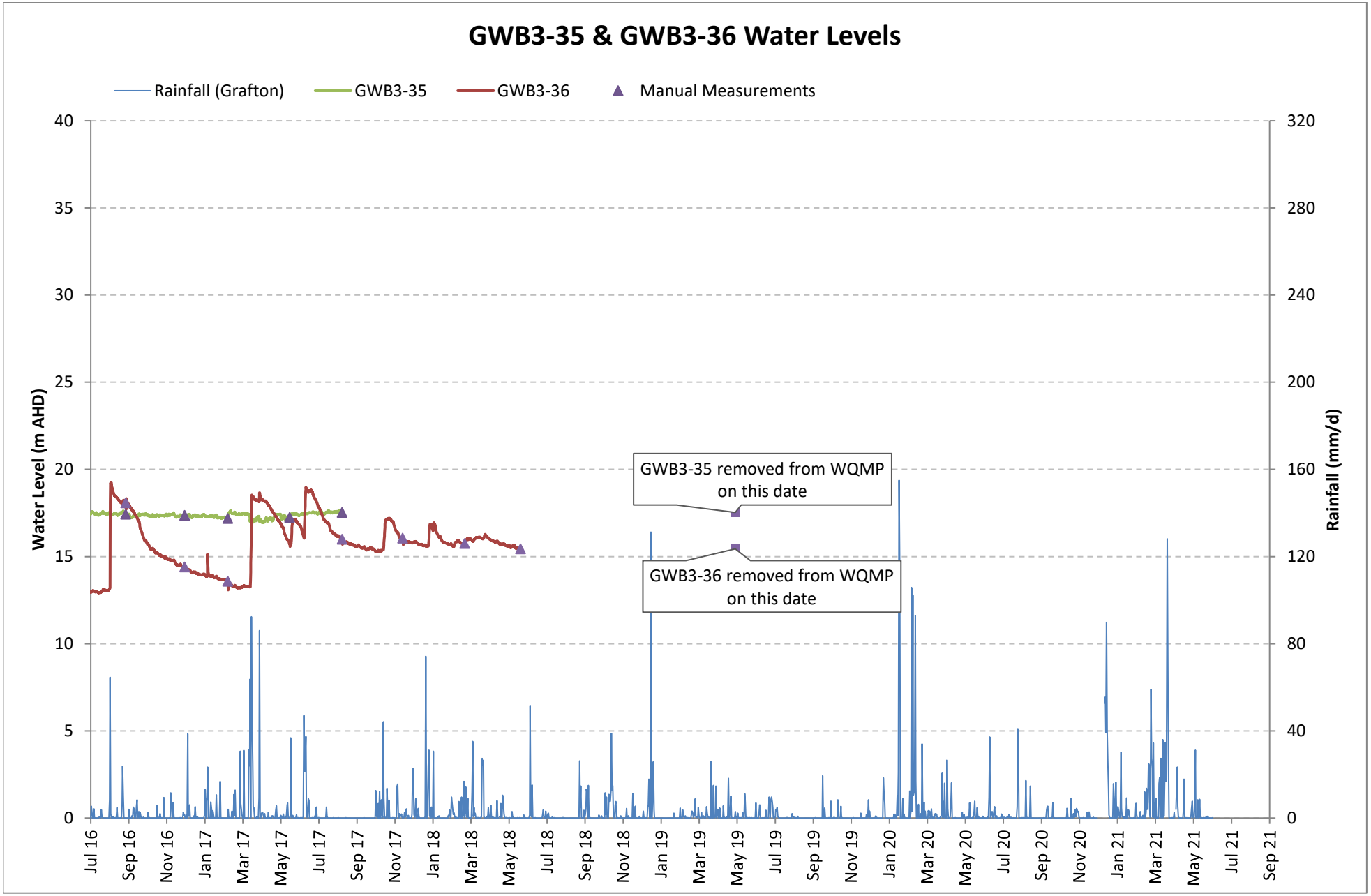

GWB3-21 & GWB3-22 Water Levels
Rainfall (Grafton)
GWB3-21
GWB3-22
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

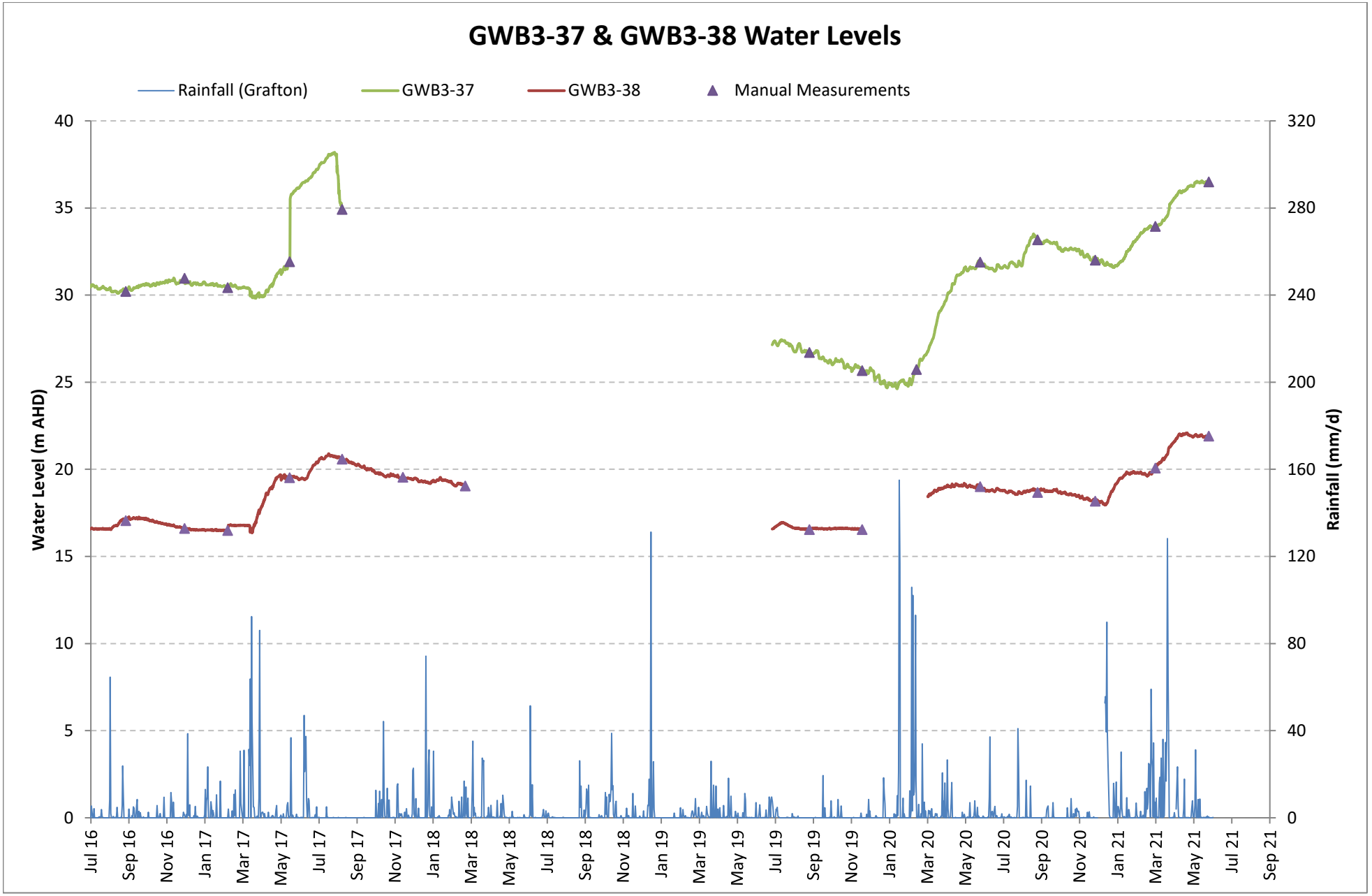

GWB3-28 Water Level
Rainfall (Grafton)
GWB3-28
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Nov 19
Jan 20
Mar 20
May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

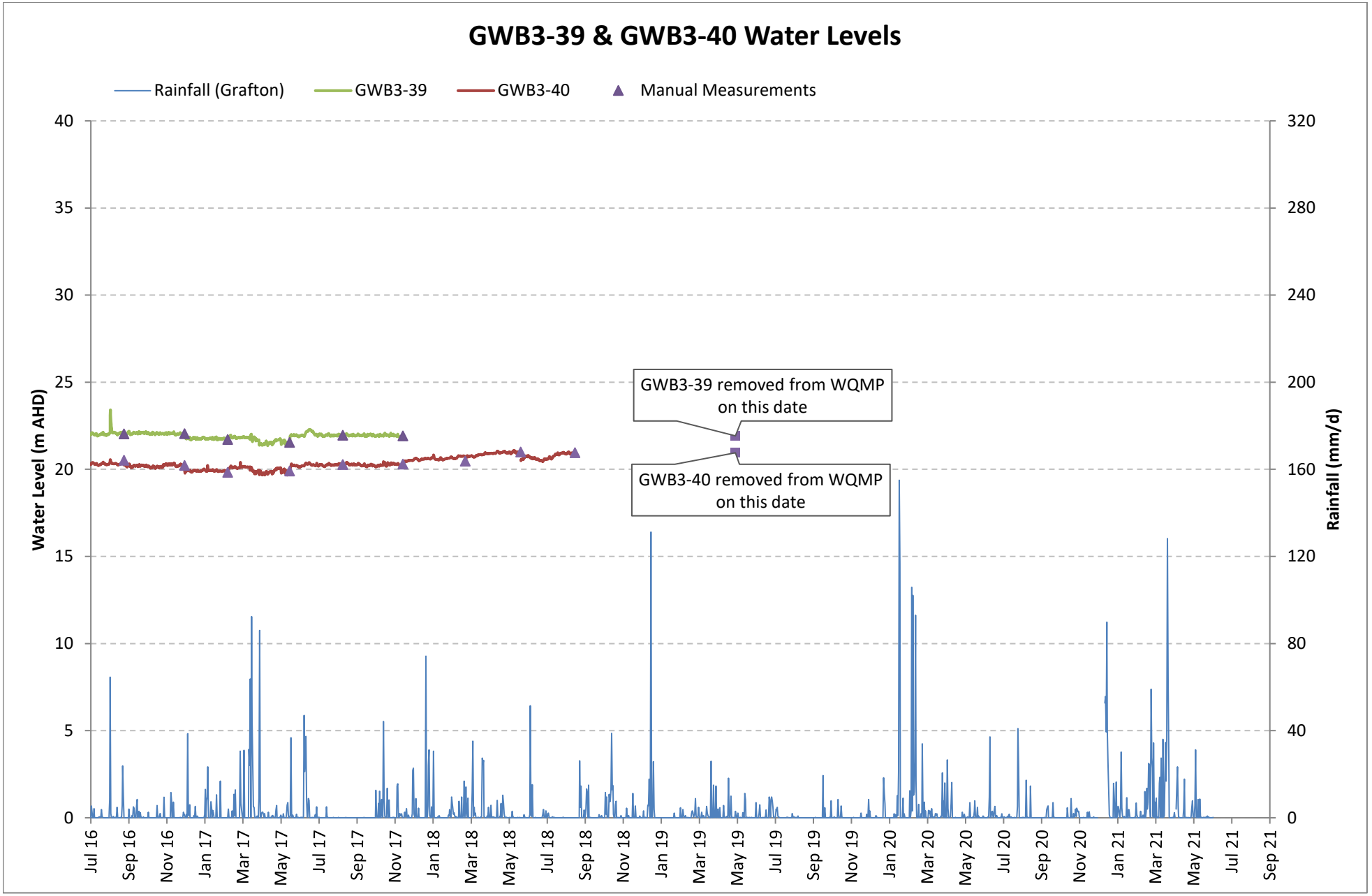

GWB3-30 & GWB3-31 Water Levels
Rainfall (Grafton)
GWB3-30
GWB3-31
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
GWB3-30 removed from WQMP on this date
GWB3-31 removed from WQMP on this date
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

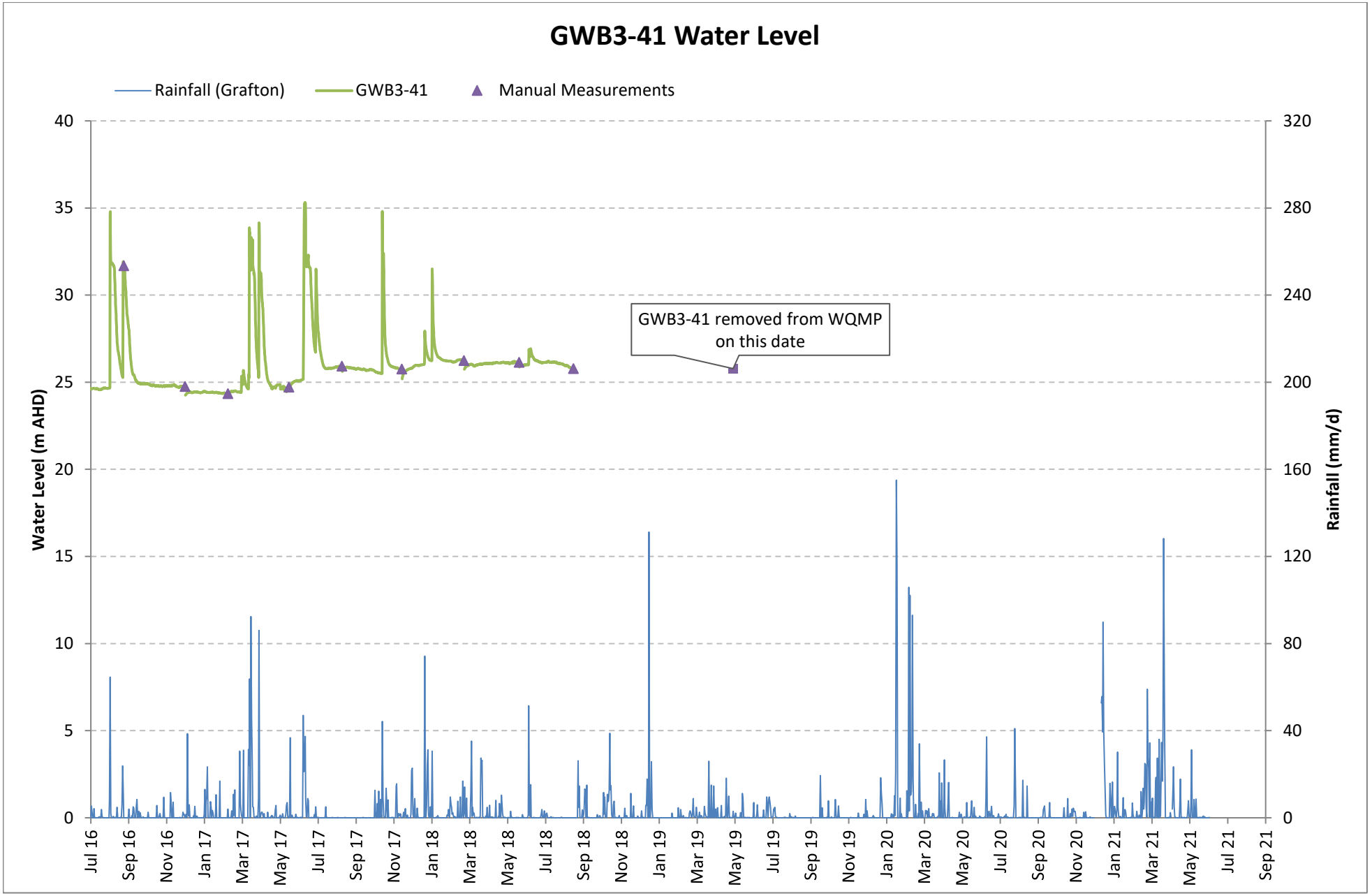

GWB3-32 & GWB3-33 Water Levels
Rainfall (Grafton)
GWB3-32
GWB3-33
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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May 20
Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

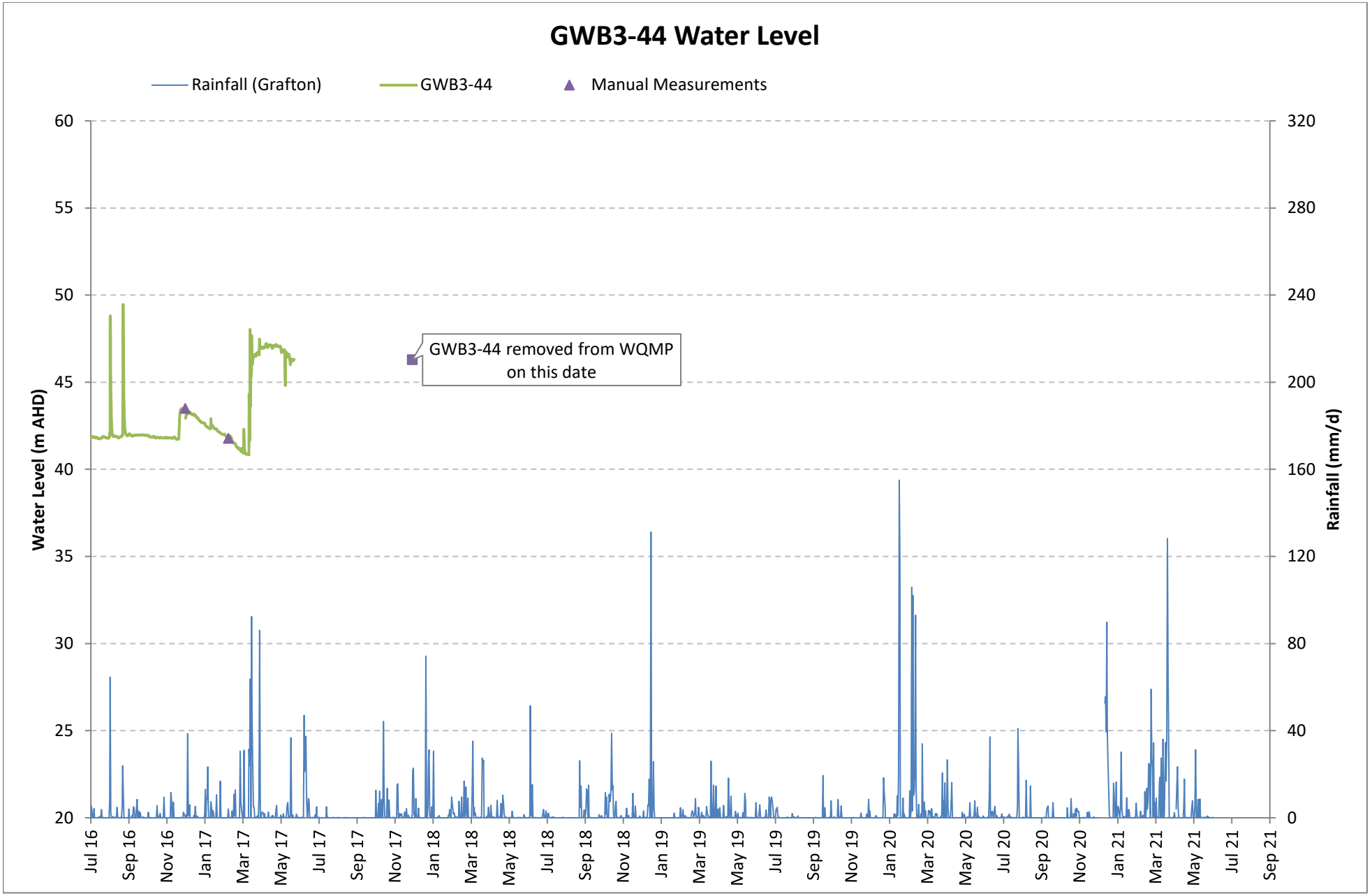

GWB3-34 Water Level
Rainfall (Grafton)
GWB3-34
Manual Measurements
GWB3-34 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
Mar 20
May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

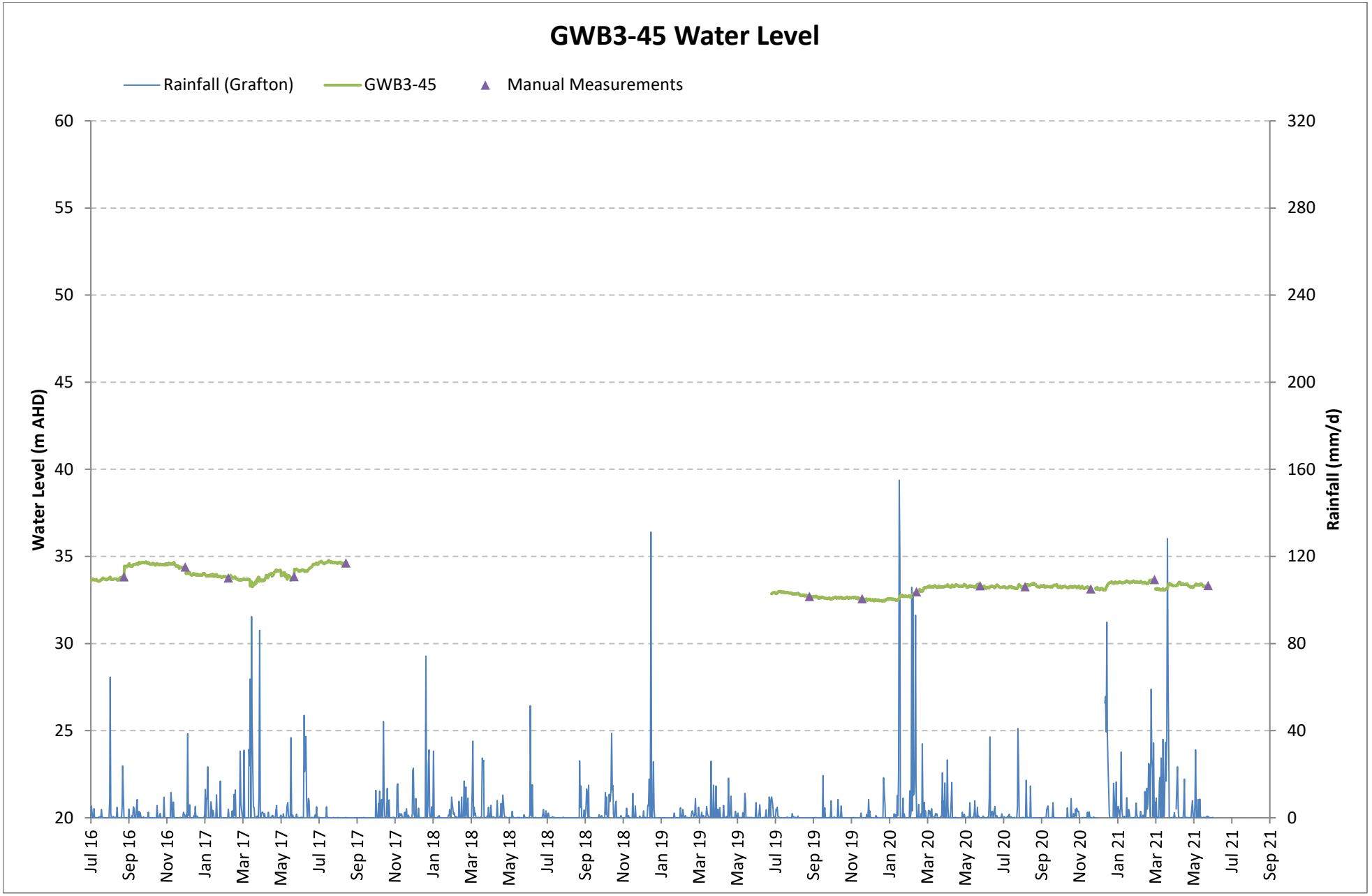

GWB3-35 & GWB3-36 Water Levels
Rainfall (Grafton)
GWB3-35
GWB3-36
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB3-35 removed from WQMP on this date
GWB3-36 removed from WQMP on this date
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
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May 18
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Nov 18
Jan 19
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

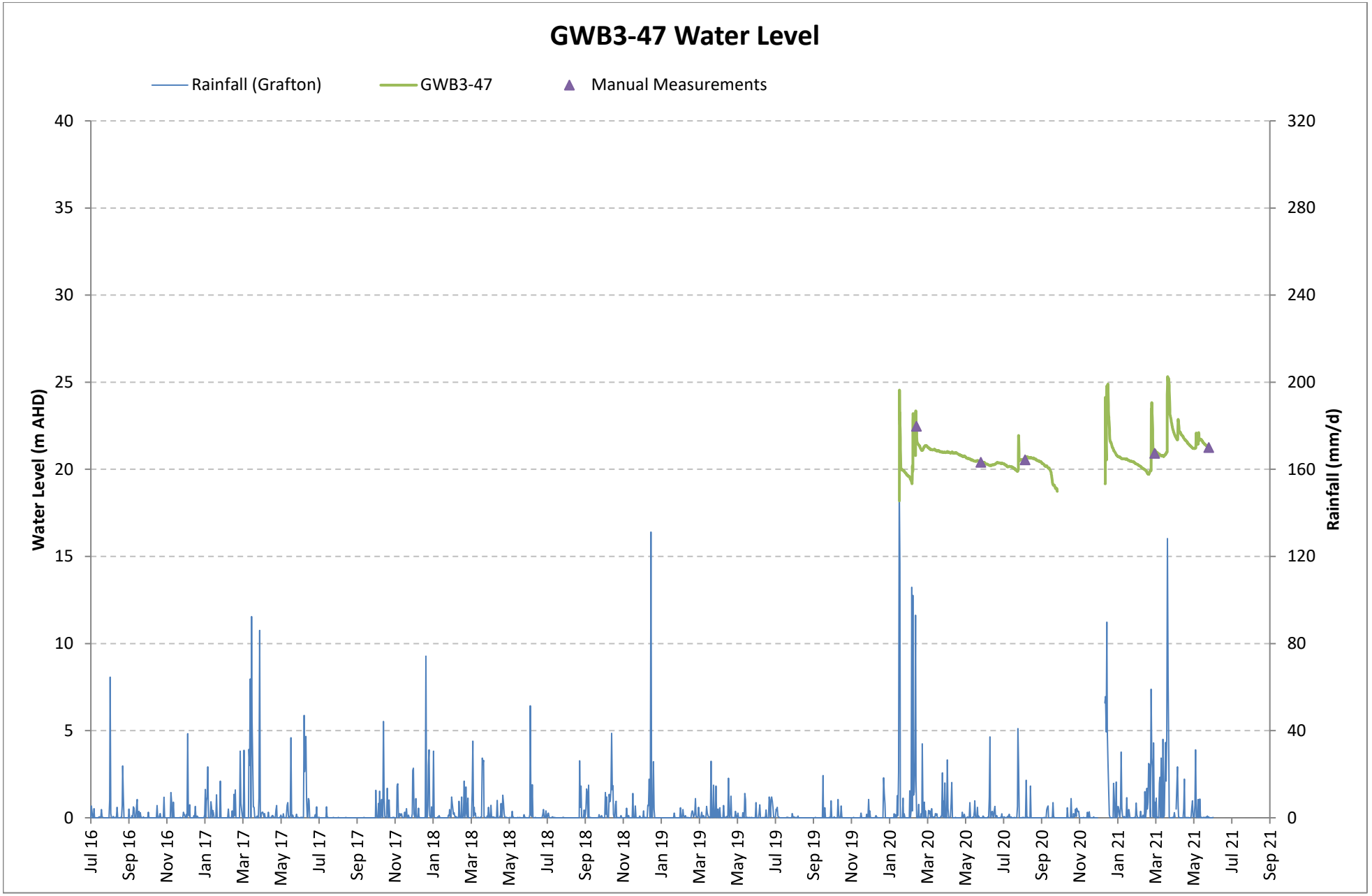

GWB3-37 & GWB3-38 Water Levels
Rainfall (Grafton)
GWB3-37
GWB3-38
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
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Nov 19
Jan 20
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May 20
Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

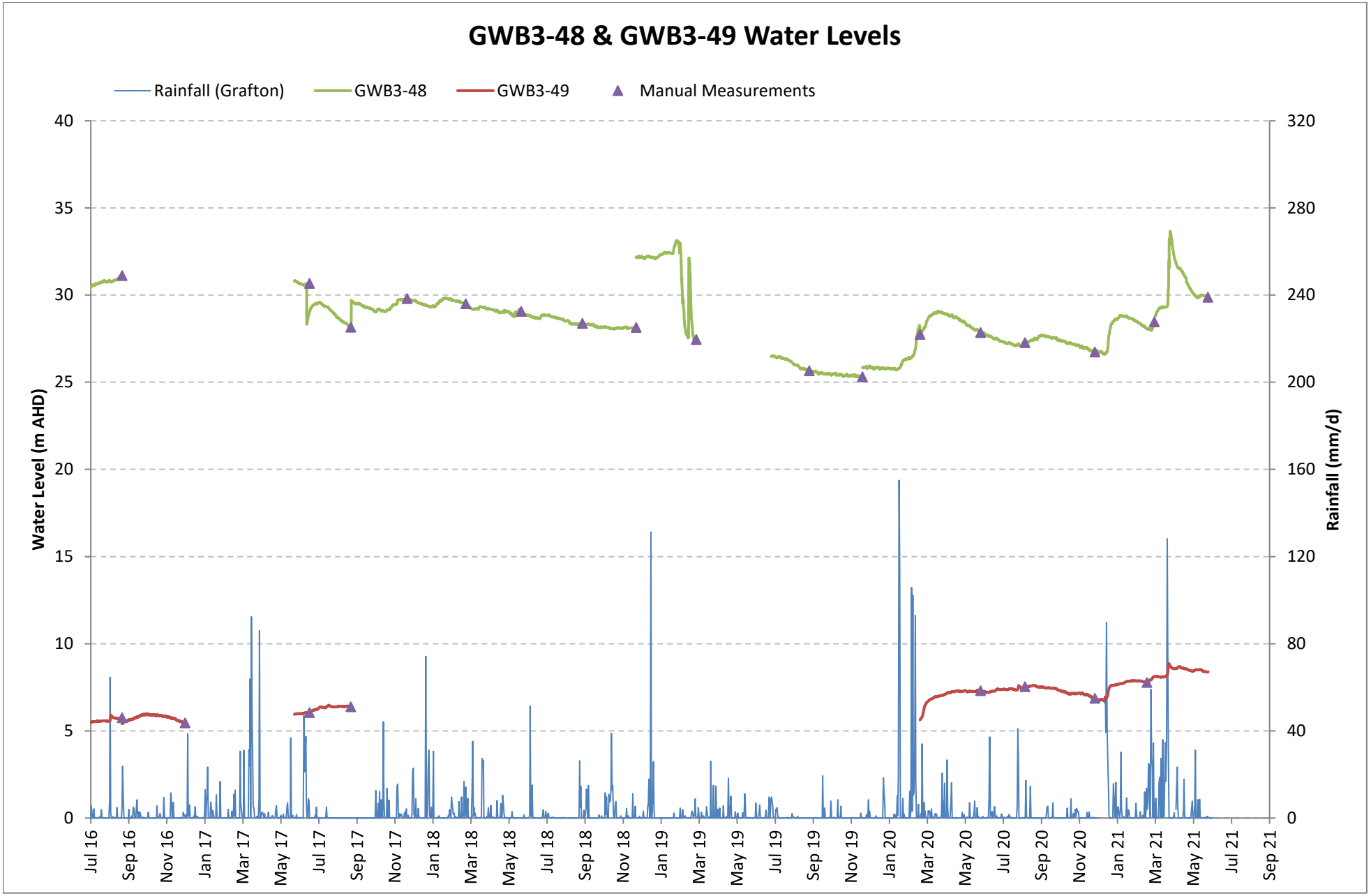

GWB3-39 & GWB3-40 Water Levels
Rainfall (Grafton)
GWB3-39
GWB3-40
Manual Measurements
GWB3-39 removed from WQMP on this date
GWB3-40 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

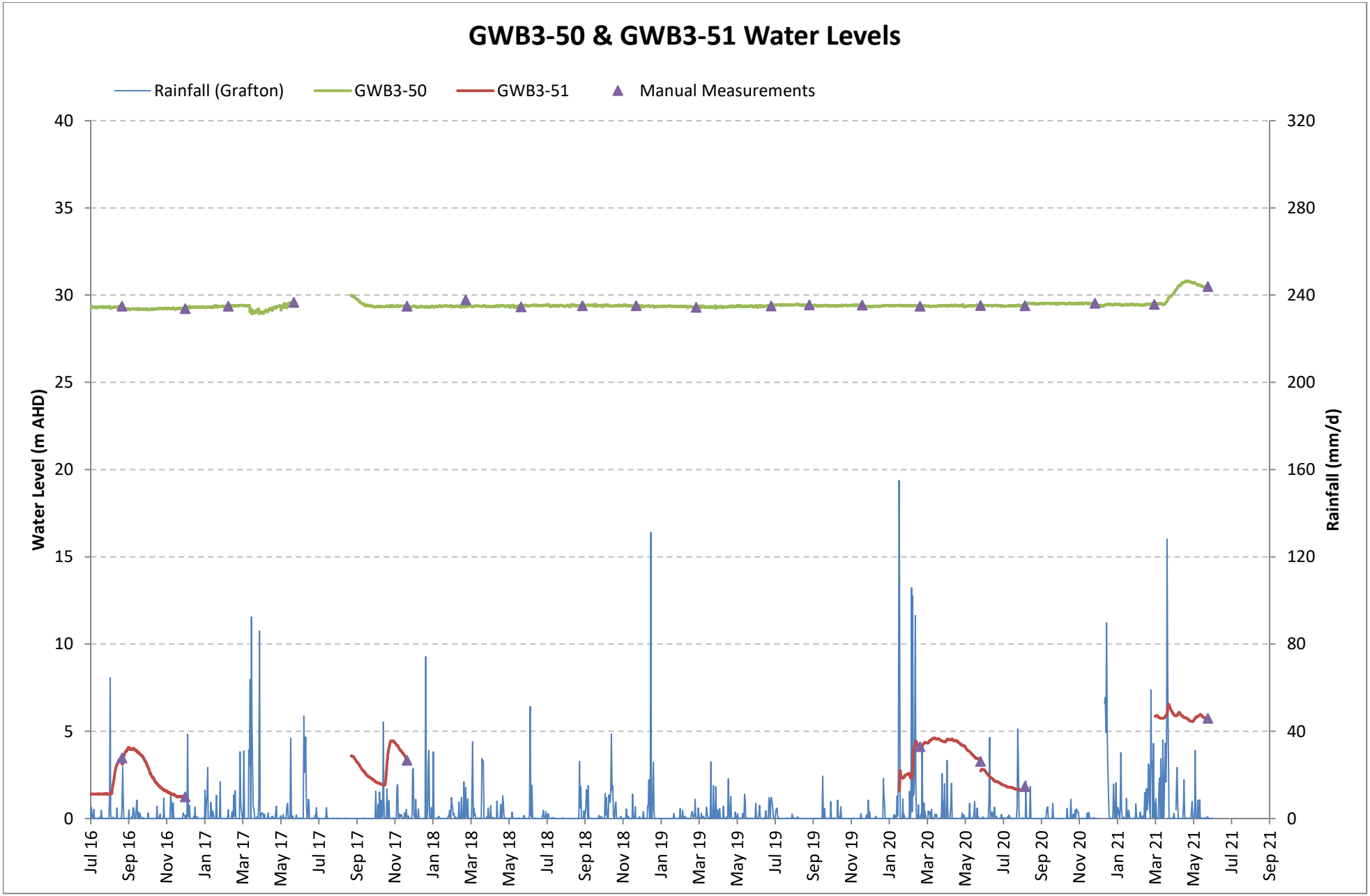

GWB3-41 Water Level
Rainfall (Grafton)
GWB3-41
Manual Measurements
GWB3-41 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

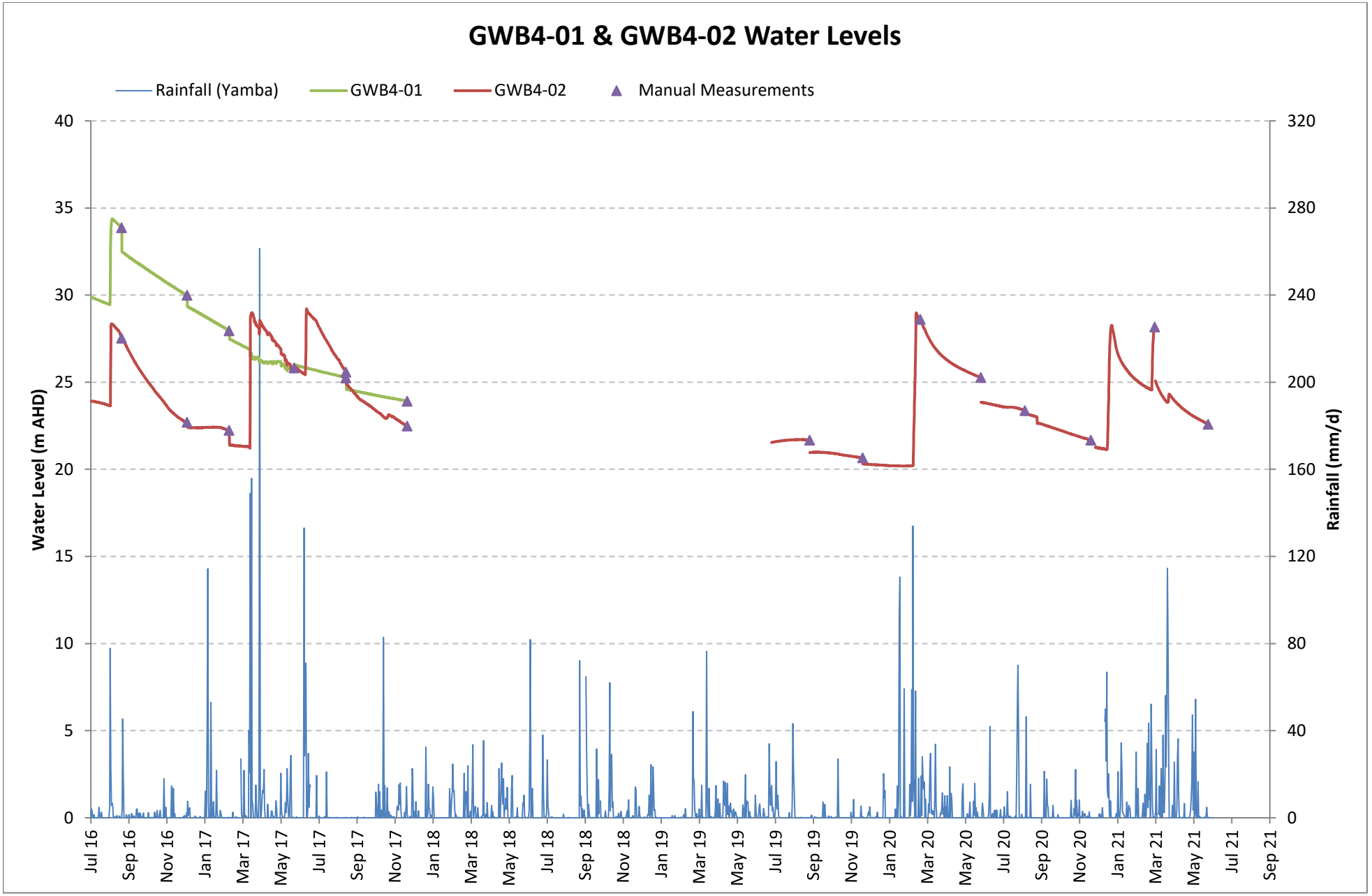

GWB3-44 Water Level
Rainfall (Grafton)
GWB3-44
Manual Measurements
GWB3-44 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
60
55
50
45
40
35
30
25
20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Jan 20
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May 20
Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

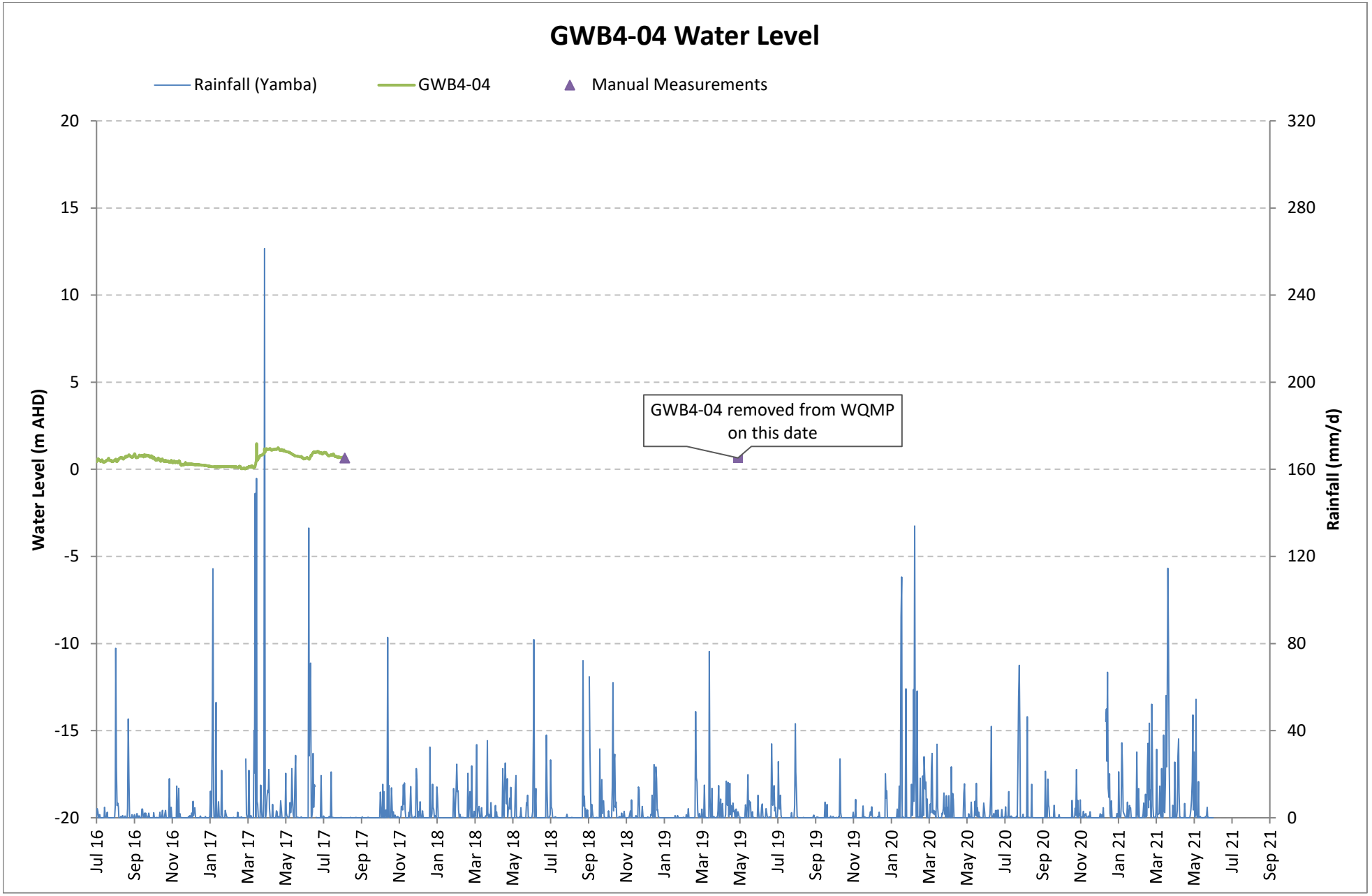

GWB3-45 Water Level
Rainfall (Grafton)
GWB3-45
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
60
55
50
45
40
35
30
25
20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
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May 20
Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

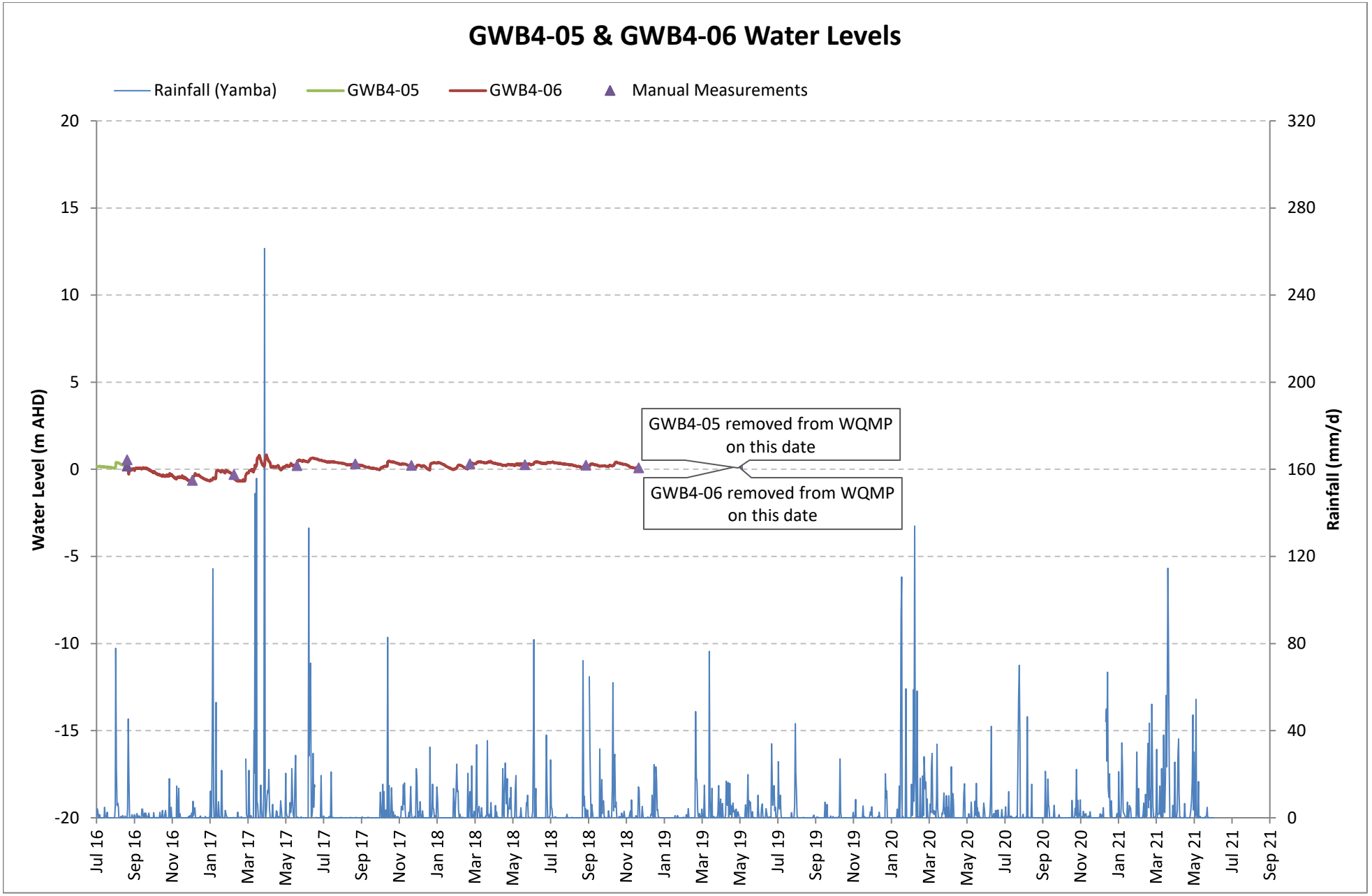

GWB3-47 Water Level
Rainfall (Grafton)
GWB3-47
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
Sep 19
Nov 19
Jan 20
Mar 20
May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

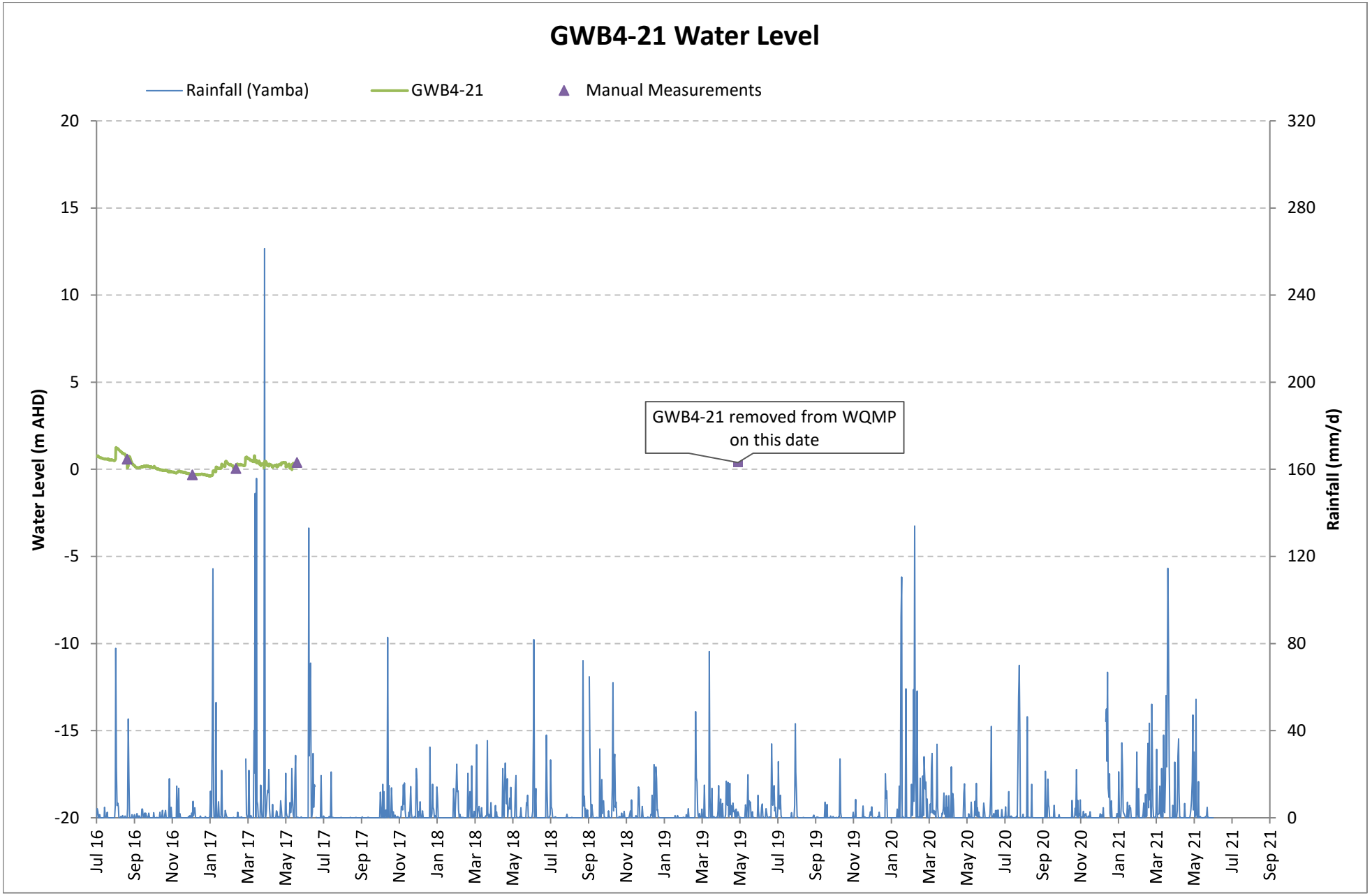

GWB3-48 & GWB3-49 Water Levels
Rainfall (Grafton)
GWB3-48
GWB3-49
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
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May 19
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

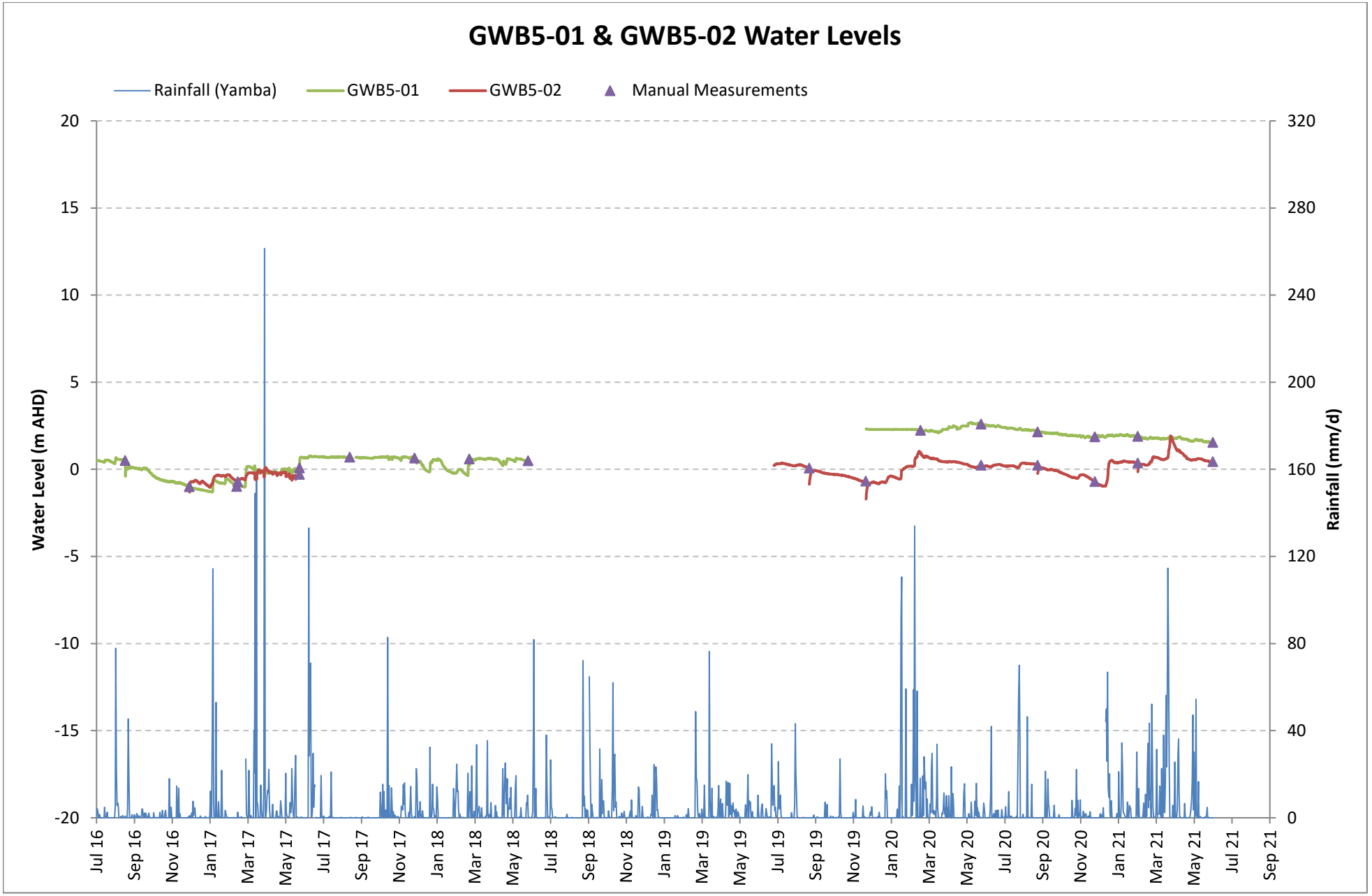

GWB3-50 & GWB3-51 Water Levels
Rainfall (Grafton)
GWB3-50
GWB3-51
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Nov 19
Jan 20
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Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

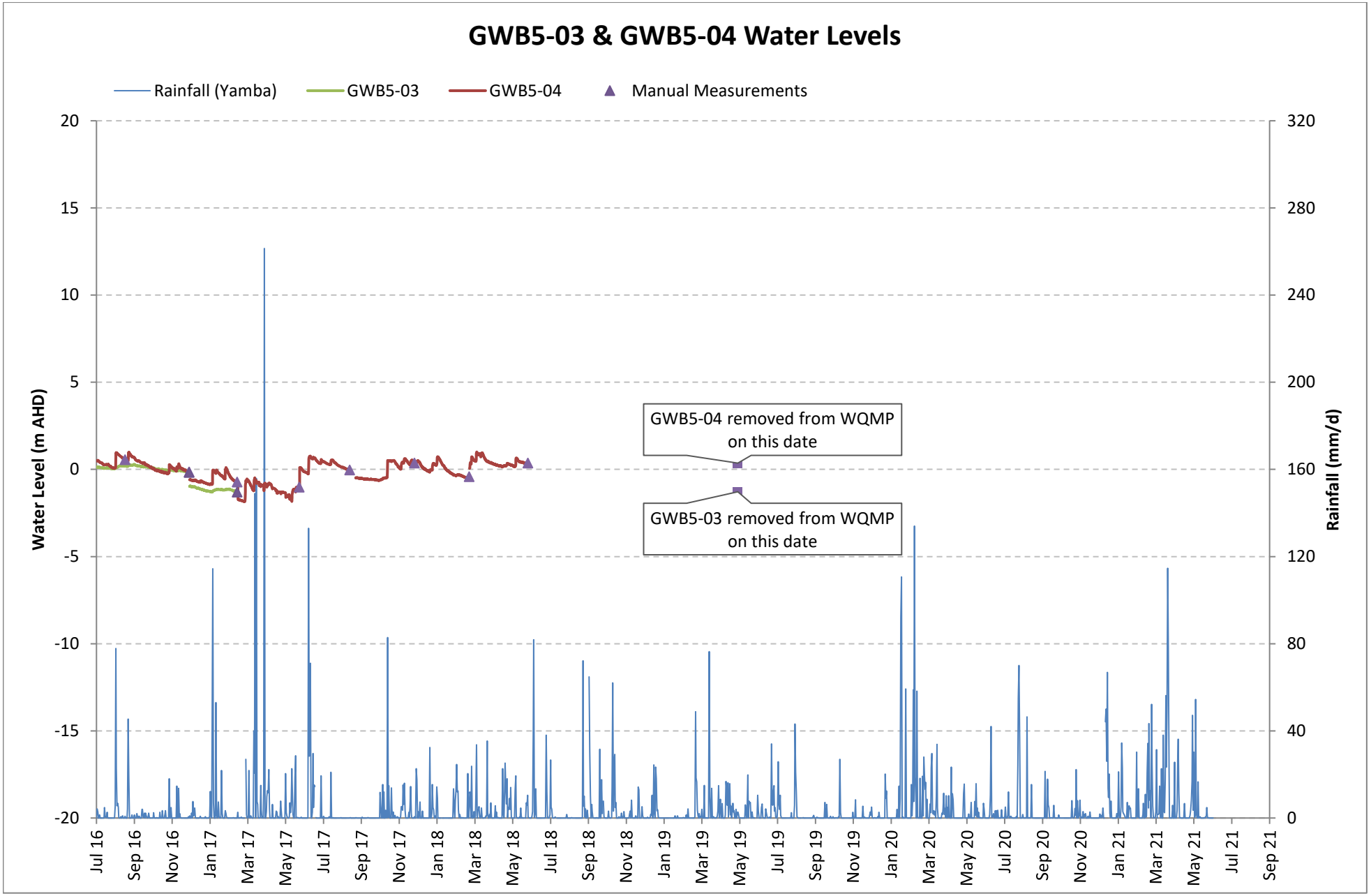

GWB4-01 & GWB4-02 Water Levels
Rainfall (Yamba)
GWB4-01
GWB4-02
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
40
35
30
25
20
15
10
5
0
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
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May 19
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

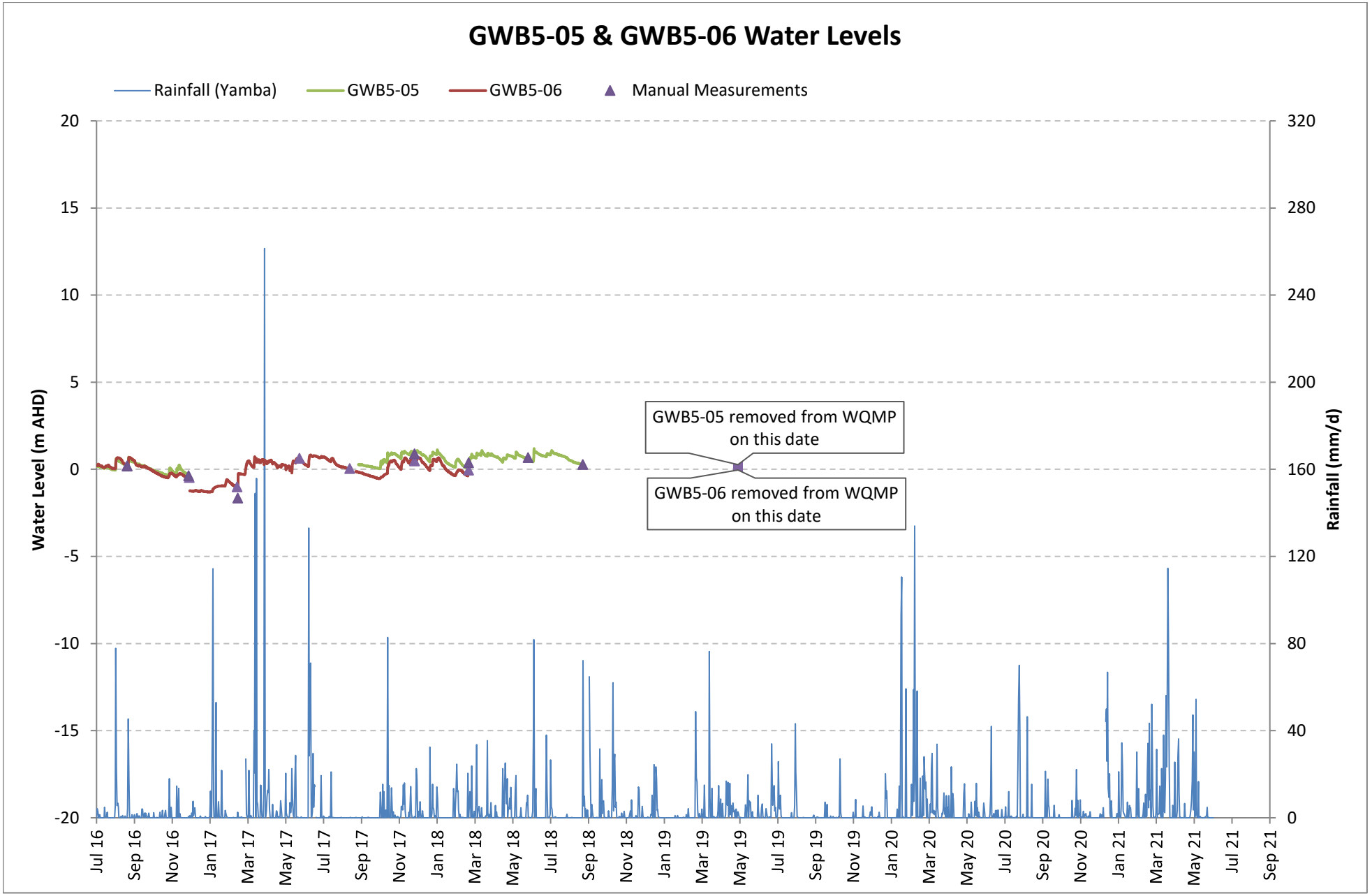

GWB4-04 Water Level
Rainfall (Yamba)
GWB4-04
Manual Measurements
GWB4-04 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
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Nov 17
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

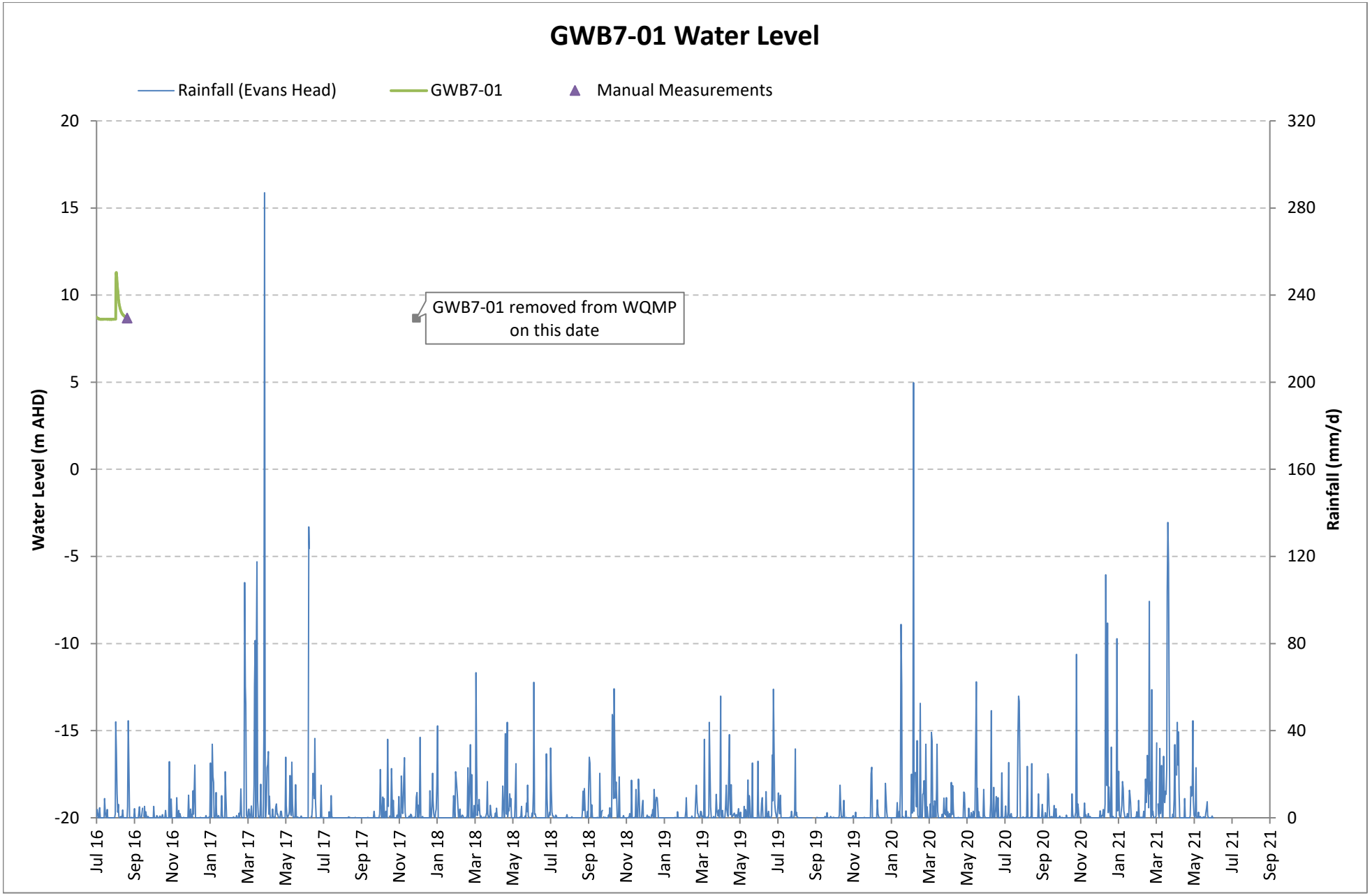

GWB4-05 & GWB4-06 Water Levels
Rainfall (Yamba)
GWB4-05
GWB4-06
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB4-05 removed from WQMP on this date
GWB4-06 removed from WQMP on this date
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
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Nov 18
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Jan 20
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May 20
Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

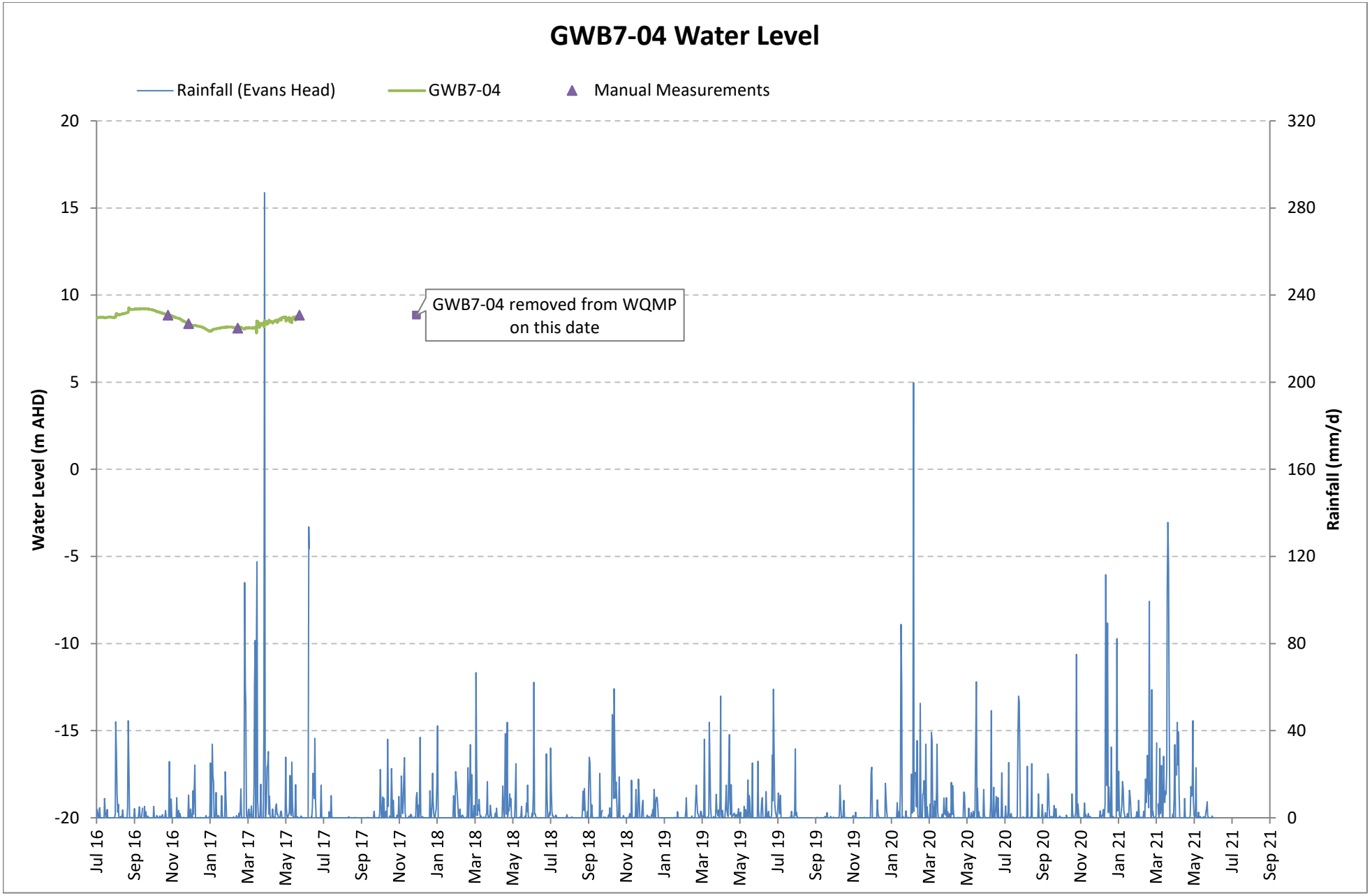

GWB4-21 Water Level
Rainfall (Yamba)
GWB4-21
Manual Measurements
GWB4-21 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
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Nov 18
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May 19
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Jan 20
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Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

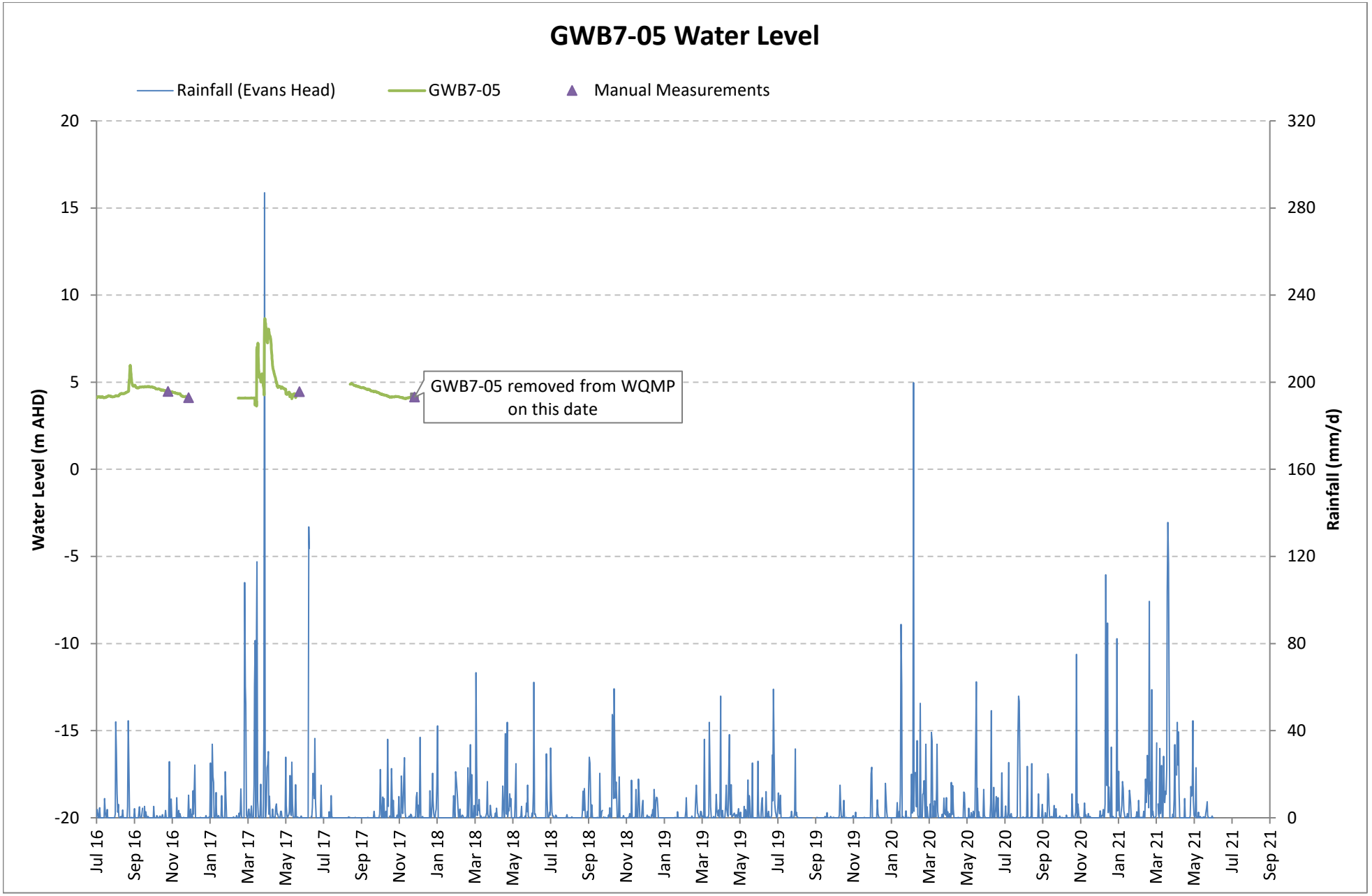

GWB5-01 & GWB5-02 Water Levels
Rainfall (Yamba)
GWB5-01
GWB5-02
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
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Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

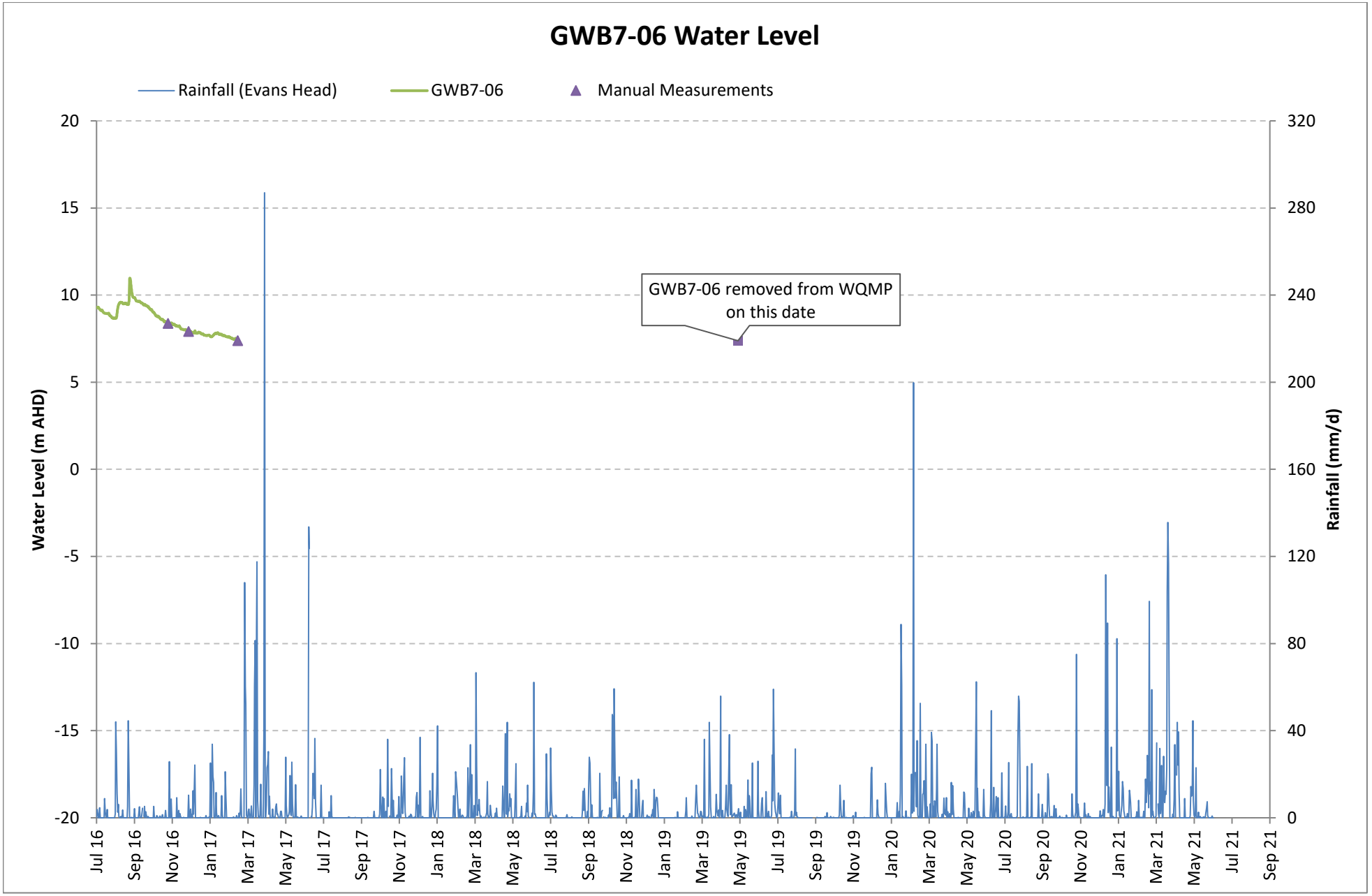

GWB5-03 & GWB5-04 Water Levels
Rainfall (Yamba)
GWB5-03
GWB5-04
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB5-04 removed from WQMP on this date
GWB5-03 removed from WQMP on this date
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
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May 18
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Nov 18
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

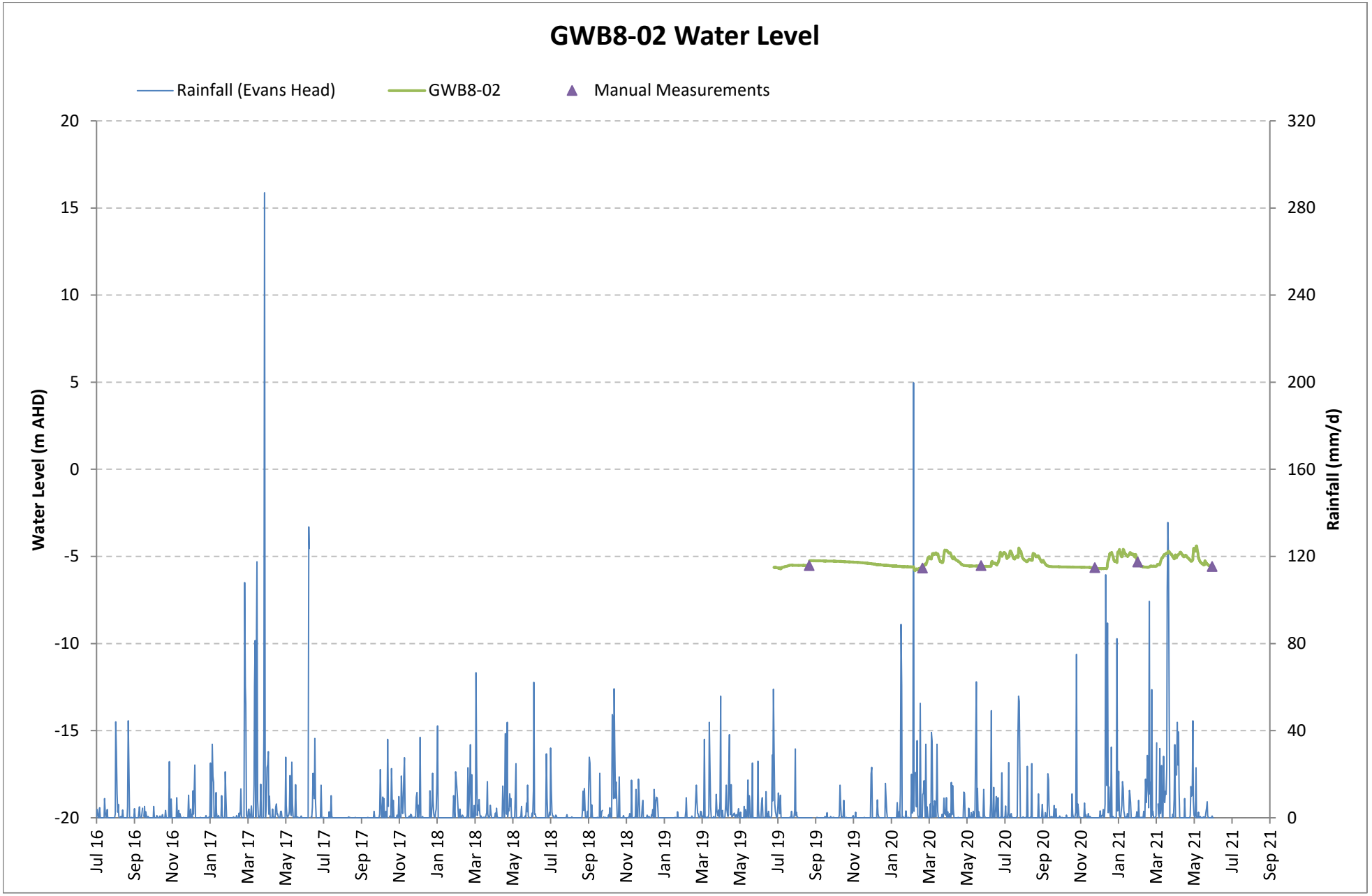

GWB5-05 & GWB5-06 Water Levels
Rainfall (Yamba)
GWB5-05
GWB5-06
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB5-05 removed from WQMP on this date
GWB5-06 removed from WQMP on this date
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
Jul 18
Sep 18
Nov 18
Jan 19
Mar 19
May 19
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Nov 19
Jan 20
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May 20
Jul 20
Sep 20
Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

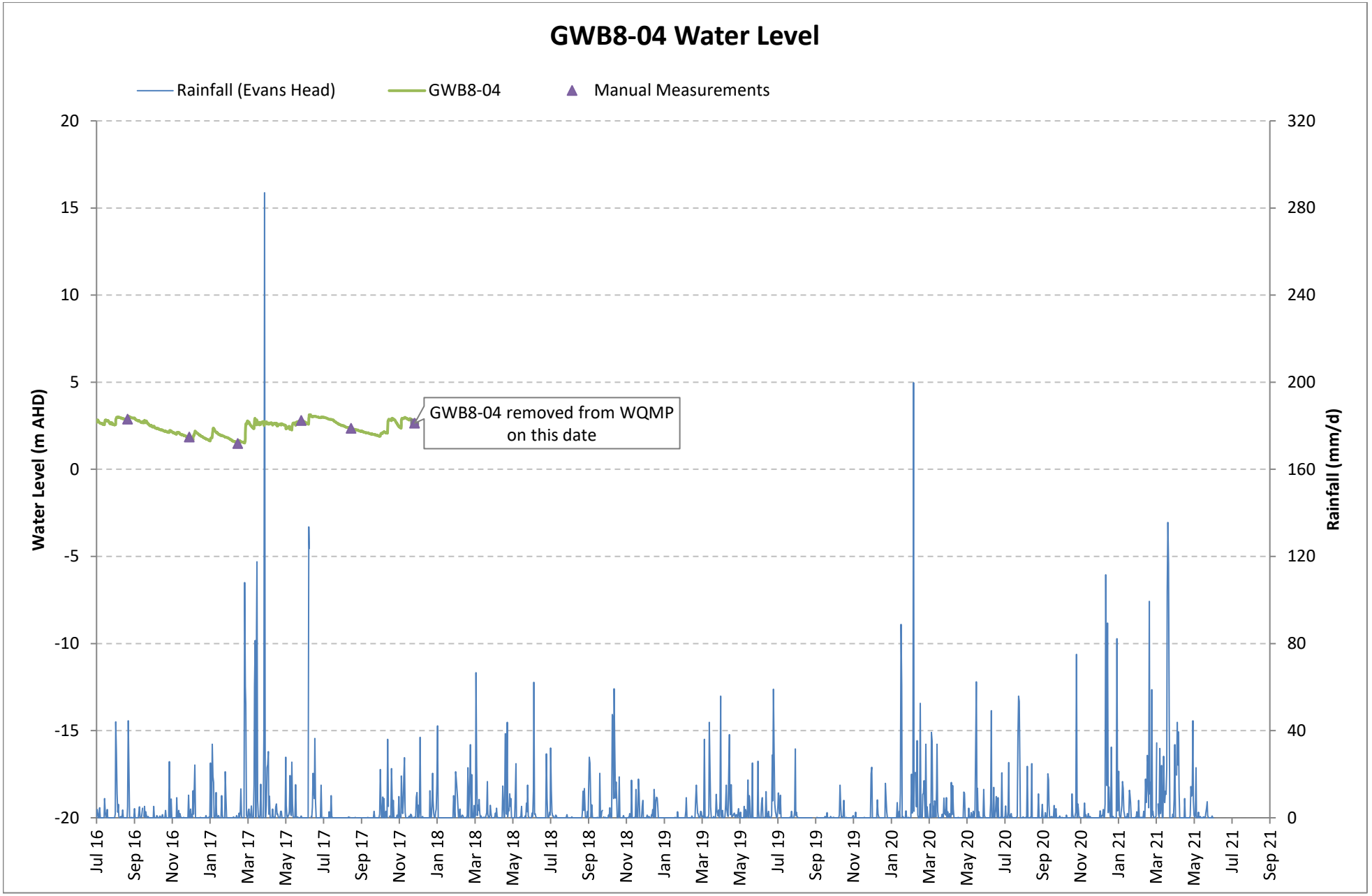

GWB7-01 Water Level
Rainfall (Evans Head)
GWB7-01
Manual Measurements
GWB7-01 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
Sep 17
Nov 17
Jan 18
Mar 18
May 18
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Nov 18
Jan 19
Mar 19
May 19
Jul 19
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Nov 19
Jan 20
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May 20
Jul 20
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

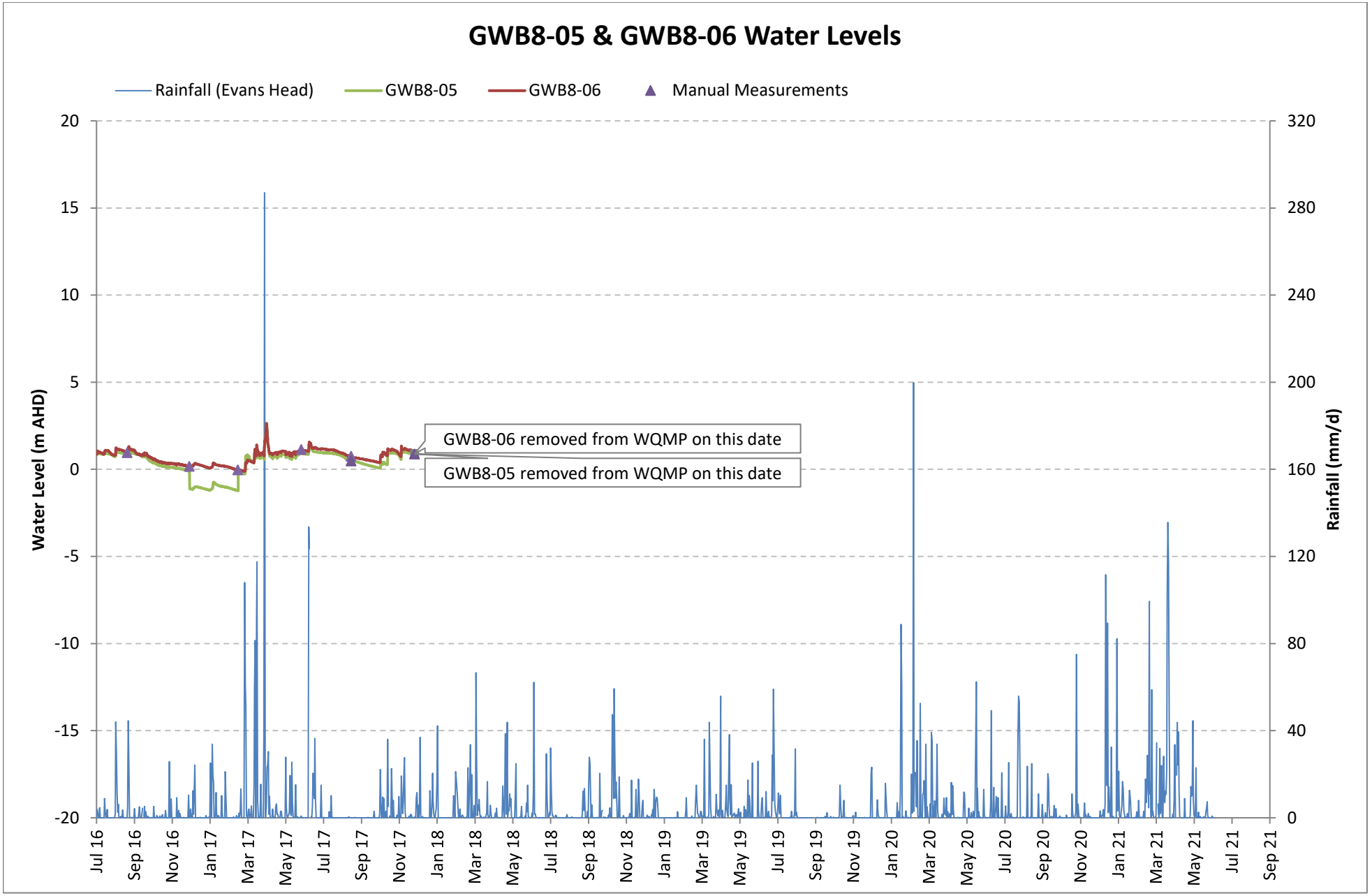

GWB7-04 Water Level
Rainfall (Evans Head)
GWB7-04
Manual Measurements
GWB7-04 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
Jul 17
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May 19
Jul 19
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

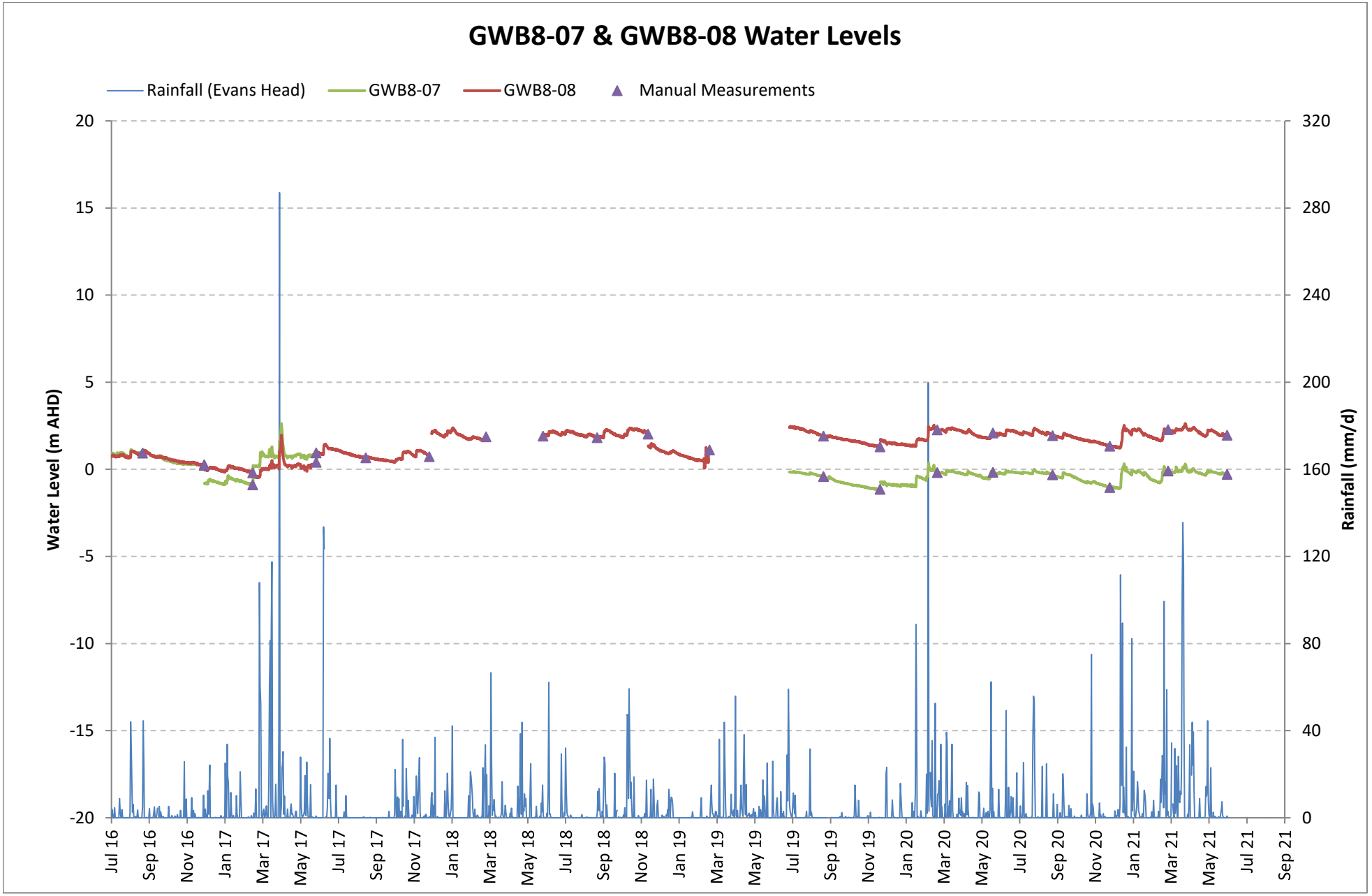

GWB7-05 Water Level
Rainfall (Evans Head)
GWB7-05
Manual Measurements
GWB7-05 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
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May 17
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Jan 21
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May 21
Jul 21
Sep 21

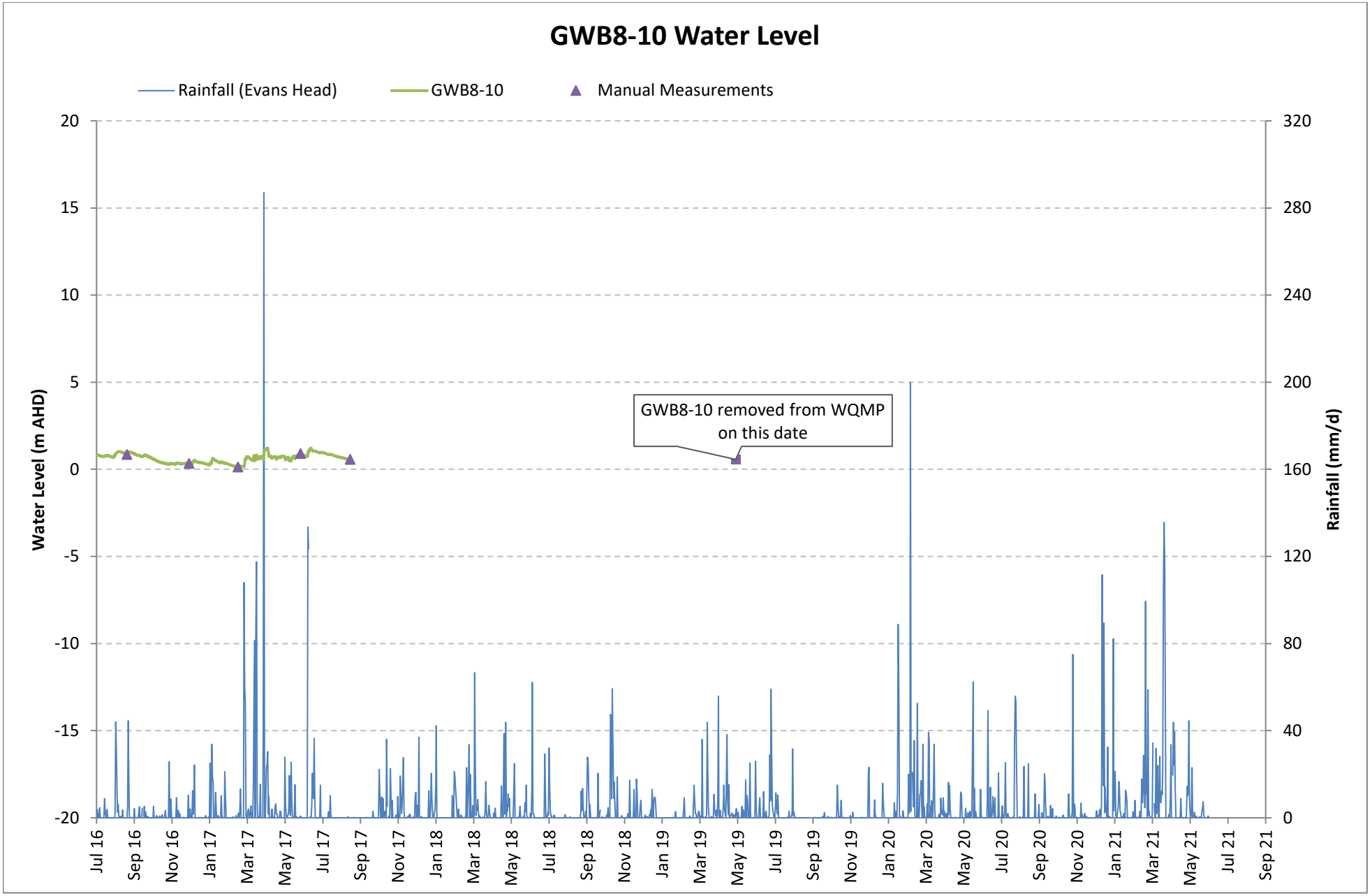

GWB7-06 Water Level
Rainfall (Evans Head)
GWB7-06
Manual Measurements
GWB7-06 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
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Mar 21
May 21
Jul 21
Sep 21

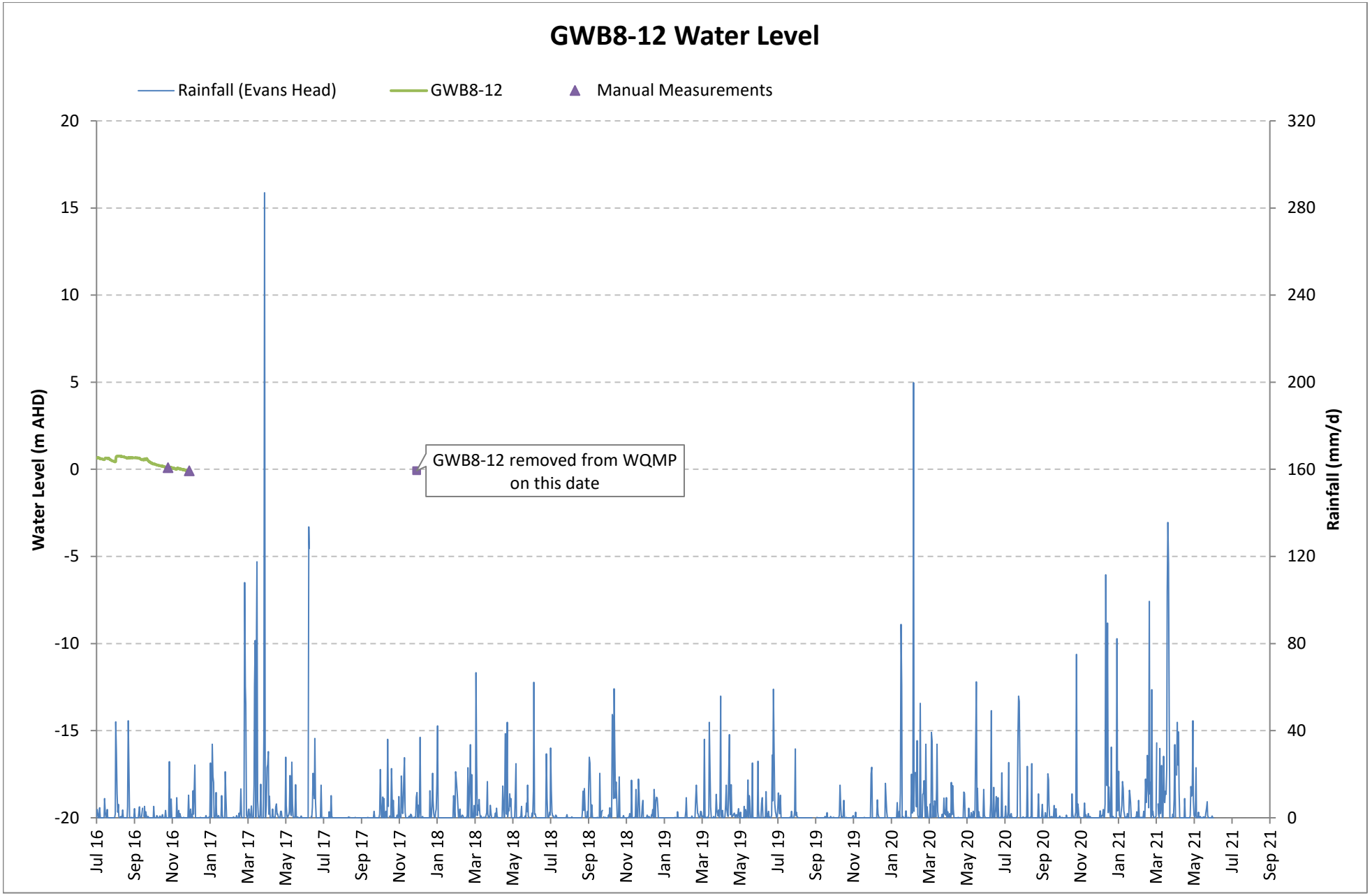

GWB8-02 Water Level
Rainfall (Evans Head)
GWB8-02
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
Mar 17
May 17
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May 21
Jul 21
Sep 21

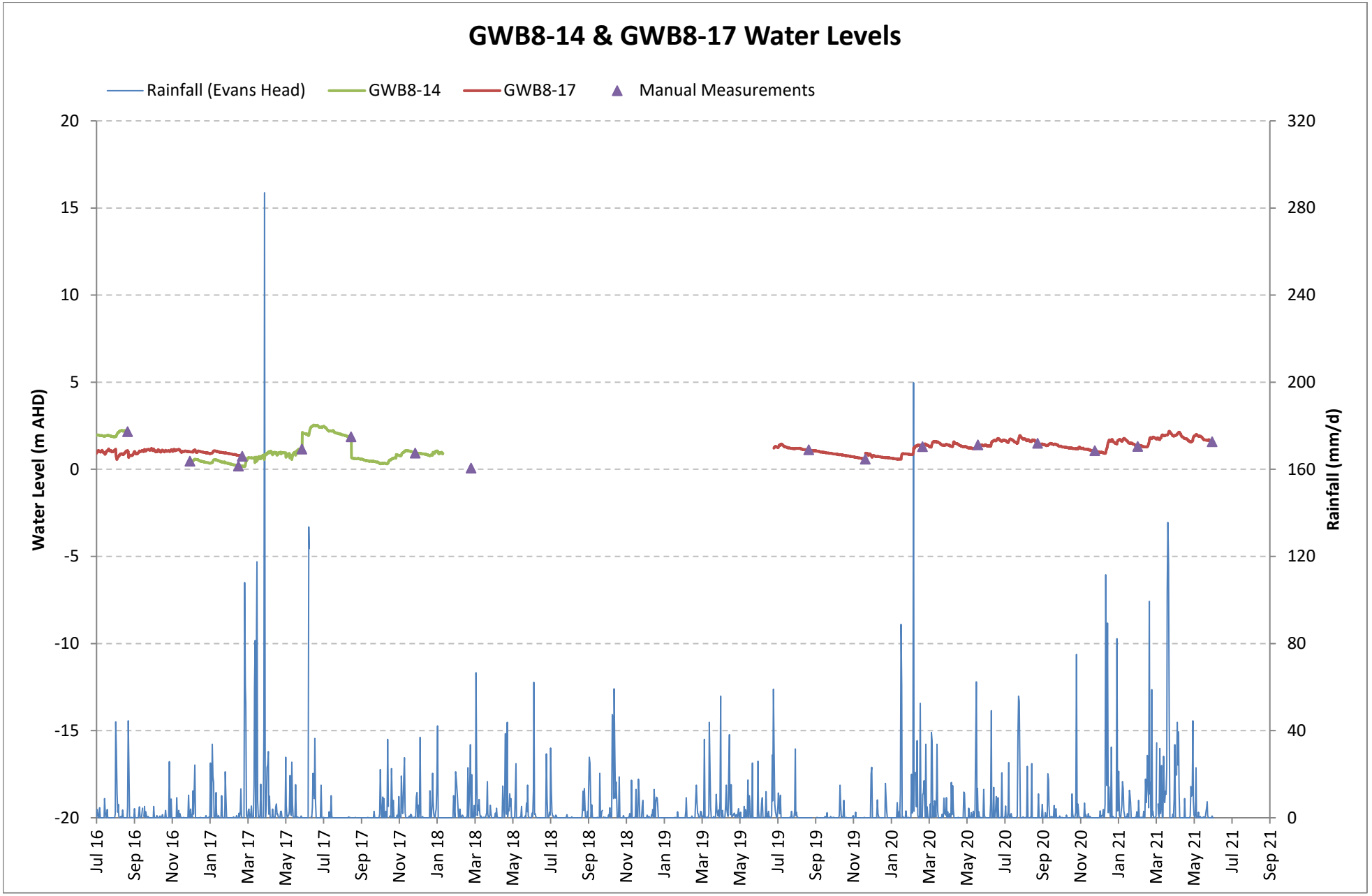

GWB8-04 Water Level
Rainfall (Evans Head)
GWB8-04
Manual Measurements
GWB8-04 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
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0
Jul 16
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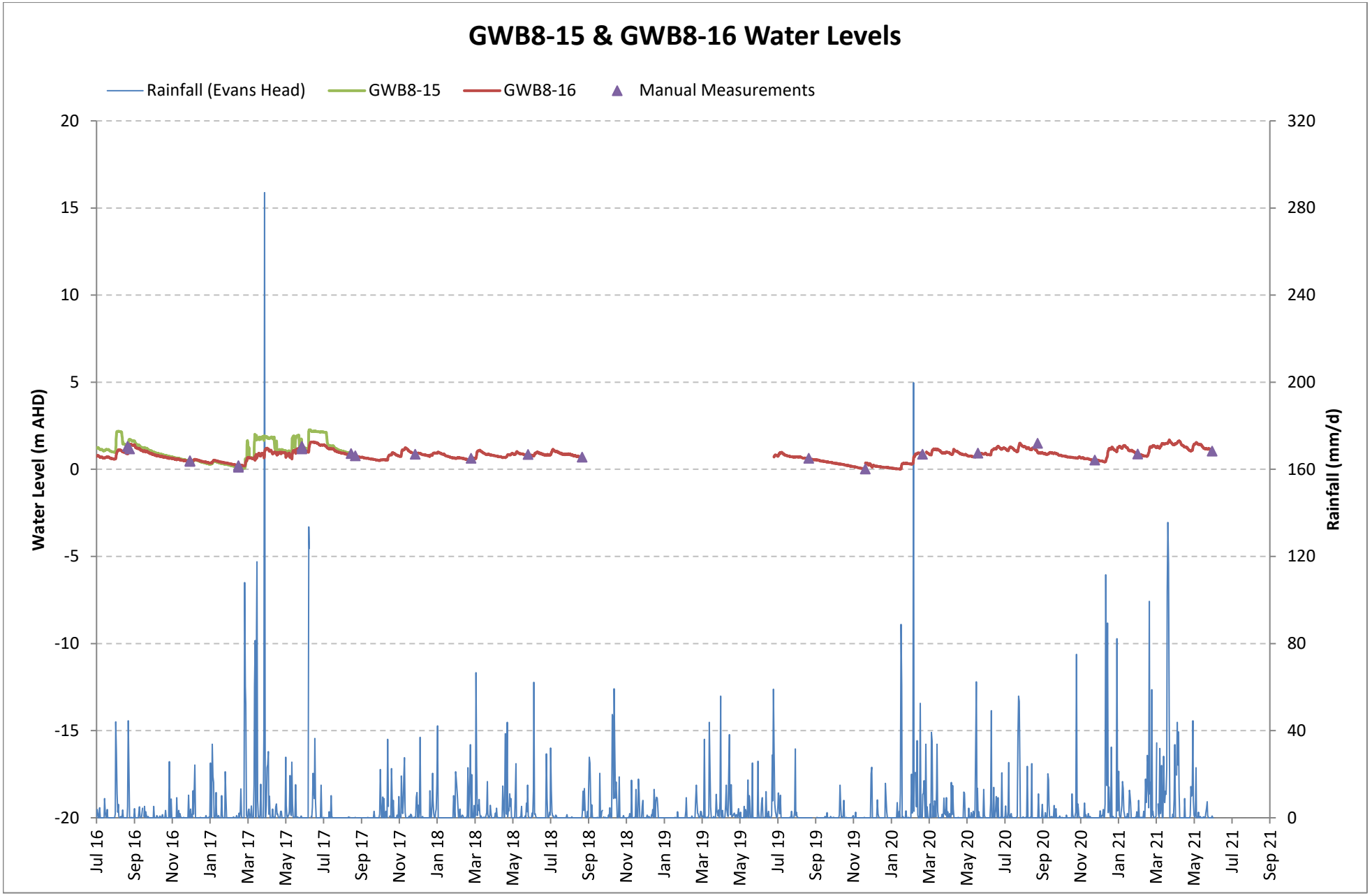

GWB8-05 & GWB8-06 Water Levels
Rainfall (Evans Head)
GWB8-05
GWB8-06
Manual Measurements
GWB8-06 removed from WQMP on this date
GWB8-05 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
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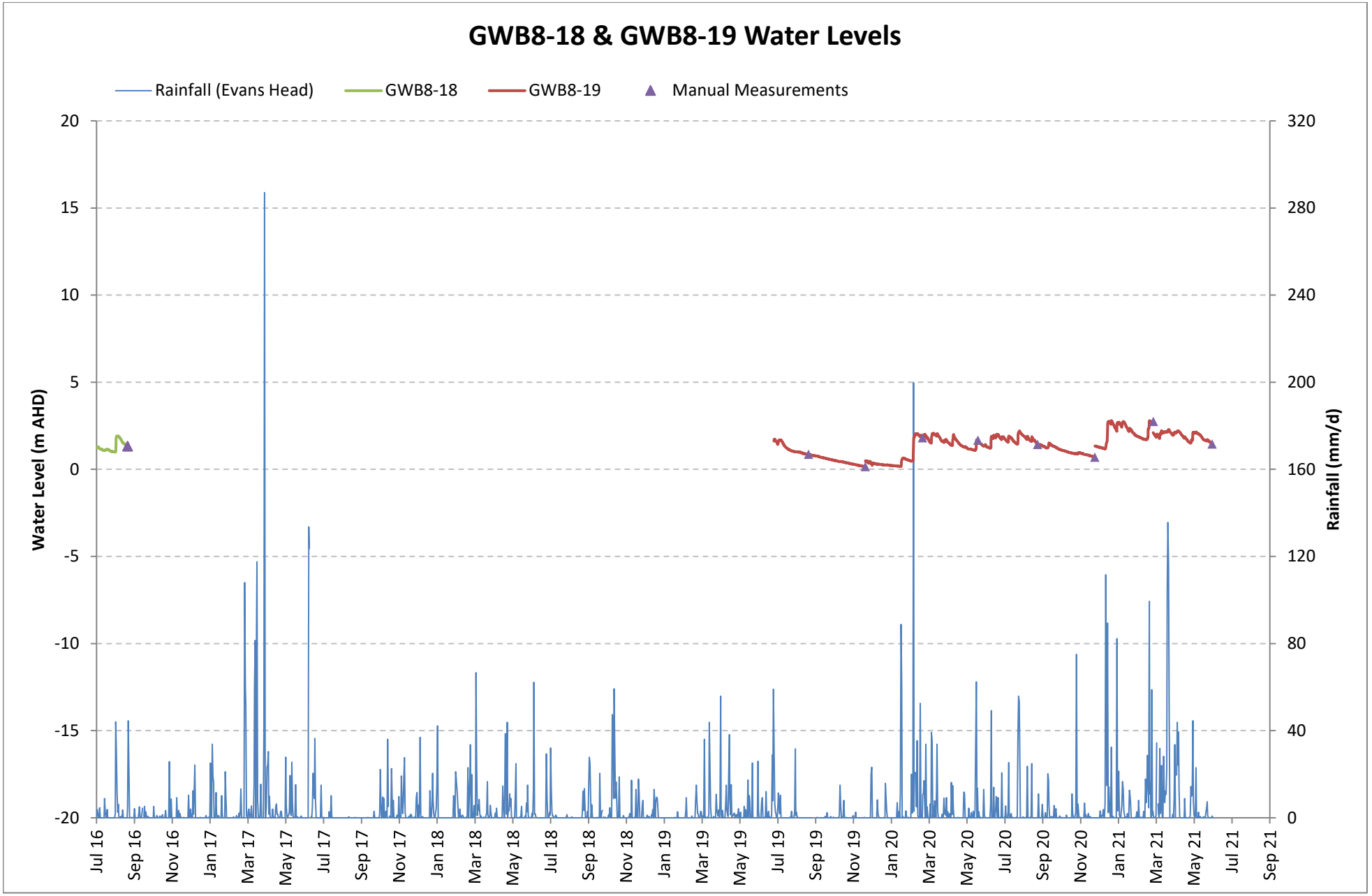

GWB8-07 & GWB8-08 Water Levels
Rainfall (Evans Head)
GWB8-07
GWB8-08
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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May 21
Jul 21
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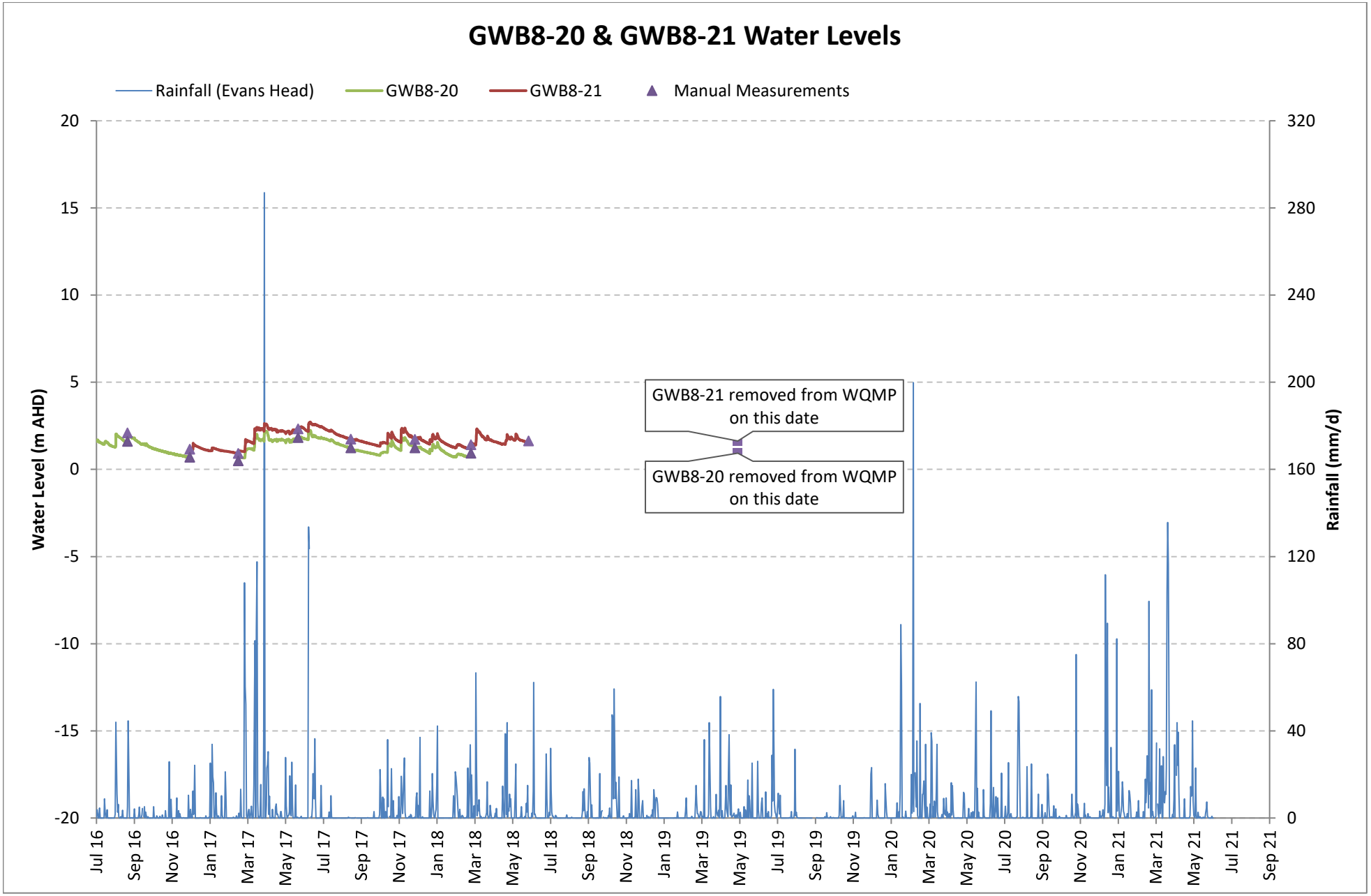

GWB8-10 Water Level
Rainfall (Evans Head)
GWB8-10
Manual Measurements
GWB8-10 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
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May 21
Jul 21
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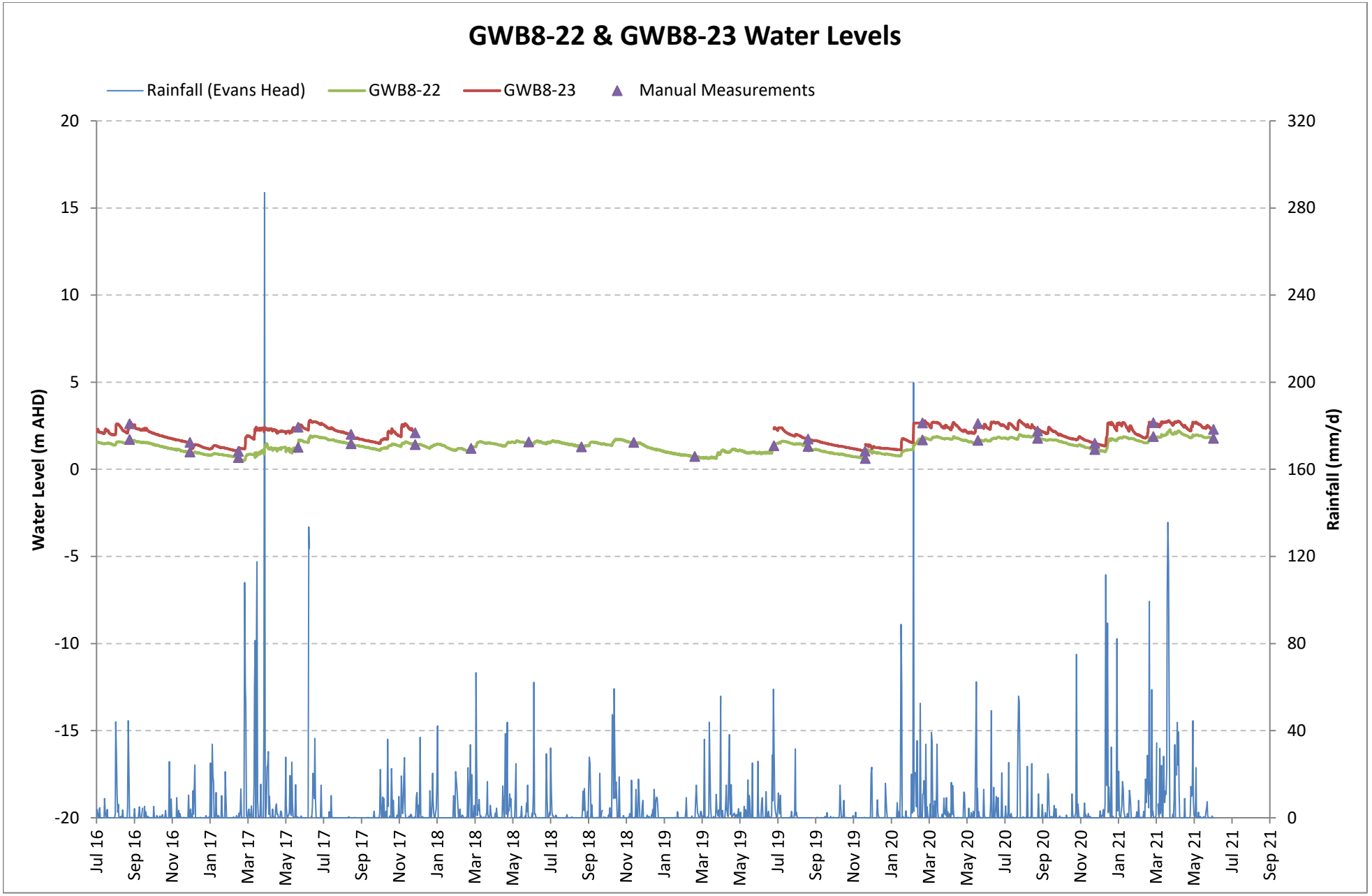

GWB8-12 Water Level
Rainfall (Evans Head)
GWB8-12
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB8-12 removed from WQMP on this date
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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May 21
Jul 21
Sep 21

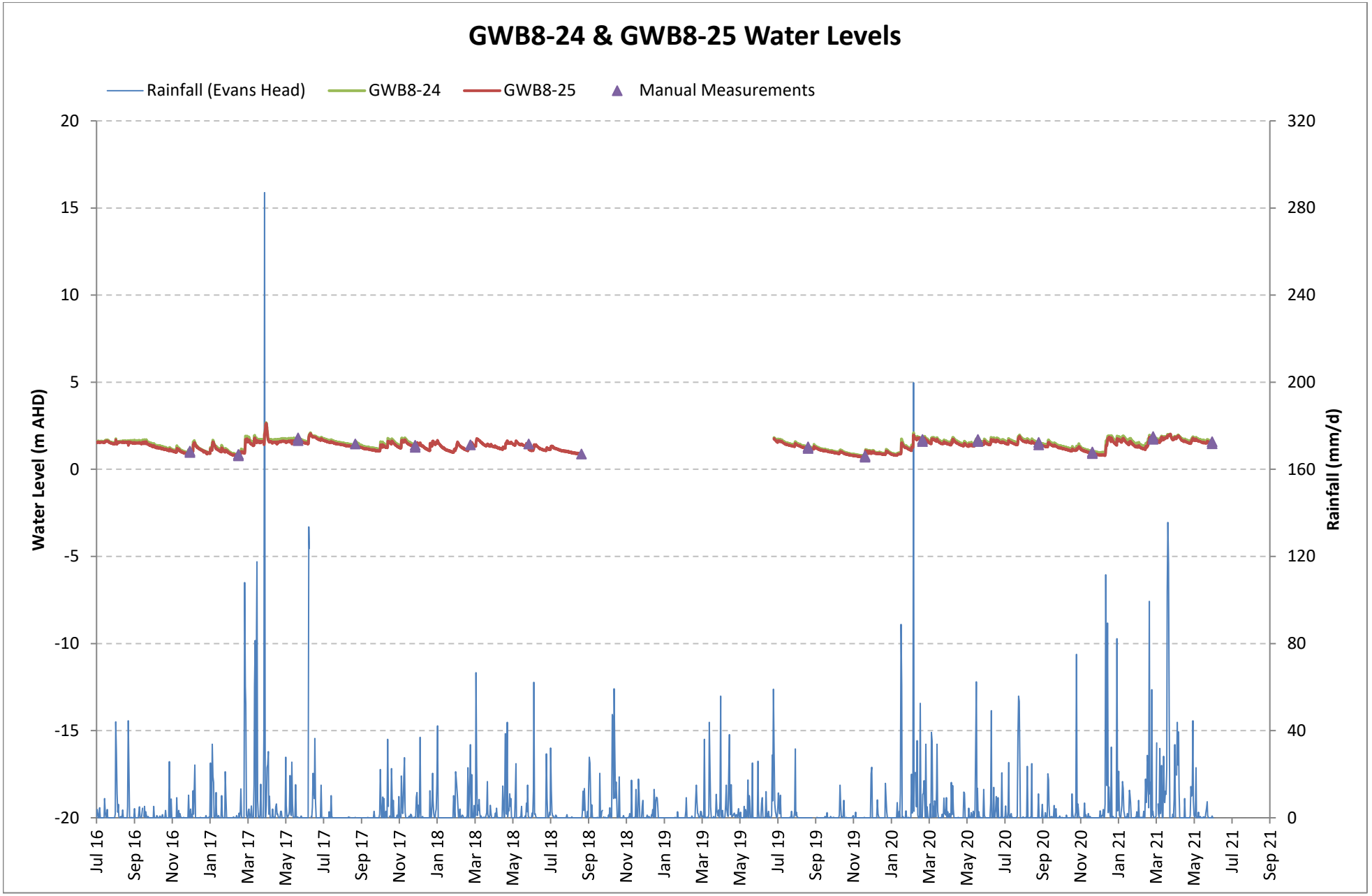

GWB8-14 & GWB8-17 Water Levels
Rainfall (Evans Head)
GWB8-14
GWB8-17
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

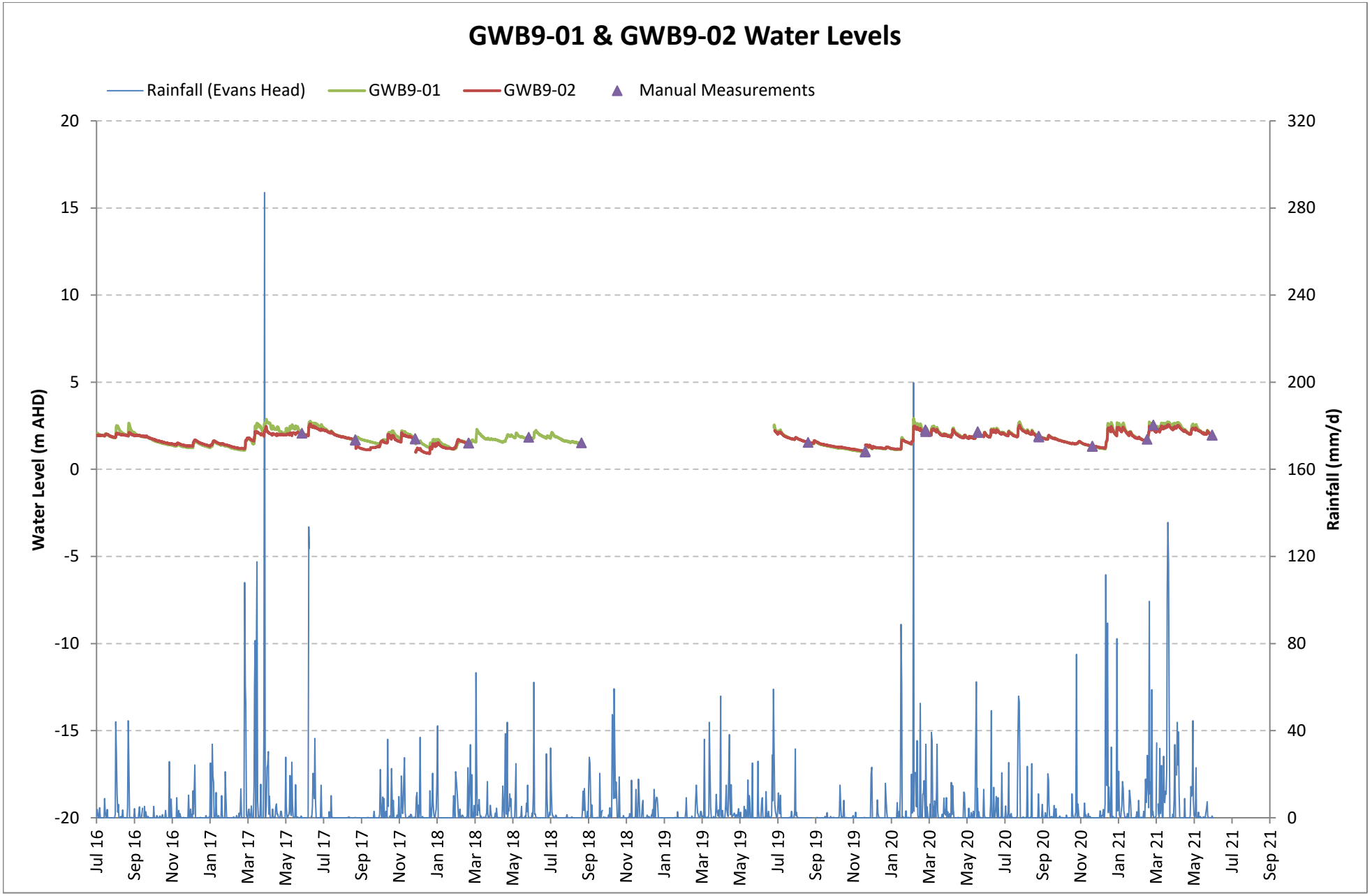

GWB8-15 & GWB8-16 Water Levels
Rainfall (Evans Head)
GWB8-15
GWB8-16
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
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May 21
Jul 21
Sep 21

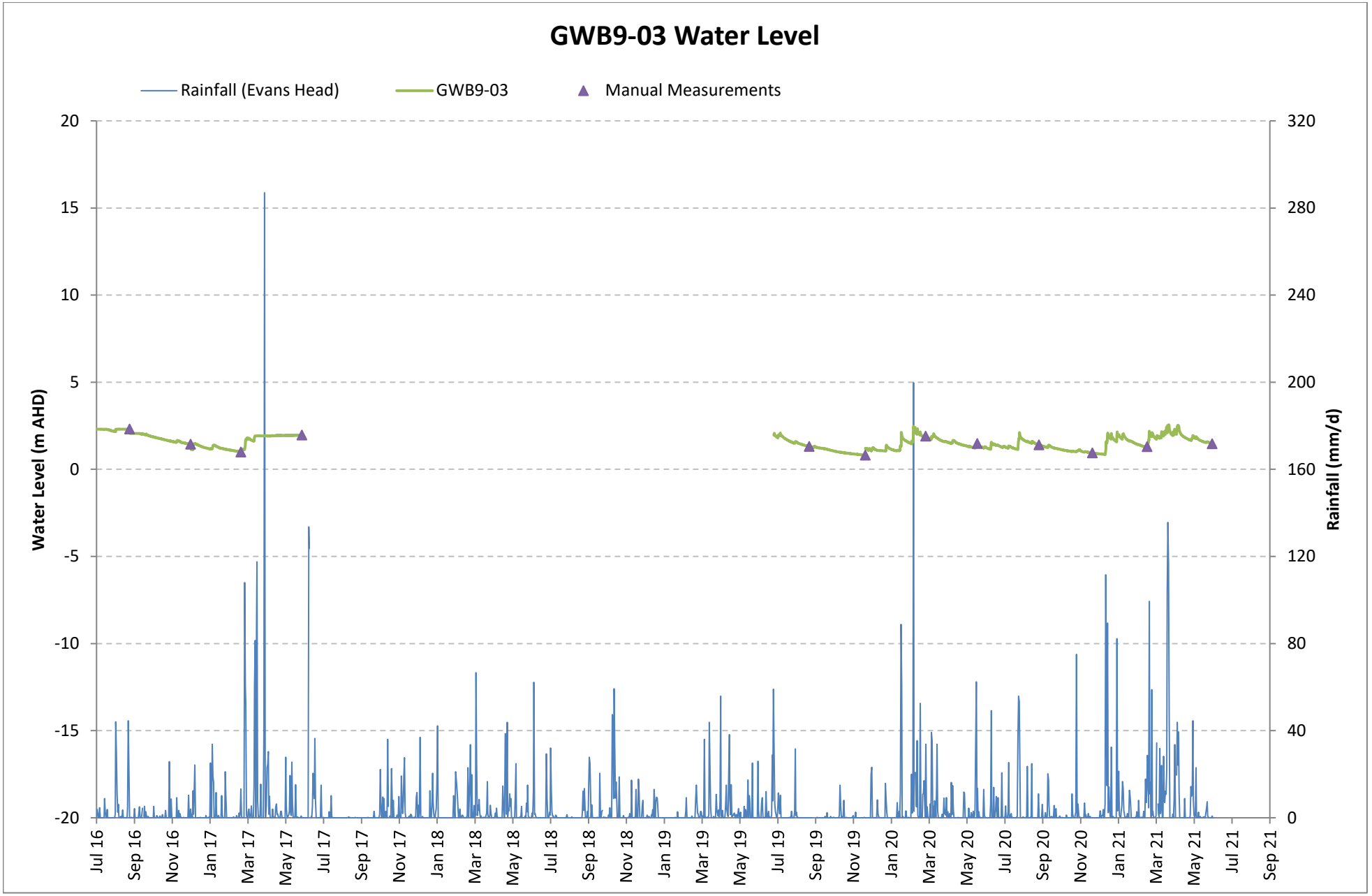

GWB8-18 & GWB8-19 Water Levels
Rainfall (Evans Head)
GWB8-18
GWB8-19
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
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Sep 21

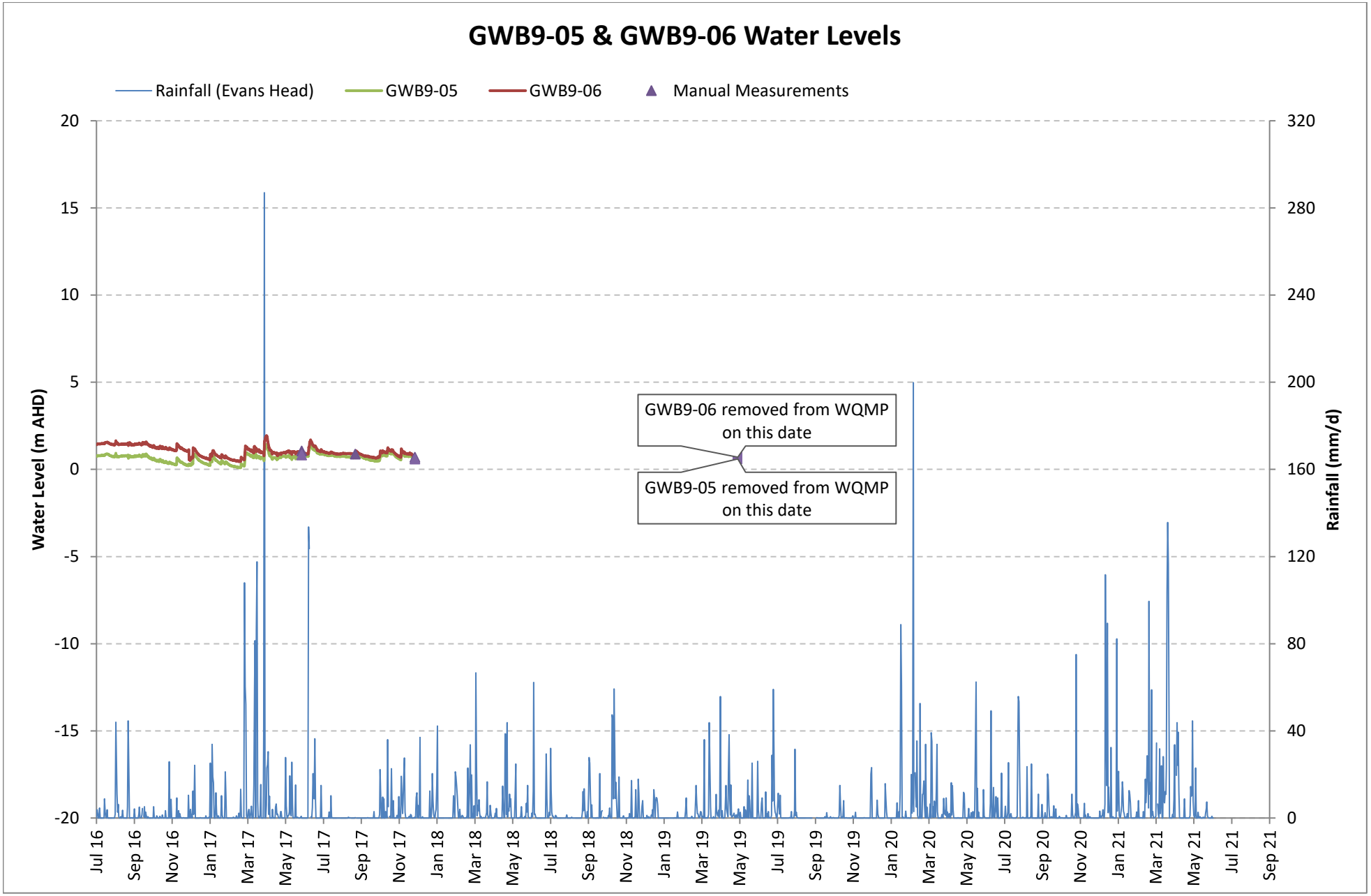

GWB8-20 & GWB8-21 Water Levels
Rainfall (Evans Head)
GWB8-20
GWB8-21
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB8-21 removed from WQMP on this date
GWB8-20 removed from WQMP on this date
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
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May 21
Jul 21
Sep 21

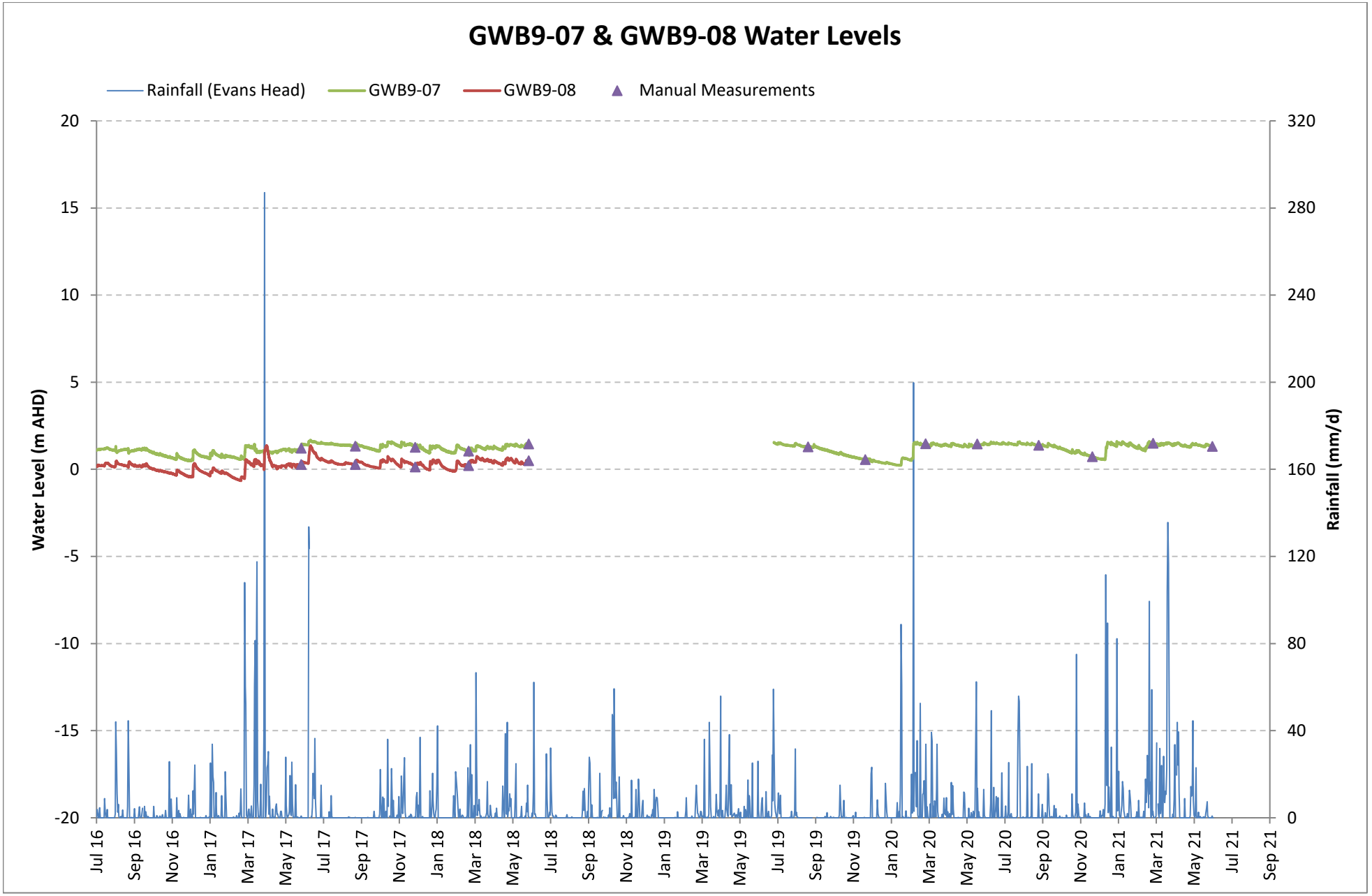

GWB8-22 & GWB8-23 Water Levels
Rainfall (Evans Head)
GWB8-22
GWB8-23
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
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Jul 21
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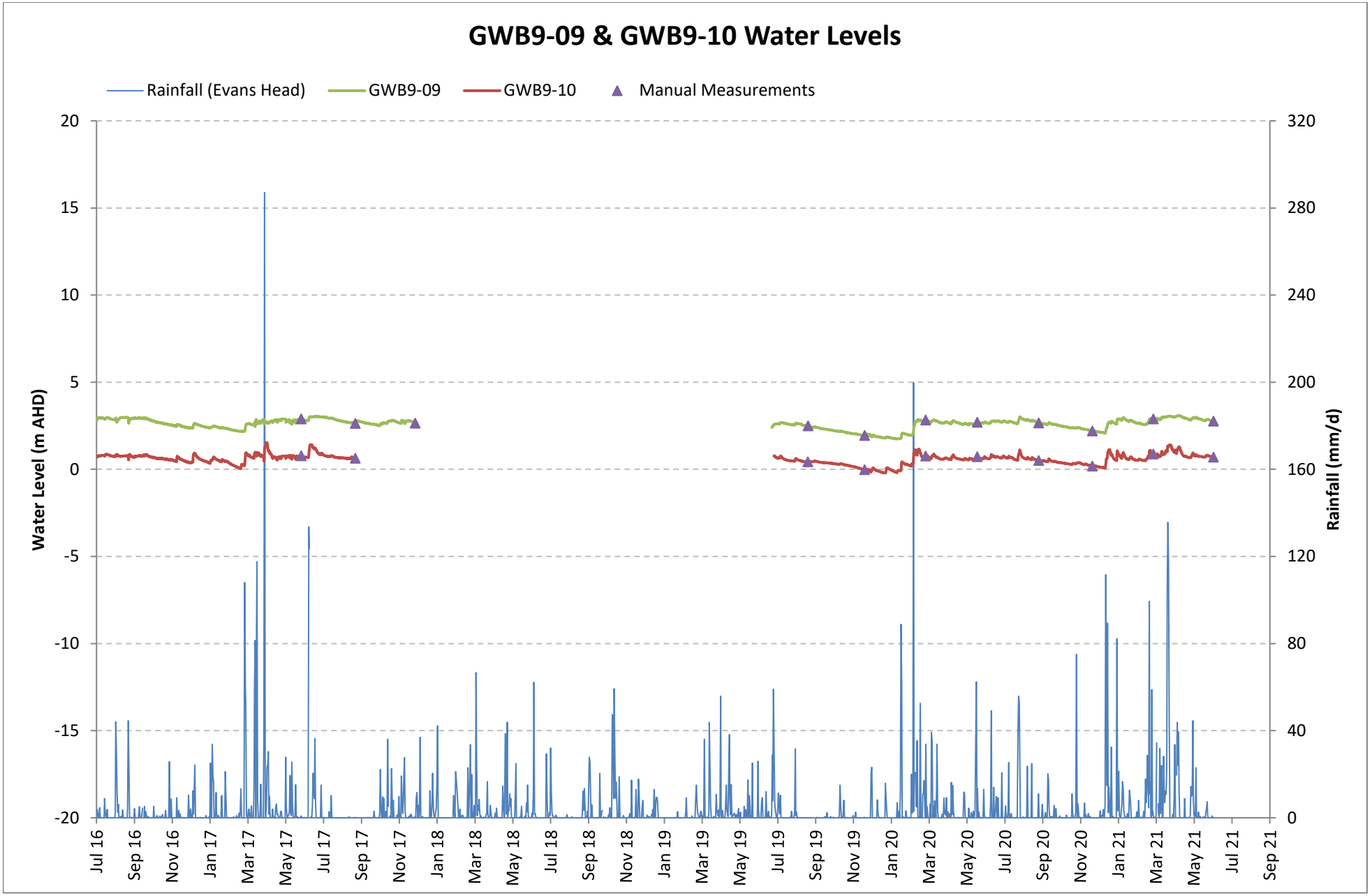

GWB8-24 & GWB8-25 Water Levels
Rainfall (Evans Head)
GWB8-24
GWB8-25
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
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May 21
Jul 21
Sep 21

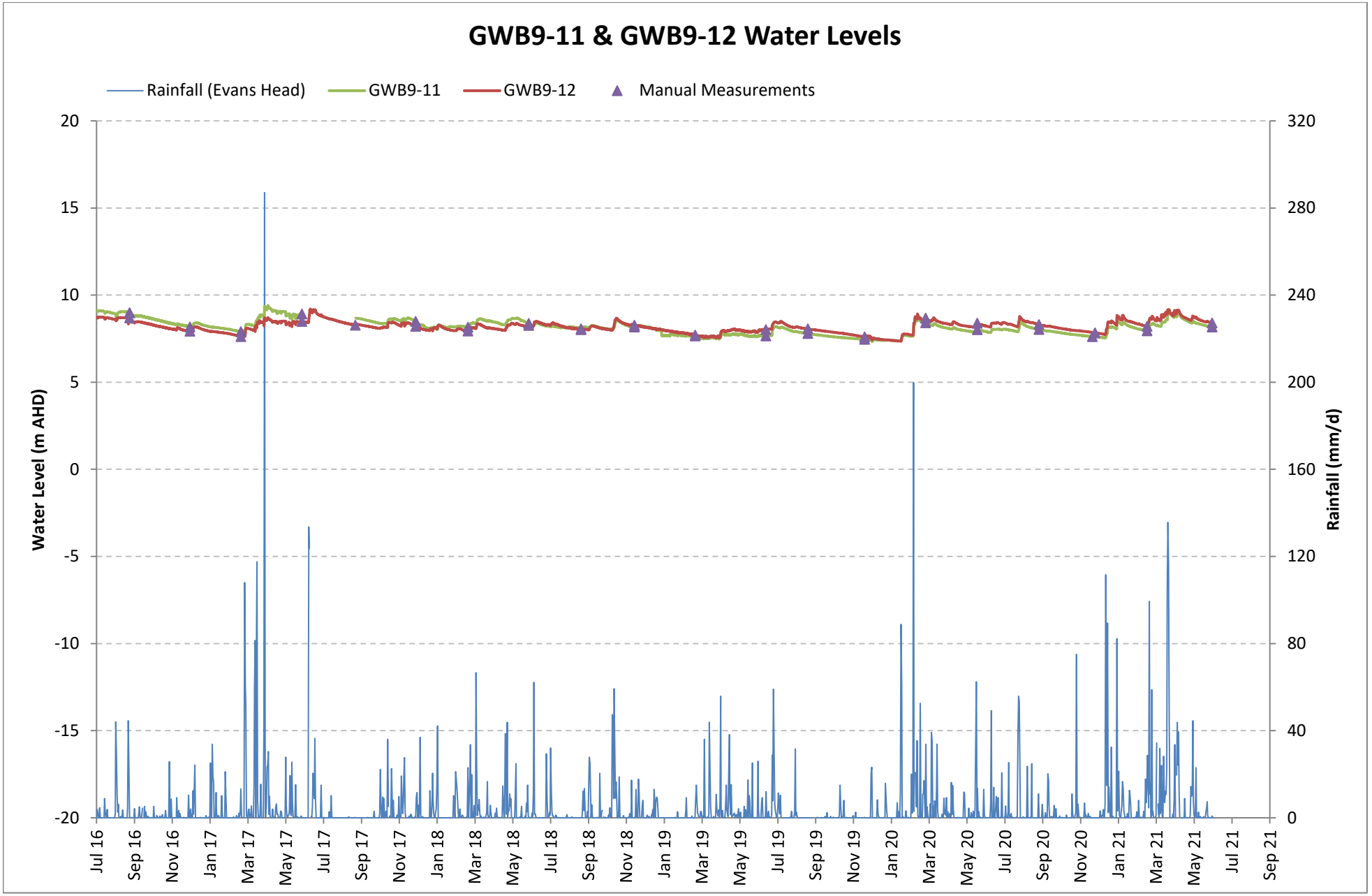

GWB9-01 & GWB9-02 Water Levels
Rainfall (Evans Head)
GWB9-01
GWB9-02
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

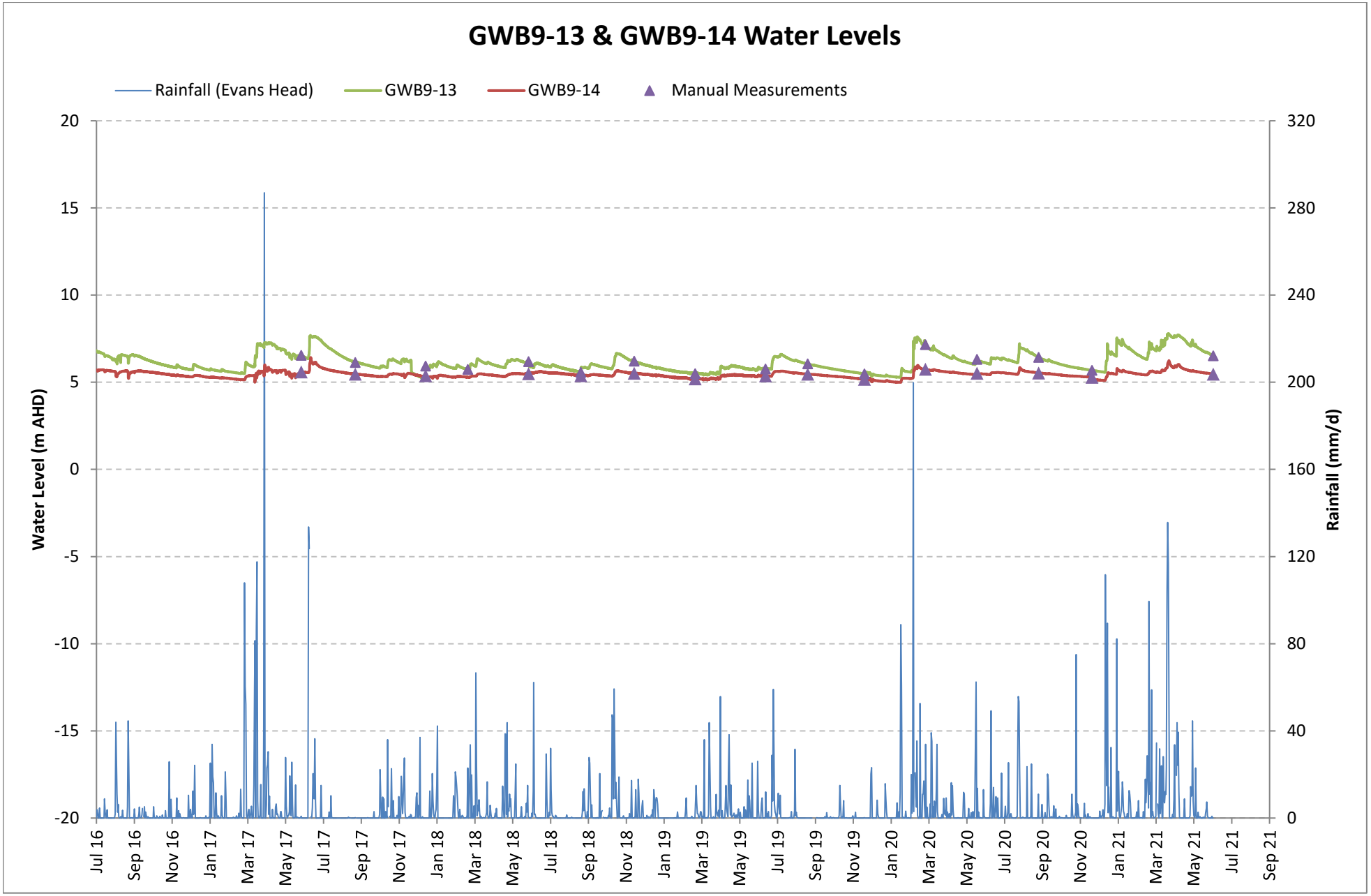

GWB9-03 Water Level
Rainfall (Evans Head)
GWB9-03
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
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Nov 20
Jan 21
Mar 21
May 21
Jul 21
Sep 21

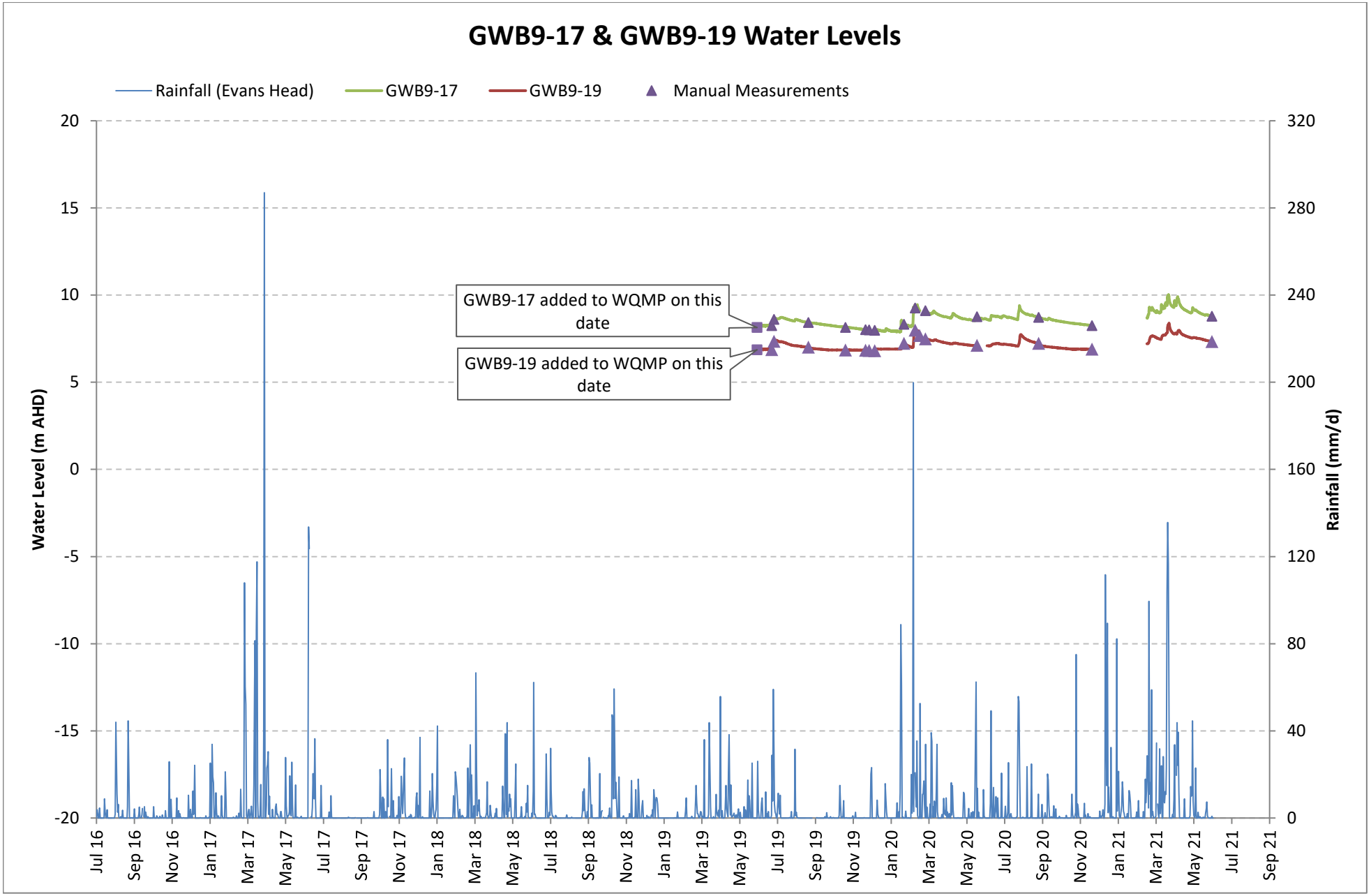

GWB9-05 & GWB9-06 Water Levels
Rainfall (Evans Head)
GWB9-05
GWB9-06
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB9-06 removed from WQMP on this date
GWB9-05 removed from WQMP on this date
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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May 21
Jul 21
Sep 21

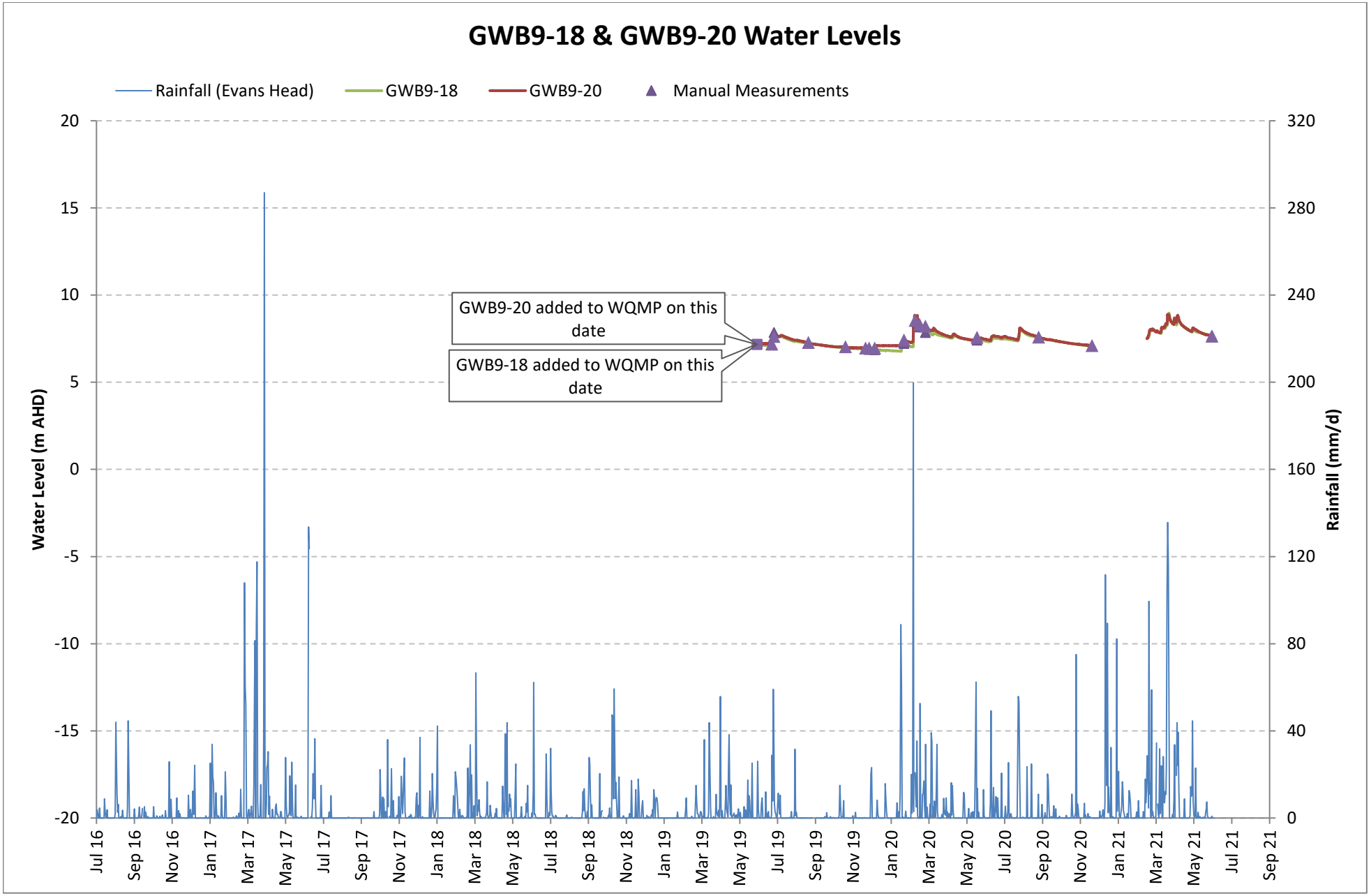

GWB9-07 & GWB9-08 Water Levels
Rainfall (Evans Head)
GWB9-07
GWB9-08
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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Jul 21
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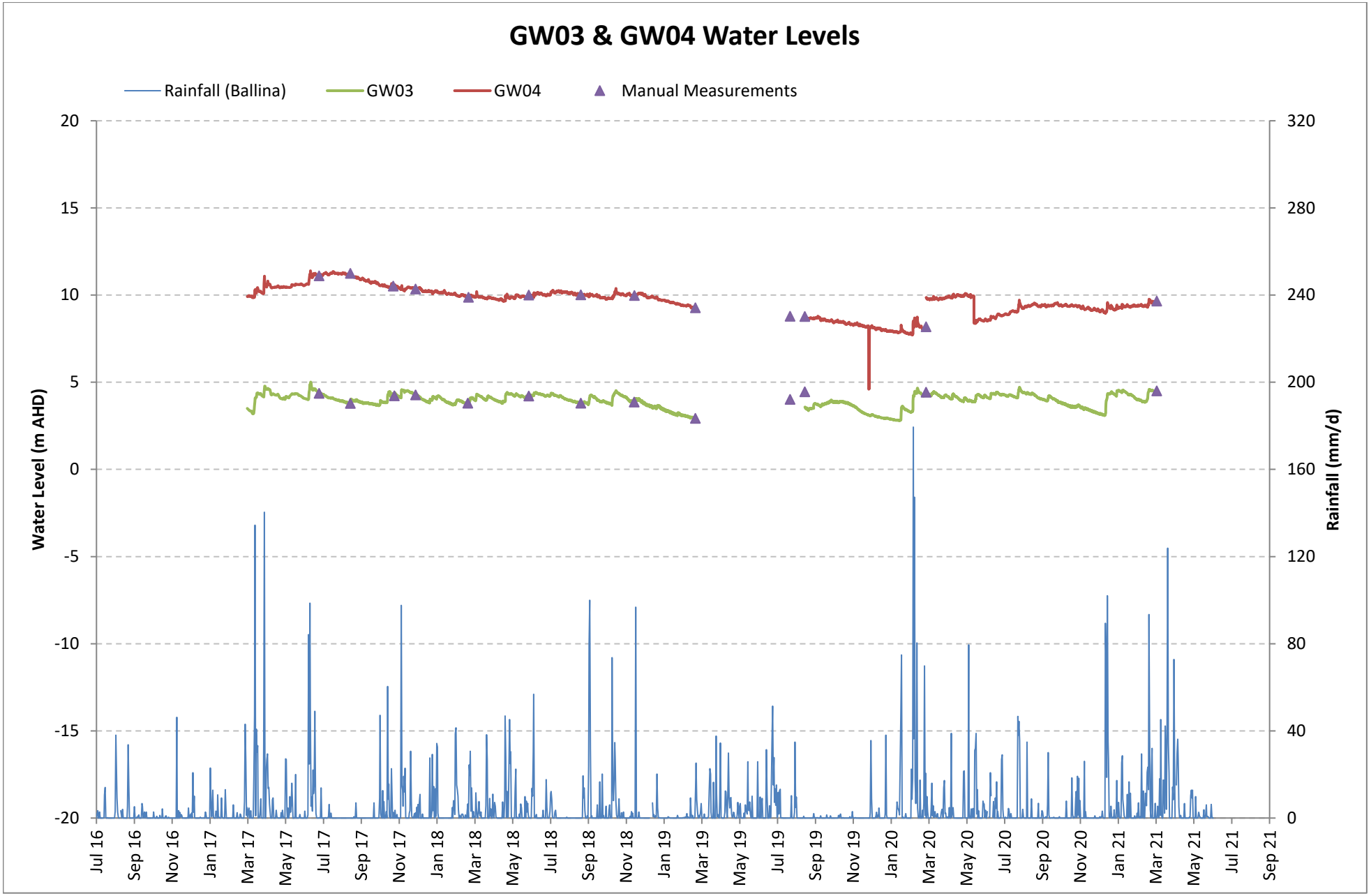

GWB9-09 & GWB9-10 Water Levels
Rainfall (Evans Head)
GWB9-09
GWB9-10
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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May 21
Jul 21
Sep 21

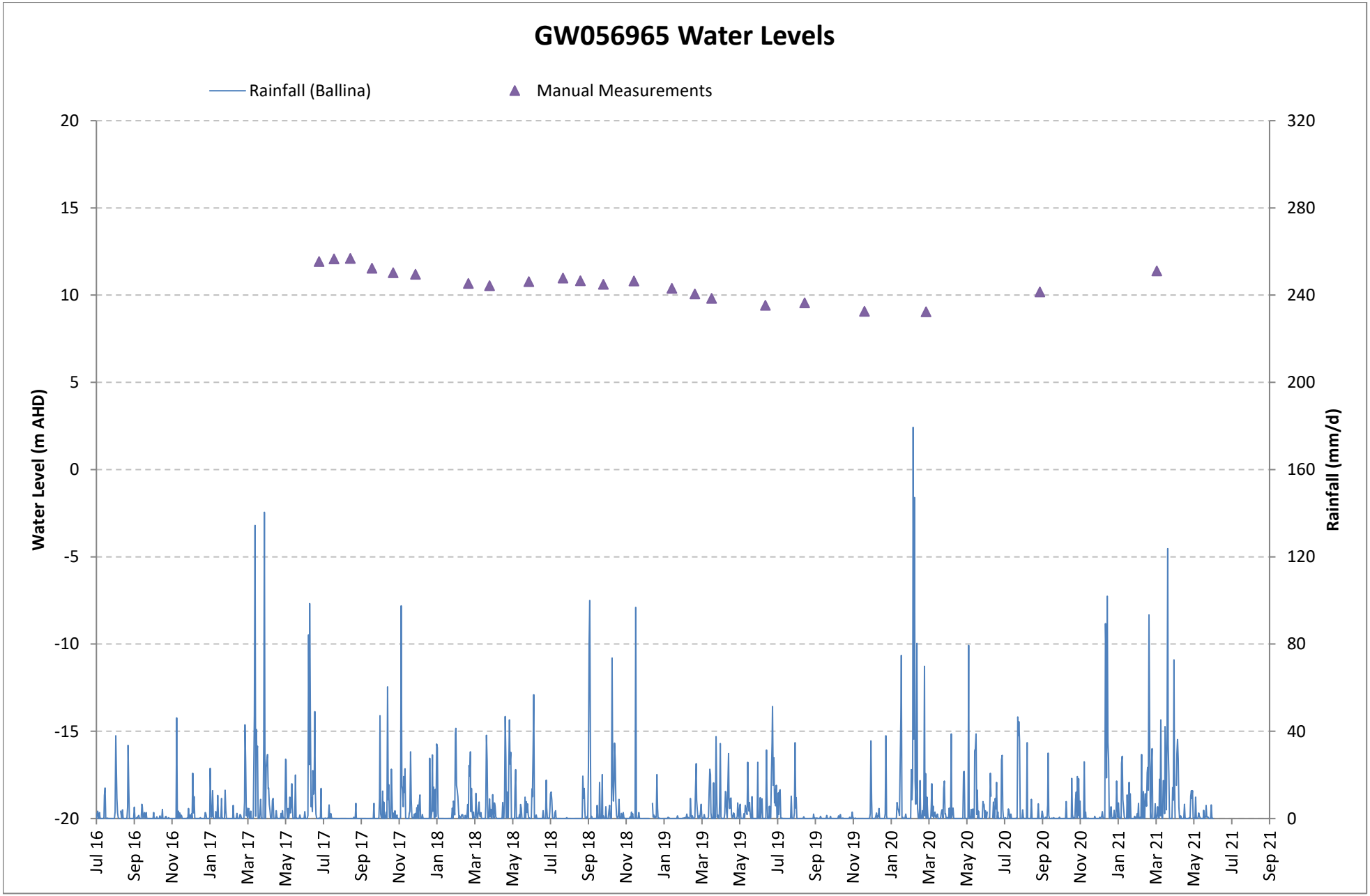

GWB9-11 & GWB9-12 Water Levels
Rainfall (Evans Head)
GWB9-11
GWB9-12
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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May 17
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Jul 21
Sep 21

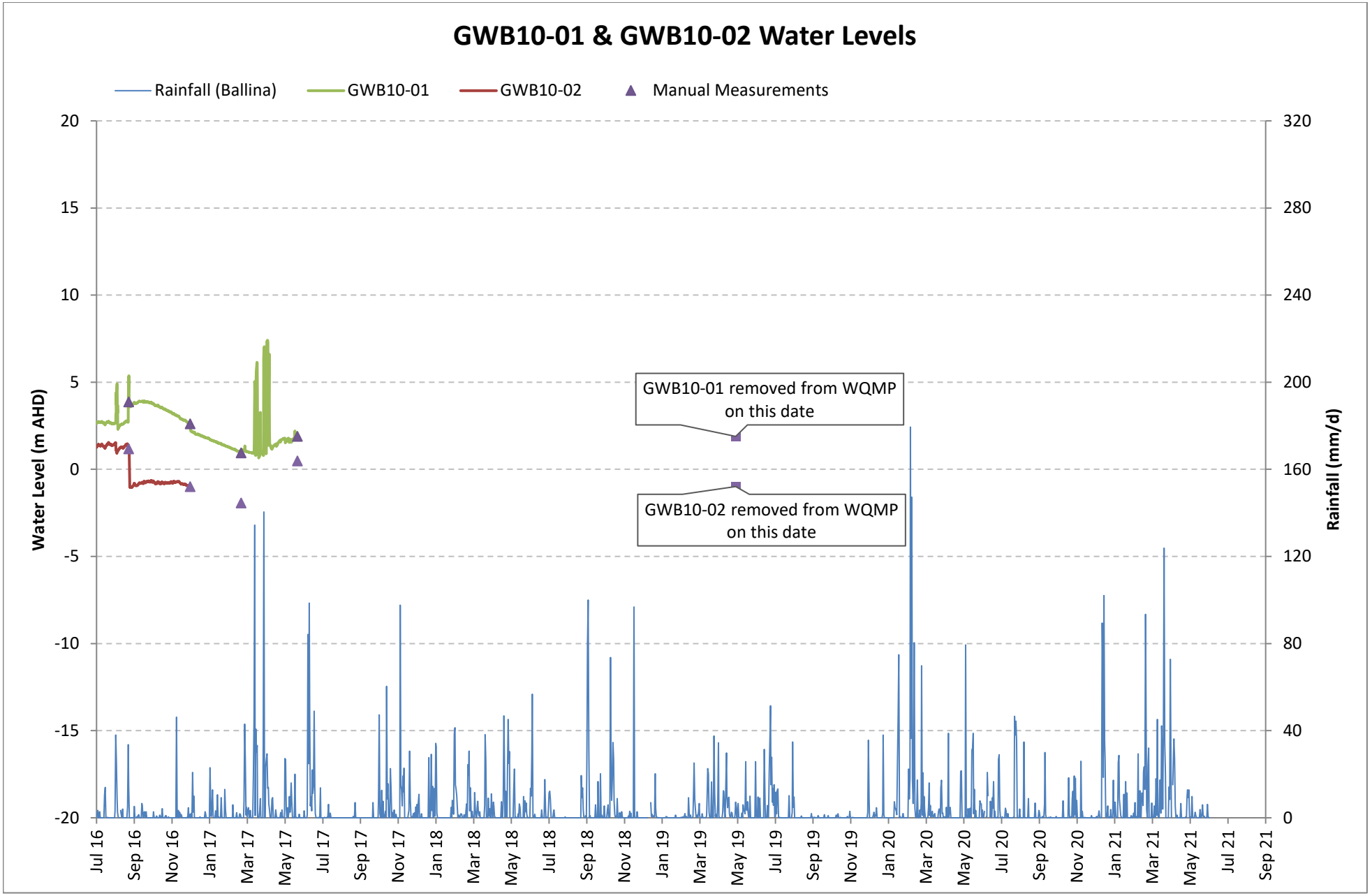

GWB9-13 & GWB9-14 Water Levels
Rainfall (Evans Head)
GWB9-13
GWB9-14
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
Jan 17
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Jul 21
Sep 21

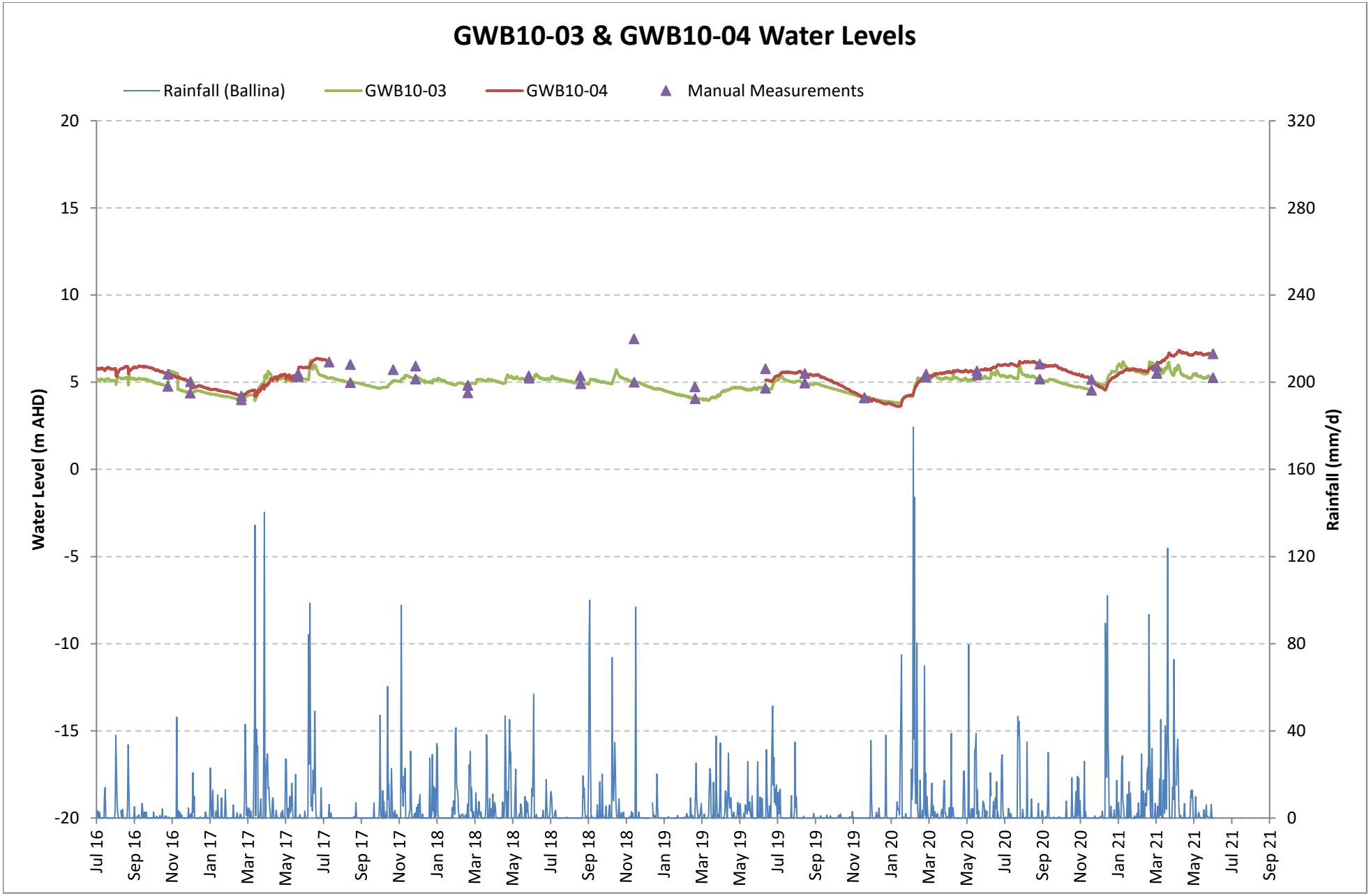

GWB9-17 & GWB9-19 Water Levels
Rainfall (Evans Head)
GWB9-17
GWB9-19
Manual Measurements
GWB9-17 added to WQMP on this date
GWB9-19 added to WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
Sep 16
Nov 16
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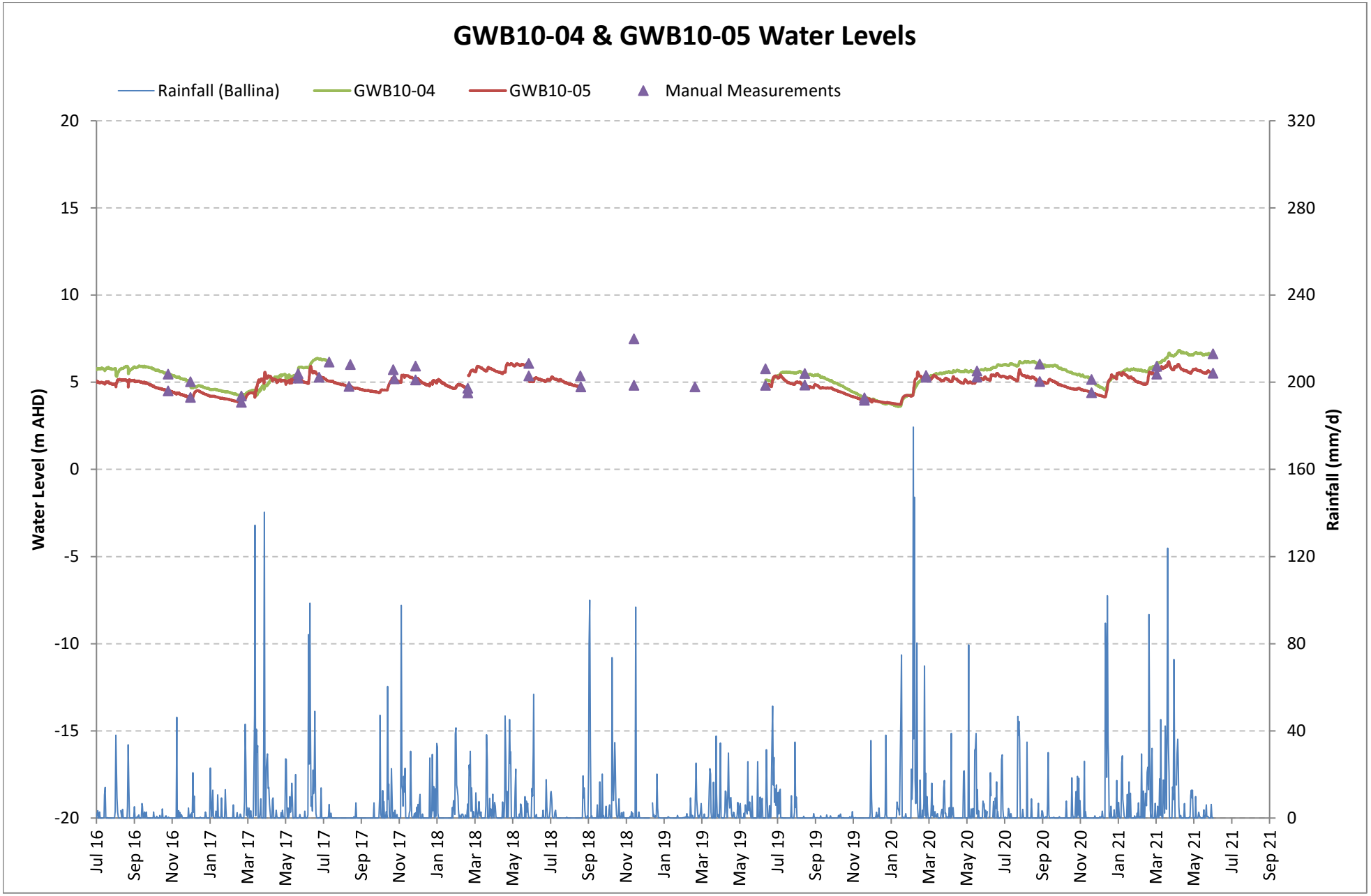

GWB9-18 & GWB9-20 Water Levels
Rainfall (Evans Head)
GWB9-18
GWB9-20
Manual Measurements
GWB9-20 added to WQMP on this date
GWB9-18 added to WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
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May 21
Jul 21
Sep 21

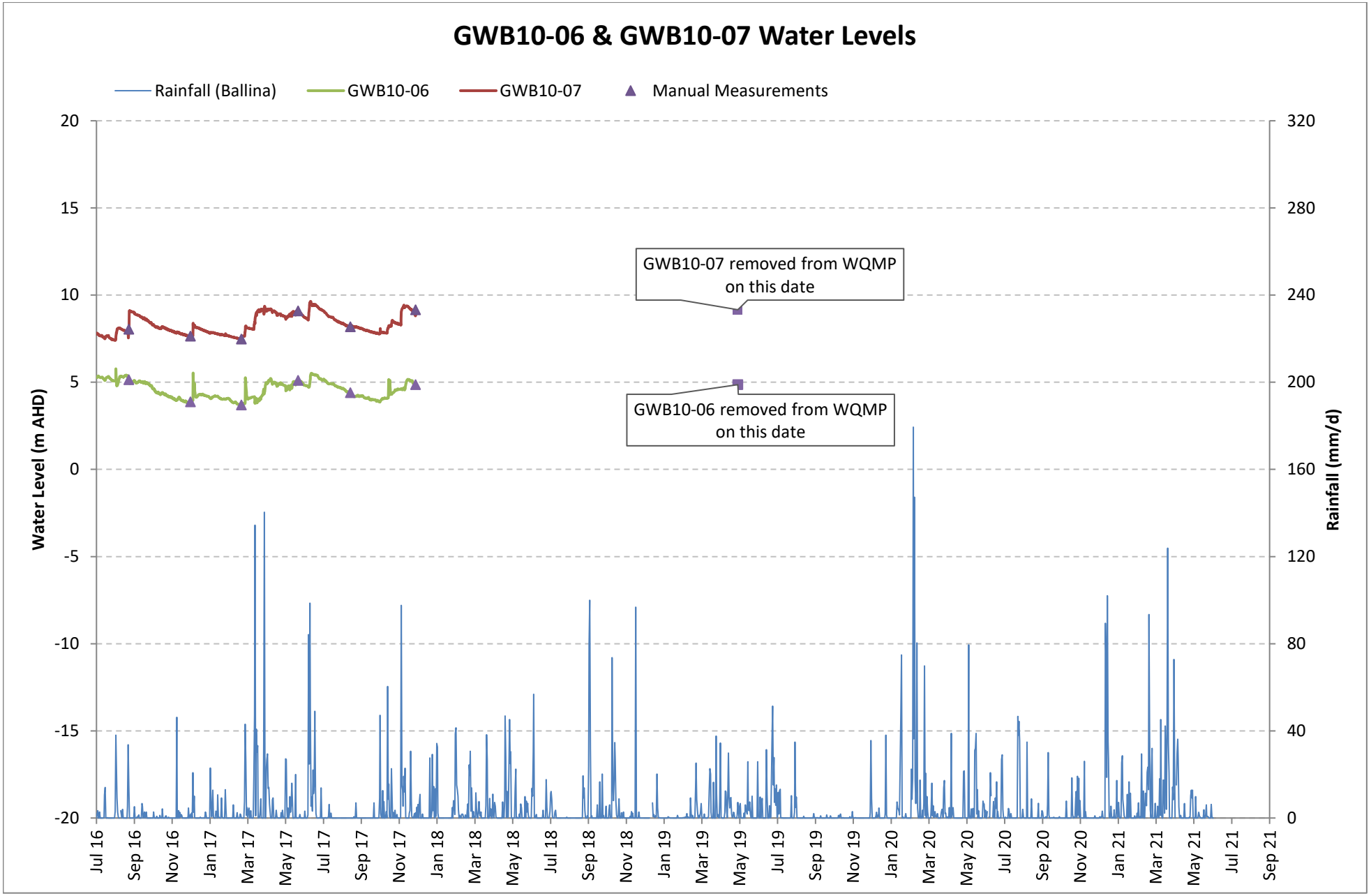

GW03 & GW04 Water Levels
Rainfall (Ballina)
GW03
GW04
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
10
5
0
-5
-10
-15
-20
320
280
240
200
160
120
80
40
0
Jul 16
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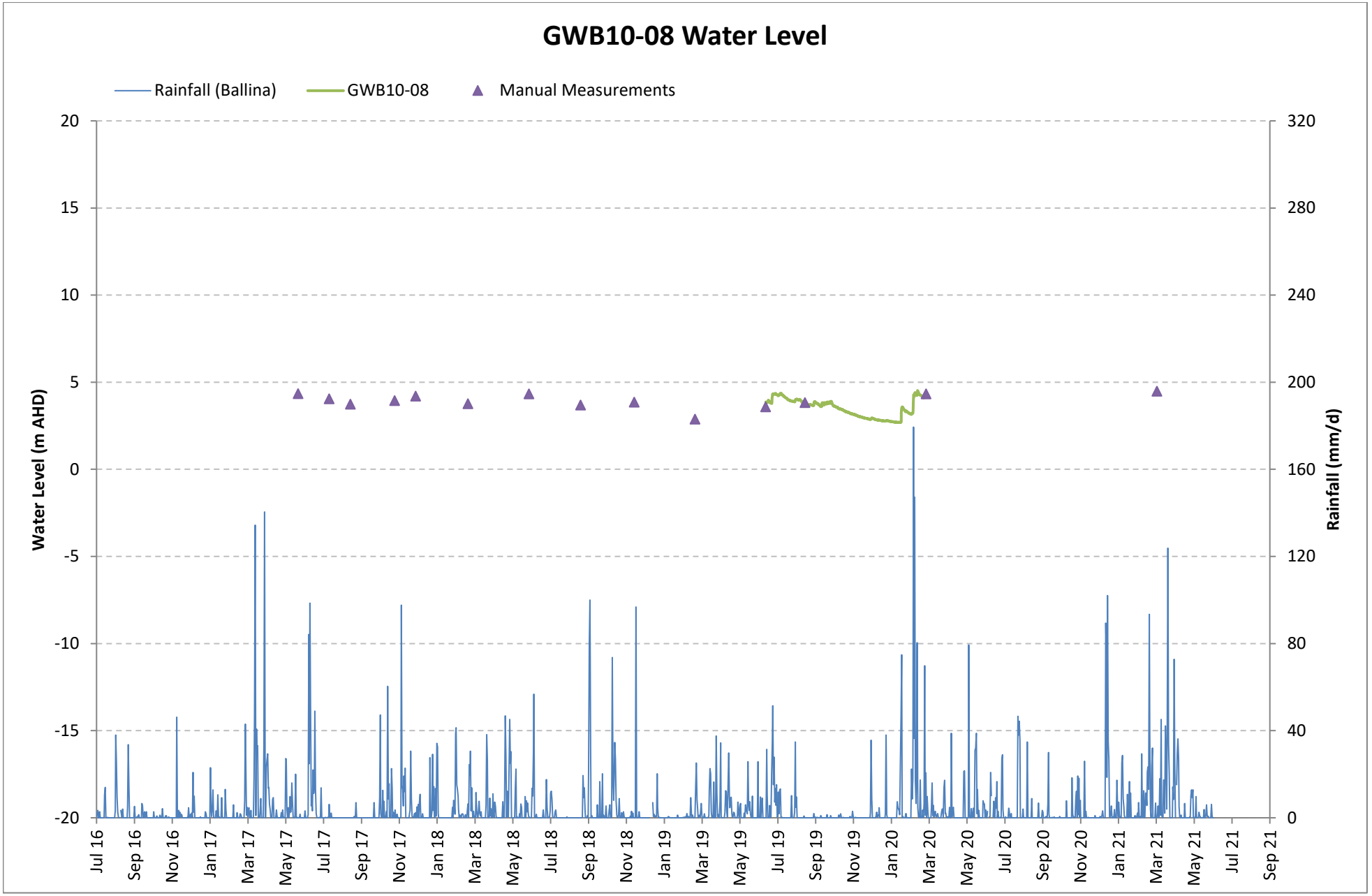

GW056965 Water Levels
Rainfall (Ballina)
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
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320
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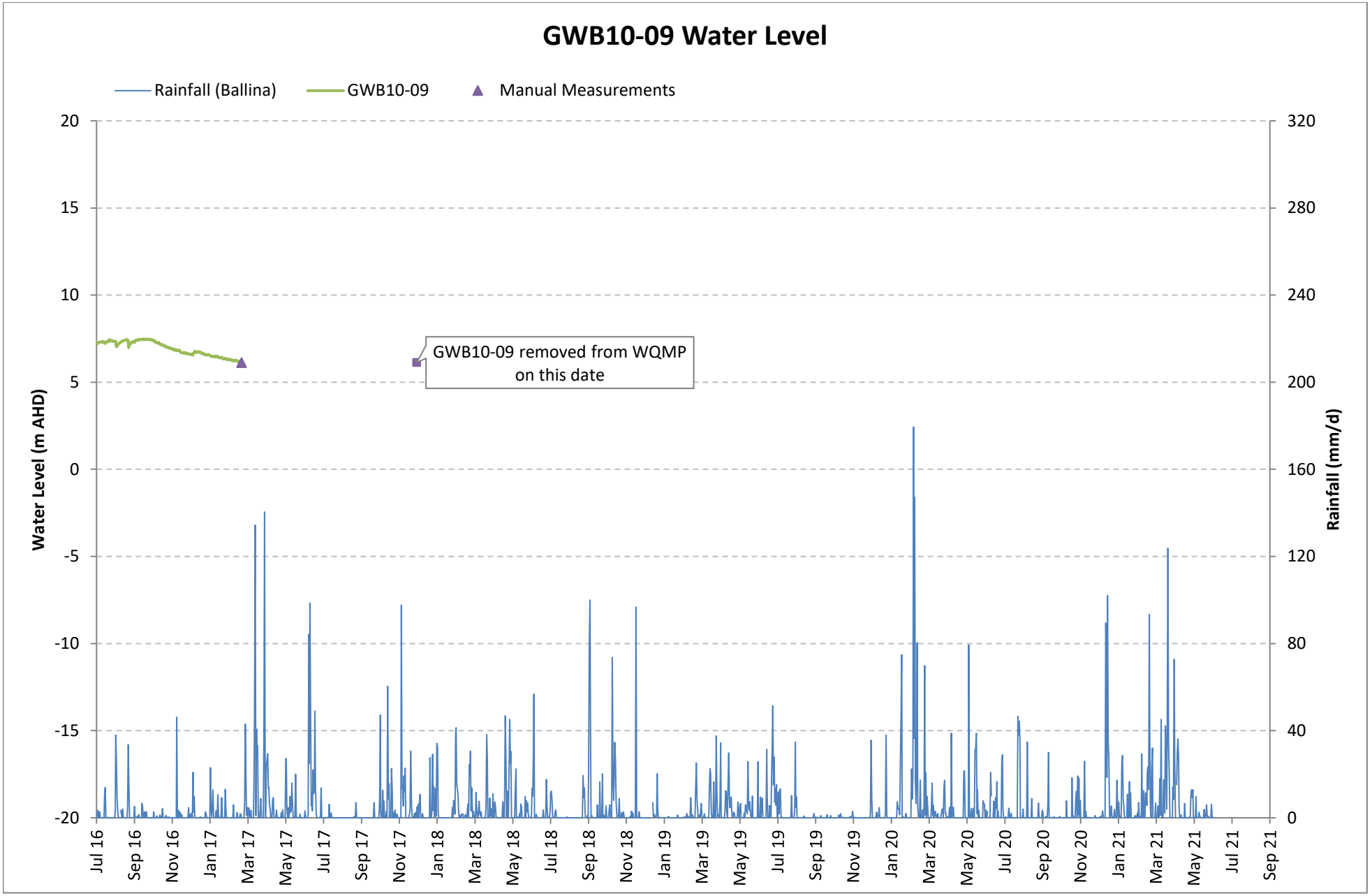

GWB10-01 & GWB10-02 Water Levels
Rainfall (Ballina)
GWB10-01
GWB10-02
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB10-01 removed from WQMP on this date
GWB10-02 removed from WQMP on this date
20
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320
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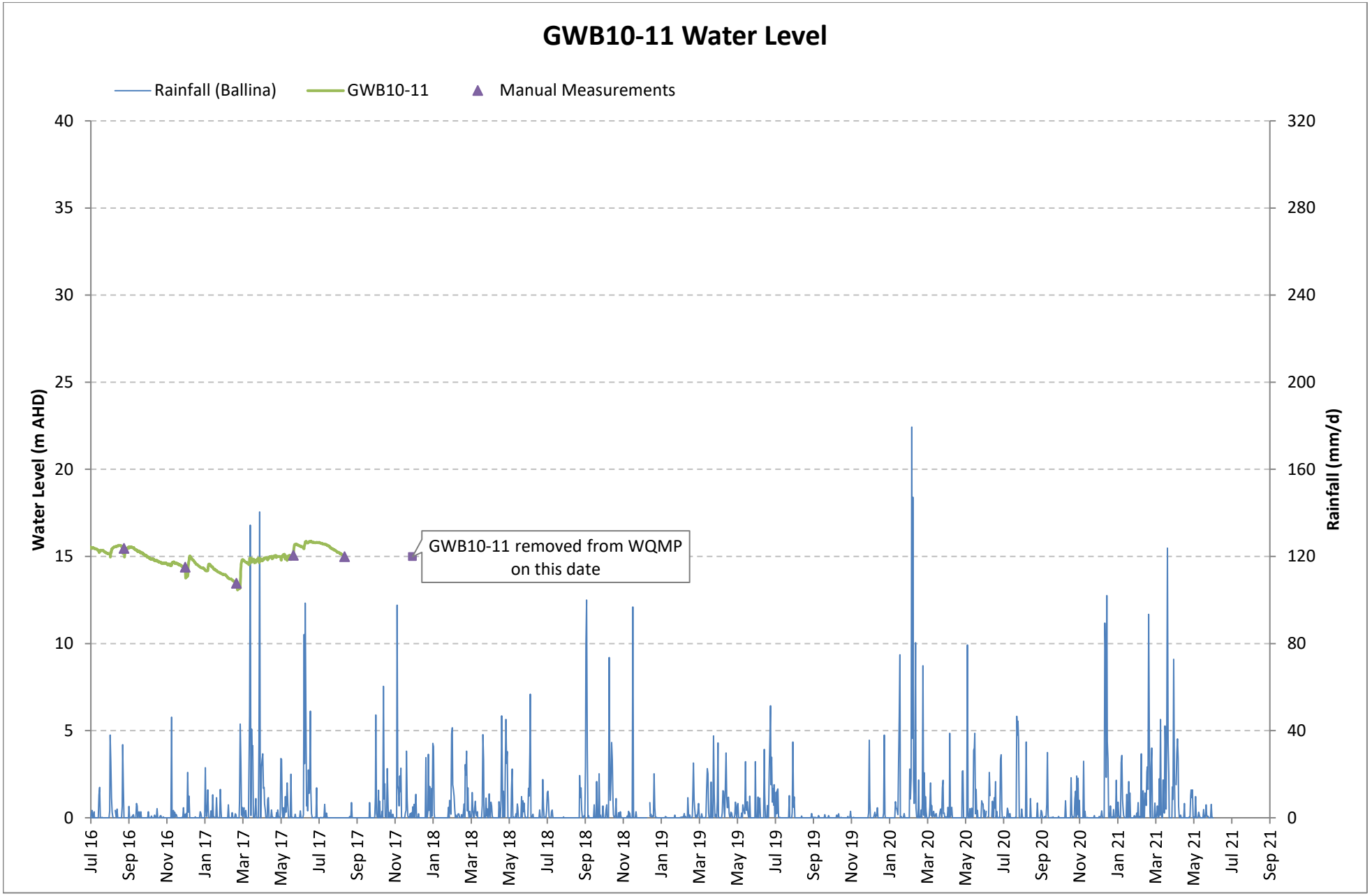

GWB10-03 & GWB10-04 Water Levels
Rainfall (Ballina)
GWB10-03
GWB10-04
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
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320
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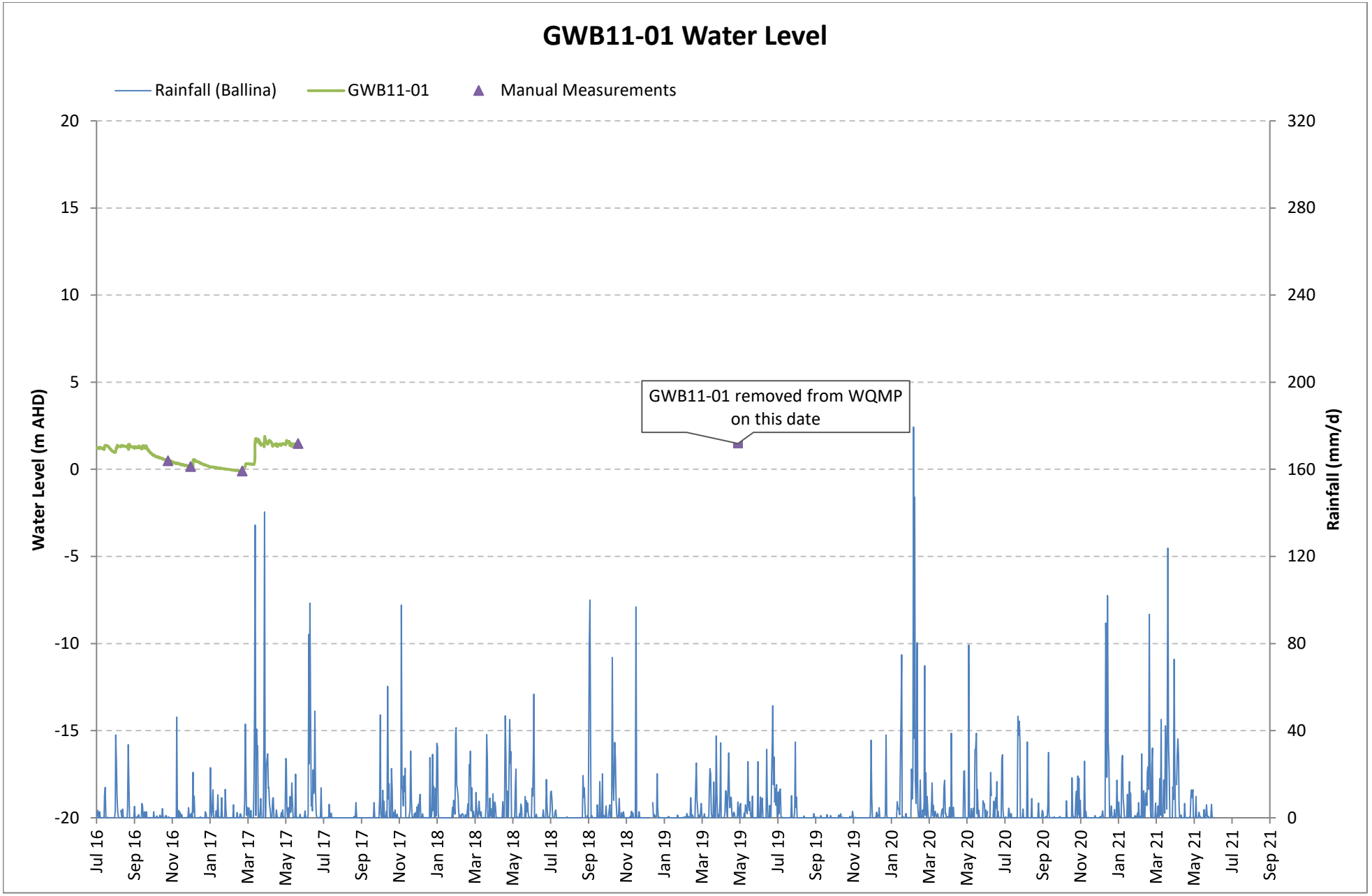

GWB10-04 & GWB10-05 Water Levels
Rainfall (Ballina)
GWB10-04
GWB10-05
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
15
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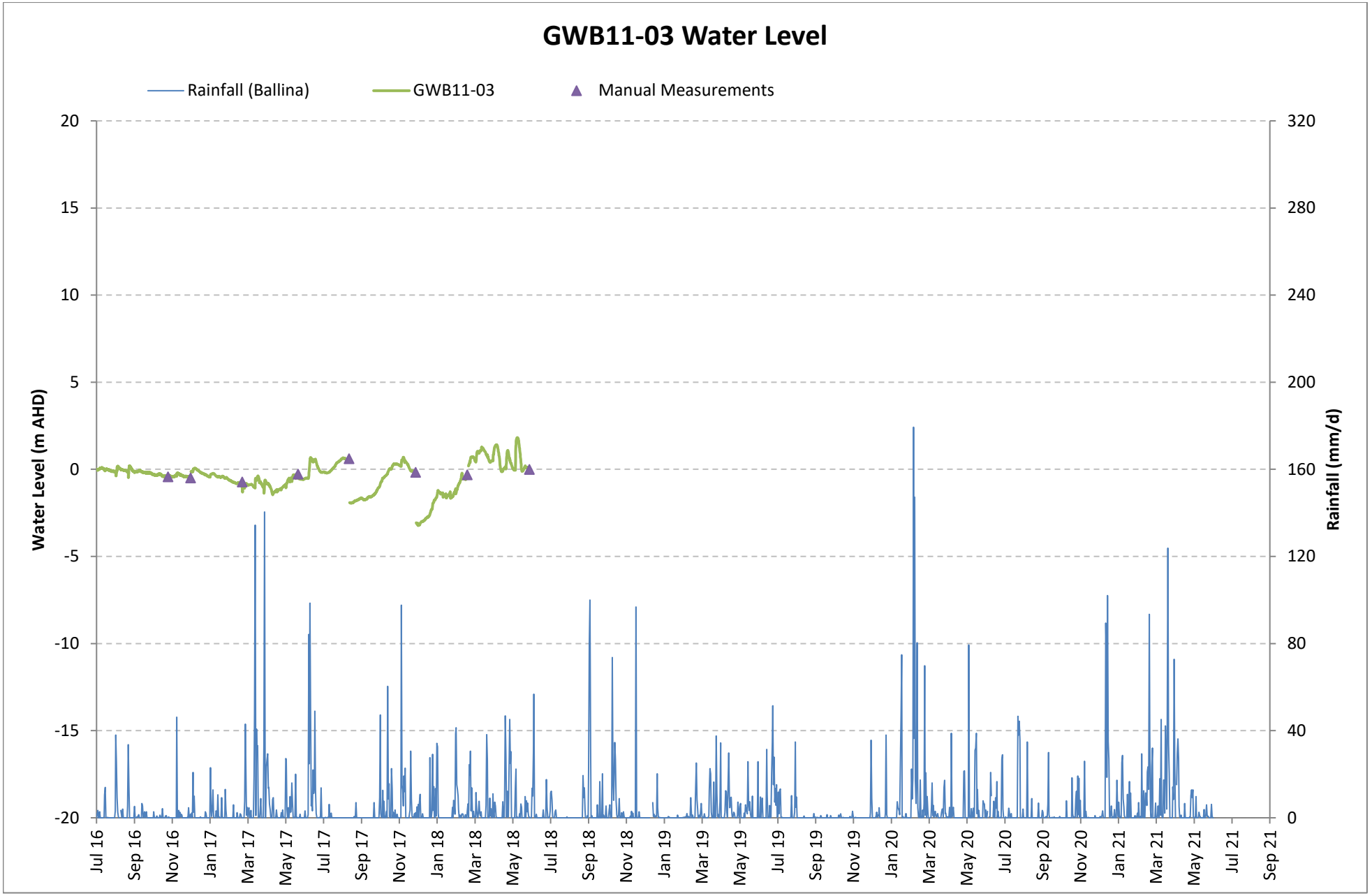

GWB10-06 & GWB10-07 Water Levels
Rainfall (Ballina)
GWB10-06
GWB10-07
Manual Measurements
GWB10-07 removed from WQMP on this date
GWB10-06 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
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GWB10-08 Water Level
Rainfall (Ballina)
GWB10-08
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
20
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May 21
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GWB10-09 Water Level
Rainfall (Ballina)
GWB10-09
Manual Measurements
GWB10-09 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
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GWB10-11 Water Level
Rainfall (Ballina)
GWB10-11
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
GWB10-11 removed from WQMP on this date
40
35
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GWB11-01 Water Level
Rainfall (Ballina)
GWB11-01
Manual Measurements
GWB11-01 removed from WQMP on this date
Water Level (m AHD)
Rainfall (mm/d)
20
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GWB11-03 Water Level
Rainfall (Ballina)
GWB11-03
Manual Measurements
Water Level (m AHD)
Rainfall (mm/d)
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Appendix H

Incidents with Potential Water Quality Impacts

Event Ref Number	Monthly Data > Sub Project	Date of Event	Time of Event	Exact Location	LOR Category of Actual Environment Event	RMS Category	Summarise the Event Details	Actions > Action Required (All values)	Event Status	Nature of Event	Affected environmental media / receptor	Environmental Impact - Description of Outcome
34477	W2B-C- CPB S7,8,9 Civil Works	1-Jul-20	13:20	CH134900	Class 3	2	On the 01/07/2020 at approx. 13:20 a hydraulic hose failed on a watercart. The operator discovered the issue at the time, up to approximately 5L of oil was discharged from the hose onto the concrete pavement whilst the truck was in motion Clean up was initiated and material was contained on site with absorbents. No material left site. Nearest waterway - 300m. 5L.	Work ceased. Spill was immediately reported to Contractor Environmental team. Clean up materials deployed and clean up initiated. Spill material was disposed of in contaminated waste bin. Pre-start checks on plant. Raise awareness at pre-start meeting/s	Closed	Pollutant	Ground	Hydraulic Failure
34545	W2B-C- CPB S7,8,9 Civil Works	23-Jul-20	15:00	CH117800 CPB Section 7 Batch Plant	Class 2	1	Routine EPA inspection: Section 7 batch plant CH117800 hardstand sump spillway observed to be overtopping prior to any rainfall, with what appeared to be cementitious alkaline waters / blue opaque tinge. Further review identified overland flow toward the median drains to the north. Nearest waterway is a median clean water drain approx. 15m from the spillway, with the flow path to the project boundary is approx. 100m north along the median drain and then 60m to the west through a piped culvert underneath the northbound. Testing confirmed high pH ~ 11. Haul road bunds had also failed with sediment sitting into retained vegetation.	pH testing to confirm issue and appropriate neutralisation. Dewatering of sump. Rectification of haul road bunds. Clean up of waste concrete. Weekend roster to monitor and act for forecasted heavy rainfall. G36 3:10HP placed on CPB for all batch plant operations until a review of EWMS, review of ESCP, Incident investigation, briefing to staff and presentation of findings to PC. Review of controls and further removal of waste concrete. Review of PC surveillance.	Closed	Breach of license conditions/Act or Regulation	Surface Water	Erosion and Sediment Control (ERSED)
34684	W2B-0- Shamrock	10-Aug-20	7:30	Avenue Road Ancillary Site Compound, ~CH 41500	Class 3	2	Hydraulic oil leak from pulveriser attachment on excavator during concrete crushing works, resulting in less than 5 litres of oil being spilled. Excavator was on sealed ancillary facility pad, no spill to natural earth occurred. 5 litres.	Spill kit was deployed, pulveriser attachment was tagged out of use. Pulveriser will be repaired/replaced before return to service.	Closed	Pollutant	Ground	Hydraulic Failure
34619	W2B-0- CBC Facilities Maintenance	13-Aug-20	10:50	Iluka Pacific Complete compound, Southern toilet block macerator pit, approximately 300m to nearest waterway.	Class 3	2	Macerator pit behind southern toilet block has become blocked and overflowed.	Closed toilet blocks. Ongoing macerator cleanouts.	Closed	Pollutant	Ground	Sewage Spill
34666	W2B-C- CPB S7,8,9 Civil Works	25-Aug-20	11:00	CH 129600 - Southbound carriageway.	Class 3	2	On the 25/08/2020 a hydraulic hose broke on a sucker truck on the pavement at chainage 129600. Releasing less than 20 litres onto the concrete. Pit drainage is in place in the surrounding area. < 20L.	Upon discovery by CPB staff the spill was immediately reported to CPB's Environmental team and site supervisor. Clean up materials deployed from CPB spill kits with additional spill containment resources supplied from CPB's environmental team. Clean up initiated and contained by CPB staff - refer attached photo. Ensure that spill containment materials used are restocked.	Closed	Pollutant	Ground	Hydraulic Failure
347000	W2B-C- CPB S7,8,9 Civil Works	1-Sep-20	15:30	CH142220	Class 3	2	During a routine ER inspection with CPB it was identified that controls that diverted construction water into temporary sediment/infiltration bays had been removed, resulting in construction water flowing down a stabilized drain, out a water quality baffle and into an ephemeral waterway at CH142220. This waterway ultimately flows the to Richmond River. Water quality probe readings were taken at 18:19 showing a turbidity of 49 NTU. Upstream - from the project boundary from within the ephemeral stream, readings taken the following day show a turbidity of 304 NTU.	Instruction was given to CPB to reinstate controls. As this was to go over standard construction hours works were carried out under EPL L5.2 e Emergency Works. These works were completed by 7:30pm on 1/9/2020. The cut drain has been rock armoured and will be jute lined and seeded, and temporary fauna exclusion fencing will be installed for the upcoming switch. Permanent infiltration bay design is underway and will be constructed. The temporary controls will stay in place until permanent works are constructed and operational. Incident Investigation to be undertaken, to determine any necessary corrective or preventative actions.	Closed	Breach of license conditions/Act or Regulation	Groundwater	Erosion and Sediment Control (ERSED)
35178	W2B-C- CPB S7,8,9 Civil Works	14-Dec-20	9:30	Workshop yard. product remained within the project boundary	Class 3	2	A concure curing trailer and tractor was washed down into a washdown pit following removal of residual concure from the trailer to a storage pod approximately 2-3 weeks ago. The washout pit had significant capacity post the washdown. The residual Concure captured in the pit from the washdown has over topped the washout sump following the in excess of 100mm of rainfall received and flowed down through the compound area. Spill containment measures were immediately implemented on identification of the over topping event. The sump was pumped out into a 5,000 litre tank and the bunded trailer was covered with tarpaulins to prevent further release. The nearest sensitive receiver is approximately 350m away to the north west. A small quantity of diluted concure was released. The product remained within the project boundary, photos in notification email.	Upon identification CPB implemented spill containment measures and pumped the diluted material back into a 5000 litre storage tank. The bunded trailer was covered to prevent further egress. Initial corrective action: Ensure washout pit is covered prior to rain where there is capacity not requiring pump out of the pit (note there is no runoff to the pit except from the washout bay).	Closed	Pollutant	Ground	Chemical Spill
35231	W2B-D- Quickway Constructions	29-Jan-21	10:00	28°54'08.6"S 153°28'40.9"E	Class 3	2	A leak was identified on a contractor tipper truck on Whytes Lane Pimlico NSW. Bunded with soil and cleaned with spill kit. The leaking coolant line was tightened up, no further issue required as vehicle was taken off site for repairs. 0.2L.	The supervisor for the area was notified of the spill immediately. The oil was absorbed using absorbent material from Quickway Spill kit on site. All contaminated material was removed from site, placed in a bag and transferred to a contaminated waste bin. On going pre start checks and routine maintenance on all equipment.	Closed	Pollutant	Ground	Chemical Spill
35573	W2B-D- Quickway Constructions	31/03/2021	12:00	CH142300	Class 3	2	During a routine ER/RMS inspection, it was identified that a drain that was previously directing water collected from within operational drains into temporary infiltration ponds, had been diverted into an ephemeral waterway at a culvert 100m to the south via a constructed operational swale, with baffle in place. Although this was in accordance with the approved methodology within the approved ESCP for the works, this approach did not align with the intent of previous management of water collected from within operational drains in this area. Quickway was not made aware of this during ESCP review, or instruction of works, so proceeded in accordance with the approved ESCP.	Within 1 hour after the issue was identified temporary diversion was reinstated to its original flow regime into the temporary infiltration basins. Water sampling was conducted upstream and downstream of the receiving culvert identifying negligible difference between downstream water, and upstream water collected as it flowed into the upstream end of the culvert, not influenced by downstream waters. Pacific Complete to advise Quickway of any existing issues or concerns relating to the work either as part of the works instruction, or through the ESCP review process. Quickway to undertake further due diligence checks during works planning phase to assist in identifying any unknown existing issues. ESCP updated to capture revised methodology and toolboxed to relevant personnel.	Closed	Failed Environmental Controls	Technical Breach	Erosion & Sediment Control (ERSED)