Pacific Highway upgrade

Monthly achievement report

JUNE 2011

Transport Roads & Traffic Authority

Start of survey and geotechnical work on the Oxley Highway to Kempsey upgrade was announced

Erect steel truss bridge over the new highway to connect Bulahdelah with Alum Mountain

This achievement report will provide you with information about Pacific Highway upgrade projects, including the current status and key activities carried out on construction projects over the last month.

As at 30 June 2011, 337 kilometres are completed dual carriageway, 67 kilometres are under construction, and about 128 kilometres are being prepared for construction. Planning is also being progressed on the remaining single carriageway sections of highway.

About 51 per cent of the final highway length of 664 kilometres is now dual carriageway.

June 2011
67 km of highway under construction

1520 workers on site

For overall upgrading strategy for the next five years, refer to the last page

Girders for the floodplain bridge are in place on the Bulahdelah upgrade. Construction of the deck is to follow

For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092

Bulahdelah upgrade

Upgrading the Pacific Highway

UNDER CONSTRUCTION

Transport Roads & Traffic Authority

Contractors: Baulderstone Pty Ltd.

Form of contract: Construction contract

Workers on site: 265

Pieces of large plant: 97

Start date of major construction: August 2010

Expected completion date: late 2012 (weather permitting)

Project value: $315 million

Mountain Park truss bridge in now place with construction of the deck to follow

Background

The Bulahdelah upgrade project was approved by the NSW Minister for Planning on 9 July 2007.

The Bulahdelah upgrade project is jointly funded by the Australian and NSW governments.

The upgrade of the Pacific Highway at Bulahdelah will involve the construction of about 8.6 kilometres of four lane divided road with an eastern bypass of the Bulahdelah township.

Key construction activities during June 2011

- The first girders were installed as part of building the floodplain bridge.
- Girders continued to be installed that form part of the Myall River bridge.
- Installation of all the girders was completed for the Bombah Point Road bridge.
- Settlement periods were completed for earthwork on the northern side of the Myall River and the southern side of Frys Creek bridge.
- Piling started for the northern side of Myall River bridge.
- Installation of the steel truss bridge at Mountain Park.
- Shotcreting (spray concreting) was carried out on the batter slopes at the northern interchange.
- Material continued to be processed immediately north of Bombah Point Road.
- Controlled blasts were carried out immediately to the north of Bombah Point Road and immediately to the north of Mountain Park.
- Revegetation continued throughout the project of the drains and batters.
- Acid sulphate rock processing and lime treatment continued. This is a process where rock is treated with lime until the rock is neutralised so that it can be used as fill throughout the project.
- Wet weather across the site slowed progress, with the site experiencing over 200 millimetres of rain in one week.
- Community interest group meeting held 22 June.

For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092 or 02 6640 1000.

Bulahdelah upgrade

Spray concreting of the slope at the northern interchange

Looking south from the northern side of the Myall River bridge

A reinforcing cage for one of the piles for the Myall River bridge which is about one metre in diameter

Trucks being loaded with material immediately north of Bombah Point Road

Herons Creek to Stills Road upgrade

Upgrading the Pacific Highway

Transport Roads & Traffic Authority

UNDER CONSTRUCTION

Contractors: BMD Constructions Pty Ltd.

Form of contract: Construction contract

Workers on site: 75

Pieces of large plant: 20

Start date of major construction: March 2011

Expected completion date: late 2012 (weather permitting)

Project value: $60 million

Installation of twin 525 millimetre diameter pipes across the existing northbound carriageway

Background

The Herons Creek to Stills Road upgrade project was approved to proceed on 5 October 2007.

The Herons Creek to Stills Road upgrade project is jointly funded by the Australian and NSW governments.

The upgrade of the Pacific Highway between Herons Creek and Stills Road will upgrade 3.5 kilometres of highway. The majority of the existing northbound carriageway will become a two-way local service road, linking Bago Road, Burrawan Forest Drive, Herons Creek and local properties to the Bago Road interchange

Key construction activities during June 2011

- Concreting was carried out for the fauna underpass base slab.
- Concreting was carried out for part 1 of the Cutty Creek culvert slab.
- The contractors site sheds were established north of Cutty Creek.
- Concreting was carried out for the pad footings for the centre pier of the Bago Road interchange.
- Twin 525 millimetre diameter pipes were installed across the existing northbound carriageway.
- Topsoil was stripped north of Cutty Creek.
- Mulching and removal of timber from site continued.
- Construction of sedimentation basins continued throughout the project.
- Construction of clean water drains continued throughout the project.
- Establishment of site accesses. continued
- Consultation with Herons Creek Public School was carried out for the upcoming piling work at Herons Creek bridge.

For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092 or 02 6640 1000.

Herons Creek to Stills Road upgrade

First concrete pour for Cutty Creek culvert base slab

A mobile concrete pump at Cutty Creek

Construction of a clean water drain north of Cutty Creek

Mulching and removal of timber from site

Kempsey bypass

Upgrading the Pacific Highway

UNDER CONSTRUCTION

Transport Roads & Traffic Authority

Contractors: The RTA has formed an alliance with Leighton Contractors, AECOM and Coffey Geotechnics to build the Kempsey bypass.

The bridge over the Macleay River is being built by Abigroup Contractors under a separate design and construct contract.

Form of contract: Alliance and design and construct contract

Workers on site: 456

Pieces of large plant: 86

Start date of major construction: June 2010

Expected completion date: by mid 2013 (weather permitting)

Project value: $618 million

View looking north from the southern abutment fill for the Maccleay River and floodplain bridges after the flooding in June

Background

The Kempsey bypass project was approved by the NSW Minister for Planning on 10 July 2008.

As part of the Building Australia Fund, the Australian Government announced that it would provide $618 million for the construction of the Kempsey bypass.

The 14.5 kilometre Kempsey bypass project is part of the 40 kilometre Kempsey to Eungai project, which extends from the existing dual carriageway south of Kempsey to the existing dual carriageway at Eungai Rail.

The bridge over the Macleay River and Floodplain will be 3.2 kilometres long and on completion, making it the longest bridge in Australia.

Key construction activities during June 2011

- General earthworks, foundation layers and installation of transverse drainage was carried out between the southern Kempsey interchange and the Macleay River floodplain at Frogmore, and the northern interchange construction.
- Stripping topsoil and installing sediment basins has started at the southern interchange.
- A clay layer over the bridging layer was placed on the section of the alignment between Boat Harbour Creek and the North Coast Railway overbridge.
- Noise mound construction progressed north of Crescent Head Road.
- Construction of the southern abutment started at Pola Creek.
- Excavation of the Inches Road cutting progressed with material being placed as general fill over the area north of Old Station Road.
- Construction continued of the North Coast Railway overbridge with the reinforced earth retaining walls for the north and south abutments being built.
- Girder production for all bridges including South Kempsey interchange, North Coast Railway, Crescent Head Road, Pola Creek, Inches Road, Old Station Road and Frederickton have been completed and delivery to site continued.
- Water and sewer relocations continued at the northern interchange.
- Installation of fencing and maintenance of sedimentation controls continued in various locations along the project.
- Flood mitigation works in the form of house raising and stock mounds continued to be built across the floodplain at Frogmore. To date, 3 houses have been raised and 19 stock mounds have been built.
- Because of flooding during the month, the roadwork fills were aerated to dry out enough to allow for compaction and retesting. Maintaining the sediment basins also continued after the flood.
- Abigroup continued to build and establish the site compound for building the Macleay River bridge.
- A flood focus group meeting was held on 21 June to discuss the updated flood modelling and the proposed Macleay River temporary rock platform.

Kempsey bypass

The haul road at Pola Creek which was affected by flooding during the month

Construction of the pedestrian walkway on Crescent Head Road overpass bridge

Looking south towards Pola Creek

Construction of a reinforced soil wall around abutment piles for the new twin bridges over the main Northern Railway line

Sapphire to Woolgoolga upgrade

Upgrading the Pacific Highway

Transport Roads & Traffic Authority

UNDER CONSTRUCTION

Contractors: Leighton Fulton Hogan Joint Venture

Form of contract: Design and construct contract

Workers on site: 256

Pieces of large plant: 172

Start date of major construction: August 2010

Expected completion date: early 2014 (weather permitting)

Project value: $705 million

Drainage work near Fiddaman Road on the upgrade section

Background

The NSW Minister for Planning approved the project on 13 January 2009 which did not include a rest area. The RTA's rest area strategy for the Pacific Highway aims to provide rest areas at about 50 kilometre intervals.

The preferred location for the rest area is proposed at the Arrawarra interchange. An environmental assessment of the proposed rest area location was on display in April 2011 and a submissions report is currently being prepared.

The Sapphire to Woolgoolga Pacific Highway upgrade project is jointly funded by the Australian and NSW governments.

This project will provide a four-lane divided highway extending approximately 25 kilometres from Campbell Close, Sapphire, to Arrawarra Beach Road, Arrawarra.

Key construction activities during June 2011

- Piling started for bridges and construction continued on bridge substructures.
- Fenceline clearing and fencing continued.
- Installation of erosion and sediment controls.
- Property adjustments continued.
- General earthworks continued including drainage on the upgrade section.
- Earthworks and drainage continued between Unwins Road and Woolgoolga Creek Road on the bypass.
- Earthworks and drainage continued from Woolgoolga Creek Road to Bark Hut Road on the bypass.
- Blasting continued about 1 kilometre southwest of Woolgoolga near Unwins Road.
- Environmental presentations were delivered to local schools to support the native bee hive relocations.
- Meetings were held with residents to discuss property adjustments including fencing and access arrangements.
- Letterbox drop for the proposed design refinement at Moonee Beach Road, Moonee Beach.

For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092 or 02 6640 1000.

Sapphire to Woolgoolga upgrade

Building the underpass at Unwins Road on the Woolgoolga bypass

Piling operations at Double Crossing Creek Woolgoolga on the upgrade

Bridge works at Cunninghams Creek on the upgrade

Drainage work at Woolgoolga Creek Road on the Woolgoolga bypass

Earthwork and drainage near Bark Hut Road on the Woolgoolga bypass

Glenugie upgrade

Upgrading the Pacific Highway

Transport Roads & Traffic Authority
NSW GOVERNMENT

UNDER CONSTRUCTION

Contractors: The RTA has formed an alliance with Macmahon Contractors and Arup

Form of contract: Alliance design and construct contract

Workers on site: 71

Pieces of large plant: 50

Start date of major construction: March 2010

Expected completion date: late 2011 (weather permitting)

Project value: $60 million

Installation of a longitudinal drainage outlet

Background

The NSW Minister for Planning approved the Glenugie upgrade project on 17 December 2009.

The Glenugie upgrade project is jointly funded by the Australian and NSW governments.

The seven kilometre Glenugie upgrade forms part of the larger Woolgoolga to Ballina project. This section extends from Franklins Road to Eight Mile Lane, approximately 15 kilometres south of Grafton.

Key construction activities during June 2011

- Rain affected the site with seven days of construction activities lost.
- Placement continued of the select material zone.*
- Drainage was completed of the batter chutes.
- Installation continued of drainage kerb.
- Subsoil drainage continued to be installed.
- Drainage pipe continued to be installed.
- Heavy duty base pavement material continued to be manufactured offsite.
- Trials were completed on pavement bitumen spray seals.
- Placement of the base layer material continued.
- Landscaping and topsoiling continued on the completed batters and medians.
- Fauna and stock fencing continued to be installed.
- Installation of steel wire rope barrier posts continued.
- A traffic switch was implemented at the northern end of the project to tie in the construction work with the existing highway.

* The road is broken up into a number of specified layers. The top layers are classified as 'base' and 'sub base' layers. The next level down is classified as a 'select material zone' (SMZ), which is a selection of material from the site that has higher strength qualities. The 'upper zone of formation' (UZF), includes the 'select material zone' and the next layer below, which is often called the 'capping layer'.

For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092 or 02 6640 1000.

Glenugie upgrade

Installation of barriers at the northern end in preparation for the traffic switch connection to the existing highway

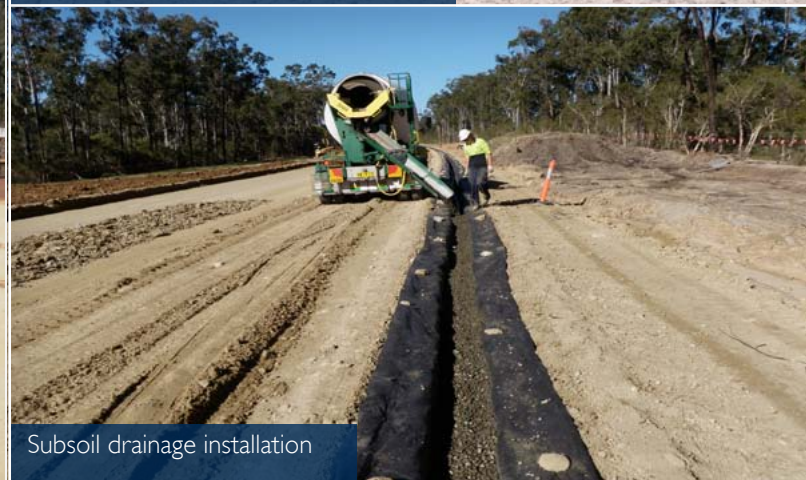
Incorporating 2% lime into soil to reduce moisture content due to wet weather

Fauna stock fencing around one of the many drainage and animal culverts

Pavement material being imported and placed onto the north bound embankment

Placement of pavement material with the grade controled by remote

Drainage blanket rock being installed



Subsoil drainage installation

Ballina bypass

Upgrading the Pacific Highway

UNDER CONSTRUCTION

Transport Roads & Traffic Authority

Contractors: The RTA has formed an alliance with Leighton Contractors, AECOM, SMEC and Coffey Geotechnics

Form of contract: Alliance design and construct contract

Workers on site: 205

Pieces of large plant: 94

Start date of major construction: May 2008

Expected completion date: mid 2012 (weather permitting)

Project value: $640 million

Emigrant Creek Central bridge

Background

The NSW Minister for Planning approved the Ballina bypass project on 22 May 2003.

The $640 million Ballina bypass project is jointly funded by the Australian and NSW governments.

The project will provide 12 kilometres of dual carriageway, extending from south of Ballina at the intersection of the Bruxner and Pacific highways to north of Ballina at the intersection of Ross Lane at Tintenbar. The project is being opened in two stages. The first stage from Cumbalum to Ross Lane was opened on 1 March 2011. The second stage from the Bruxner Highway to Cumbalum interchange will be open by mid 2012 (weather permitting).

Key construction activities during June 2011

- Low embankment pavement works between Teven Road bridge and Emigrant Creek central bridge continued.
- The piling platform was constructed for the McLeay box culverts south of Teven Road.
- Surcharge was removed between the McLeay box culverts and the Teven Road bridge.
- Placement of verge materials south of Cumbalum continued.
- Deck construction progressed for the Cumbalum flood relief plank bridge.
- Construction of the abutment progressed for the plank bridge on the Old Pacific Highway at Sandy Flat.
- Northern section property adjustment works were finalised.
- Landscaping continued on the Teven Road bridge approaches.
- Construction continued of the Teven Road tie-in with the existing highway.
- Widening of the road continued at the Bruxner tie-in with the existing highway.

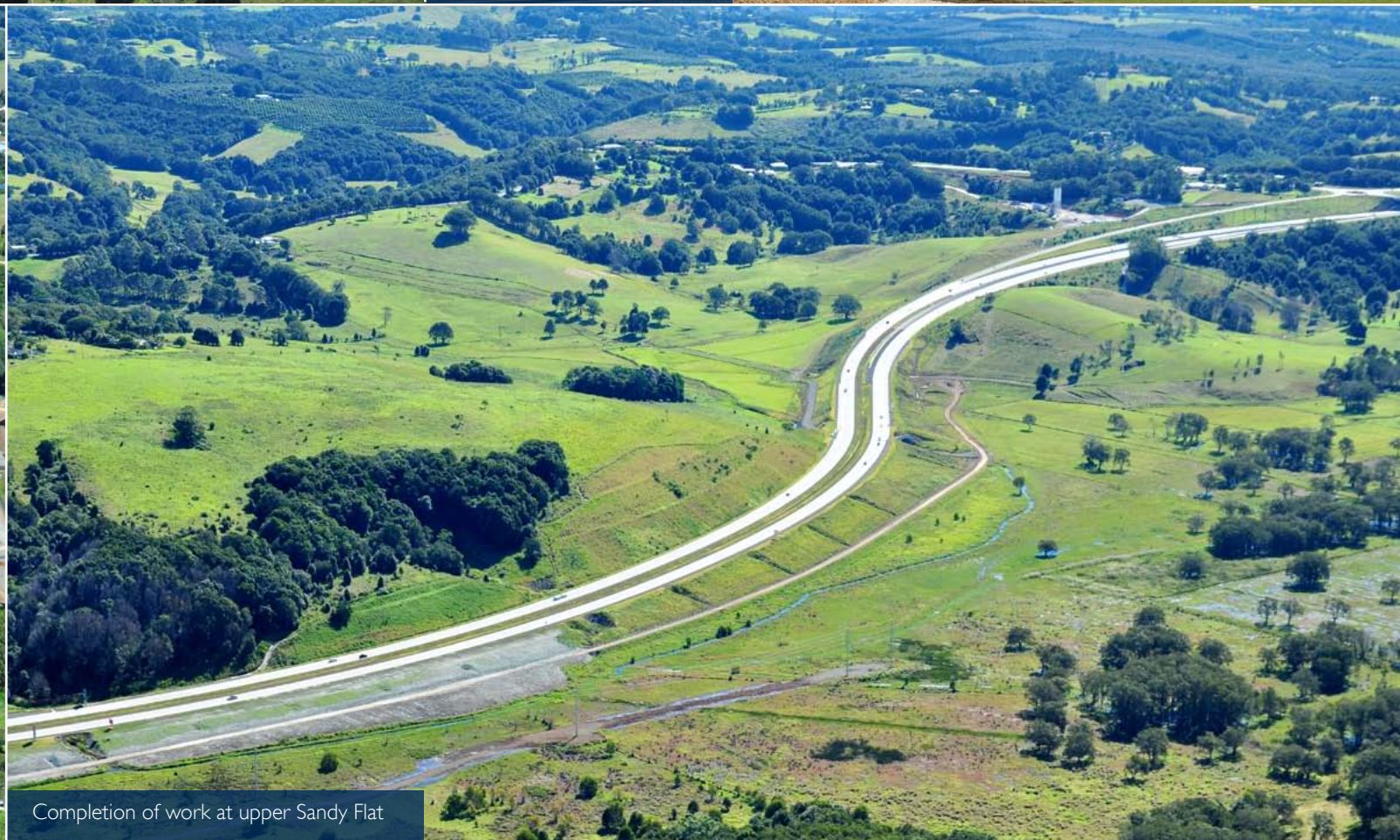
For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092 or 02 6640 1000.

Ballina bypass

Tamarind Drive bridge under being built

Teven Road bridge and gateway

Ballina bypass northern tie-in



Completion of work at upper Sandy Flat

Banora Point upgrade

Upgrading the Pacific Highway

Transport Roads & Traffic Authority

UNDER CONSTRUCTION

Contractors: The RTA has formed an alliance with Abigroup Contractors, Seymour Whyte and SMEC.

Form of contract: Alliance design and construct contract

Workers on site: 173

Pieces of large plant: 76

Start date of major construction: December 2009

Expected completion date: Late 2012 (weather permitting)

Project value: $359 million

First deck pour in the southern valley

Background

The NSW Minister for Planning approved the Pacific Highway upgrade at Banora Point on 26 February 2009.

The Banora Point upgrade project is jointly funded by the Australian and NSW governments.

The upgrade extends over approximately 2.5 kilometres from the northern end of Barneys Point bridge to the southern end of the Tweed Heads bypass.

Key construction activities during June 2011

- Rock splitting started in the main cutting.
- Earthwork continued for the southbound carriageway embankment and work on a retaining wall for the southbound off ramp started.
- Sleaving and grouting works were substantially completed for the Lake Kimberly culverts. Sleaving is a process where new concrete pipes are pushed through the existing pipes.
- The pier 5 headstock pour and span 2 deck pours for both carriageways were completed in the southern valley.
- Abutment works started at the bridge over Minjungbal Drive.
- Noise wall footings were substantially completed north of Barneys Point bridge.
- Community information session was held on Tuesday 21 June.

For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092 or 02 6640 1000.

Banora Point upgrade

Progress of construction work at the northern roundabout

Earthwork in the main cutting

Safety improvement works

Upgrading the Pacific Highway

UNDER CONSTRUCTION

Transport Roads & Traffic Authority

Contractors: RTA Road and Fleet Services

Workers on site: 20

Pieces of large plant: 8

Start date of major construction: November 2009

Expected completion date: mid 2014
(weather permitting)

Project value: $55 million

Background

A program of safety improvement works has been developed as part of the Australian and NSW governments $3.65 billion commitment to upgrade the Pacific Highway over the next five years to mid 2014 as part of the Nation Building Program and the Building Australia Fund.

While most of this funding will be directed to upgrading the highway to dual carriageway, there is a need to address road safety and traffic issues on sections of two-lane highway that is not being upgraded to dual carriageway as part of the current five year program.

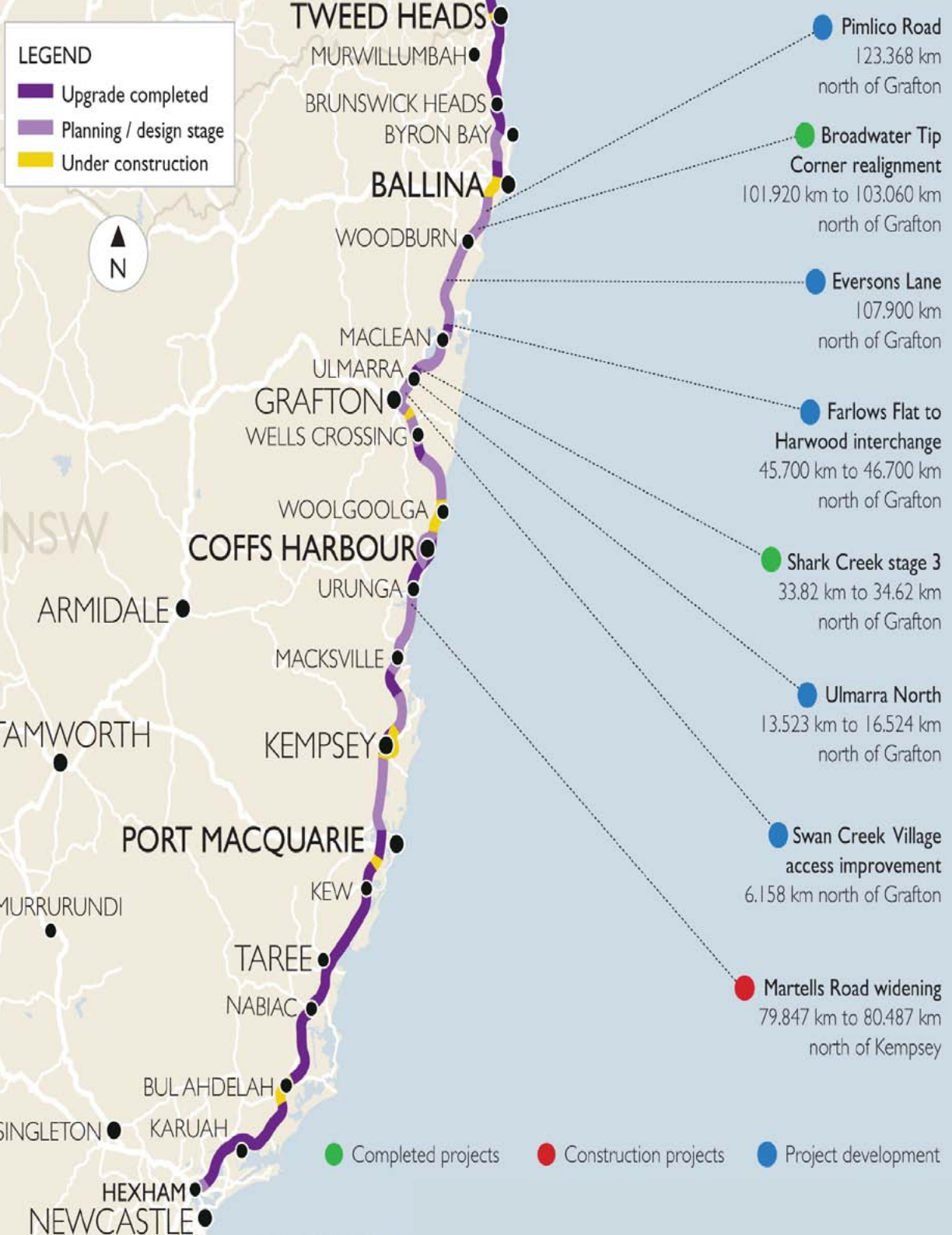
A package of smaller works is being delivered to keep these sections safe and serviceable until upgrades can be completed. This work is also aimed at reducing the delays caused by local and major flood events.

Key construction activities during June 2011

- Work continued on the realigment of the Pacific Highway at Blackadder Creek near Corindi Beach with drainage work continuing in June. Placement of general fill on top of bridging layer started however flooding in the area slowed progress.
- Work continued on the Martells Road widening project with earthworks completed in June. Drainage along the widening project was 90% completed through the month. However major, flooding in the Port Macquarie area required resources from this project to be deployed to emergency work mid June.

Pacific Highway closed at Blackadder due to flooding

General fill over the bridging layer next to the existing highway



Transport Roads & Traffic Authority

Safety improvement works

As of 30 June 2011, two safety improvement projects under this program have been completed, one is under construction and a further five are in various stages of development.

Building new pavement opposite Martells Road for southbound traffic to accommodate a dedicated right turn into Martells Road

Drainage work is now completed at the southern section and the area has been prepared for asphalting

Environment

Upgrading the Pacific Highway

RECYCLING INITIATIVES ON THE BANORA POINT UPGRADE

Contractors: The RTA has formed an alliance with Abigroup Contractors, Seymour Whyte and SMEC.

Form of contract: Alliance design and construct contract

Workers on site: 173

Pieces of large plant: 76

Start date of major construction: December 2009

Expected completion date: Late 2012 (weather permitting)

Project value: $359 million

The Banora Point Upgrade Alliance has implemented an innovative approach to reuse concrete pavement on the project.

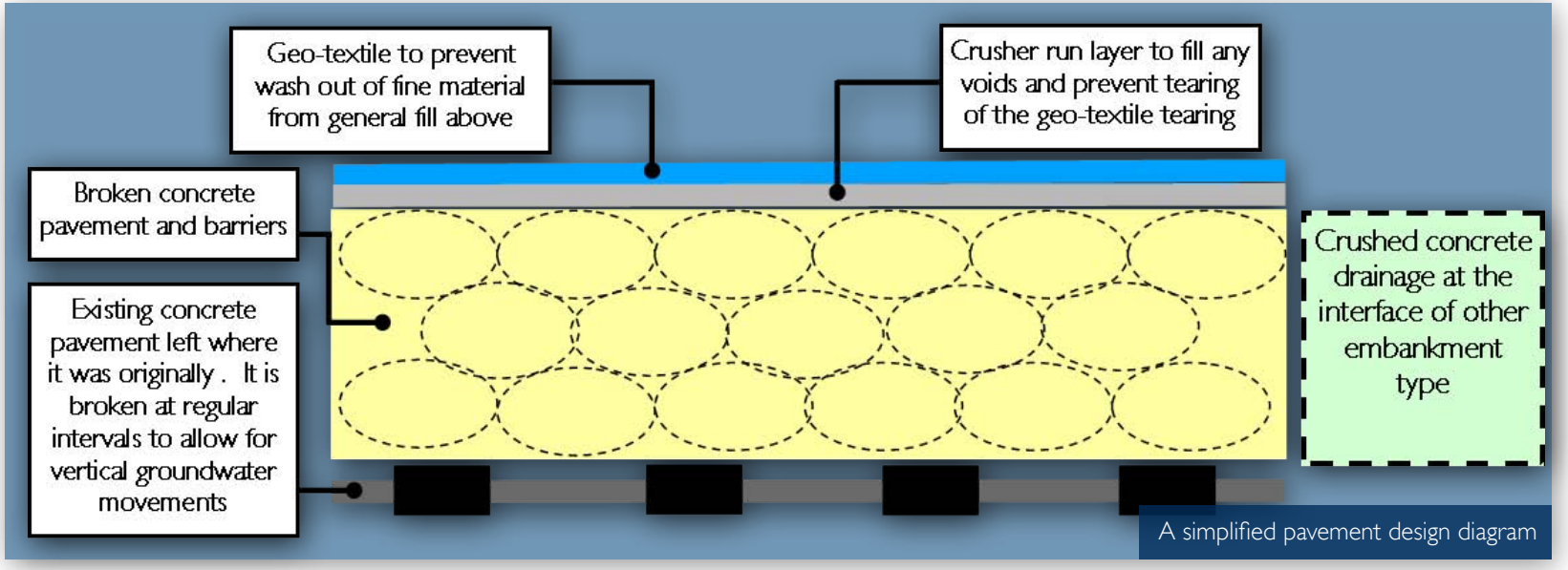
As part of the upgrade design, an 11 metre fill is required over the existing highway carriageway to raise the level of the ground and allow for the new road to be built at a higher level. The alliance worked closely with the RTA to get an embankment approved that allowed for the concrete that was originally on this carriageway to be reused as the fill.

This significantly reduced noise impacts on local residents as the pavement didn't need to be demolished while allowing for demolished concrete pavement and barriers from another area of the project to be used as drainage layers within the new embankment. The longitudinal drainage required next to the existing embankments was also constructed using demolished concrete.

This initiative resulted in the reuse of 2,250m3 of concrete from within the site. Additional benefits from the reuse were:

- Risks of constructing the new embankment over soft ground areas adjacent to marine zones were eliminated.
- Impacts to traffic were minimised by reducing traffic movements for imported fill and exported material that would have normally been considered a waste.
- The reuse of the concrete has also reduced the exposure time for erosion and sediment control issues in this location.
- The overall construction program was fast tracked in this area.

This clever reuse initiative resulted in the reduction imported fill that would have been required and a great sustainability outcome for the project.



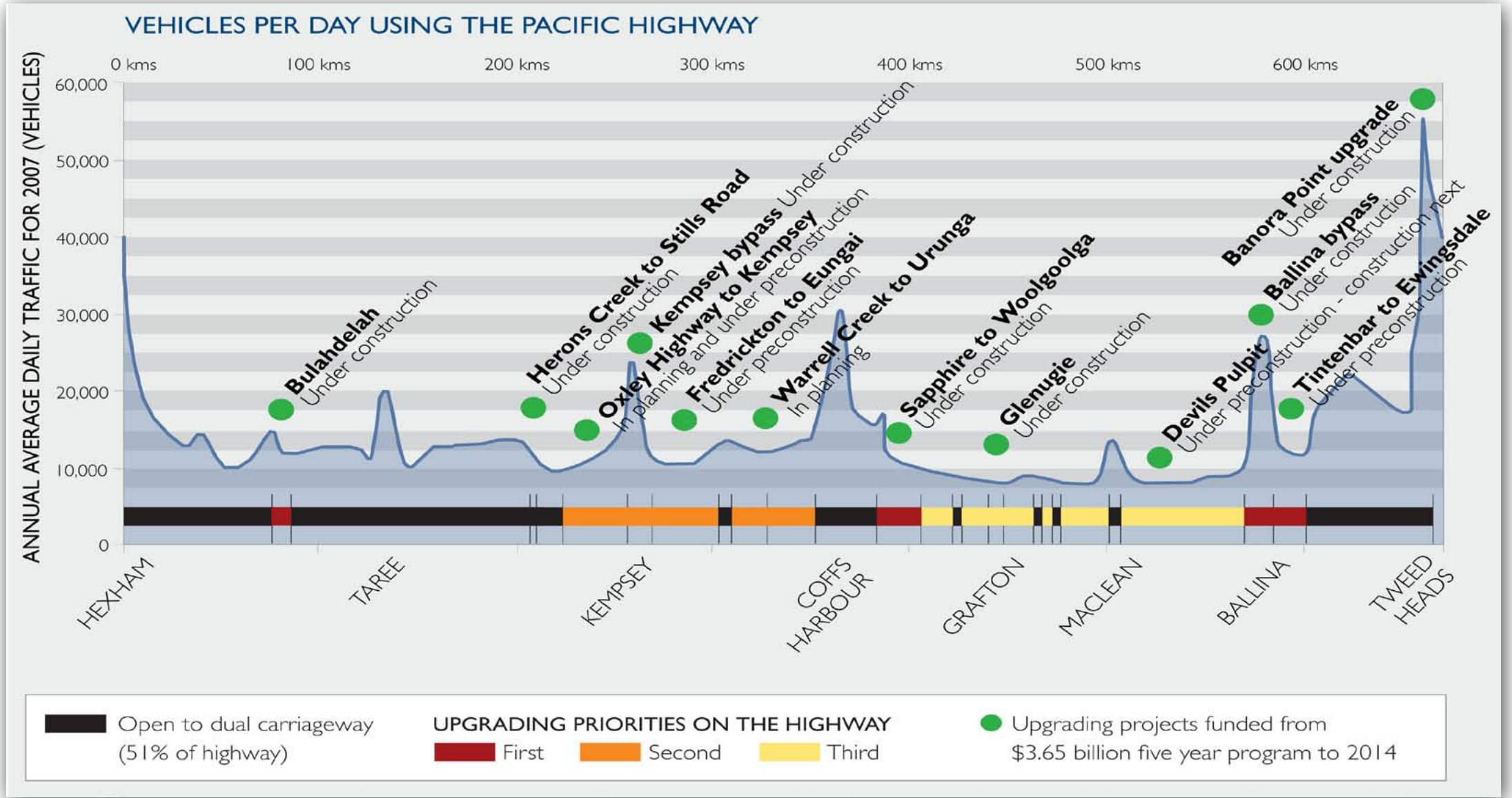
A simplified pavement design diagram


The concrete has been crushed and reused in its existing location

The $3.65 billion plan (2009/10 to 2013/14)

Upgrading the Pacific Highway

NSW GOVERNMENT | Transport Roads & Traffic Authority



Transport
Roads & Traffic
Authority

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