



Transport
Roads & Traffic
Authority

Upgrading the Pacific Highway

Warrell Creek to Urunga

Project approval documents

October 2011

NARROW BRIDGE



PROJECT APPROVAL DOCUMENTS

OCTOBER 2011

ISBN NO 978-1-921899-56-0





PACIFIC HIGHWAY UPGRADE: WARRELL CREEK TO URUNGA

Record of decision to proceed by the Chief
Executive of the NSW Roads and Traffic
Authority

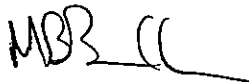
OCTOBER 2011



PROPOSED UPGRADE OF THE PACIFIC HIGHWAY WARRELL CREEK TO
URUNGA – RECORD OF DECISION

I, MICHAEL BUSHBY, Chief Executive of the Roads and Traffic Authority of New South Wales, say as follows:

1. I have examined and considered the approval of the Minister for Planning and Infrastructure to the construction and operation of the Pacific Highway Upgrade, Warrell Creek to Urunga.
2. I have decided that the construction and operation of the Pacific Highway Upgrade, Warrell Creek to Urunga (with the exception of an 8 km section, located between 8.5km to 16.5km from the southern end of the project (**the Deferred Section**)) may proceed subject to the conditions set out in the approval of the Minister for Planning and Infrastructure, the project priorities for upgrading the highway and the available funding.
3. Construction and operation of the Deferred Section may proceed subject to:
 - a. The conditions set out in the approval of the Minister for Planning and Infrastructure, the project priorities for upgrading the highway and the available funding; and
 - b. Consideration of a review of route alignment options for the Deferred Section.



Michael Bushby
Chief Executive
Roads and Traffic Authority of New South Wales
Date: 22 SEP 2011



PACIFIC HIGHWAY UPGRADE: WARRELL CREEK TO URUNGA

Approval by the NSW Minister for Planning

OCTOBER 2011



Project Approval

Section 75J of the *Environmental Planning & Assessment Act 1979*

I, the Minister for Planning and Infrastructure, approve the project application referred to in Schedule 1, subject to the conditions in Schedule 2

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.



The Hon Brad Hazzard MP
Minister for Planning and Infrastructure

Sydney 19 JUL 2011 2011 File No: S02/01634

SCHEDULE 1

Application No.:	MP 07_0112
Proponent:	NSW Roads and Traffic Authority
Approval Authority:	Minister for Planning and Infrastructure
Land:	Land generally commencing at the northern end of the existing dual carriageway highway at Allgomera and stretching 42 kilometres north, ending at the Waterfall Way interchange at Raleigh, traversing the Nambucca and Bellingen local government areas.
Project:	The construction and operation of approximately 42 kilometres of two lane divided carriageways, referred to as the Pacific Highway Upgrade – Warrell Creek to Urunga Project.
Major Project:	The proposal is declared a major project under section 75B(1)(b) of the <i>Environmental Planning and Assessment Act 1979</i> , by virtue of an Order made by the then Minister for Planning and gazetted on 5 December 2006. The Order was amended by the then Minister for Planning on 3 December 2010 and gazetted on 10 December 2010.
Critical Infrastructure:	The proposal is declared to be critical infrastructure under section 75C of the <i>Environmental Planning and Assessment Act 1979</i> , by virtue of an Order made by the then Minister for Planning and gazetted on 5 December 2006. The Order was amended by the then Minister for Planning on 3 December 2010 and gazetted on 10 December 2010.

TABLE OF CONTENTS

DEFINITIONS	2
PART A – ADMINISTRATIVE CONDITIONS	4
TERMS OF APPROVAL	4
STAGING	4
STATUTORY REQUIREMENTS	4
LIMITS OF APPROVAL	5
PART B – PRIOR TO CONSTRUCTION	6
BIODIVERSITY	6
HYDROLOGY AND FLOODING	9
WATER QUALITY	10
HERITAGE IMPACTS	10
URBAN DESIGN AND LANDSCAPING	11
TRAFFIC AND ACCESS	11
PROPERTY AND LANDUSE	12
COMPLIANCE TRACKING	12
COMMUNITY INFORMATION AND INVOLVEMENT	12
ENVIRONMENTAL MANAGEMENT	13
PART C – DURING CONSTRUCTION	18
PART C – DURING CONSTRUCTION	19
BIODIVERSITY	19
AIR QUALITY IMPACTS	19
NOISE AND VIBRATION IMPACTS	19
HERITAGE IMPACTS	21
SEDIMENTATION, EROSION AND WATER	22
PROPERTY AND LANDUSE	22
TRAFFIC IMPACTS	22
WASTE MANAGEMENT	22
ANCILLARY FACILITIES	23
PART D – PRIOR TO OPERATIONS	24
PART E – DURING OPERATIONS	25

DEFINITIONS

Act, the	<i>Environmental Planning and Assessment Act, 1979</i>
Ancillary facility	Temporary facility for construction, including for example an office and amenities compound, construction compound, batch plant (concrete or bitumen), materials storage compound, maintenance workshop or testing laboratory.
Conditions of Approval	The Minister's conditions of approval for the project.
Construction	Includes all work in respect of the project other than survey; acquisitions; fencing; investigative drilling or excavation; building/road dilapidation surveys; minor clearing or translocation (except where heritage, threatened species, populations or endangered ecological communities would be affected, unless otherwise approved by the Director General in consultation with OEH); or other activities determined by the Environmental Representative to have minimal environmental impact (e.g. minor access roads and adjustments for services/utilities, etc).
Department, the	NSW Department of Planning and Infrastructure
Director General, the	Director General of the NSW Department of Planning and Infrastructure
Director General's approval, agreement or satisfaction	A written approval from the Director General (or delegate). Where the Director General's approval is required under a condition of this approval, the Director General will endeavour to provide a response within one month of receiving an approval request. The Director General may ask for additional information if the approval request is considered incomplete. When further information is requested the time taken for the Proponent to respond in writing will be added to the one month period.
DPI	Department of Primary Industry (includes divisions such as Agriculture, Forestry, Fisheries and Minerals and the NSW Office of Water (NOW)).
EEC	Endangered Ecological Communities
Environmental Assessment	<i>Upgrading the Pacific Highway – Warrell Creek to Urunga - Environmental Assessment (Volumes 1 and 2)</i> , prepared by Sinclair Knight Merz Pty Ltd for the NSW Roads and Traffic Authority and dated January 2010
EPL	Environment Protection Licence under the <i>Protection of the Environment Operations Act 1997</i>
Feasible and Reasonable	Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account mitigation benefits and cost of mitigation versus benefits provided, community views and nature and extent of potential improvements. Where requested by the Director General, the Proponent must provide evidence as to how feasible and reasonable measures were considered and taken into account.
Minister, the	Minister for Planning and Infrastructure
OEH	Office of Environment and Heritage
Operation	Means the operation of the project, but does not include commissioning trials of equipment or temporary use of parts of the project during construction.
Project	The project that is the subject of Major Project Application 07_0112
Proponent	NSW Roads and Traffic Authority

Publicly available	Available for inspection in hard copy and/or electronic format by a member of the general public (for example available on the project website as well as at a local display site).
Relevant council	Nambucca and/ or Bellingen as applicable
Response to Submissions	<i>Upgrading the Pacific Highway – Warrell Creek to Urunga - Environmental Assessment Submissions and Preferred Project Report</i> , prepared by the RTA and dated November 2010
Sensitive receiver	Residence, education institution (e.g. School, university, TAFE college), health care facility (e.g. nursing home, hospital) and religious facility (e.g. church).
SoC	Final Statement of Commitments as provided in the Response to Submissions

SCHEDULE 2

PART A – ADMINISTRATIVE CONDITIONS

Terms of Approval

- A1. The Proponent shall carry out the project generally in accordance with the:
- (a) Major Projects Application 07_0112;
 - (b) *Upgrading the Pacific Highway – Warrell Creek to Urunga - Environmental Assessment (Volumes 1 and 2)*, prepared by Sinclair Knight Merz Pty Ltd for the NSW Roads and Traffic Authority and dated January 2010;
 - (c) *Upgrading the Pacific Highway – Warrell Creek to Urunga - Environmental Assessment Submissions and Preferred Project Report*, prepared by the NSW Roads and Traffic Authority and dated November 2010;
 - (d) Letter from the NSW Roads and Traffic Authority titled *Pacific Highway Upgrade – Warrell Creek to Urunga Upgrade Addendum to Submissions Report - Fauna Crossing Structures*, dated 25 May 2011 and accompanying attachments and Letter from the NSW Roads and Traffic Authority titled *Pacific Highway Upgrade – Warrell Creek to Urunga Upgrade Addendum to Submissions Report - Fauna Crossing Structures*, dated 1 June 2011 and accompanying attachment; and
 - (e) conditions of this approval.
- A2. In the event of an inconsistency between:
- (a) the conditions of this approval and any document listed from condition A1(a) to A1(d) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and
 - (b) any document listed from condition A1(a) to A1(d) inclusive, and any other document listed from condition A1(a) to A1(d) inclusive, the most recent document shall prevail to the extent of the inconsistency.
- A3. The Proponent shall comply with any reasonable requirement(s) of the Director General arising from the Department's assessment of:
- (a) any reports, plans or correspondence that are submitted in accordance with this approval; and
 - (b) the implementation of any actions or measures contained within these reports, plans or correspondence.
- A4. Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request.

Staging

- A5. The Proponent may elect to construct and/ or operate the project in stages. Where staging of the project is proposed, these conditions of approval are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stages of works. Where staging is proposed, the Proponent shall submit a Staging Report to the Director General prior to the commencement of the first proposed stage, which provide details of:
- (a) how the project would be staged including general details of work activities associated with each stage and the general timing of when each stage would commence; and
 - (b) details of the relevant conditions of approval, which would apply to each stage and how these shall be complied with across and between the stages of the project.

The Proponent shall ensure that an updated Staging Report (or advice that no changes to staging are proposed) is submitted to the Director General prior to the commencement of each stage, identifying any changes to proposed staging or applicable conditions.

The Proponent shall ensure that relevant plans, sub-plans and other management documents required by the conditions of this approval relevant to each stage (as identified in the Staging Report) are submitted to the Director General no later than one month prior to the commencement of the relevant stages, unless an alternative timeframe is agreed to by the Director General.

Statutory Requirements

- A6. The Proponent shall ensure that all necessary licences, permits and approvals required for the development of the project are obtained and maintained as required throughout the life of the

project. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 75U of the Act. This shall include relevant certification requirements in accordance with section 109R of the Act.

Limits of Approval

- A7. This approval shall lapse ten years after the date on which it is granted, unless construction works the subject of this project approval are physically commenced on or before that date.
 - A8. The Proponent shall implement the bridge crossing option (Option 2 in the Environmental Assessment) to traverse the floodplain from the northern bank of the Nambucca River to the existing Pacific Highway.
 - A9. The proposed trailer exchange facility located in the vicinity of the Nambucca Heads rest area does not form part of this approval.
-

PART B – PRIOR TO CONSTRUCTION

Biodiversity

Mitigation Measures – Fauna and Waterway Crossings

- B1. The Proponent shall implement the fauna and waterway crossings identified in the documents listed under condition A1(d) at the locations and in accordance with the minimum design dimensions identified in the documents listed under condition A1(d), unless otherwise agreed to by the Director General.
- B2. As part of detailed design, the Proponent shall further investigate design refinements to improve fauna connectivity between Chainages 19150 and 19820.
- B3. All investigations into fauna crossings design undertaken during detailed design (with respect to the crossing design and locations identified in conditions B1 and B2 shall be undertaken with the input of a qualified and experienced ecologist and in consultation with OEH and DPI (Fisheries) through a process of workshops and on-site ground verification. Where detailed design refinements are made, the Proponent shall prior to the commencement of construction of the relevant crossings, submit a report to the Director General identifying the final design of the fauna crossings and demonstrating consistency with the locations and minimum design parameters identified in the documents listed under condition A1(d) or where there have been changes, how the new location and/ or design would result in a better biodiversity outcome. The report shall also clearly identify how the fauna crossings structures will work in conjunction with complementary fauna exclusion fencing measures to be implemented for the project. The report must be accompanied by evidence of consultation with OEH and DPI (Fisheries) in relation to the suitability of any changes to the crossings design.
- B4. The Proponent shall in consultation with OEH, ensure that the design of the project as far as feasible and reasonable, incorporates provision for glider crossings (such as widened medians and maintenance or enhancement of habitat within the medians and corresponding carriageway boundaries) where the alignment crosses areas of recognised glider habitat.
- B5. The Proponent shall in consultation with DPI (Fisheries) ensure that all waterway crossings are designed and constructed consistent with the principles of the *Guidelines for Controlled Activities Watercourse Crossings (DWE)*, *Fish Note: Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries)* and *Policy and Guidelines for Design and Construction of Bridges, Roads, Causeways, Culverts and Similar Structures (NSW Fisheries)*. As far as feasible and reasonable, culvert replacements as part of the project shall incorporate naturalised bases and where multiple cell culverts are proposed for creek crossings, shall include at least one cell for fish passage, with an invert or bed level that mimics creek flows.

Mitigation Measures - Nest Boxes

- B6. Prior to the commencement of any construction work that would result in the disturbance of any native vegetation (or as otherwise agreed to by the Director General), the Proponent shall in consultation with OEH prepare and submit for the approval of the Director General a **Nest Box Plan** to provide replacement hollows for displaced fauna consistent with the requirements of SoC F7. The plan shall detail the number and type of nest boxes to be installed which must be justified based on the number and type of hollows removed (based on detailed pre-construction surveys), the density of hollows in the area to be cleared and adjacent forest, and the availability of adjacent food resources. The plan shall also provide details of maintenance protocols for the nest boxes installed including responsibilities, timing and duration.

Mitigation Measures - *Amorphospermum whitei* and *Marsdenia longiloba*

- B7. Prior to the commencement of any construction work that would result in the disturbance of *Amorphospermum whitei* and *Marsdenia longiloba*, the Proponent shall in consultation with the OEH develop a management plan for these species which:
- investigates the potential for the translocation of plants impacted by the project;
 - if investigation under Condition B7(a) reveals translocation of impacted plants is feasible, includes details of a translocation plan for the plants consistent with the Australian Network for Plant Conservation 2nd Ed 2004: *Guidelines for the Translocation of*

- Threatened Species in Australia*, including details of ongoing maintenance such as responsibilities, timing and duration;
- (c) identifies a process for incorporating appropriate compensatory habitat for the impacted plants in the Biodiversity Offset Strategy referred to in Condition B8 should the information obtained during the investigation referred to in Condition B7(a) find that translocation is not feasible or where the monitoring undertaken as part of condition B10 finds that translocation measures have not been successful (as identified through performance criteria); and
 - (d) includes detail of mitigation measures to be implemented during construction to avoid and minimise impacts to areas identified to contain these species, including excluding construction plant, equipment, materials and unauthorised personnel.

Unless otherwise agreed to by the Director General, the Plan shall be submitted for the Director General's approval prior to the commencement of any construction work that would result in the disturbance of *Amorphospermum whitei* and *Marsdenia longiloba*.

Biodiversity Offsets

- B8. The Proponent shall, in consultation with the OEH and DPI (Fisheries), develop a Biodiversity Offset Strategy that identifies available options for offsetting the biodiversity impacts of the project in perpetuity, with consideration to OEH's *Principles for the Use of Biodiversity Offsets in NSW* (OEH Website, June 2011). Unless otherwise agreed to by OEH, offsets shall be provided on a like-for-like basis and at a minimum ratio of 4:1 for areas of high conservation value (including EEC and threatened species or their habitat identified in the Environmental Assessment to be impacted by the project and poorly conserved vegetation communities identified as being more than 75% cleared in the catchment management area) and 2:1 for the remainder of native vegetation areas (including mangroves, seagrass, salt marsh and riparian vegetation). The Strategy shall include, but not necessarily be limited to:
- (a) confirmation of the vegetation communities/ habitat (in hectares) to be offset and the size of offsets required (in hectares);
 - (b) details of the available offset measures that have been identified to compensate for the biodiversity impacts of the project, such as (but not necessarily limited to): suitable compensatory land options and/ or contributions towards biodiversity programs for high conservation value areas on nearby lands (including research programs). Where the use of State Forest land managed in accordance with an Integrated Forestry Operations Approval is proposed to offset biodiversity impacts, the Proponent shall clearly demonstrate how this would provide the biodiversity outcomes required under this condition including any additional offset requirements to cover residual impacts;
 - (c) the decision-making framework that would be used to select the final suite of offset measures to achieve the aims and objectives of the Strategy, including the ranking of offset measures;
 - (d) a process for addressing and incorporating offset measures for changes to impact (where these changes are generally consistent with the biodiversity impacts identified for the project in the documents listed under condition A1, including:
 - i. changes to footprint due to design changes;
 - ii. changes to predicted impacts resulting from changes to mitigation measures;
 - iii. identification of additional species/habitat through pre-clearance surveys; and
 - iv. additional impacts associated with ancillary facilities; and
 - (e) options for the securing of biodiversity options in perpetuity.

The Biodiversity Offset Strategy shall be submitted to, and approved by, the Director General prior to the commencement of any construction work that would result in the disturbance of any native vegetation, unless otherwise agreed by the Director General. Unless otherwise agreed, the Biodiversity Offset Strategy shall be submitted to the Director General for approval no later than 6 weeks prior to the commencement of any construction that would result in the disturbance of any native vegetation.

The Proponent may elect to satisfy the requirements of this condition by implementing a suitable offset package which addresses impacts from multiple Pacific Highway Upgrade projects (including the Warrell Creek to Urunga Project) within the North Coast Bio-region. Any

such agreement made with the OEH must be made in consultation with the Department and approved by the Director General within a timeframe agreed to by the Director General.

- B9. Within two years of the approval of the Biodiversity Offset Strategy, unless otherwise agreed by the Director General, the Proponent shall prepare and submit a **Biodiversity Offset Package** which identifies the final suite of offset measures to be implemented for the project for the approval of the Director General. The Package shall be developed in consultation with OEH, and shall provide details of:
- (a) the final suite of the biodiversity offset measures selected for the project demonstrating how it achieves the requirements and aims of the Biodiversity Offset Strategy (including specified offset ratios);
 - (b) the final selected means of securing the biodiversity values of the offset package in perpetuity including ongoing management, monitoring and maintenance requirements; and
 - (c) timing and responsibilities for the implementation of the provisions of the package over time.

The requirements of the Package shall be implemented by the responsible parties according to the timeframes set out in the Package.

Ecological Monitoring

- B10. Prior to the commencement of any construction work that would result in the disturbance of any native vegetation, the Proponent shall develop an **Ecological Monitoring Program** to monitor the effectiveness of the mitigation measures implemented as part of the project. The program shall be developed in consultation with OEH and prepared by a suitably qualified ecologist and shall include but not necessarily be limited to:
- (a) an adaptive monitoring program to assess the effectiveness of the mitigation measures identified in condition B1 to B6, B7(b), B7(d), B21(c) and B31(b) and allow amendment to the measures if necessary. The monitoring program shall nominate appropriate and justified monitoring periods and performance targets against which effectiveness will be measured. The monitoring shall include operational road kill surveys to assess the effectiveness of fauna crossing and exclusion fencing implemented as part of the project;
 - (b) mechanism for developing additional monitoring protocols to assess the effectiveness of any additional mitigation measures implemented to address additional impacts in the case of design amendments or unexpected threatened species finds during construction (where these additional impacts are generally consistent with the biodiversity impacts identified for the project in the documents listed under condition A1);
 - (c) monitoring shall be undertaken during construction (for construction-related impacts) and from opening of the project to traffic (for operation/ongoing impacts) until such time as the effectiveness of mitigation measures can be demonstrated to have been achieved over a minimum of five successive monitoring periods (i.e. 5 years) after opening of the project to traffic, unless otherwise agreed to by the Director General. The monitoring period may be reduced with the agreement of the Director General in consultation with OEH, depending on the outcomes of the monitoring;
 - (d) provision for the assessment of the data to identify changes to habitat usage and if this can be attributed to the project;
 - (e) details of contingency measures that would be implemented in the event of changes to habitat usage patterns directly attributable to the construction or operation of the project; and
 - (f) provision for annual reporting of monitoring results to the Director General and OEH, or as otherwise agreed by those agencies.

The Program shall be submitted for the Director General's approval prior to the commencement of any construction work that would result in the disturbance of any native vegetation. Unless otherwise agreed, the Program shall be submitted to the Director General for approval no later than 6 weeks prior to the commencement of any construction that would result in the disturbance of any native vegetation.

Hydrology and Flooding

- B11. The Proponent shall undertake further flood modelling during detailed design to ensure that the Nambucca River crossing is designed and constructed with the aim of not exceeding the afflux and other flood characteristics predicted in the Environmental Assessment and Response to Submissions.
- B12. Prior to the commencement of construction within areas affected by an increased afflux from the project, the Proponent shall in consultation with the OEH, DPI (Fisheries) and Nambucca Shire Council undertake flood modelling of the Nambucca River and floodplain based on the detailed design of the project, and submit the flood modelling report for the approval of the Director General. The flood modelling shall:
- (a) assess the impacts of the project on flood behaviour (in relation to Nambucca River and floodplain);
 - (b) confirm the location and size of structures for the crossing the Nambucca River and floodplain which meet the performance criteria outlined in Condition B11;
 - (c) examine flood behaviours through the full range of flood events including but not limited to the 10%, 5%, 2%, 1% 0.5% and 0.2% Annual Exceedence Probability;
 - (d) examine any changes in the flood behaviour under climate change conditions; and
 - (e) examine any changes to existing conditions for flood timing, afflux, inundation, flood velocity, scour and siltation flood warning and flood evacuation strategies including stock.
- B13. Prior to commencement of construction within areas affected by an increased afflux from the Nambucca River and Kalang River crossings, the Proponent shall submit a hydrological mitigation report for the approval of the Director General detailing all feasible and reasonable flood mitigation measures for all properties where flood impacts are predicted to increase as a result of the project. The Report shall be based on detailed floor level survey and associated assessment of potentially flood affected properties. The report shall:
- (a) identify all properties likely to have an increased flooding impact and detail the predicted increased flooding impact;
 - (b) identify mitigation measures to be implemented where increased flooding is predicted to adversely affect access, property or infrastructure;
 - (c) identify measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the project and cause localised soil erosion and/or pasture damage;
 - (d) be developed in consultation with OEH, the relevant Council, NSW State Emergency Service and directly-affected property owners; and
 - (e) identify operational and maintenance responsibilities for items (a) to (e) inclusive.

The Proponent shall not commence construction of the project on or within areas likely to alter flood conditions until such time as works identified in the hydrological mitigation report have been completed, unless otherwise agreed by the Director General.

- B14. Based on the mitigation measures identified in condition B13, the Proponent shall prepare a final schedule of feasible and reasonable flood mitigation measures proposed at each directly-affected property in consultation with the property owner. The schedule shall be provided to the relevant property owner(s) no later than two months prior to the implementation of the mitigation works, unless otherwise agreed by the Director General. A copy of each schedule of flood mitigation measures shall be provided to the relevant Council and the Department prior to the implementation / construction of the mitigation measures on the property.
- B15. In the event that the Proponent and the relevant property owner cannot agree on feasible and reasonable flood mitigation measures to be applied to a property within one month of the first consultation on the measures (as required under Condition B14), the Proponent shall employ a suitably qualified and experienced independent hydrological engineer (who has been approved by the Director General for the purposes of this condition prior to the commencement of construction) to advise and assist affected property owners in negotiating feasible and reasonable mitigation measures.
- B16. The Proponent shall provide assistance to the relevant Council's and/ or NSW State Emergency Service to prepare any new or necessary update(s) to the relevant plans and documents in

relation to flooding, to reflect changes in flooding levels, flows and characteristics as a result of the project, as identified in the documents listed under condition A1 and the modelling undertaken as part of condition B12.

Water Quality

- B17. The Proponent shall prepare and implement a **Water Quality Monitoring Program** to monitor the impacts of the project on SEPP 14 wetlands, surface water quality and groundwater resources during construction and operation. The Program shall be developed in consultation with OEH and DPI and shall include but not necessarily be limited to:
- (a) identification of surface water and groundwater quality monitoring locations which are representative of the potential extent of impacts from the project;
 - (b) identification of works and activities during construction and operation of the project, including emergencies and spill events, that have the potential to impact on surface water quality and risks to oyster farming in the Nambucca, Bellinger, and Kalang rivers;
 - (c) representative background monitoring of surface water and groundwater quality parameters for a minimum of six (6) months (considering seasonality) prior to the commencement of construction to establish baseline water conditions;
 - (d) development and presentation of indicators or standards against which any changes to surface water quality will be assessed, having regard to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000* (ANZECC, 2000);
 - (e) contingency and ameliorative measures in the event that adverse impacts to surface water quality are identified;
 - (f) a minimum monitoring period of three years following the completion of construction or until any disturbed waterways/ groundwater resources are certified by an independent expert as being rehabilitated to an acceptable condition. The monitoring shall also confirm the establishment of operational water control measures (such as sedimentation basins and vegetation swales); and
 - (g) reporting of the monitoring results to the Department, OEH and DPI.

The Program shall be submitted to the Director General for approval six (6) months prior to the commencement of construction of the project, or as otherwise agreed by the Director General. A copy of the Program shall be submitted to OEH and DPI prior to its implementation.

Heritage Impacts

- B18. As part of detailed design, the Proponent shall ensure that the final design of the alignment is aligned to minimise project impacts on the Cow Creek Aboriginal Reserve (21-6-0228) as far as practicable and detail these design considerations in the Heritage Management Plan required to be prepared under condition B31(e).
- B19. Prior to the commencement of pre-construction and construction activities affecting the following Aboriginal sites the Proponent shall undertake the relevant salvage mitigation measures outlined in the Environmental Assessment for these sites:
- (a) Butchers Creek 1 (previously PAD 1);
 - (b) Stoney Creek 1 (previously PAD 24);
 - (c) Bald Hill Road 1 (previously PAD 7);
 - (d) Old Coast Road Stone Artefact (previously PAD 2);
 - (e) Boggy Creek Artefact 1 & resource gathering area (previously PAD 16);
 - (f) Cow Creek Artefact Scatter (previously PAD 8);
 - (g) Kalang Spur Artefact Scatter (previously PAD 12);
 - (h) Kalang Flat 1 9(a) (previously PAD 9);
 - (i) Kalang Flat 2 9(b) (previously PAD 9);
 - (j) South Arm Road 1;
 - (k) Tyson's Flat Ridge Artefact Scatter (previously PAD 29);
 - (l) Tyson's Flat 1 (previously PAD 28); and
 - (m) Tyson's Flat 2 (previously PAD 27).

The results of the salvage program shall be provided to the Department, OEH and Aboriginal stakeholders within six months of the completion of the salvage program, unless otherwise agreed by the Director General.

- B20. Prior to the commencement of pre-construction and construction activities affecting the possible house site identified as Site 12 in Table 19-3 of the Environmental Assessment, the Proponent shall prepare an archaeological assessment in consultation with the OEH (Heritage Branch), and generally in accordance with the *Departments Archaeological Assessments Guideline* (1996), and submit the assessment for the Director General's approval.

Any further archaeological work recommended on this site by the assessment shall be undertaken by the Proponent in consultation with the OEH (Heritage Branch) and reported to the Director General within six months of the completion of the work, unless otherwise agreed by the Director General.

Urban Design and Landscaping

- B21. Prior to the commencement of construction (unless otherwise agreed to by the Director General), the Proponent shall prepare and implement an **Urban Design and Landscape Plan** for the project. The plan shall be prepared in consultation with the relevant Council and shall present an integrated urban design for the project. The plan shall include, but not necessarily be limited to:

- (a) a principle goal of achieving the urban design objectives outlined in Section 13.4 of Volume 1 of the Environmental Assessment;
- (b) sections and perspective sketches;
- (c) locations along the project corridor directly or indirectly impacted by the construction of the project (e.g. temporary ancillary facilities, access tracks, watercourse crossings, etc.) which are proposed to be actively rehabilitated, regenerated and/ or revegetated to promote biodiversity outcomes and visual integration. Details of species to be replanted/ revegetated shall be provided,, including their appropriateness to the area and considering existing vegetation and habitat for threatened species;
- (d) location of existing vegetation and proposed landscaping, including use of indigenous and endemic species where possible. The plan shall assess the visual screening affects of existing vegetation and the proposed landscaping at residences and businesses, which have been identified as likely to experience high visual impact as a result of the project. Where high residual impacts are identified to remain, the plan shall in consultation with affected receptors, identify opportunities for providing at-receptor landscaping to further screen views of the project. Where agreed to with the landowner, these measures shall be implemented during the construction of the project;
- (e) strategies for progressive landscaping incorporating other environmental controls such as erosion and sedimentation controls, drainage, noise mitigation;
- (f) location and design treatments for built elements including retaining walls, cuttings, bridges, and noise barriers;
- (g) location and design treatments for any associated footpaths and cyclist elements, and other features such as seating, lighting (in accordance with *AS 4282-1997 Control of the Obtrusive Effect of Outdoor Lighting*), fencing, and signs;
- (h) evidence of consultation with the community on the proposed urban design and landscape measures prior to its finalisation; and
- (i) monitoring and maintenance procedures for the built elements and landscaping (including weed control) including responsibilities, timing and duration and contingencies where landscaping measures fail.

The Plan shall be submitted for the approval of the Director General prior to commencement of construction of the project. The Plan may be submitted in stages to suit the staged construction program of the project.

Traffic and Access

- B22. The Proponent shall ensure that the project is designed in consultation with DPI (Forests NSW) to ensure that access of a standard that is at least equivalent to that currently existing and which meets relevant road safety standards is maintained within the State forests to enable continued forestry operations, fire management and recreation during construction and operation.
- B23. The Proponent shall ensure that the project is designed to incorporate appropriate signage for townships along the project alignment, in consultation with the relevant Council and businesses

policy, and provide information on the range of services available within the towns including advice that the route through the towns may be taken as an alternative route to the bypass.

Property and Landuse

B24. The Proponent shall ensure that the project is designed to minimise land take impacts to surrounding properties (including agricultural properties) as far as feasible and reasonable, in consultation with the affected landowners. Where the viability of existing agricultural operations are identified to be highly affected by the land requirements of the project, the Proponent shall as part of detailed design employ a suitably qualified and experienced independent agricultural specialist (that is approved by the Director General for the purpose of this condition), to assist in the following (where agreed to by the relevant landowner):

- (a) identifying alternative farming opportunities for the relevant properties including purchase of other residual land to enable existing/new agricultural activities to continue; and/or
- (b) negotiating appropriate compensation and/or arrangements for the purchase of the property under the *Land Acquisition (Just Terms Compensation) Act 1991*.

Compliance Tracking

B25. The Proponent shall develop and implement a **Compliance Tracking Program** to track compliance with the requirements of this approval. The Program shall be submitted to the Director General for approval prior to the commencement of construction and relate to both the construction and operational phases of the project, and include, but not necessarily be limited to:

- (a) provisions for the notification of the Director General of the commencement of works prior to the commencement of construction and prior to the commencement of operation of the project (including prior to each stage, where works are being staged);
- (b) provisions for periodic review of project compliance with the requirements of this approval, Statement of Commitments and documents listed under condition A1;
- (c) provisions for periodic reporting of compliance status against the requirements of this approval, Statement of Commitments and documents listed under condition A1 to the Director General including at least one month prior to the commencement of construction and operation of the project and at other intervals during the construction and operation, as identified in the Program;
- (d) a program for independent environmental auditing in accordance with *ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing*;
- (e) mechanisms for reporting and recording incidents and actions taken in response to those incidents;
- (f) provisions for reporting environmental incidents to the Director General during construction and operation; and
- (g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.

Community Information and Involvement

Provision of Electronic Information

B26. Prior to the commencement of construction, the Proponent shall establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the project. The Proponent shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not necessarily limited to:

- (a) information on the current implementation status of the project;
- (b) a copy of the documents referred to under condition A1 of this approval, and any documentation supporting modifications to this approval that may be granted from time to time;
- (c) a copy of this approval and any future modification to this approval;
- (d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the project;
- (e) a copy of each current strategy, plan, program or other document required under this approval; and
- (f) the outcomes of compliance tracking in accordance with the requirements of Condition B25.

- (f) the outcomes of compliance tracking in accordance with the requirements of Condition B25.

Complaints and Enquiries Procedure

- B27. Prior to the commencement of construction, the Proponent shall ensure that the following are available for community complaints and enquiries during the construction period:
- (a) a telephone number on which complaints and enquiries about construction and operation activities may be registered;
 - (b) a postal address to which written complaints and enquiries may be sent; and
 - (c) an email address to which electronic complaints and enquiries may be transmitted.

The telephone number, the postal address and the email address shall be published in a newspaper circulating in the local area prior to the commencement of construction and prior to the commencement of project operation. The above details shall also be provided on the website (or dedicated pages) required by this approval.

The Proponent must prepare and implement a Construction Complaints Management System consistent with *AS 4269 Complaints Handling* prior to the commencement of construction activities and must maintain the System for the duration of construction activities.

Information on all complaints received, including the means by which they were addressed and whether resolution was reached and whether mediation was required or used, must be maintained by the Proponent and included in a complaints register. The information contained within the System must be made available to the Director General on request.

Community Involvement

- B28. The Proponent shall prepare and implement a **Community Communication Strategy** for the project. This Strategy shall be designed to provide mechanisms to facilitate communication between the Proponent, the Contractor, the Environmental Representative, the relevant Council and the local community (broader and local stakeholders) on the construction and environmental management of the project. The Strategy shall include, but not necessarily be limited to:
- (a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners;
 - (b) procedures and mechanisms for the regular distribution of information to stakeholders on the progress of the project and matters associated with environmental management;
 - (c) procedures and mechanisms through which stakeholders can discuss or provide feedback to the Proponent and/or Environmental Representative in relation to the environmental management and delivery of the project;
 - (d) procedures and mechanisms through which the Proponent can respond to any enquires or feedback from stakeholders in relation to the environmental management and delivery of the project; and
 - (e) procedures and mechanisms that would be implemented to resolve any issues/disputes that may arise between parties on the matters relating to environmental management and the delivery of the project. This may include the use of an appropriately qualified and experienced independent mediator.

The Proponent shall maintain and implement the Strategy throughout construction of the project. The Strategy shall be approved by the Director General prior to the commencement of construction, or as otherwise agreed by the Director General.

Environmental Management

Environmental Representative

- B29. Prior to the commencement of construction of the project, or as otherwise agreed by the Director General, the Proponent shall nominate for the approval of the Director General a suitably qualified and experienced Environment Representative(s) that is independent of the design (including preparation of documentation referred to condition A1), and construction personnel. The Proponent shall employ the Environmental Representative(s) for the duration of

construction, or as otherwise agreed by the Director General. The Environment Representative(s) shall:

- (a) be the principal point of advice in relation to the environmental performance of the project;
- (b) be consulted in responding to the community concerning the environmental performance of the project;
- (c) monitor the implementation of all environmental management plans and monitoring programs required under this approval;
- (d) monitor the outcome of all environmental management plans and advise the Proponent upon the achievement of all project environmental outcomes;
- (e) have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and all other licences and approvals related to the environmental performance and impacts of the project;
- (f) ensure that environmental auditing is undertaken in accordance with the requirements of condition B25 and the project Environmental Management System(s);
- (g) be given the authority to approve/ reject minor amendments to the Construction Environment Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environment Management Plan required under condition B30; and
- (h) be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.

Construction Environmental Management Plan

B30. Prior to the commencement of construction, the Proponent shall prepare and (following approval) implement a **Construction Environmental Management Plan** for the project. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the OEH, DPI and relevant Council and include, but not necessarily be limited to:

- (a) a description of all relevant activities to be undertaken during construction of the project or stages of construction, as relevant;
- (b) statutory and other obligations that the Proponent is required to fulfil during construction including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies. Evidence of consultation with relevant public authorities, shall be included identifying how issues raised by these public authorities have been addressed in the plan;
- (c) a description of the roles and responsibilities for all relevant employees involved in the construction of the project including relevant training and induction provisions for ensuring that all employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of approval;
- (d) identification of ancillary facility site locations, including an assessment against the location criteria outlined in condition C27;
- (e) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase and details of how environmental performance would be monitored and managed to meet acceptable outcomes including what actions will be taken to address identified potential adverse environmental impacts (including any impacts arising from concurrent construction works with adjacent Pacific Highway Upgrade projects, as relevant). In particular, the following environmental performance issues shall be addressed in the Plan:
 - (i) measures to monitor and manage **dust emissions** including dust generated by haulage trucks, traffic on unsealed public roads and stockpile management;
 - (ii) measures to monitor and manage **waste** generated during construction including but not necessarily limited to: general procedures for waste classification, handling, reuse, and disposal; how contaminated materials would be handled and disposed; use of secondary waste material in construction wherever feasible and reasonable; procedures for dealing with green waste including timber and much from clearing activities; and measures for reducing demand on water resources (including the potential for reuse of treated water from sediment control basins);

- (iii) measures to monitor and manage **spoil and fill** including details of how excavated material would be handled, stockpiled, reused and disposed and a stockpile management protocol detailing location criteria that would guide the placement of stockpiles and minimum management measures (including rehabilitation) that would be implemented to avoid/ minimise amenity impacts to surrounding residents and environmental risks (including to surrounding watercourses);
- (iv) measures to monitor and manage **hazard and risks** including emergency management; and
- (v) the issues identified in condition B31;
- (f) details of community involvement and complaints handling procedures during construction, consistent with the requirements of conditions B26 to B28;
- (g) details of compliance and incident management consistent with the requirements of condition B25; and
- (h) procedures for the periodic review and update of the Construction Environmental Management Plan as necessary (including where minor changes can be approved by the Environmental Representative).

The Plan shall be submitted for the approval of the Director General no later than one month prior to the commencement of construction, or within such period otherwise agreed by the Director General. Construction works shall not commence until written approval has been received from the Director General.

B31. As part of the Construction Environment Management Plan for the project required under condition B30 of this approval, the Proponent shall prepare and implement the following sub plan(s):

- (a) a **Construction Traffic Management Plan**, prepared in accordance with the RTA's *QA Specification G10 – Control of Traffic and Traffic Control at Work Sites Manual (2003)* to manage disruptions to highway and local traffic movements as a result of construction traffic associated with the project. The Plan shall be developed in consultation with Council and shall include, but not necessarily be limited to:
 - (i) identification of construction traffic routes and quantification of construction traffic volumes (including heavy vehicle/spoil haulage) on these routes;
 - (ii) details of vehicle movements for construction sites and site compounds including parking, dedicated vehicle turning areas, and ingress and egress points;
 - (iii) potential impacts to traffic on the existing highway and associated local roads including intersection level of service and potential disruptions to arrangements for pedestrians, property access, public transport, parking and/ or cyclist;
 - (iv) details of temporary and interim traffic arrangements including intersections, property access and alternative traffic routes;
 - (v) traffic and other arrangements to minimise impacts including safe pedestrian access at all times, and the provision of alternative facilities and locations for pedestrians and/or cyclist access;
 - (vi) a response procedure for dealing with traffic incidents; and
 - (vii) mechanism for the monitoring, review and amendment of this plan;
- (b) a **Construction Flora and Fauna Management Plan** to detail how construction impacts on ecology will be minimised and managed. The Plan shall be developed in consultation with the OEH and shall include, but not necessarily be limited to:
 - (i) details of pre-construction surveys undertaken to verify the construction boundaries/ footprint of the project based on detailed design and to confirm the vegetation to be cleared as part of the project (including tree hollows, threatened flora and fauna species, mangroves and riparian vegetation). The surveys shall be undertaken by a qualified ecologist and include surveys of existing bridges and culverts for the presence of micro-bat roosting at least 6 months prior to the planned disturbance of such structures and targeted surveys for the Giant Barred Frog within and in the vicinity of the project corridor undertaken during suitable conditions;
 - (ii) updated sensitive area / vegetation maps based on B31(b)(i) above and previous survey work;

- (iii) a Giant Barred Frog management plan, in the case that this species or its habitat is identified to occur in the project corridor or its vicinity, based on surveys undertaken as part of B31(b)(i);
- (iv) a micro-bat management strategy, in the case that micro bats or evidence of roosting are identified during pre-construction surveys. The strategy shall detail measures to avoid, minimise and mitigate impacts to these species and identified roost sites, including short and long term management measures;
- (v) details of general work practices to minimise the potential for damage to native vegetation (particularly EECs) not proposed to be cleared as part of the project and native fauna during construction, including (but not necessary limited to): fencing of sensitive areas, a protocol for the removal and relocation of fauna during clearing, presence of an experienced ecologist to oversee clearing activities and facilitate fauna rescues and re-location, clearing timing with consideration to breeding periods, measures for maintaining existing habitat features (such as bush rock and tree branches etc), seed harvesting and appropriate topsoil management, construction worker education, weed management, erosion and sediment control and progressive re-vegetation;
- (vi) specific procedures to deal with EEC/ threatened species anticipated to be encountered within the project corridor including re-location, translocation and/or management and protection measures;
- (vii) a procedure for dealing with unexpected EEC/ threatened species identified during construction including stopping works and notification of OEH, determination of appropriate mitigation measures in consultation with OEH (including relevant re-location measures) and update of ecological monitoring and/ or biodiversity offset requirements consistent with conditions B8 and B10; and
- (viii) mechanism for the monitoring, review and amendment of this plan;
- (c) a **Construction Noise and Vibration Management Plan** to detail how construction noise and vibration impacts will be minimised and managed. The Plan shall be developed in consultation with the OEH and include, but not necessarily be limited to:
 - (i) identification of nearest sensitive receptors and relevant construction noise and vibration goals applicable;
 - (ii) identification of key noise and/or vibration generating construction activities (based on representative construction scenarios) that have the potential to impact on surrounding sensitive receivers including expected noise/ vibration levels;
 - (iii) identification of all feasible and reasonable measures proposed to be implemented to minimise construction noise and vibration impacts (including construction traffic noise impacts);
 - (iv) procedure for dealing with out-of-hour works in accordance with condition C4, including procedures for notifying the Director General concerning complaints received in relation to the extended hours approved under condition C4(d);
 - (v) procedures and mitigation measures to ensure relevant vibration and blasting criteria are achieved, including a suitable blast program supported by test blast results, applicable buffer distances for vibration intensive works, use of low-vibration generating equipment/ vibration dampeners or alternative construction methodology, and pre- and post- construction dilapidation surveys of sensitive structures where blasting and/ or vibration is likely to result in building damage;
 - (vi) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity, as well as procedures for dealing with and responding to noise complaints; and
 - (vii) a program for construction noise and vibration monitoring clearly indicating monitoring frequency, location, how the results of this monitoring would be recorded and, procedures to be followed where significant exceedences of relevant noise and vibration goals are detected;
- (d) a **Construction Water Quality Management Plan** to manage surface water quality and groundwater impacts during construction of the project. The Plan shall be developed in consultation with OEH, DPI (Fisheries and NOW) and include, but not necessarily be limited to:
 - (i) a contingency plan, consistent with the *Acid Sulfate Soils Manual*, to deal with the unexpected discovery of actual or potential acid sulfate soils;

- (ii) a tannin leachate management protocol to manage the stockpiling of mulch and use of cleared vegetation and mulch filters for erosion and sediment control;
 - (iii) details of how construction activities would be managed and mitigated to minimise erosion and sedimentation consistent with condition C17;
 - (iv) where construction activities have the potential to impact on waterways or wetlands (through direct disturbance such as construction of waterway crossings or works in close proximity to waterways or wetlands), site specific mitigation measures to be implemented to minimise water quality, riparian and stream hydrology impacts as far as practicable, including measures to stabilise bank structure and rehabilitate affected riparian vegetation to existing or better condition (including relevant performance indicators and monitoring requirements). The timing of rehabilitation of the waterways shall be as agreed to with DPI (Fisheries and NOW) shall be identified in the plan;
 - (v) construction water quality monitoring requirements consistent with condition B17; and
 - (vi) a groundwater management strategy, including (but not necessarily limited to):
 - i. description and identification of groundwater resources (including depths of the water table and groundwater quality) potentially affected by the proposal based on baseline groundwater monitoring undertaken in accordance with condition B17(c);
 - ii. identification of surrounding licensed bores, dams or other water supplies and groundwater dependant ecosystems and potential groundwater risks associated with the construction of the project on these groundwater users and ecosystems;
 - iii. measures to manage identified impacts on water table, flow regimes and quality and to groundwater users and ecosystems;
 - iv. groundwater inflow control, handling, treatment and disposal methods; and
 - v. a detailed monitoring plan to identify monitoring methods, locations, frequency, duration and analysis requirements; and
- (e) a **Construction Heritage Management Plan** to detail how construction impacts on Aboriginal and non-Aboriginal heritage will be minimised and managed. The Plan shall be developed in consultation with the OEH (Heritage Branch) (for non-Aboriginal heritage) and OEH and Registered Aboriginal Stakeholders (for Aboriginal heritage), and include, but not necessarily be limited to:
- (ii) In relation to Aboriginal Heritage:
 - i. details of management measures to be carried out in relation to already recorded sites and potential Aboriginal deposits (including further archaeological investigations, salvage measures and/ or measures to protect unaffected sites during construction works in the vicinity);
 - ii. procedures for dealing with previously unidentified Aboriginal objects excluding human remains (including halting of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a qualified archaeologist in consultation with registered Aboriginal stakeholders, assessment of the consistency of any new Aboriginal heritage impacts against the approved impacts of the project, and registering of the new site in the OEH AHIMS register);
 - iii. procedures for dealing with human remains (including halting of works in the vicinity and notification of the NSW Police, OEH and registered Aboriginal stakeholders and not-recommending any works in the area unless authorised by OEH and/ or the NSW Police); and
 - iv. Aboriginal cultural heritage induction processes for construction personnel (including procedures for keeping records of inductions undertaken for the duration of the project) and procedures for ongoing Aboriginal consultation and involvement; and
 - (iii) In relation to non-Aboriginal Heritage:
 - i. details of management measures to be carried out in relation to already recorded sites (including further heritage investigations, archival recordings and/ or measures to protect unaffected sites during construction works in the

vicinity), consistent with the measures listed in Environmental Assessment Table 19-4;

- ii. procedures for dealing with previously unidentified non-Aboriginal objects, (including halting of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a qualified archaeologist and assessment of the consistency of any new non-Aboriginal heritage impacts against the approved impacts of the project; and
 - iii. non-Aboriginal cultural heritage induction processes for construction personnel.
-

PART C – DURING CONSTRUCTION

Biodiversity

- C1. The Proponent shall employ all feasible and reasonable measures to minimise the clearing of native vegetation to the greatest extent practicable during the construction of the project.

Air Quality Impacts

- C2. The Proponent shall employ all feasible and reasonable measures (including temporary cessation of relevant works, as appropriate) to ensure that the project is constructed in a manner that minimises dust emissions from the site, including wind-blown, traffic-generated dust, stockpiles and material tracking from construction sites onto public roads.

Noise and Vibration Impacts

Construction Hours

- C3. The Proponent shall only undertake construction activities associated with the project during the following standard construction hours:
- (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; and
 - (b) 8:00am to 1:00pm Saturdays; and
 - (c) at no time on Sundays or public holidays.
- C4. Works outside of the construction hours identified in conditions C3 may be undertaken in the following circumstances:
- (a) works that generate noise that is not audible at any sensitive receptor;
 - (b) for delivery of materials required outside these hours by the Police or other authorities for safety reasons; or
 - (c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or
 - (d) construction works undertaken through sparsely populated areas in which sensitive receptors are located greater than 300 metres away from the project boundary. In this case construction is permissible during the following hours: 6.00am to 6.00pm Monday to Friday and 7.00am to 4.00pm Saturdays and at no time on Sundays or public holidays. These works hours may be reviewed and/ or revoked by the Director General in consultation with the OEH in the case of excessive or unresolved noise complaints; or
 - (e) where an EPL applies to the construction of the project, construction hours which are approved in accordance with the conditions of an EPL for the project; or
 - (f) where an EPL does not apply to the construction of the project, Out of Hours Works as agreed to by the Director General in accordance with condition C5.
- C5. For the purposes of condition C4 (f), certain construction activities (Out of Hours Works) may be allowed to occur outside the construction hours specified in conditions C3 with the prior written approval of the Director General. Requests for out of hours approval will be considered for construction activities which cannot be undertaken during the construction hours specified in conditions C3 for technical or other justifiable reasons and will be considered on a case by case or activity-specific basis. Any request for Out of Hours Works must be accompanied by:
- (a) details of the nature and need for activities to be conducted during the varied construction hours;
 - (b) written evidence to the OEH and the Director General that activities undertaken during the varied construction hours are justified, appropriate consultation with potentially affected receivers and notification of Council has been undertaken, issues raised have been addressed, and all feasible and reasonable mitigation measures have been put in place; and
 - (c) evidence of consultation with the OEH on the proposed variation in standard construction hours.

Despite the above, Out of Hours Works may also occur in accordance with an approved Construction Environment Management Plan or Construction Noise and Vibration Management Plan for this project, where that plan provides a process for considering the above on a case by case or activity specific basis by the Proponent, including factors a) to c) above.

- C6. Blasting associated with the project shall only be undertaken during the following hours:
- (a) 9:00 am to 5:00 pm, Mondays to Fridays, inclusive;
 - (b) 9:00 am to 1:00 pm on Saturdays; and
 - (c) at no time on Sundays or public holidays.

This condition does not apply in the event of a direction from police or other relevant authority for safety or emergency reasons to avoid loss of life, property loss and/or to prevent environmental harm.

Construction Noise and Vibration Goals

- C7. The Proponent shall implement all feasible and reasonable noise mitigation measures with the aim of achieving the construction noise management levels detailed in the *Interim Construction Noise Guideline* (DECC, 2009) during construction activities. Any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the Construction Noise and Vibration Management Plan required under condition B31(c) of this approval.
- C8. The Proponent shall implement all feasible and reasonable mitigation measures with the aim of achieving the following construction vibration goals and ground-borne noise levels:
- (a) for structural damage vibration, the vibration limits set out in the German Standard *DIN 4150 Part 3-1999 Structural Vibration in Buildings - Effects on Structures*;
 - (b) for works in the vicinity of the heritage structures, the vibration limits set out in the German Standard *DIN 4150-3: 1999 Structural Vibration – part 3: Effects of vibration on structures*; and
 - (c) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: A Technical Guideline* (DEC 2006); and
 - (d) the ground-borne noise levels set out in the *Interim Construction Noise Guidelines* (DECC, 2009).
- C9. The Proponent shall ensure that airblast overpressure generated by blasting associated with the project does not exceed the criteria specified in Table 1 when measured at the most affected residence or other sensitive receiver. To ensure that criteria are satisfied at the most affected residence or other sensitive receiver, blasting trials shall be undertaken prior to the commencement of the project blasting program, with results from the trials used to determine site specific blast design to satisfy the criteria specified in Table 1.

Table 1 - Airblast overpressure criteria

Airblast overpressure (dB(Lin Peak))	Allowable exceedance
115	5% of total number of blasts over a 12 month period
120	0%

- C10. The Proponent shall ensure that ground vibration generated by blasting associated with the project does not exceed the criteria specified in Table 2 when measured at the most affected residence or other sensitive receiver. To ensure that criteria are satisfied at the most affected residence or other sensitive receiver, blasting trials shall be undertaken prior to the commencement of the project blasting program, with results from the trials used to determine site specific blast design to satisfy the criteria specified in Table 2.

Table 2 – Peak particle velocity criteria

Peak particle velocity (mms-1)	Allowable exceedance
5	5% of total number of blasts over a 12 month period
10	0%

- C11. The blasting criteria identified in condition C9 and/ or C10 do not apply where the Proponent has a written agreement with the relevant landowner to exceed the criteria identified in condition C9 and/ or C10 and the Director General has approved the terms of the written agreement. In obtaining the Director General approval for any such agreement, the Proponent shall submit to the Director General:

- (a) details of the proposed blasting program and justification for the proposed increase to blasting criteria including alternatives considered (where relevant);
- (b) an assessment of the environmental impacts of the increased blast limits on the surrounding environment and most affected residences or other sensitive receivers including, but not limited to noise, vibration and air quality and any risk to surrounding utilities, services or other structures;
- (c) details of the blast management, mitigation and monitoring procedures to be implemented; and
- (d) details of consultation undertaken and agreement reached with the relevant landowners (including a copy of the agreement in relation to increased blasting limits).

The following exclusions apply to the application of this condition:

- (a) any agreements reached may be terminated by the landowner at any time should concerns about the increased blasting limits be unresolved;
- (b) the blasting limit agreed to under any agreement can at no time exceed a maximum Peak Particle Velocity vibration level of 25 mm/s or maximum Airblast Overpressure level of 125 dBL; and
- (c) the provisions under condition C11 (to increase applicable blast criteria in agreement with the relevant landowners) do not apply where the property is a heritage property.

Operational Noise Mitigation Review

- C12. Unless otherwise agreed to by the Director General, within six months of commencing construction, the Proponent shall in consultation with OEH prepare and submit for the approval of the Director General, a review of the operational noise mitigation measures proposed to be implemented for the project. The review shall:
- (a) confirm the operational noise predictions of the project based on detailed design. This operational noise assessment shall be based on an appropriately calibrated noise model (which has incorporated additional noise monitoring, where necessary for calibration purposes). The assessment shall specifically include verification of noise levels at Nambucca Heads Rest Area, based on additional noise monitoring undertaken at this location;
 - (b) review the suitability of the operational noise mitigation measures identified in the documents listed under condition A1 to achieve the criteria outlined in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999) and the *Industrial Noise Policy* (EPA, 2000) in relation to the Nambucca Heads Rest Area, based on the operational noise performance of the project predicted under (a) above; and
 - (c) where necessary, investigate additional feasible and reasonable noise mitigation measures to achieve the criteria outlined in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999) and the *Industrial Noise Policy* (EPA, 2000) in relation to the Nambucca Heads Rest Area including the applicability of noise walls in the vicinity of River Road in Macksville.

Heritage Impacts

- C13. This approval does not allow the Proponent to destroy, modify or otherwise physically affect human remains.
- C14. The Proponent shall not destroy, modify or otherwise physically affect the Aboriginal cultural sites identified in Table 15-3 of the Environmental Assessment (including AHIMS site numbers 21-6-36, 21-6-0287, 21-6-0016, 21-6-0163, 21-6-0039, 21-6-0090, 21-6-0102, 21-6-0141, 21-6-0164, 21-6-0064, and 21-6-0044), Boggy Creek spiritual area, Buchanan Conflict Site at Cow Creek (21-6-00286), burial site, Cabbage tree palm resource site, Aboriginal mirrah (21-3-0034), Rosewood Scarred Tree or potential archaeological deposits (PAD) 31.
- C15. The Proponent shall not destroy, modify or otherwise physically affect the following historic sites: the ferry/ punt crossing at Boulton Hill; old municipal tip; Valla Gold Mine; former stock route; tramway and quarry, Martells Road; the native swamp conservation area; and 'vegetation group remnant forest' conservation area.

C16. The measures to protect any Aboriginal or historic heritage sites near or adjacent to the project during construction shall be detailed in the Heritage Management Plan required under condition B31(e).

Sedimentation, Erosion and Water

C17. Soil and water management measures consistent with *Managing Urban Stormwater - Soils and Construction Vols 1 and 2, 4th Edition* (Landcom, 2004) and *Managing Urban Stormwater Soils And Construction Vols 2A and 2D Main Road Construction* (DECC 2008) shall be employed during the construction of the project for erosion and sediment control.

C18. Where available, and of appropriate chemical and biological quality, the Proponent shall use stormwater, recycled water or other water sources in preference to potable water for construction activities, including concrete mixing and dust control.

Property and Landuse

Property Impacts

C19. The Proponent shall construct the project in a manner that minimises impacts to private properties and other public or private structures (such as dams, fences, utilities, services etc) along the project corridor. In the event that construction of the project results in direct or indirect damage to any such property or structure, the Proponent shall arrange and fund repair of the damage to a standard comparable to the in existence prior to the damage.

C20. The Proponent shall ensure that access to all properties is maintained during construction unless agreed with the property owner in advance and that any access physically affected by the Project is reinstated to at least an equivalent standard, in consultation with the landowner.

C21. The Proponent shall in consultation with relevant landowners construct, the project in a manner that minimises intrusion and disruption to agricultural operations/activities in surrounding properties (e.g. stock access, access to farm dams etc).

Forestry Impacts

C22. Where the project traverses Nambucca, Newry and Little Newry State Forests, the Proponent shall in consultation with DPI (Forestry) ensure that construction activities do not unduly disrupt existing forestry activities, access for fire fighting and recreation activities during construction.

Traffic Impacts

C23. Road dilapidation reports shall be prepared for all local roads likely to be used by construction traffic prior to use by construction heavy vehicles. A copy of the relevant report shall be provided to the relevant Council. Any damage resulting from the construction of the project, aside from that resulting from normal wear and tear, shall be repaired at the cost of the Proponent. The roads likely to be used by heavy construction vehicles should be identified in the Traffic Management Plan required under condition B31(a).

Waste Management

C24. The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*, if such a licence is required in relation to that waste.

C25. The Proponent shall maximise the reuse and/or recycling of waste materials generated on site as far as practicable, to minimise the need for treatment or disposal of those materials off site.

C26. The Proponent shall ensure that all liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with *Waste Classification Guidelines* (DECC, 2008), or any future guideline that may supersede that document and where removed from the site is only directed to a waste management facility lawfully permitted to accept the materials.

Ancillary Facilities

C27. Unless otherwise approved by the Director General in accordance with this condition, the sites for ancillary facilities associated with the construction of the project shall:

- (a) be located more than 50 metres from a waterway;
- (b) have ready access to the road network or direct access to the construction corridor;
- (c) be located in areas of low ecological significance and require minimal clearing of native vegetation (not beyond that already required by the project);
- (d) be located on relatively level land;
- (e) be separated from the nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant);
- (f) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented;
- (g) not unreasonably affect the land use of adjacent properties;
- (h) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours; and
- (i) be located in areas of low heritage conservation significance (including identified Aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the project.

Ancillary sites identified that do not meet the above criteria shall be assessed against this criteria to demonstrate how any impacts can be mitigated and managed to acceptable standards (including demonstrating consistency with project impacts identified in the documents listed under condition A1, to the satisfaction of the Director General. Such assessment(s) can be submitted separately or as part of the Construction Environmental Management Plan required under condition B30.

PART D – PRIOR TO OPERATIONS

Operational Environment Management System

- D1. Prior to the commencement of operation, the Proponent shall incorporate the project into its existing environmental management systems.
-

PART E – DURING OPERATIONS

Operational Noise

- E1. Within 12 months of the commencement of operation of the project, or as otherwise agreed by the Director General, the Proponent shall undertake operational noise monitoring to compare actual noise performance of the project against noise performance predicted in the review of noise mitigation measures required by condition C12 and prepare an **Operational Noise Report** to document this monitoring. The Report shall include, but not necessarily be limited to:
- (a) noise monitoring to assess compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under condition C12 and documents specified under condition A1 of this approval;
 - (b) a review of the operational noise levels in terms of criteria and noise goals established in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999);
 - (c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which project noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers;
 - (d) details of any complaints and enquiries received in relation to operational noise generated by the project between the date of commencement of operation and the date the report was prepared;
 - (e) any required recalibrations of the noise model taking into consideration factors such as actual traffic numbers and proportions;
 - (f) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of all feasible and reasonable mitigation measures; and
 - (g) identification of any additional feasible and reasonable measures to those identified in the review of noise mitigation measures required by condition C12, that would be implemented with the objective of meeting the criteria outlined in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999), when these measures would be implemented and how their effectiveness would be measured and reported to the Director General and the OEH.

The Proponent shall provide the Director General and the OEH with a copy of the Operational Noise Report within 60 days of completing the operational noise monitoring referred to a) above and no later than 12 months after the date of the commencement of operation, or as otherwise agreed by the Director General.
