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The 'Pacific Complete' logo consists of the words 'PACIFIC' and 'COMPLETE' stacked vertically in a bold, black, sans-serif font. To the right of the text is a graphic of three overlapping red chevrons pointing to the right.

Staging Report


Woolgoolga to Ballina Pacific Highway Upgrade

July 2016

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Contents

Glossary / Abbreviations	iv
1 Introduction	1
1.1 Project description	1
1.2 Approval framework	3
1.3 Purpose of this staging report	3
2 Roads and Maritime Delivery Strategy	5
2.1 Project Scope	5
2.2 Project delivery model.....	6
3 Stage 1	9
3.1 Overview of Stage 1.....	9
3.2 Pre-Construction Activities	9
3.2.1 Utility relocations.....	11
3.2.2 Fencing.....	11
3.2.3 Salvage.....	13
3.3 Section 1 – Woolgoolga to Halfway Creek	14
3.4 Section 2 – Halfway Creek to Glenugie.....	14
3.5 Soft Soil preload construction works (Wave 1, 2 and 3)	16
4 Stage 2	21
4.1 Soft Soil preload construction works (Wave 1, 2, 3 and 4)	21
4.1.1 Wave 5a	21
4.1.2 Wave 5b	21
4.1.3 Wave 5c.....	22
4.2 Construction of Sections 3 to 11	27
4.2.1 Pavement reuse strategy	29
4.3 Program (schedule)	30
4.4 Opening sequence.....	30
5 Stage 3 Future Pavement Upgrades	32
6 Stage 4	33
6.1 Upgrade to M Class highway	33
7 Occurrence of threatened species, ecological communities and migratory species.....	34
7.1 Stage 1	34
7.2 Stage 2	36
8 Threatened Species Management Plans required under condition of approval D8.....	45
Appendix A Application of NSW Conditions of Approval	47
Appendix B Application of Commonwealth Conditions of Approval.....	48

Glossary / Abbreviations

CEMP	Construction Environmental Management Plan
DP	Delivery Partner
DoE	Department of Environment (Commonwealth)
EEC	Endangered Ecological Communities
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EPBC Act	<i>Environment Protection Biodiversity Conservation Act 1999</i>
EPA&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EWMS	Environmental Work Method Statement
LALC	Local Aboriginal Land Council
MCoA	Ministers Condition of Approval
NSW TSC Act	<i>NSW Threatened Species Conservation Act 1995</i>
PC	Pacific Complete
Project, the	Woolgoolga to Ballina Pacific Highway Upgrade Project
Roads and Maritime	Roads and Maritime Services
SPIR	Submissions/Preferred Infrastructure Report

1 Introduction

1.1 Project description

NSW Roads and Maritime Services is upgrading the Pacific Highway between Woolgoolga and Ballina on the NSW North Coast. This is known as the Woolgoolga to Ballina Pacific Highway Upgrade Project (the project). An overview of the project is shown in Figure 1-1.

The Woolgoolga to Ballina project is Australia's largest regional infrastructure project and will duplicate about 155 kilometres to a four-lane divided road. The project starts about six kilometres north of Woolgoolga (north of Coffs Harbour) and ends about six kilometres south of Ballina.

When complete, the project will:

- Reduce overall length from 180 kilometres to about 167 kilometres, saving about 13 kilometres in travel distance
- Allow for a higher posted speed limit of up to 110 km/h
- Reduce travel time from 130 minutes to about 105 minutes, saving 25 minutes
- Reduce crash rates by an expected 27 per cent due to divided carriageways
- Improve travel reliability through better flood immunity, fewer incidents and more readily available alternative routes.

Key features of the upgrade include:

- Duplication of 155 kilometres of the Pacific Highway to a motorway standard (Class M) or arterial road (Class A), with two lanes in each direction and room to add a third lane if required in the future
- Split-level (grade-separated) interchanges at Range Road, Glenugie, Tyndale, Maclean, Yamba / Harwood, Woombah (Iluka Road), Woodburn, Broadwater and Wardell
- Bypasses of South Grafton, Ulmarra, Woodburn, Broadwater and Wardell
- About 40 bridges over rivers, creeks and floodplains, including major bridges crossing the Clarence and Richmond rivers
- About fifty-five underpasses and bridges over and under the highway to maintain access to local roads that crossing the highway
- Access roads to maintain connections to existing local roads and properties
- Structures designed to encourage animals over and under the upgraded highway where it crosses key animal habitat or wildlife corridors
- Rest areas located at about 50 kilometre intervals at Arrawarra, Pine Brush (Tyndale), north of Mororo Road and north of the Richmond River
- A heavy vehicle checking station near Halfway Creek and north of the Richmond River.

The Woolgoolga to Ballina upgrade does not include the completed Devils Pulpit and Glenugie upgrade projects.

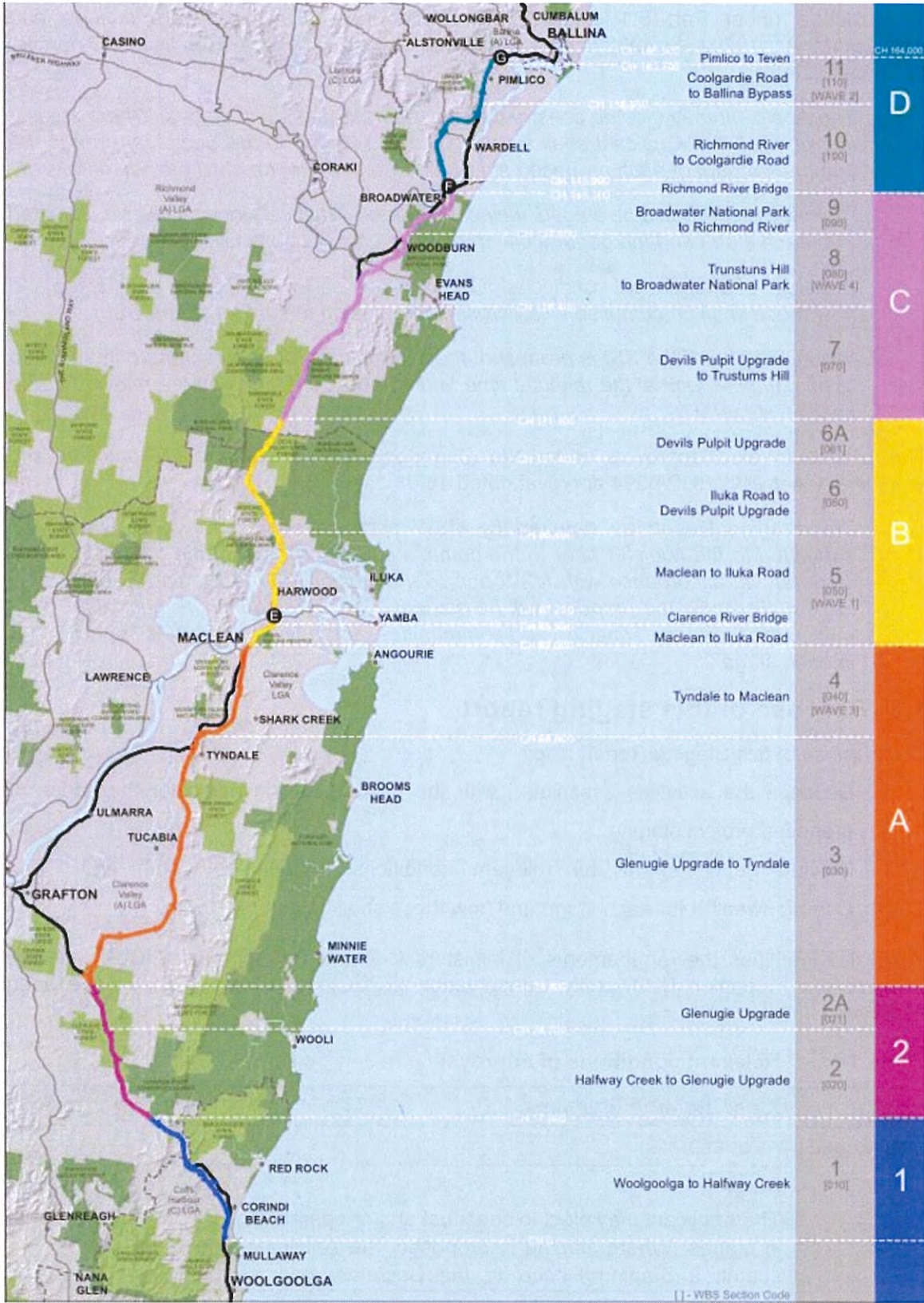


Figure 1-1 Woolgoolga to Ballina Highway Upgrade Project

1.2 Approval framework

The Woolgoolga to Ballina Pacific Highway upgrade is approved as State Significant Infrastructure under Part 5.1 of the New South Wales *Environmental Planning and Assessment Act 1979* (SSI-4963, approval dated 24 June 2014). NSW Condition of Approval (MCoA) A7 states:

The Applicant may elect to construct and/or operate the SSI in stages. Where staging is proposed, the Applicant shall submit a Staging Report to the Secretary prior to the commencement of each proposed stage. The Staging Report shall provide details of:

(a) how the SSI 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 SSI.

Where staging of the SSI 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 stage(s).

The project is also approved under the Commonwealth *Environment Protection and Biodiversity Act 1999* (012/6394 approval dated 14/08/14).

The Staging Report as required by NSW approval condition A7 must be submitted to the Minister prior to the commencement of each of the proposed stage(s). In accordance with NSW approval condition A7 the Staging Report must outline how the proposal will be staged. The Staging Report must also outline the threatened species and communities, and migratory species impact in each stage.

1.3 Purpose of this staging report

The purpose of this Staging Report is to:

- Describe the activities associated with the project, and in particular the scope of proposed project staging
- Provide detail as to the relevant conditions of approval (both NSW and Commonwealth) for each stage and how these shall be complied with.

Table 1-1 identifies the requirements of Ministers Condition of Approval (MCoA) A7 and Environment Protection Biodiversity Conservation (EPBC) 1 and where they have been addressed in this report.

Table 1-1 Relevant conditions of approval

CoA	Condition requirements	Reference
NSW conditions of approval		
A7	<p>Staging</p> <p>The Applicant may elect to construct and/or operate the SSI in stages. Where staging is proposed, the Applicant shall submit a Staging Report to the Secretary prior to the</p>	This report

CoA	Condition requirements	Reference
	commencement of each proposed stage. The Staging Report shall provide details of:	
(a)	How the SSI would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence.	Sections 3, 4, 5 and 6
(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 SSI.	Appendix A and Appendix B
-	Where staging of the SSI 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 stage(s).	-
Commonwealth conditions of approval		
1	Staging of the action The Staging Report as required by NSW approval condition A7 must be submitted to the [Commonwealth] Minister prior to the commencement of each proposed stage(s).	This report
	In accordance with NSW approval condition A7, the Staging Report must outline how the proposal will be staged.	Sections 3, 4, 5 and 6
	The Staging Report must also outline the threatened species and communities, and migratory species impacted by each stage.	Section 7

2 Roads and Maritime Delivery Strategy

2.1 Project Scope

As outlined in Section 1.2, NSW Roads and Maritime Services (RMS) has received approval to upgrade the Pacific Highway between Woolgoolga and Ballina to a four-lane motorway standard highway (known as a class M highway). This section of the highway is about 155 kilometres long.

The construction of the project would be staged to include both arterial sections (known as class A) and motorway standard sections (known as class M). For sections of the project initially upgraded to arterial standard, the design allows for these sections to be upgraded to motorway standard in the future. These criteria are outlined in Figure 2-1 below.

KEY TERM – class M (Motorway standard) / class A (Arterial standard)

Class M: Two lanes in each direction, 110 km per hour posted speed limit, controlled access highway with grade separated interchanges, and a continuous alternative route for local traffic.

Class A: Two lanes in each direction, at least 100 km per hour posted speed limit, limited access highway with at-grade intersections. This may include intersections where right turn movements are permissible. Under class A, local traffic and through traffic could share the highway.

Figure 2-1 Definition of upgrade class

The project would be built as an arterial highway in some sections and later upgraded to a full motorway standard. Accordingly, the project has been designed so it can be constructed in stages, and progressively upgraded to full motorway standard.

While the overall project is for a full motorway standard throughout, staging of the project would include building an arterial highway in some sections and later upgrading it to a full motorway standard (referred to as the 'ultimate' upgrade).

The project EIS (Section 6.1.2) outlined that any construction staging would need to consider:

- The availability of funding from relevant levels of Government and affordability
- The need to minimise road user delays
- The need for local road and property access
- The need for land acquisitions
- The earthworks balance, both within each section and across all sections
- Areas that may require soft soil pre-loading
- The sequence in which completed sections could be opened to traffic.

2.2 Project delivery model

Delivery of the final section of the Pacific Highway Upgrade will be tailored to the project, based on the model used to build infrastructure for the London Olympics. The upgrade will use an industry partner contract model to harness the best ideas and solutions from the private sector and draw on knowledge from within government.

The traditional practice would be to deliver the project as four or five separate packages using design and build or build only contracts. Under this new model, a major provider with design, building and management expertise has been engaged to oversee the project in collaboration with Roads and Maritime's Pacific Highway Office, managing multiple contracts for professional services, supply, and building of the highway. The delivery partner model will offer better value for money and drive project efficiencies.

Roads and Maritime Services has engaged Pacific Complete (comprising Laing O'Rourke and WSP Parsons Brinckerhoff) to partner with the Pacific Highway Office to deliver the 155km Woolgoolga to Ballina Pacific Highway upgrade.

The delivery partner model encourages the best ideas and solutions from the private sector and is tailored to this project so that it draws on NSW Government knowledge to deliver better engineering and design, customer outcomes and public value.

The model also allows for better outcomes across the supply chain. This is through a consistent and coordinated approach, economies of scale and better access to competitive supplies and contractors, which will help the project meet its 2020 deadline.

Section 6.1.2 of the EIS outlined that the project would be delivered in 5 Stages. RMS has considered a range of packaging strategies with regards to the available funding, affordability, industry resources and capacity and the need to achieve the target of a dual, separated carriageway between Woolgoolga and Ballina by 2020. As a result, the project will now be undertaken in four stages as outlined below.

The Woolgoolga to Ballina project will be completed in the following stages:

- **Stage 1** (as outlined in W2B Staging Report Version 1, March 2015) will include preconstruction activities, selected utility relocations, archaeological salvage works, construction of sections 1 & 2 (Woolgoolga to Glenugie) and soft soil early works (Waves 1,2 and 3).
- **Stage 2** (this report) will be for construction (sections 3-11), between Glenugie and Ballina. With regards for the need to balance available funding with the completion of a dual separated carriageway, the intent of Stage 2 is to upgrade the section between Glenugie and Ballina to combination of M and A Class. EIS Sections 3 and 4 will be upgraded to the final M Class. Sections 5 and 6 will be a combination of A and M class. Sections 7, 8 and 9 will be a combination of A and M Class. Sections 10 and 11 will be constructed to the final M Class. Details of proposed locations of the A and M class in Stage 2 is provided in 4.2 of this Staging Report.

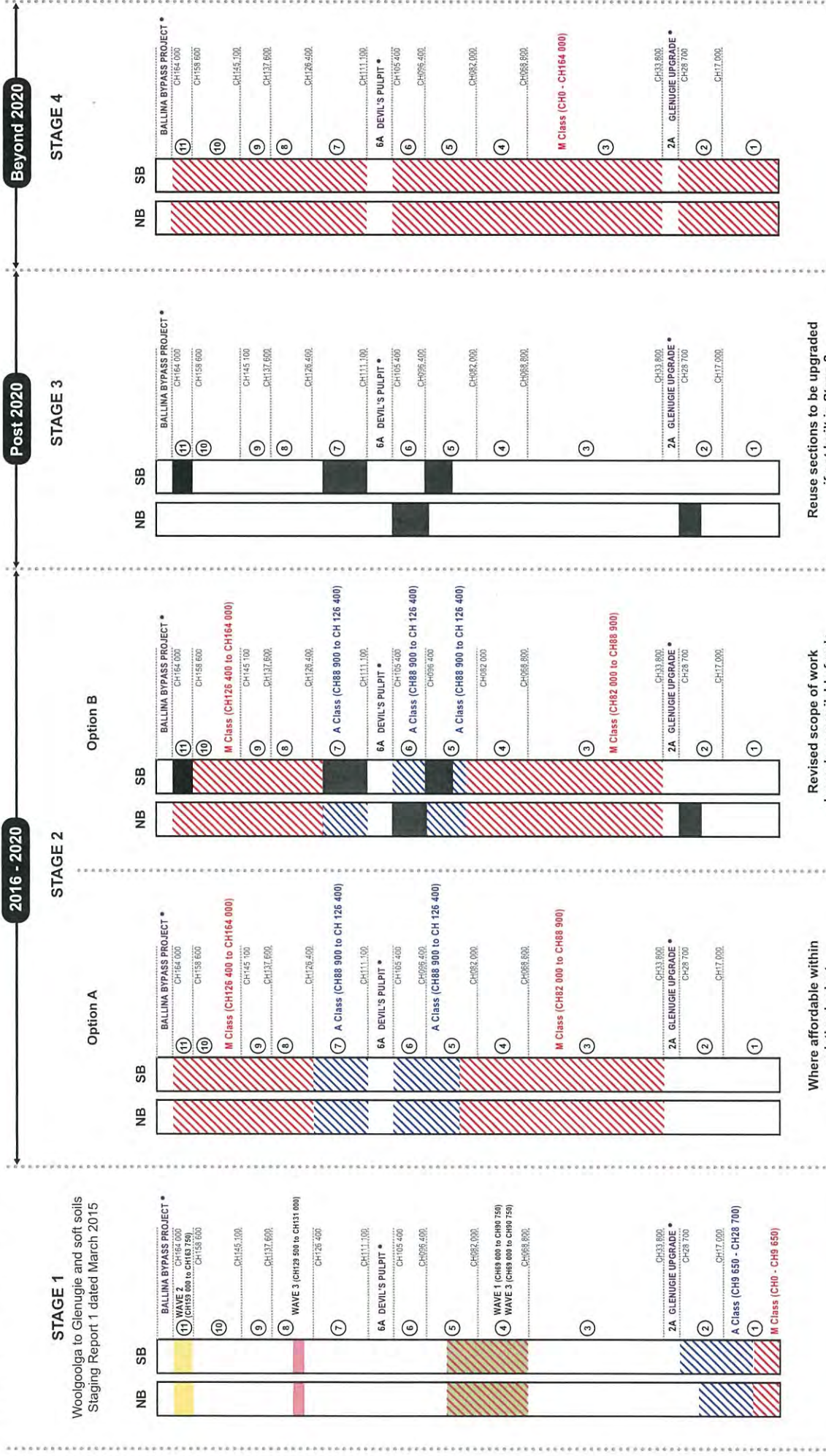
The combination of the A and the M class has been determined such that the available funding is used efficiently while achieving the 2020 project objectives. These works are being managed by Pacific Complete and will include the progressive opening of the highway to traffic in the required configuration to meet the 2020 project objectives.

The detailed design phase is currently underway for the sections between Glenugie and Ballina. Should the available funding not be sufficient to achieve the proposed combination of A and M class outlined above, as a contingency measure, opportunities to re-use existing sections of the existing Pacific Highway are being explored.

Further details of the proposed pavement reuse strategy are provided in section 4.2.1 of this report. A graphical representation of the potential approach to reusing existing sections of the Pacific Highway is provided below.

- Stage 2 of the upgrade includes two options to achieve the 2020 objective. Stage 2 Option A represents the construction of the full combination of the A and M class. Stage 2 Option B represents the potential combination of reused sections of the Pacific Highway.
- **Stage 3** progressive rehabilitation of pavement reuse areas along the project length. This will see the reused sections upgraded to A or M class as funding becomes available.
- **Stage 4** the upgrade of the remaining sections of the highway to the ultimate M-Class configuration.

W2B STAGING PLAN



• These projects covered by separate approvals.

Reuse sections to be upgraded if not built in Stage 2

Revised scope of work depends on available funds

Where affordable within existing budget

3 Stage 1

3.1 Overview of Stage 1

Stage 1 of the project consists of the following activities:

- Pre-construction activities
- Construction of Section 1 - Woolgoolga to Halfway Creek
- Construction of Section 2 – Halfway Creek to Glenugie
- Soft Soil pre-load construction activities – Waves 1, 2 & 3.

These activities are summarised below. Indicative construction timing of Stage 1 is shown in Table 3-1 below.

Table 3-1 Stage 1 indicative construction program

Stage 1	Estimated Commencement	Estimated Completion
Section 1 – Woolgoolga to Halfway Creek	May 2015	Late 2017
Section 2 – Halfway Creek to Glenugie	May 2015	Mid 2017
Waves 1,2,3 - Soft soils preload works	June 2015	March 2019

3.2 Pre-Construction Activities

There are a number of initial proposed activities that are not defined as either “construction” under the New South Wales approval or “commencement” under the Commonwealth approval for the project and do not therefore trigger particular approval conditions. These activities do not form part of the construction stages which are the primary focus of this document. They are however described below for general information. The pre-construction activities will include:

- Utility relocations
- Fencing
- Salvage.

The due diligence process for ensuring that activities to be carried out during pre-construction do not trigger “construction” under the New South Wales approval or “commencement” under the Commonwealth approval would be the completion of a compliance checklist and appropriate environmental consistency assessment that would be prepared by the Project Manager / relevant Contractor to review the proposed activities against the relevant conditions of approval and be signed off by the Roads and Maritime Pacific Highway Upgrade Environment Manager and Environmental Representative or Secretary. If the proposed activities are not considered consistent with the requirements to not trigger ‘construction’ or ‘commencement’ of construction then the activities would be put on hold until substantial construction has commenced.

The definitions of ‘construction’ and ‘commencement’ as detailed in the relevant approval documents (NSW Infrastructure approval document SSI-4963 and Commonwealth Department of the Environment approval document EPBC 2012/6394 respectively) are provided below.

Construction – includes all work in respect of the SSI other than:

- a) Survey works including general alignment survey and survey controls (including installation of global positioning system (GPS), repeater stations, survey of existing and future utilities or building/road dilapidation surveys.
- b) Further investigations including investigative drilling, excavation or salvage; treatment of contaminated sites or work undertaken in accordance with a strategy or salvage operations required by the conditions of this approval.
- c) Establishing ancillary facilities/construction work sites (in locations meeting the criteria identified in the conditions of approval), or where criteria are not fully satisfied, those ancillary facility sites which have been fully assessed against all criteria, with mitigation to manage and minimise impacts identified in the documents referred to in condition A2 and approved by the Environmental Representative or Secretary. This includes the establishment of ancillary facilities access roads and the provision of services to the facility and installation of erosion and sedimentation controls.
- d) Installation of environmental impact mitigation measures (including erosion and sedimentation control, temporary exclusion fencing or sensitive areas, and at-house acoustic treatment) and measures identified in approved strategies, plans, programs and other documents required by the conditions of this approval (including works associated with the construction of connectivity structures (including boundary and exclusion fencing and vegetation planting)).
- e) Property acquisition adjustment works including the installation of property fencing, demolition and removal of buildings, relocation of utilities to property (including water supply and electricity).
- f) Utilities and adjustments within sections 1, 4, 5, 6 and 11 of the SSI, as specified in the documents referred to in condition A2(f), where an Environmental Work Method Statement has been approved by the Secretary in consultation with EPA and DoE.
- g) Existing road network adjustments including minor upgrades to existing local roads and the existing Pacific Highway network, upgrade of existing intersections to cater for construction traffic and installation of temporary project signage.
- h) Minor clearing or translocation of native vegetation association with (a) to (g) above.
- i) Other activities determined by the Environmental Representative to have minimal environmental impact (e.g. minor access roads, minor adjustments to services/utilities, etc.).

Note: Work where heritage, threatened species or suitable habitat, populations or endangered ecological communities would be affected is classified as construction, unless otherwise approved by the Secretary in consultation with the Environment Protection Authority or in accordance with an approved strategy, plan or program required by this approval.

Commence, Commencement and Commenced – means any works where threatened species and communities or suitable habitat for threatened species and communities is directly or indirectly impacted, excluding the utility adjustments required in Sections 1, 4, 5 and 11; Nest Box Installation; Installation of Emu Fencing; Installation of Fauna Fencing in all Sections except Section 10; planting of vegetation for land bridges; Aboriginal heritage salvage operations; and survey works defined in the NSW approval decision in Definitions: Constructions (a).

3.2.1 Utility relocations

The utility relocation works for the project in Sections 1, 4, 5 and 11 do not trigger construction or commencement as defined by the project approval conditions. The decommissioning of redundant utilities and the identification of the utility corridor for subsequent relocations are assessed for environmental impact (in particular to any heritage items or threatened species) prior to the commencement of any relocation work.

Where it is deemed that the utility works do not constitute construction, Environmental Work Method Statements (EWMS) for the utility work are then developed from the results of the environmental assessment, which are reviewed and endorsed by the project Environmental Representative and approved by the Secretary in consultation with EPA and DoE.

3.2.2 Fencing

Temporary emu fence has already been installed at locations within Section 3 (Figures 3-1, 3-2 and 3-3), in accordance with the project approval definitions. Temporary emu fence will be installed across the remainder of the length of Section 3 and Section 4 during the stage 2 main construction. It is not required in Section 4 for the stage 1 (early works pre-treatment) construction. This is because traffic activity is expected to be minimal during stage 1 and would be restricted to open country. Emus are regularly observed in cane properties around Shark Creek (Section 4) where they frequent modified habitat and are easy to sight in the open areas. Emu activity would be monitored during stage 1 (early works) and if emus are found to be frequenting the construction corridor during the early works activities, this would trigger the need to erect temporary emu fencing in Section 4.

A specific ecological assessment was completed along the length of the temporary fence to identify threatened species, habitat and endangered ecological communities. An EWMS was prepared and approved by the Secretary, in consultation with EPA and DoE.

The approved EWMS for the temporary emu fence allowed for / approved clearing of 1 hectare of native vegetation, including 0.24 hectares of Endangered Ecological Communities (*Subtropical Coastal Floodplain Forest on Coastal Floodplains and Swamp Sclerophyll Forest on Coastal Floodplains*), and individual *Angophora robur* trees.



Figure 3-1 Temporary emu fencing



Figure 3-2 Temporary emu fence and bollard gate



Figure 3-3 Temporary emu squeeze style fence

3.2.3 Salvage

A proposed methodology was submitted by the two companies contracted to undertake the salvage works. These were submitted to the relevant Local Aboriginal Land Council (LALC) for comment over a 28 day consultation period. Methodologies were updated to reflect LALC comments and submitted to agencies for approval. After agency approval on 17 August, 2014, salvage works commenced on 1 September 2014. These salvage works have a targeted completion date of May 2016. Predominantly two salvage teams have been working throughout this period.

3.3 Section 1 – Woolgoolga to Halfway Creek

Section 1 of the Woolgoolga to Ballina Pacific Highway upgrade involves the upgrade of the section of Pacific Highway, situated between two other upgraded sections of the Pacific Highway, Sapphire to Woolgoolga upgrade to the south and Halfway Creek duplication to the north (Figure 3-4 and Figure 1-1).

The main features of the Section 1 upgrade are:

- the construction of a length of approximately 14.7 kilometres of roadway to median separated dual carriageway standard
- nine bridges over watercourses, floodplain and local roads
- establishment of a rest area at Arrawarra.

Construction activities will involve:

- site compound and ancillary site setup
- demolition of existing structures/houses
- clearing of vegetation
- utility relocations
- earthworks including material processing from a large cutting
- bridge works including foundations, girder erection and completion
- drainage works
- pavement works
- landscaping and finishing.

3.4 Section 2 – Halfway Creek to Glenugie

Section 2 of the Woolgoolga to Ballina Pacific Highway upgrade involves the upgrade of the section of Pacific Highway, situated between two other upgraded sections of the Pacific Highway; Halfway Creek upgrade to the south and Glenugie upgrade to the north (Figure 3-4 and Figure 1-1).

The main features of the Section 2 upgrade are:

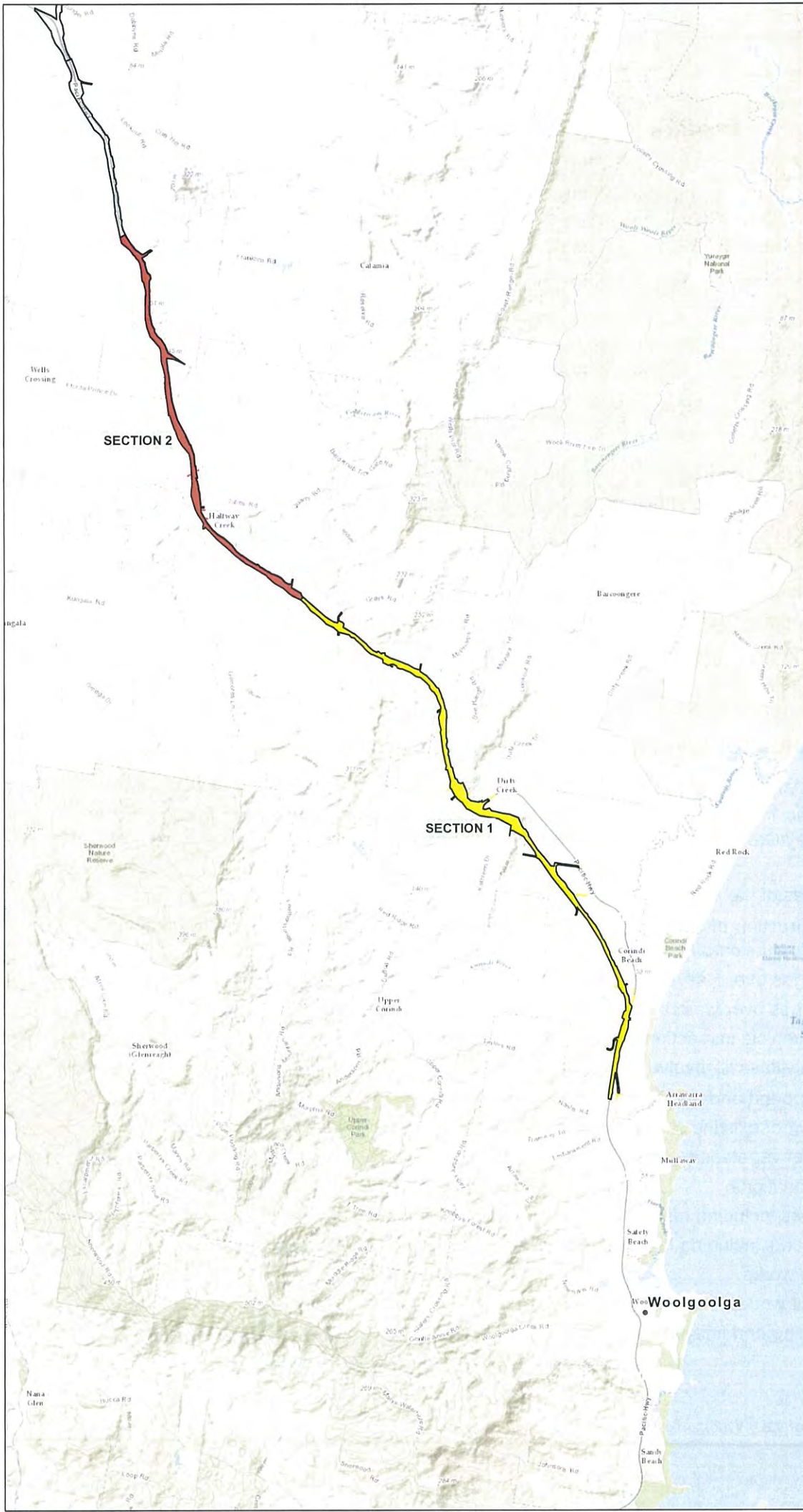
- the construction of a length of approximately 15.2 kilometres of roadway to median separated dual carriageway standard
- twin bridges over Halfway Creek and Wells Crossing
- nine bridges over watercourses, floodplain and local roads
- a heavy vehicle inspection station.

Construction activities will involve:

- site compound and ancillary site setup
- demolition of existing structures/houses
- clearing of vegetation
- utility relocations
- earthworks including material processing from large cutting
- bridge works including foundations, girder erection and completion
- drainage works
- pavement works
- landscaping and finishing.

**PACIFIC HIGHWAY
 UPGRADE**
Woolgoolga to Ballina

Figure 3-4
Sections 1 & 2
Locality Plan



■ Section 1
■ Section 2



1:100,000
 at A3

0 500,000 2,000 3,000

Metres

Print Date: 8/03/2016

Author: MARSHAND

Map produced by Pacific Highway Branch, Infrastructure Development RMS. Map data copyright 2014 Roads & Maritime Services, NSW. Spatial data used under licence from Land and Property Management Authority, NSW © 2014.

3.5 Soft Soil preload construction works (Wave 1, 2 and 3)

Due to the presence of soft soils in the vicinity of the Clarence River and Richmond River floodplains, initial works are required in advance of the main construction of the highway to consolidate the deep soft soils under the proposed highway alignment.

Figure 3-5 provides general location details of waves 1, 2 and 3 in relation to the sections of the project and each other. More specific location details of the waves are provided in Figure 3-6 (for waves 1 and 3) and Figure 3-7 (for wave 2).

Details regarding soft soils Wave 1 are outlined below:

- The purpose of the early works at soft soil sites is to speed up the overall project delivery, de-risk the construction of a motorway over deep soft soils and reduce the overall construction and maintenance costs.
- The soft soil early works encompasses only the geotechnical treatments and directly associated infrastructure. Completion of the main roadworks and associated infrastructure will be carried out under separate main construction works (future Stages).
- Wave 1 soft soil works is located in sections 4 and 5 (between CH 69,000 and 90,750). A total of 4.14km of motorway embankment will be constructed at various locations.
- The work includes the construction of embankments, surcharges, stability berms, associated temporary works and utility adjustments.
- A highway cutting at approximately CH 69,000 to 69,500 will be the main source for general fill for the embankments.

Details regarding soft soils Wave 2 are outlined below:

- The purpose of the early works at soft soil sites is to speed up the overall project delivery, de-risk the construction of a motorway over deep soft soils and reduce the overall construction and maintenance costs.
- The soft soil early works encompasses only the geotechnical treatments and directly associated infrastructure. Completion of the main roadworks and associated infrastructure will be carried out under separate main construction works (future Stages).
- Wave 2 soft soil works is located in section 11 (between CH 159,900 and 163,750). A total of 3.85km of motorway embankment will be constructed at various locations.
- The work includes the construction of embankments, surcharges, stability berms, and associated temporary works.

Details regarding soft soils Wave 3 are outlined below:

- The purpose of the early works at soft soil sites is to speed up the overall project delivery, de-risk the construction of a motorway over deep soft soils and reduce the overall construction and maintenance costs.
- The soft soil early works encompasses only the geotechnical treatments and directly associated infrastructure. Completion of the main roadworks and associated infrastructure will be carried out under separate main construction works (future Stages).
- Wave 3 soft soil works is located in project sections 4, 5, 8 (between CH 69,000 and 90,750 and between CH 129,500 and 131,000). A total of 7.14 km in sections 4, 5 and 1.5km in section 8 of motorway embankment will be constructed at various locations.
- The work includes the construction of embankments, surcharges, stability berms, associated temporary works and utility adjustments.

- A highway cutting at approximately CH 75,200 to 77,000 will be the main source for general fill for the embankments.

Construction activities associated with soft soil preloading works will involve:

- site compound and ancillary site setup
- demolition of existing structures/houses
- clearing of vegetation
- utility relocations
- earthworks including material processing from two large cuttings
- drainage works
- temporary landscaping and finishing.



Figure 3-5 Overview Stage 1 - Wave 1, 2, 3

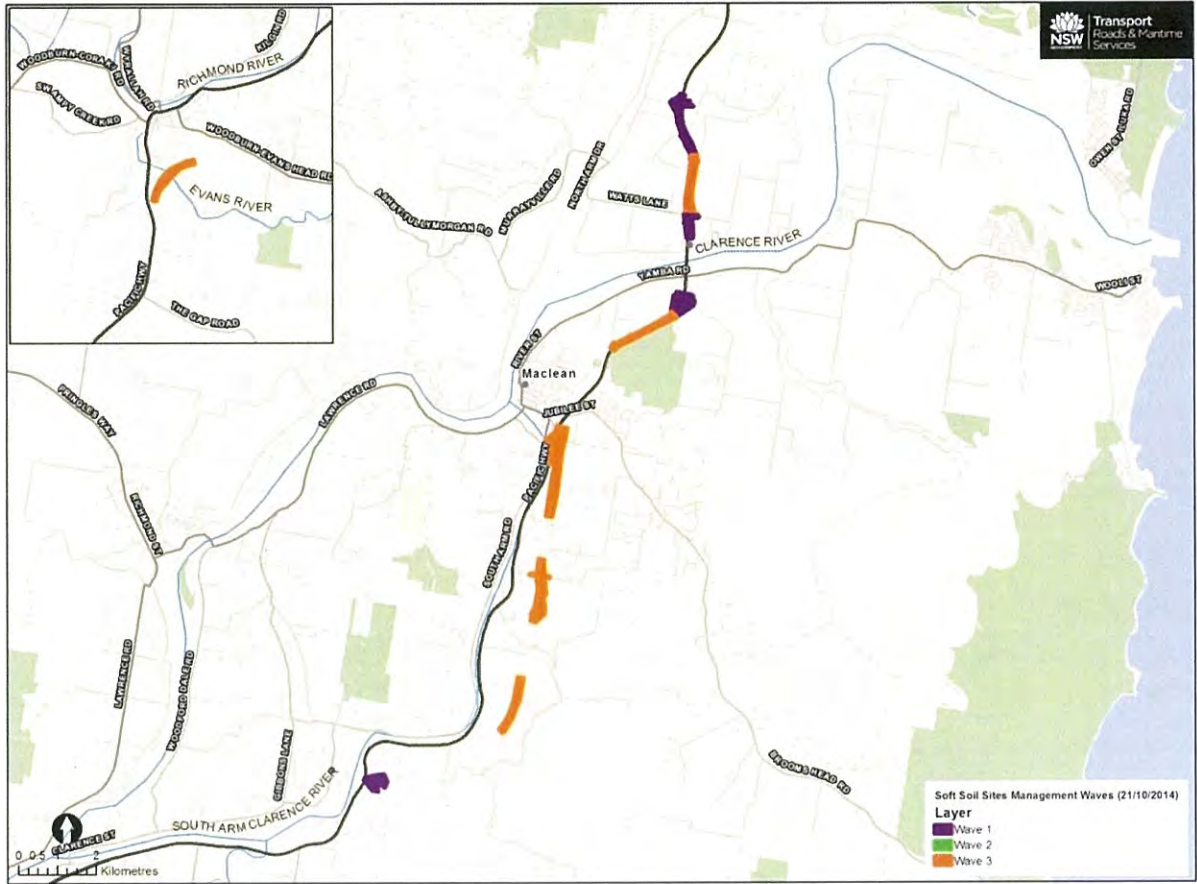


Figure 3-6 Stage 1 - Wave 1 and 3 Plan

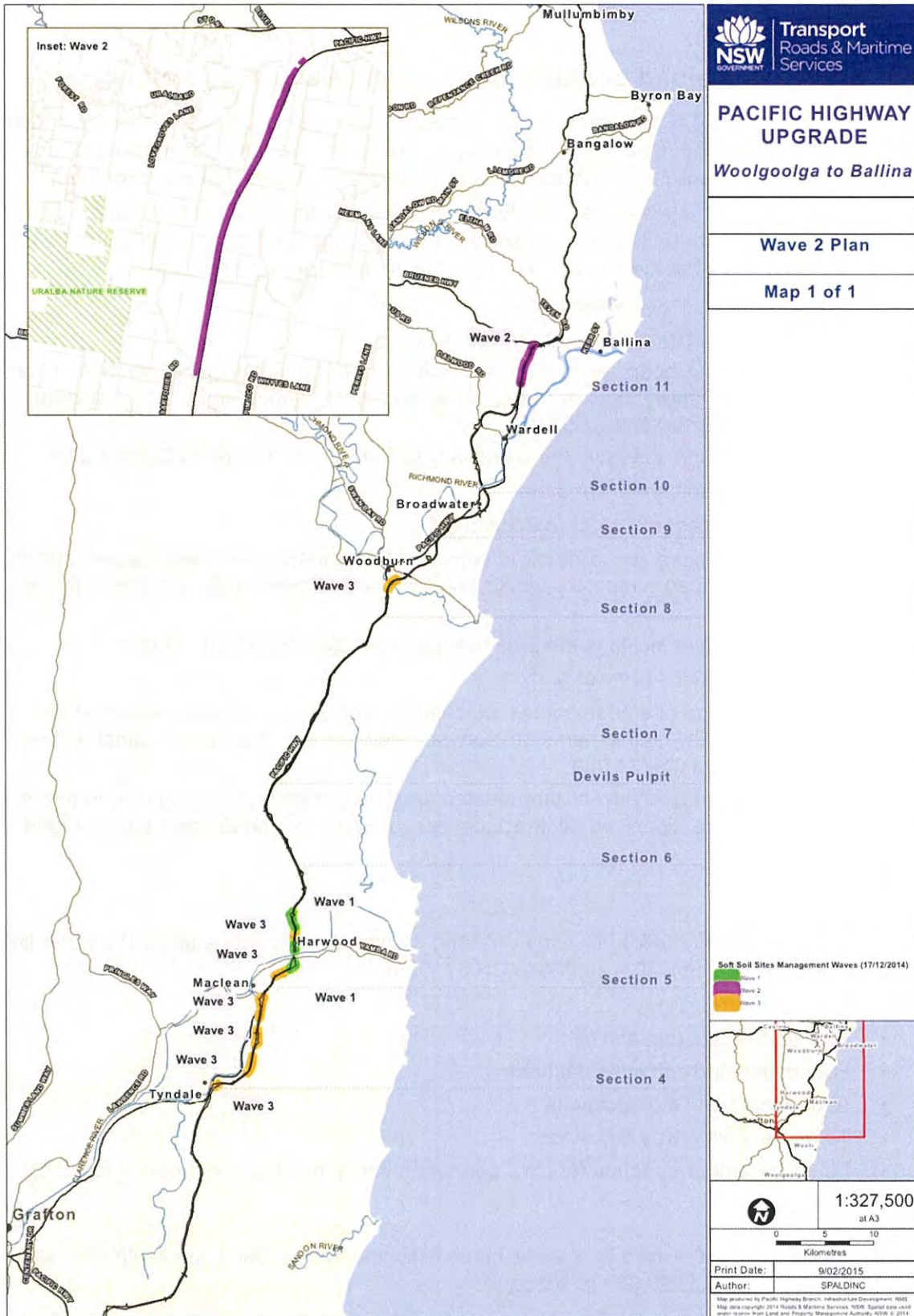


Figure 3-7 Stage 1 - Wave 2 Plan

4 Stage 2

4.1 Soft Soil preload construction works (Wave 1, 2, 3 and 4)

As outlined in Section 3.5, due to the presence of soft soils in the vicinity of the Clarence River and Richmond River floodplains, initial works are required in advance of the main construction of the highway to consolidate the deep soft soils under the proposed highway alignment.

In consultation with Roads and Maritime Services, Pacific Complete identified some program and procurement opportunities to increase the scope of the existing soft soil activities that commenced in Stage 1 of the project. The changes to these are outlined below.

The main features of soft soil wave 1 are:

- As outlined in Stage 1 (refer to Section 3.5)
- The work has been expanded to include the construction of embankments, surcharges, stability berms, associated temporary works and utility adjustments between CH83,100 and CH91,200.

The main features of soft soil wave 2 are unchanged from Stage 1 (refer to Section 3.5)

The main features of soft soil wave 3 are:

- As outlined in Stage 1 (refer to Section 3.5)
- The work has been consolidated to construct the embankments, surcharges, stability berms, associated temporary works and utility adjustments between CH68,500 and CH82,500
- Wave 3 no longer includes the area between CH129,500 and CH131,000.

The main features of soft soil wave 4 are:

- The construction of embankments, surcharges, stability berms, associated temporary works and utility adjustments at soft soil works near Tuckombil Canal between CH129,500 and CH131,000.

Figure 4-1 provides an overview of the updated locations of wave 1, 2, 3 and 4. Figure 4-2 and 4-3 provide more detail about the locations of wave 1 and 3, and wave 2 and 4 respectively.

4.1.1 Wave 5a

Wave 5a comprises the following early enabling construction activities along the main line within Section 3, Portion A (CH 38,060 to CH 67, 525):

- Vegetation clearing
- Bulk earthworks (cut and fill)
- Foundation and soft soil treatment
- Abutments for bridge locations
- Temporary waterway crossings
- Fencing (temporary fauna fencing, permanent fauna fencing and property fencing).

4.1.2 Wave 5b

Wave 5b comprises the following early construction activities along the main line within Section 6, Portion B (CH 96,000 to 105,200):

- Vegetation clearing
- Site access and intersection upgrades
- Temporary waterway crossings

- Embankment foundations
- Fencing (temporary fauna fencing and property fencing).

4.1.3 Wave 5c

Wave 5c comprises the following early construction activities along the main line in six discrete work locations within Sections 7 (CH114,070 to CH115,900), Section 8 (CH126,700 to 129,540, CH132,100 to 132,200, 132,200 to 134,050 and 134,050 to 136,410) and Section 9 (CH142,500 to 142,800), Portion C:

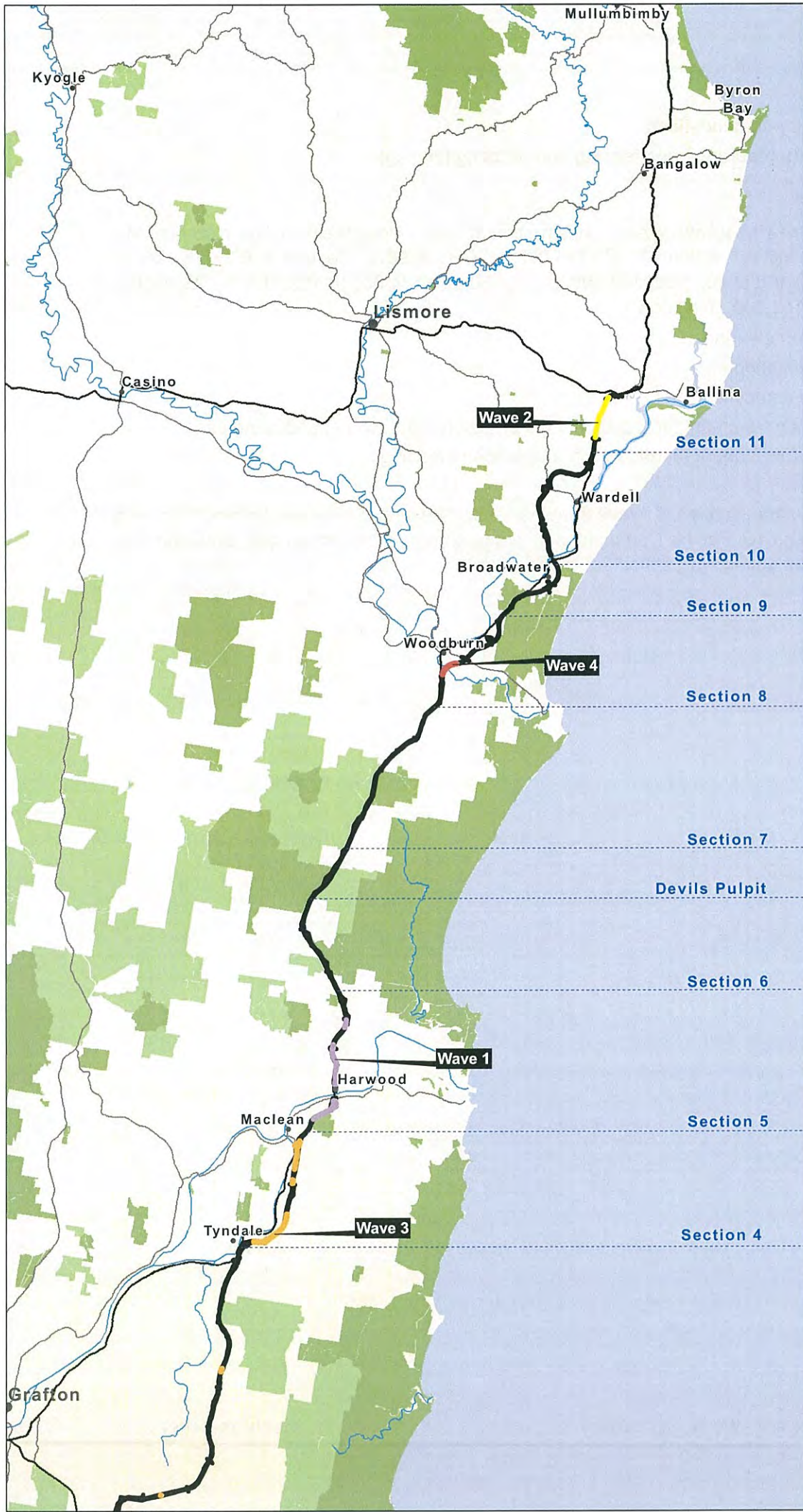
- Vegetation clearing
- Utility relocations
- Property demolition
- Foundation treatment, embankment construction (earthworks) and piling pads
- Fencing (permanent fauna fencing and property fencing).

Figure 4-4 shows the location of Wave 5a, 5b and 5c. The use of the wave terminology is no longer being used by Pacific Complete (i.e. procurement, construction and environment) during Stage 2 as defined in Section 2.2 of this report.

**PACIFIC HIGHWAY
 UPGRADE**
Woolgoolga to Ballina

**Figure 4-1
 Overview
 Waves 1, 2, 3 & 4**

Map 1 of 1



Wave 1
 Wave 2
 Wave 3
 Wave 4
 WZB PIR Project Boundary




1:327,500
at A3
 0 5 10
 Kilometres

Print Date: 8/03/2016
 Author: MARSHAND

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PACIFIC HIGHWAY UPGRADE

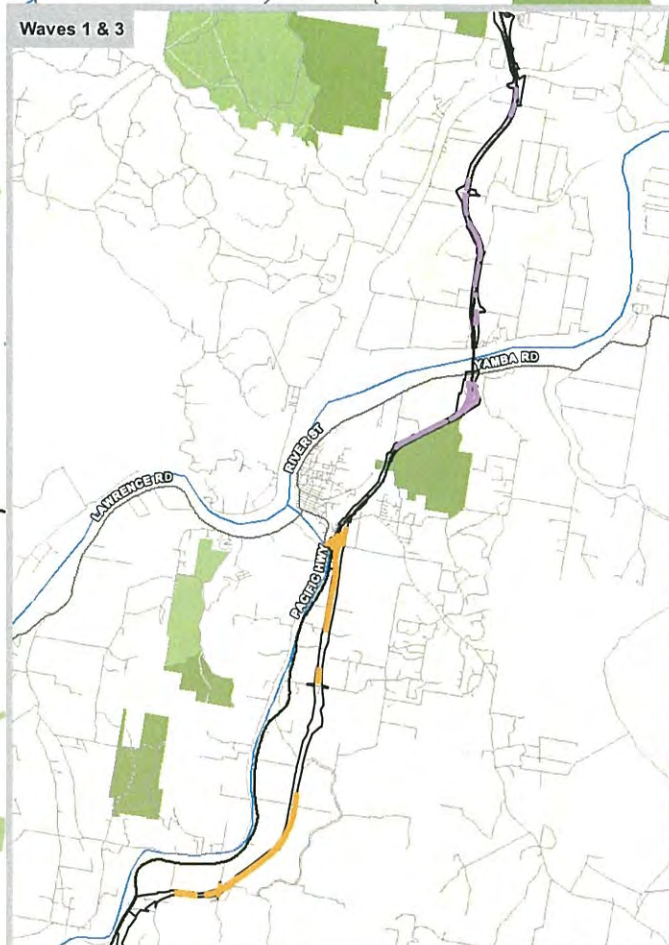
Woolgoolga to Ballina

Figure 4-2
Waves 1 & 3 - Plan

Map 1 of 1



Waves 1 & 3



Soft soil locations (December 2015)

- Wave 1
- Wave 2
- Wave 3
- Wave 4



1:327,500
at A3



Print Date:	8/03/2016
Author:	MARSHAND

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PACIFIC HIGHWAY UPGRADE

Woolgoolga to Ballina

Figure 4-3
Waves 2 & 4 - Plan

Map 1 of 1

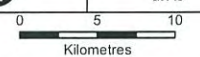


Soft soil locations (December 2015)

- Wave 1
- Wave 2
- Wave 3
- Wave 4



1:327,500
at A3



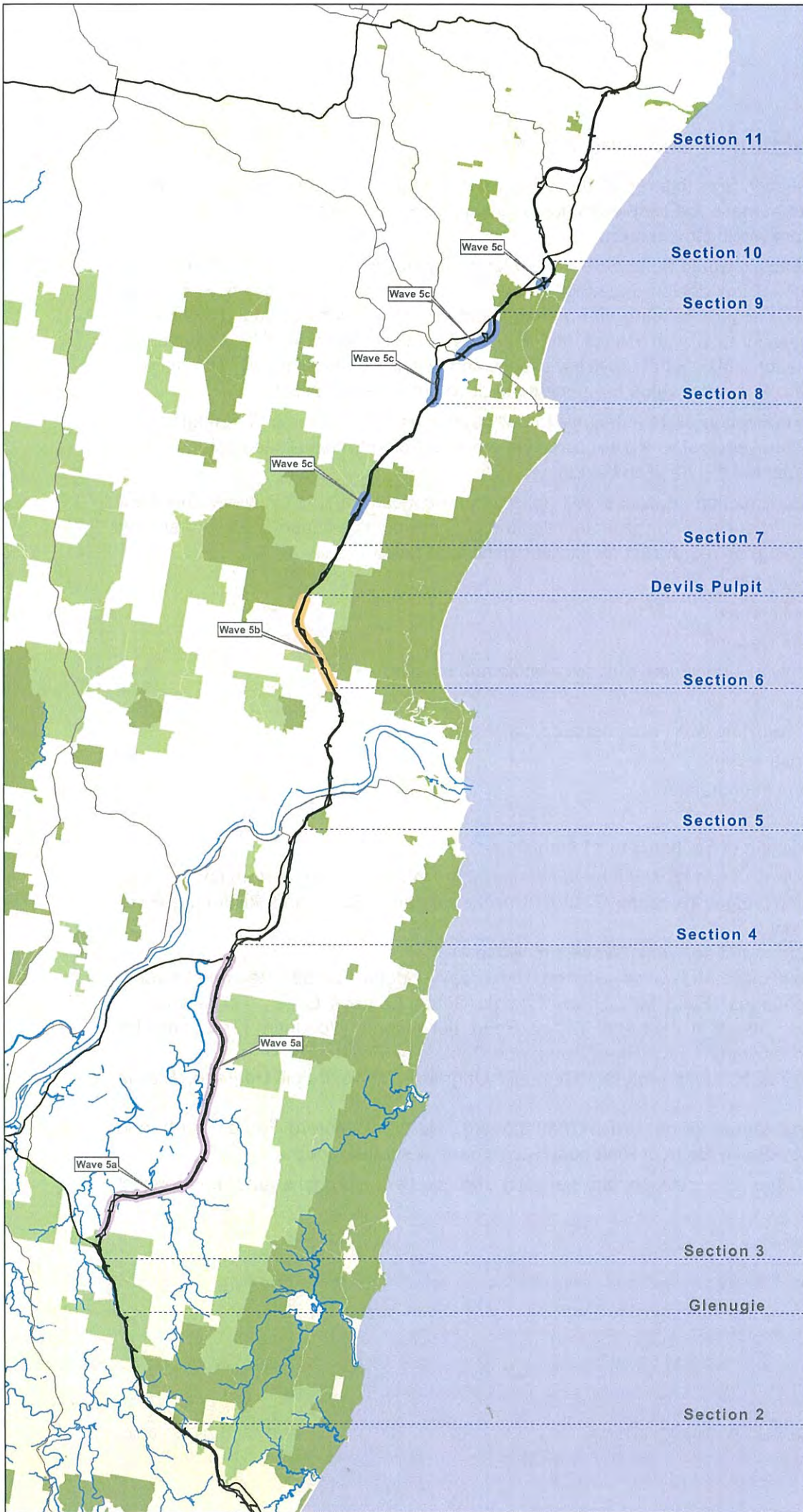
Print Date:	8/03/2016
Author:	MARSHAND

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**PACIFIC HIGHWAY
 UPGRADE**
Woolgoolga to Ballina

Figure 4-4
Waves 5a, 5b
and 5c - Plan

Map 1 of 1



Wave Location (12/01/2016)

Wave 5a

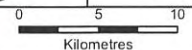
Wave Locations (30/06/2016)

Wave 5b

Wave 5c



1:327,500
 at A3



Print Date: 30/06/2016
 Author: SPALDINGC

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4.2 Construction of Sections 3 to 11

As outlined in Section 2 of this report the project will be delivered using a delivery partner contract model to harness the best ideas and solutions from the private sector while drawing on knowledge from within Government.

The traditional practice would be to deliver the Woolgoolga to Ballina upgrade as four or five separate packages using 'design-and-build' or 'build only' contracts. Under this new model, a major provider with design, building and management expertise will be engaged to oversee the project in collaboration with Roads and Maritime's Pacific Highway Office, managing multiple contracts for professional services, supply, and building of the highway. The delivery partner model will offer better value for money and drive project efficiencies.

The construction of Sections 3-11 (Glenugie to Ballina) of the project will be undertaken across a number of portions, each of which will comprise a number of activities. These portions align with the procurement of the detailed design.

Some of the construction activities will take place concurrently to achieve the best project/program efficiency. In any given location the project would be constructed sequentially (construction staging) as per the list of activities described below:

- Enabling works
- Site establishment
- Vegetation clearing
- Bulk earthworks (including rock excavation and blasting)
- Drainage
- Bridges , retaining walls and rest area construction
- Road construction
- Tie-ins and interchanges
- Pre-operation.

The main construction of Section 3 to 11 comprises:

- Nine sections (3 to 11), which have been grouped into four portions (A to D)
- Two major bridges (portions E and F) at the Clarence River and Richmond River respectively
- Four areas of soft soil work (Wave 1 to Wave 4)
- Six bypasses (South Grafton, Grafton, Ulmarra, Woodburn, Broadwater and Wardell)
- 10 interchanges (Eight Mile Lane, Tyndale South (Sheeys Lane), Tyndale North, Goodwood Street, Watts Lane, Yamba Road, Iluka Road, Woodburn (Trustums Hill) Road, Broadwater (Evans Head Road) and Coolgardie Road
- Three tie-ins to other projects (Glenugie Upgrade, Devils Pulpit Upgrade, Ballina Bypass)
- Three rest areas (Pine Brush (northbound), North of Mororo Road (north and southbound) and North of Richmond River (north & southbound)).

Table 4-1 describes the relationship between the sections, portions and key project infrastructure.

Table 4-1 Project Sections, Portions and Key Infrastructure

Portion	Section	Start	CH	End	CH	Bypasses	Interchanges	Tie-ins	Rest Areas
A	3	Glenugie Upgrade	33.8	Tyndale	68.8	Grafton South Grafton Ulmarra	Eight Mile Lane, Tyndale South (Sheeys Lane), Tyndale North	Glenugie (Section 2A)	Pine Brush (Northbound)
	4	Tyndale	68.8	Maclean	82.0	-	Goodwood Street	-	-
E	5	Clarence River Bridge	85.9	Clarence River Bridge	87.3	-	-	-	-
	5	Maclean	82.0	Iluka Road	96.4	-	Iluka Road, Yamba Road, Watts Lane	-	-
B	6	Iluka Road	96.4	Devils Pulpit Upgrade	111.1	-	-	Devils Pulpit (Section 6A)	North of Mororo Road (North & Southbound)
	7	Devils Pulpit Upgrade	111.1	Trustums Hill	126.4	-	-	-	-
C	8	Trustums Hill	126.4	Broadwater National Park	137.6	Woodburn	Woodburn (Trustums Hill Road)	-	-
	9	Broadwater National Park	137.6	Richmond River	145.1	Broadwater	Broadwater (Evans Head Road)	-	-
F	10	Richmond River Bridge	145.1	Richmond River Bridge	145.9	-	-	-	-
	10	Richmond River	145.1	Coolgardie Road	158.6	Wardell	Coolgardie Road	-	North of Richmond River (North & southbound)
D	11	Coolgardie Road	158.6	Ballina Bypass	164.0	-	-	-	-
	-	Pimlico to Teven	163.7	Pimlico to Teven	165.5	-	-	Ballina Bypass (Section 11A)	-

Note – Refer to Figure 1-1 for additional location information.

As outlined in Section 2.1 of the staging report and Chapter 5 of the project EIS, the Woolgoolga to Ballina project has been designed to both Class A and Class M highway configuration. The locations of Class A and Class M for each portion are outlined below:

- Portion A – CH 34,300 to CH 82,000 (Class M)
- Portion B –CH 82,000 to CH 88,900 (Class M)
 - CH 88,900 to CH 111,100 (Class A)
- Portion C – CH 111,100 to CH 126,400 (Class A)
 - CH 126,400 to CH 145,000 (Class M)
- Portion D – CH 145,000 to CH 164,000 (Class M).

The figure bellows provides an outlined of the proposed distribution of Motorway and Arterial Classes as they relate to EIS Sections 3 to 11. This combination will be completed to balance affordability and resources while achieving the 2020 objectives.

Where required due to budget and affordability constraints, sections of the existing Pacific Highway may be reused. These sections will be upgraded as required. Further details on the pavement reuse strategy are described in section 4.2.1.

Figure 4-1 Motorway and Arterial Combination by EIS Section



4.2.1 Pavement reuse strategy

As part of the detailed design and construction activities for Stage 2 of the highway upgrade, Pacific Complete and Roads and Maritime Services are examining the potential for reusing sections of existing highway where pavements could be re-used rather than construction of a completely new carriageway. The sections on the existing Pacific Highway proposed for reuse would be upgraded where required to meet the requirements of Arterial Class.

The primary benefits with the reuse of existing pavements include the reduction in capital expenditure and delivery program as well as reducing disruption to communities during the construction phase. It also allows RMS to realise benefits of the remaining lifespan of previously installed pavement. The sections currently identified for potential reuse still has suitable asset lifespan remaining.

In addition, opportunities to reuse existing pavements will realise saving in areas of native vegetation clearing.

Potential locations will be further assessed and refined during detailed design in consultation with Roads and Maritime Services. The final decision would be made during the detailed design phase of the project as relevant affordability, technical and constructability investigations are completed. Total life costs (which include construction and ongoing maintenance costs) are also being considered in addition to environmental impacts.

Matters relating to compliance with the Conditions of Approval, including but not limited to flooding, biodiversity and connectivity, traffic and noise, will be addressed for these sections in accordance with the existing commitments.

Where existing pavements cannot be reused, construction methodologies will include the harvesting of existing pavement material and its reuse as part of the select material zone layers of the new alignment.

Notwithstanding the above where fauna connectivity structures are required in re-use sections these will also be included in the scope of works as per approved Connectivity Strategy required under NSW Condition of Approval D2 and federal Condition of Approval 14b.

4.3 Program (schedule)

Table 4-2 shows the planned start and end date for each project portion of the project. These dates are indicative and may change during detailed design or when construction contractors are procured.

Table 4-2 Construction activities and timeframes

	2016				2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Portion A (Sections 3 & 4)																
Portion B (Section 5 & 6)																
Portion C (Section 7, 8 & 9)																
Portion D (Section 10 & 11)																
Portion E (Clarence River Bridge)																
Portion F (Richmond River Bridge)																
Portion G (Pimlico to Teven)																

Source: Approved Pacific Complete Construction Environmental Management Plan

4.4 Opening sequence

Construction activities for the Project are detailed in Chapter 6 of the project Environmental Impact Statement. As outlined above in Table 4-2, the date for completion of construction activities across the Project length varies in each section / portion. These indicative dates shown are all subject to the commencement date of each Contractor(s) in each section or portion, and subject to the potential impacts from wet weather events. Given the complexity of construction traffic management across the project, and the proximity of the construction

activities to the existing road network it is anticipated that the new highway alignment would be progressively opened to traffic across the project length.

Progressively opening the new highway alignment to traffic will:

- Enable highway traffic to utilise the new upgrade sections when appropriate
- Improve road safety and separation of construction and live traffic in these complex traffic staging arrangements
- Allow completion of construction activities at key tie-in locations to the existing road network.
- Allow finishing works to occur, such as:
 - Installation of pavement markings, signposting, street lighting
 - Progressive landscaping and tree planting
 - Site clean-up and demobilisation, including restoration of ancillary sites and construction access roads (where required).

The project approval facilitates the concurrent construction and operation of the project. Where part of the project is open to traffic, except in relation to traffic switches or temporary use of carriageways, then that part of the project is considered to be operation.

However, the following construction activities may be carried out after a section / portion of the upgraded highway is opened to traffic:

- Construction activities that take place on both the main line and local roads
- Tie-ins for surrounding infrastructure
- Landscaping
- Defect rectification.

An updated staging report (including construction and operation staging) would be provided to the Department prior to the commencement of operation of each specific section.

5 Stage 3 Future Pavement Upgrades

The pavement reuse strategy outlined in Section 4.2.1 has the potential to identify areas of pavement reuse that could benefit both the program and associated capital expenditure during Stage 2 of the project. There is further benefit to Roads and Maritime Services as pavement is retained until it reaches the end of its design life.

The re-use strategy discussed above is intended to facilitate the upgrade objectives through to 2020 and will be utilised where appropriate to ensure budgetary constraints are addressed.

Once the pavement re-use areas reach the end of their design life they would be progressively upgraded to A or M Class as required by RMS as part of the routine pavement maintenance program for the NSW road network. This would be considered Stage 3 of the project. The schedule for these upgrade works will align with affordability and budget constraints.

Stage 2 is scheduled for completion in 2020. It is important to note that Stage 3 activities will occur progressively as required in the future and following the completion of the Stage 2 construction activities. Stage 3 will be undertaken in accordance with the RMS environmental management framework.

The Stage 3 Staging Report will be developed to address the proposed future pavement upgrades. This would include a detailed discussion on the applicable conditions of approval.

6 Stage 4

6.1 Upgrade to M Class highway

The design and construction of the highway during Stage 1 and 2 would allow for future upgrade to the ultimate M Class arrangements. Refer to Section 4.2 for locations where the highway would be upgraded to Class A in Stage 1 and 2, and subsequently upgraded to Class M in Stage 4.

The upgrade to M Class would include the key features outlined in Table 6-1.

Table 6-1 Key features of Stage 4

Feature	Motorway Class standard
Highway	A divided road with two lanes in each direction and a median sufficiently wide to allow further upgrade to three lanes in each direction (six lanes in total), when required.
Access	Controlled access only. No direct public access would be allowed to the carriageways between interchanges. Service road access to the project would be limited to on-ramps and off-ramps at interchanges.
Interchanges	Interchanges would be grade-separated with no cross-carriageway movements. Full acceleration and deceleration lanes would be provided to on-ramps and off-ramps.
Posted speed limit	110 kilometres per hour.
Intersections	All entry to, exit from and crossings of the main carriageways would be via interchanges.
Alternative routes	A continuous alternative route (service road) would be provided with a desirable design standard of 80 kilometres per hour where possible. RMS would confirm the posted speed limit in consultation with local councils.
U-turn facilities	No U-turn facilities would be provided. Arterial standard U-turn bays would be closed to the public.
Emergency crossover facilities	Combined crossover/U-turn facilities would be provided for emergency use only, every 2.5 kilometres or so.

7 Occurrence of threatened species, ecological communities and migratory species

The following section summarises existing threatened ecological communities, threatened fauna and threatened flora species within and adjacent to the project area.

7.1 Stage 1

Table 7-1, 7-2 and 7-3 outline the threatened ecological communities, threatened fauna and threatened flora species relevant to Section 1, Section 2 and the soft soil wave works that were outlined in the Staging Report Version 1 (March 2015). These tables have been reproduced from those in the Staging Report Version 1 (March 2015).

Table 7-1 Threatened ecological communities relevant to Stage 1

Common name	EPBC Act	TSC Act	Section (1&2)	Soft soils (Waves 1, 2 & 3)
Littoral rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Endangered	NA	NA
Lowland Rainforest of Subtropical Australia (EPBC listed)	Critically Endangered	Endangered	NA	NA
Lowland Rainforest of Subtropical Australia (NSW EEC)		Endangered	All	NA
Subtropical Coastal Floodplain Forest of NSW North Coast Bioregion	–	Endangered	All	All
Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions	–	Endangered	All	All
Mangroves	–	Listed under Fisheries Act	NA	1, 3
Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner Bioregions	–	Endangered	NA	1, 3
Coastal Cypress Pine Shrubby Open Forest of the North Coast Bioregion	–	Endangered	NA	NA
Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin, and South East Corner Bioregions	–	Endangered	NA	1, 3

Table 7-2 Threatened fauna relevant to Stage 1

Common name	Scientific Name	EPBC Act	TSC Act	Section (1&2)	Soft soils (Waves 1, 2 & 3)
Green-thighed Frog	<i>Litoria brevipalmata</i>	–	Vulnerable	All	NA
Wallum Sedge Frog	<i>Litoria longburnensis</i>	Vulnerable	Vulnerable	NA	NA
Giant Barred Frog	<i>Mixophyes iteratus</i>	Endangered	Endangered	All	NA
Coastal Emu	<i>Dromaius novaehollandiae</i>	–	Endangered Population	NA	1, 3
Yellow-bellied Glider	<i>Petaurus australis</i>	–	Vulnerable	All	NA
Squirrel Glider	<i>Petaurus norfolcensis</i>	–	Vulnerable	All	NA
Rufous Bettong	<i>Aepyprymnus rufescens</i>	–	Vulnerable	All	NA

Spotted-tailed Quoll	<i>Dasyurus maculatus</i>	Endangered	Endangered	All	3
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>	–	Vulnerable	All	1, 3
Koala	<i>Phascolarctos cinereus</i>	Vulnerable	Vulnerable	All	1, 3
Long-nosed Potoroo	<i>Potorous tridactylus</i>	Vulnerable	Vulnerable	NA	NA
Little Bentwing-bat	<i>Miniopterus australis</i>	–	Vulnerable	All	NA
Eastern Bentwing-bat	<i>Miniopterus schreibersii oceanensis</i>	–	Vulnerable	All	NA
Southern Myotis	<i>Myotis macropus</i>	Vulnerable	Vulnerable	All	NA
Large-eared Pied Bat	<i>Chaminolobus dwyeri</i>	Vulnerable	Vulnerable	NA	NA
Atlas Rainforest Ground Beetle	<i>Nurus atlas</i>	–	Endangered	NA	NA
Pink Underwing Moth	<i>Phyllodes imperialis</i>	Endangered	Endangered	NA	NA
Oxleyan Pygmy Perch	<i>Nannoperca oxleyana</i>	Endangered	Endangered	NA	NA
Swift Parrot	<i>Lathamus discolor</i>	Endangered, Migratory	Endangered	All	NA
Regent Honeyeater	<i>Xanthomyza Phrygia</i>	Critically Endangered	Endangered	All	NA
Grey-crowned babbler	<i>Pomatostomus temporalis</i>	–	Vulnerable	2	NA
Common planigale	<i>Planigale maculata</i>	–	Vulnerable	All	NA

Table 7-3 Threatened flora relevant to Stage 1

Common name	Scientific Name	EPBC Act	TSC Act	Section (1&2)	Soft soils (Wave 1, 2 & 3)
Sandstone Roughbarked Apple	<i>Angophora robur</i>	Vulnerable	Vulnerable	NA	NA
Hairy Joint Grass	<i>Arthraxon hispidus</i>	Vulnerable	Vulnerable	1	3
Water Nutgrass	<i>Cyperus aquatilis</i>	–	Endangered	All	NA
Square-stemmed Spike-rush	<i>Eleocharis tetraquetra</i>	–	Endangered	1	NA
Square-fruited Ironbark	<i>Eucalyptus tetrapleura</i>	Vulnerable	Vulnerable	2	NA
Four-tailed Grevillea	<i>Grevillea quadricauda</i>	Vulnerable	Vulnerable	NA	NA
Noah's False Chickweed or Lindernia	<i>Lindernia alsinoides</i>	–	Endangered	All	NA
Slender Screw Fern	<i>Lindsaea incisa</i>	Endangered	Endangered	All	NA
Maundia	<i>Maundia triglochoides</i>	–	Vulnerable	All	NA
Weeping Paperbark	<i>Melaleuca irbyana</i>	–	Endangered	NA	NA
King of the Fairies Orchid	<i>Oberonia titania</i>	–	Vulnerable	NA	NA
Yellow-flowered King of the Fairies Orchid	<i>Oberonia complanata</i>	–	Endangered	NA	NA
Square-stemmed Olax	<i>Olax angulata</i>	–	Vulnerable	2	NA
Slender Knotweed or Tall Knotweed	<i>Persicaria elatior</i>	Vulnerable	Vulnerable	NA	1, 3
Southern Swamp Orchid	<i>Phaius australis</i>	Endangered	Endangered	NA	NA
Singleton Mint Bush	<i>Prostanthera cineolifera</i>	Vulnerable	Vulnerable	NA	NA

Swamp Mint Bush	<i>Prostanthera palustris</i>	Vulnerable	Vulnerable	NA	NA
Moonee Quassia	<i>Quassia</i> sp. 'Moonee Creek'	Endangered	Endangered	1	NA
Scented Acronychia	<i>Acronychia littoralis</i>	Endangered	Vulnerable	NA	NA
Acalypha	<i>Acalypha eremorum</i>	Vulnerable	Endangered	NA	NA
White Lace Flower	<i>Archidendron hendersonii</i>	–	Vulnerable	NA	NA
Needle-leaf Fern	<i>Belvisia mucronata</i>	–	Endangered	NA	NA
Stinking Cryptocarya	<i>Cryptocarya foetida</i>	Vulnerable	Vulnerable	NA	NA
Smooth Davidson's Plum	<i>Davidsonia johnsonii</i>	Endangered	Endangered	NA	NA
Rusty Rose Walnut	<i>Endiandra hayesii</i>	Vulnerable	Vulnerable	NA	NA
Green-leaved Rose Walnut	<i>Endiandra muelleri</i> subsp. <i>bracteata</i>	–	Endangered	NA	3
Axe-breaker	<i>Coatesia paniculata</i> syn. <i>Geijera paniculata</i>	–	Endangered	NA	NA
Rough-shelled Bush Nut	<i>Macadamia tetraphylla</i>	–	Vulnerable	NA	NA
Southern Ochrosia	<i>Ochrosia moorei</i>	Endangered	Endangered	NA	NA
Whalebone Tree	<i>Streblus pendulinus</i> syn. <i>S. brunonianus</i>	Endangered	–	NA	3
Red Lilly Pilly	<i>Syzygium hodgkinsoniae</i>	Vulnerable	Vulnerable	NA	NA
Arrow Head Vine	<i>Tinospora tinosporoides</i>	Vulnerable	Vulnerable	NA	NA

7.2 Stage 2

Table 7-4, 7-5, 7-6 and 7-7 outline the threatened ecological communities, threatened flora species, threatened fauna and migratory species that occur within and adjacent to the project area in Sections 3 to 11 and the soft soil wave works outlined in Section 4.1.

Table 7-4 Threatened ecological communities relevant to Stage 2

Common name	EPBC Act	TSC Act	Section 3 to 11 ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Endangered	10	NA	NA
Lowland Rainforest of Subtropical Australia (EPBC listed)	Critically Endangered	Endangered	10,11	2	NA
Lowland Rainforest of Subtropical Australia (NSW EEC)	–	Endangered	3, 10, 11	2, 3	5a
Subtropical Coastal Floodplain Forest of NSW North Coast Bioregion	–	Endangered	All	All	All
Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions	–	Endangered	3, 4, 5, 6, 7, 8, 9, 10	1, 3, 4	All

Common name	EPBC Act	TSC Act	Section 3 to 11 ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Mangroves	–	Listed under Fisheries Act	5, 8, 10, 11	1, 2, 4	5c
Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner Bioregions	–	Endangered	3, 4, 5, 8, 9, 10, 11	All	5a, 5c
Coastal Cypress Pine Shrubby Open Forest of the North Coast Bioregion	–	Endangered	8, 9, 10, 11	2, 4	5c
Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin, and South East Corner Bioregions	–	Endangered	3, 4, 8, 9	3, 4	5a, 5c

1: Species occurring within sections have been taken from Pacific Complete Construction Environmental Management Plan.

2: Species occurring within soft soil and wave locations are indicative only and have been taken from the section within which the wave works occur. Species specifically relevant to these wave works will be refined in the Construction Environmental Management Plans that will be produced for these works.

Table 7-5 Threatened flora species relevant to Stage 2

Common name	Scientific name	EPBC Act	TSC Act	Section 3 to 11 ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Sandstone rough-barked apple	<i>Angophora robur</i>	Vulnerable	Vulnerable	3,4	3	5a
White laceflower	<i>Archidendron hendersonii</i>	-	Vulnerable	10	NA	NA
Hairy-joint grass	<i>Arthraxon hispidus</i>	Vulnerable	Vulnerable	3,8,10	3, 4	5a, 5c
Carronia Vine ³	<i>Carronia multisepealea</i> ²	-	-	10	NA	NA
Stinking Cryptocarya	<i>Cryptocarya foetida</i>	Vulnerable	Vulnerable	10	NA	NA
Water nutgrass	<i>Cyperus aquatilis</i>	-	Endangered	6,7	NA	5b, 5c
Green-leaved rose walnut	<i>Endiandra muelleri subsp. bracteata</i>	-	Endangered	4,10	3	NA
Four-tailed grevillea	<i>Grevillea quadricauda</i>	Vulnerable	Vulnerable	3	3	5a
Slender screw fern	<i>Lindsaea incise</i>	Endangered	Endangered	3, 6	3	5a, 5b
Rough-shelled bush nut	<i>Macadamia tetraphylla</i>	-	Vulnerable	8,10	4	5c
Maundia	<i>Maundia triglochinos</i>	-	Vulnerable	3,7	3	5a, 5c
Weeping paperbark	<i>Melaleuca irbyana</i>	-	Endangered	7	NA	5c
Yellow-flowered King of the Fairies	<i>Oberonia complanata</i>	-	Endangered	8	4	5c
Soldiers Crest Orchid	<i>Oberonia titania</i>	-	Vulnerable	10	NA	NA
Knotweed	<i>Persicaria elatior</i>	Vulnerable	Vulnerable	4,5	1, 3	NA
Singleton mint bush	<i>Prostanthera cineolifera</i>	Vulnerable	Vulnerable	6	NA	5b
-	<i>Rotala tripartita</i>	-	Endangered	6	NA	5b

Common name	Scientific name	EPBC Act	TSC Act	Section 3 to 11 ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Siah's Backbone	<i>Streblus pendulinus</i>	Endangered	-	4,8,10	3, 4	5c
Smooth-barked Rose Apple	<i>Syzygium hodgkinsoniae</i>	Vulnerable	Vulnerable	10	NA	NA

1: Species occurring within sections have been taken from Pacific Complete Construction Environmental Management Plan.

2: Species occurring within soft soil and wave locations are indicative only and have been taken from the section within which the wave works occur. Species specifically relevant to these wave works will be refined in the Construction Environmental Management Plans that will be produced for these works.

3: Carronia Vine (*Carronia multisepealea*) is not classified as threatened species under the TSC Act or EPBC Act, however, this species is a significant host plant for the endangered Southern Pink Underwing Moth (*Phyllodes imperialis smithersi*).

Table 7-6 Fauna species relevant to Stage 2

Common name	Scientific name	EPBC Act	TSC Act	Confirmed Sections	Medium-High Likelihood Sections ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Birds							
Australasian Bittern	<i>Botaurus poiciloptilus</i>	Endangered	Endangered	3	4, 7, 8, 9, 10, 11	2, 3, 4	5a, 5c
Australian Painted Snipe	<i>Rostratula australis</i>	Vulnerable, Migratory	Endangered		All	All	All
Barking Owl	<i>Ninox connivens</i>	-	Vulnerable		All	All	All
Barred Cuckoo-shrike	<i>Coracina lineata</i>	-	Vulnerable		6, 7, 8, 9, 10, 11	2, 4	5b, 5c
Black Bittern	<i>Ixobrychus flavivollis</i>	-	Vulnerable		3, 6, 7, 9	3	All
Black-chinned Honeyeater	<i>Melithreptus gularis</i>		Vulnerable	3	6, 7	3	All
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	-	Endangered	3, 4, 5	All	All	All
Brolga	<i>Grus rubicundus</i>	-	Vulnerable	3, 4, 5, 10, 11	All	All	All
Brown Treecreeper	<i>Climacteris picumnus</i>	-	Vulnerable	3, 6, 7	4, 5	3	All
Bush Stone-curlew	<i>Burhinus grallarius</i>	Endangered			3	3	5a
Coastal Emu	<i>Dromaius novaehollandiae</i>	-	Endangered	3, 4	5	1, 3	5a
Comb-crested Jacana	<i>Irediparra gallinacea</i>	-	Vulnerable		3, 4, 5, 6, 7, 8, 9, 10, 11	1, 3	All
Double-eyed Fig-parrot	<i>Cyclopsitta diophthalma coxeni</i>	Endangered	CE		9, 10, 11	2	5c

Common name	Scientific name	EPBC Act	TSC Act	Confirmed Sections	Medium-High Likelihood Sections ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Eastern Grass Owl	<i>Tyto longimembris</i>	-	Vulnerable	9, 10	All	All	All
Eastern Osprey	<i>Pandion haliaetus</i>	Migratory	Vulnerable	3, 4, 5, 9, 10, 11	All	All	All
Freckled Duck	<i>Stictonetta naevosa</i>	-	Vulnerable		3, 5	1, 3	5a
Glossy Black-cockatoo	<i>Calyptorhynchus lathami</i>	-	Vulnerable	3, 7, 10	All	All	All
Grey-crowned Babbler	<i>Pomatostomus temporalis temporalis</i>	-	Vulnerable	3, 6, 7, 8, 9, 10, 11	4	2, 3, 4	All
Ground Parrot	<i>Pezoporus wallicus</i>	-	Vulnerable		8, 9, 10	4	5c
Little Eagle	<i>hieraaetus</i>	-	Vulnerable		All	All	All
Little Lorikeet	<i>Glossopsitta pusilla</i>	-	Vulnerable		All	All	All
Magpie Goose	<i>Anseranas semipalmata</i>	-	Vulnerable	3	4, 5, 6, 8, 9, 10, 11	All	All
Mangrove Honeyeater	<i>Lichenostomus fasciulari</i>	-	Vulnerable	10	4, 5, 9, 11	1, 2, 3	5c
Masked Owl	<i>Tyto novaehollandiae</i>	-	Vulnerable	6, 11	All	All	All
Pale-vented Bush Hen	<i>Amauromis molucanna</i>	-	Vulnerable		9, 10, 11	2	5c
Powerful Owl	<i>Ninox strenua</i>	-	Vulnerable	3, 7, 10	All	All	All
Red Goshawk	<i>Erythrotriorchis radiates</i>	Vulnerable	Critically Endangered		All	All	All
Regent Honeyeater	<i>Zanthyomyza phrygia</i>	Endangered, Migratory	Endangered		All	All	All
Rose-crowned Fruit-dove	<i>Ptilinopus regina</i>	-	Vulnerable	10	All	All	All
Square-tailed Kite	<i>Lophoictinia isura</i>	-	Vulnerable		All	All	All
Superb Fruit-dove	<i>Ptilinopus superbus</i>	-	Vulnerable		All	All	All
Swift Parrot	<i>Lathamus discolor</i>	Endangered, Migratory	Endangered		All	All	All
Wompoo Fruit-dove	<i>Ptilinopus magnificus</i>	-	Vulnerable		6, 7, 8, 9, 10, 11	2, 4	5b, 5c
Microchiropteran bats							
Beccari's Freetail-bat	<i>Mormopterus beccari</i>	-	Vulnerable		All	All	All

Common name	Scientific name	EPBC Act	TSC Act	Confirmed Sections	Medium-High Likelihood Sections ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Eastern Bent-wing Bat	<i>Miniopterus schreibersii oceanensis</i>	-	Vulnerable	6, 7, 8, 9, 10, 11	All	All	All
Eastern Cave Bat	<i>Vespadelus trougtoni</i>	-	Vulnerable	6, 7, 8, 9, 10, 11	All	All	All
Eastern False Pipistrelle	<i>Falsistrellus tasmaniensis</i>	-	Vulnerable	3	All	All	All
Eastern Freetail-bat	<i>Mormopterus norfolkensis</i>	-	Vulnerable	6, 7, 8, 9, 10, 11	All	All	All
Eastern Long-eared Bat	<i>Nyctophilus bifax</i>	-	Vulnerable	6, 7, 8, 9, 10, 11	All	All	All
Golden-tipped Bat	<i>Kerivoula papuensis</i>	-	Vulnerable	9, 10, 11	All	All	All
Greater Broad-nosed Bat	<i>Scoteanax rueppellii</i>	-	Vulnerable	9, 10, 11	All	All	All
Hoary Wattled Bat	<i>Chalinolobus nigrogriseus</i>	-	Vulnerable	3, 6, 7, 8	All	All	All
Large-eared Pied-bat	<i>Chalinolobus dwyeri</i>	Vulnerable	Vulnerable		3, 4, 5, 6, 7	1, 3	5a, 5b
Little Bent-wing Bat	<i>Miniopterus australis</i>	-	Vulnerable	All		All	All
Southern Myotis	<i>Myotis macropus</i>	-	Vulnerable	5, 6, 7, 8, 9, 10, 11	All	All	All
Yellow-bellied Sheathtail-bat	<i>Saccolaimus flaviventris</i>	-	Vulnerable	9, 10, 11	All	All	All
Megachiropteran bats							
Common Blossom-bat	<i>Syconycteris australis</i>	-	Vulnerable	6, 7, 8, 9, 10, 11		2, 4	5b, 5c
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	Vulnerable	Vulnerable	All		All	All
Mammals							
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>	-	Vulnerable	3, 4, 6, 7, 8	All	All	All
Common Planigale	<i>Planigale maculata</i>	-	Vulnerable	10	3, 6, 7, 8, 9, 11	2, 3, 4	All
Eastern Pygmy-possum	<i>Cercartetus nanus</i>	-	Vulnerable		All	All	All
Koala ²	<i>Phascolarctos cinereus</i> ²	Vulnerable	Vulnerable	3, 5, 7, 9, 10	All	All	All
Long-nosed Potoroo ³	<i>Potorous tridactylus tridactylus</i> ³	Vulnerable	Vulnerable	6, 7, 10	3, 8, 9, 11	2, 3, 4	All

Common name	Scientific name	EPBC Act	TSC Act	Confirmed Sections	Medium-High Likelihood Sections ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b & 5c ²
Rufous Bettong	<i>Aepyprymnus rufescens</i>	-	Vulnerable	3	4, 5, 6, 7, 8	1, 3, 4	All
Spotted-tailed Quoll	<i>Dasyurus maculatus</i>	Endangered	Vulnerable		All	All	All
Squirrel Glider	<i>Petaurus norfolcensis</i>	-	Vulnerable	3, 4, 5, 7, 8, 9, 10	All	All	All
Yellow-bellied Glider	<i>Petaurus australis</i>	-	Vulnerable	3, 6, 7	All	All	All
Frogs							
Wallum Froglet	<i>Crinia tinnula</i>	-	Vulnerable	3, 6, 7, 8, 9, 10, 11	All	All	All
Giant Barred Frog ²	<i>Mixophyes iterates²</i>	Endangered	Endangered	7	3, 6	3	All
Green-thighed Frog	<i>Litoria brevipalmata</i>	-	Vulnerable	3, 5, 7, 8	4, 6	1, 3, 4	All
Olongburra Frog ³	<i>Litoria olongburensis³</i>	Vulnerable	Vulnerable	8, 9, 10	7, 11	2, 4	5c
Reptiles							
Pale-headed Snake	<i>Hoplocephalus bitorquatus</i>	-	Vulnerable		3, 6, 7, 8	3, 4	All
Stephens' Banded Snake	<i>Hoplocephalus stephensii</i>	-	Vulnerable	3	6, 7, 8	4	All
Fish							
Eastern Freshwater Cod	<i>Maccullochella ikei</i>	Endangered	Endangered		3, 4, 5, 10	1, 3	5a
Oxleyan Pygmy Perch ²	<i>Nannoperca oxleyana²</i>	Endangered	Endangered	6, 7, 8, 9	3, 10	3	All
Purple-spotted Gudgeon ⁴	<i>Mogurnda adspersa</i>	-	Endangered				
Invertebrates							
Atlas Rainforest Ground Beetle	<i>Nurus atlas</i>	-	Endangered	10			NA
Coastal Petaltail	<i>Petalura litoera</i>	-	Endangered		3, 4, 5, 7, 8, 9, 10	1, 3, 4	5a, 5c
Pink Underwing Moth	<i>Phyllodes imperialis</i>	Vulnerable	Vulnerable	10	9, 11	2	5c

1: Species occurring within sections have been taken from Pacific Complete Construction Environmental Management Plan.

2: Species occurring within soft soil and wave locations are indicative only and have been taken from the section within which the wave works occur. Species specifically relevant to these wave works will be refined in the Construction Environmental Management Plans that will be produced for these works.

Table 7-7 Migratory fauna species relevant to Stage 2

Migratory species	EPBC Act status	Preferred habitat	Presence Section 3 to 11 ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b and 5c ²
Eastern Osprey (<i>Pandion haliaetus</i>)	Marine; Migratory (BONN)	Occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers.	Confirmed in several locations associated with project sections 3-6 and 9-11. Predicted across the entire study area.	All	All
Great Egret (<i>Egretta alba</i>)	Marine; Migratory (CAMBA, JAMBA)	Prefer shallow water, particularly when flowing, but may be seen on any watered area, including damp grasslands.	Confirmed in project section 8. High likelihood that the species occurs across the entire study area. This species is commonly reported in the Clarence Valley wetlands (Smith 2011), which is traversed by Section 3-5.	All	All
Cattle Egret (<i>Ardea ibis</i>)	Marine; Migratory (CAMBA, JAMBA)	Is found in grasslands, woodlands and wetlands particularly in coastal areas. It also uses pastures and croplands, especially where drainage is poor. Is often seen with cattle and other stock.	Confirmed , recorded in all project sections 3-5 and 9-11 associated with grazing paddocks particularly in floodplains. Predicted across the entire study area and commonly reported in the Clarence valley wetland (Smith, 2011) which is traversed by section 3-5.	All	All
White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)	Marine; Migratory (CAMBA)	Forages over large open fresh or saline waterbodies, coastal seas and open terrestrial areas (Higgins, 1999; Simpson & Day, 1999). Breeding habitat consists of tall trees, mangroves, cliffs, rocky outcrops, silts, caves and crevices and is located along the coast or major rivers. Breeding habitat is usually in or close to water, but may occur up to a kilometre away (Marchant & Higgins, 1993).	Predicted along the length of the study area mostly in floodplain, wetland, riverine or estuarine habitats associated with the Clarence River and Richmond River.	All	All
Satin Flycatcher (<i>Myiagra cyanoleuca</i>)	Marine; Migratory (BONN)	Associated with drier eucalypt forests, absent from rainforests (Blakers et al., 1984), open forests,	Was confirmed in a number of sites in project sections 6- 8 in dense forest. Predicted throughout the study	All	All

Migratory species	EPBC Act status	Preferred habitat	Presence Section 3 to 11 ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b and 5c ²
		often at height (Simpson & Day, 1999).	area in all forested habitats.		
White Throated Needletail (<i>Hirundapus caudacutus</i>)	Marine; Migratory(C AMBA, JAMBA, ROKAMBA)	Forages aerially over a variety of habitats usually over coastal and mountain areas, most likely with a preference for wooded areas (Higgins, 1999; Simpson & Day, 1999). Has been observed roosting in dense foliage of canopy trees, and may seek refuge in tree hollows in inclement weather (Higgins, 1999).	Small flock confirmed near Shark Creek in project section 4. Predicted throughout the study area in all forested habitats.	All	All
Rainbow Bee-eater (<i>Merops ornatus</i>)	Marine; Migratory (JAMBA)	Occurs mainly in open forests and woodlands, shrublands, and in various cleared or semi-cleared habitats, including farmland and areas of human habitation (Higgins, 1999). Usually occurs in open, cleared or lightly-timbered areas, especially in arid or semi-arid areas, in riparian, floodplain or wetland vegetation assemblages (Woinarski et al., 1988).	Confirmed near Tucabia in Section 3. Predicted throughout the study area in dry forest and woodland habitats, typically prefers more open landscapes.	All	All
Swift Parrot (<i>Lathamus discolor</i>)	Marine; Migratory; Endangered	Forages in swamp and open eucalypt forests, feeding on nectar and pollen of flowering tree species.	Predicted throughout the study area in all forested habitats. Not observed from targeted surveys.	All	All
Regent Honeyeater (<i>Xanthomyza phrygia</i>)	Migratory (JAMBA); Endangered (as Anthochaera phrygia)	Forages in swamp and open eucalypt forests, feeding on nectar and pollen of flowering tree species.	Predicted throughout the study area in all forested habitats. Not observed from targeted surveys.	All	All
Black-faced Monarch (<i>Monarcha melanopsis</i>)	Marine; Migratory (BONN)	Occurs in rainforest and eucalypt forests, feeding in tangled understorey (Blakers et al., 1984).	Confirmed in dry forest habitat at one site near Tucabia in project section 4. Predicted throughout the study area in all forested habitats. Confirmed in dry forest near Tucabia in Section 4.	All	All
Rufous Fantail (<i>Rhipidura rufifrons</i>)	Marine; Migratory (BONN)	Frequents wet forests, less often open forests and woodlands (Simpson & Day, 1999). May occur in open woodland and forest habitats throughout the north coast region.	One individual confirmed in project section 6 in Doubleduke State Forest. Predicted throughout the study area in all forested habitats.	All	All

Migratory species	EPBC Act status	Preferred habitat	Presence Section 3 to 11 ¹	Soft soils (Wave 1, 2, 3 & 4) ²	Wave 5a, 5b and 5c ²
Latham's Snipe (<i>Gallinago harwickii</i>)	Marine; Migratory (C AMBA, JAMBA, ROKAMBA)	Occurs in permanent and ephemeral wetlands, usually inhabiting open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies) (Frith et al, 1977). However, they can also occur in habitats with saline or brackish water, in modified or artificial habitats, and in habitats located close to humans or human activity (Frith et al, 1977)	One individual confirmed in project section 3 in the Coldstream wetlands. Predicted throughout the study area particularly in floodplain areas of the Richmond River, Clarence River and Corindi River.	All	All
Australian Painted Snipe (<i>Rostratula australis</i>)	Marine; Migratory (CAMBA)	Generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage treatment plants and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of <i>lignum Muehlenbeckia</i> or canegrass or sometimes tea-tree (<i>Melaleuca</i>).	Predicted throughout the study area particularly in floodplain areas of the Richmond River, Clarence River and Corindi River. Not observed during targeted field surveys.	All	All
Spectacled Monarch (<i>Monarcha trivirgatus</i>)	Marine; Migratory (BONN)	Occurs in rainforest and eucalypt forests, feeding in tangled understorey (Blakers et al., 1984).	Predicted throughout the study area in all forested habitats. Not observed during targeted field surveys.	All	All

1: Species occurring within sections have been taken from Pacific Complete Construction Environmental Management Plan.

2: Species occurring within soft soil and wave locations are indicative only and have been taken from the section within which the wave works occur. Species specifically relevant to these wave works will be refined in the Construction Environmental Management Plans that will be produced for these works.

8 Threatened Species Management Plans required under condition of approval D8

Table 8-1 outlines the Threatened Species Management Plans prepared under NSW Conditions of Approval D8. These management plans detail how the impacts of the project will be minimised and managed for each individual species identified to be significantly impacted by the project.

Table 8-1 Species Management Plans applicable to the Project

Management Plan	Stage 1		A			B			C			D	
	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8	Section 9	Section 10	Section 11		
Threatened Flora Management Plan	Version 2.1 applies to Sections 1 and 2 and soft soil works (approved April/May 2015)		Version 3 (approved Aug/ Sept 2015) is an update of Version 2.1 and applies to Sections 1 to 11 and soft soil works										
Threatened Frog Management Plan	Version 2.1 applies to Sections 1 to 11 – not applicable to soft soil works (approved May 2015)												
Threatened Glider Management Plan	Version 2.1 applies to Sections 1 to 11 – not applicable to soft soil works (approved May 2015)												
Threatened Mammal Management Plan	Version 2.1 applies to Sections 1 and 2 – not applicable to soft soil works (approved May 2015)		Version 3.1 (approved Oct 2015) is an update of Version 2.1 and applies to Sections 1 to 11										
Threatened Fish Management Plan	Version 3 applies to Sections 6 to 9 (approved July 2015)												
Threatened Invertebrates Management Plan	Version 3 applies to Sections 10 and 11 – not applicable to soft soils (approved July 2015)												

Management Plan	Stage 1		A		B		C			D	
	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8	Section 9	Section 10	Section 11
Threatened Rainforest Communities and Rainforest Plants Management Plan	Version 3 applies to Sections 10 and 11 – not applicable to soft soils (approved Aug 2015)										
Microbat Management Plan	Version 3 applies to Section 1 and 2 – not applicable to soft soils (approved September 2014)		Version 2 (approved May 2015) is a separate report and applies to Sections 3 to 11 – not applicable to soft soils								
Threatened Coastal Emu Management Plan			Version 3.1 applies to Sections 3 and 4 – not applicable to soft soils (approved Jan 2016)								
Threatened Koala Management Plan	Version 2 applies to Section 1 and 2 not applicable to soft soils (approved May 2015)		Version 3 (approved Feb 2016) is an updates of Version 2 and applies to Sections 1 to 8 (excluding the Woombah/ Illuka Koala population) and 11				Ballina Koala Plan (submitted for approval)				

Note: Koala Management Plan (update 3) for Iluka population, Broadwater (north of Lang Hill) to be submitted in July 2016 with Koala Management Plan covering Coolgardie (Section 10) for approval following DoE approval of the Ballina Koala Plan. The Ballina Koala Plan was submitted to DoE for approval in February 2016.

Appendix A Application of NSW Conditions of Approval

COMPLIANCE TRACKING - NSW CONDITIONS OF APPROVAL
Woolgoolga to Ballina SSI-4963
PART A - Administrative Conditions



Reproduced from WZB Staging Report, March 2015.

Category	Part	Requirement	Stage 1		Comment	Soft soils (Wave 1, 2, 3 & 4)	Section 3 to 11	Wave 5a, 5b & 5c	Comment
			Section 1 and 2	Soft soils (Wave 1, 2 & 3)					
OBIGATION TO MINIMISE HARM TO THE ENVIRONMENT									
A1		The Applicant shall implement all feasible and reasonable measures to prevent and/or minimise any harm to the environment that may result from the construction or operation of the SSI.	All	All		All	All	All	Noted.
TERMS OF APPROVAL									
A2		The Applicant shall carry out the SSI generally in accordance with the: (a) State Environmental Offence Penalties Schedule 1993 (SEPP 193); (b) Pacific Highway Upgrade Woolgoolga to Ballina Environmental Impact Statement Volumes 1A, 1B, 2, 3, 4A, 4B, 5, 6A, 6B, 6C, 7A, 7B and 8, prepared by Roads and Maritime Services, dated December 2012; (c) Pacific Highway Upgrade Woolgoolga to Ballina Submissions/Preliminary Infrastructure Report Main Volume and Appendices, prepared by Roads and Maritime Services, dated November 2013; (d) Ancillary facility sites listed in Woolgoolga to Ballina Pacific Highway Upgrade - Ancillary descriptions and impact assessment, prepared by Roads and Maritime Services, dated 13 December 2013; (e) Connectivity structures listed in Woolgoolga to Ballina Alliance Update 20 Feb 2014 Structures Inventory (except Sections 1 and 2) and Woolgoolga to Glenugie Fauna Connectivity Tracking Register 11/02/2014, prepared by Roads and Maritime Services, and email correspondence from Roads and Maritime Services dated 14 March 2013; (f) Pacific Highway Upgrade Woolgoolga to Ballina. Utilities impact assessment (CO20395 3/102, Utilities Clearing Vegetation), prepared by Roads and Maritime Services, dated 21 May 2014; (g) Pacific Highway Upgrade Woolgoolga to Ballina. Utilities impact assessment (CO20395 3/102, Utilities Clearing Vegetation), prepared by Roads and Maritime Services, dated 21 May 2014; (h), Modification request and letter dated 24 September 2015 to modify the approval to capture additional works outside the project boundary that may impact on heritage items to require archaeological investigations, and (i) conditions of this approval.	All	All	Part (g) of this condition does not apply to Section 1 and 2, however part (e) applies to Section 1 and 2 of the project with regard to the document Woolgoolga to Glenugie Fauna Connectivity Tracking Register 11/02/2014.	All	All	All	Noted
A3		If there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	All	All		All	All	All	Noted.
A4		The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department of Planning and Environment's assessment of: (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this approval; and (b) the implementation of any actions or measures contained in these documents.	All	All		All	All	All	Noted.
LIMITS OF APPROVAL									
A5		This approval shall lapse 10 years after the date on which it is granted, unless the works the subject of this SSI approval are physically commenced on or before that date.	All	All		All	All	All	Project commenced in 2015.
STATUTORY REQUIREMENTS									
A6		The Applicant shall ensure that all licenses, permits and approvals are obtained as required by law and maintained as required throughout the life of the SSI. No condition of this approval removes the obligation for the Applicant to obtain, renew or comply with such licenses, permits or approvals.	All	All		All	All	All	Pacific Complete has obtained an Environment Protection Licence (EPL) for S3-S11 (No. 20173, 29 January 2016). The EPL is in addition to those obtained by contractors (Wave 1 and Wave 2 Soft Soil Works) directly procured by RMS. Other licenses/permits/consents are to be obtained as required by law during the course of the project.
STAGING									
A7		The Applicant may elect to construct and/or operate the SSI in stages. Where staging is proposed, the Applicant shall submit a Staging Report to the Secretary prior to the commencement of each proposed stage. The Staging Report shall provide details of: (a) how the SSI 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 SSI. Where staging of the SSI 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 stage(s).	All	All		All	All	All	This document is a revised Staging Report for the Pacific Complete activities.
SUBMISSION OF ANY STRATEGY, PLAN OR PROGRAM									
A8		The Applicant shall ensure that any strategy, plan, program or other document required by the conditions of this approval and relevant to each stage (as identified in the Staging Report) is submitted to the Secretary no later than one month prior to the commencement of the relevant stage(s), unless otherwise agreed by the Secretary. While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program shall clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.	All	All		All	All	All	Noted
COMPLIANCE									
A9		The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.	All	All		All	All	All	The requirement is addressed in the Pacific Complete CEMP (Main Document), Section 5 Competence, Training and Awareness). Pacific Complete will approve Contractor EMPs and EWMSs and apply RMS/PC specifications to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2)
A10		The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.	All	All		All	All	All	Noted

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b &c	Comment	
	A11	In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement in this approval, or relevant matter relating to the SSI, either party may refer the matter to the Secretary for resolution. The Secretary's determination of any such dispute shall be final and binding on the parties.	All	All		All	All	All	Noted	
INCIDENT REPORTING										
	A12	The Applicant shall notify the Secretary and relevant public authorities of any incident with a real or potential significant off-site impacts on people or the biophysical environment within 24 hours of becoming aware of the incident. The Applicant shall provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred. Note: • Where an incident also requires reporting to the EPA and/or OEH, the incident report prepared for the purposes of notifying the EPA and/or OEH would meet this requirement.	All	All		All	All	All	This is addressed in approved Pacific Complete CEMP (main document - Section 7.1 Incident Reporting) and is also addressed in Pacific Complete Compliance Tracking Program (Section 2.6 Incident Reporting to Secretary) - Separate and approved CEMP attachments in place for soft soil works (Wave 1 and Wave 2)	
	A13	The Applicant shall meet the requirements of the Secretary or relevant public authority (as determined by the Secretary) to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition A12, within such period as the Secretary may require.	All	All		All	All	All	Noted	

COMPLIANCE TRACKING - NSW CONDITIONS OF APPROVAL
Woolgoolga to Ballina SSI-4963
PART B - Environmental Performance



Reproduced from WZB Staging Report, March 2015.

Category	Part	Requirement	Stage 1			Stage 2			
			Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
BIODIVERSITY									
	B1	The clearing of native vegetation shall be minimised with the objective of reducing impacts to any threatened species or EECs where feasible and reasonable, consistent with the following: (a) clearing of native vegetation shall be limited to the SSI boundary defined in the document referred to in condition A2(c) and outside the SSI boundary defined in the document referred to in condition A2(c) shall be limited to 4.75 hectares; (b) clearing of native vegetation for ancillary facilities specified in the document referred to in condition A2(d) and outside the SSI boundary defined in the document referred to in condition A2(c) shall be limited to 4.75 hectares; (c) clearing of threatened ecological communities shall be limited to the areas specified in Table 6-1 (under the column titled 'Revised—direct impact (hectares)') of Appendix J of the document referred to in condition A2(c), subject to condition B1(d); (d) clearing of the Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions shall be limited to a total area of 0.5 hectares, and (e) clearing of Koalas (Phascolarctos cinereus) primary and secondary habitat shall be limited to a total area of 37.5 hectares	All	All	Not all clauses of this condition will apply to each stage. An assessment will be made as to the applicability of specific clauses prior to construction.	All	All	All	RMS and the Contractor will ensure compliance with the approved clearing limits under the Planning Approval. Clearing of native vegetation will be minimised during the construction phase. Clearing of native vegetation and threatened species or EECs where feasible and reasonable. Clearing limits will be clearly shown on relevant construction drawings and closely monitored and reported throughout the project.
	B2	Where feasible and reasonable, remnant vegetation shall be retained between the SSI boundary and the SSI footprint.	All	All	Vegetation clearance limits have been defined during detailed design for Stage 1 Roads and Maritime is satisfied that this condition has been met. Clearance will be monitored throughout construction.	All	All	All	Vegetation clearance limits will be defined during the detailed design. Overall vegetation clearance (design plus actual construction clearance) will be monitored on a regular basis during the WZB project.
	B3	Native vegetation shall be established in or adjacent to disturbed areas within the SSI boundary to provide habitat for wildlife following the completion of construction in the vicinity of the disturbed area, consistent with the Urban Design and Landscape Plan required under condition D20.	All	NA	Wave 1, 2 and 3 soft soil works is an early construction phase and does not include an Urban Design and Landscape Plan	All	NA	NA	During detailed design, Urban Design and Landscape Plans as per the requirement of COA D20 will be prepared. Soft soil works (waves) is an early construction phase activity and does not include an Urban Design and Landscape Plan.
	B4	Light spill from the SSI shall be avoided on Pink Underwing Moth and Atlas Rainforest Ground Beetle habitat, where feasible and reasonable.	NA	NA		10	NA	NA	The wave 5a, 5b, and 5c works are early enabling works and do not include any elements of permanent built works. To be addressed during detailed design as per the Threatened Invertebrates Management Plan (approved 30 July 2015).
PRE CLEARING									
	E5	Prior to construction, pre-clearing surveys and inspections for endangered and threatened species shall be undertaken. The surveys and inspections, and any subsequent relocation of species, shall be undertaken under the guidance of a suitably qualified ecologist and shall be in accordance with the methodology incorporated into the approved Construction Flora and Fauna Management Plan. All clearing of Koala habitat trees shall be undertaken in the presence of a Koala spotter.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B2 - Construction Flora and Fauna Management Plan, Section 5.4 Pre-Clearing Surveys, Section 5.4.3 Fauna Capture and Handling and Appendix N Fauna Handling and Rescues Procedure). Complete approval Contractor EIRs and EWMSS and EIRs shall be prepared and approved in compliance with the COA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B6	Incidental or unanticipated threatened flora and fauna finds shall be immediately reported and clearing work stopped in the vicinity of the find to allow for an evaluation of an appropriate response in accordance with the Construction Flora and Fauna Management Plan.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B2 - Construction Flora and Fauna Management Plan, Appendix N Fauna Handling and Rescues Procedure and Appendix O Unexpected Threatened Species Finds Procedure). Pacific Complete approval Contractor EIRs and EWMSS and EIRs shall be prepared and approved in compliance with the COA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
OXLEYAN PYGMY PERCH HABITAT									
	B7	High risk construction activities in known Oxleyan Pygmy Perch habitat shall not be undertaken during the Oxleyan Pygmy Perch spawning period, or on days when the relevant Bureau of Meteorology site predicts a 50% chance of 10mm of rain or more, unless otherwise agreed by DPI (Fisheries)	NA	NA			NA	5b, 5c	This requirement is addressed in Pacific Complete CEMP (Appendix B2 - Construction Flora and Fauna Management Plan, Appendix J Threatened Fish Management Plan). Pacific Complete will approve Contractor EIRs and EWMSS and apply RMS/PC specifications to ensure compliance with the COA.

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	B8	Temporary bridge or arch structures in known Ouleyan Pygmy Perch habitat shall be used if the crossing is intended to be in place for more than 3 months.	NA	NA		6, 7, 8, 9	NA	5b, 5c	This requirement is addressed in Pacific Complete CEMP (Appendix B2 - Construction Flora and Fauna Management Plan, Appendix J Threatened Fish Management Plan). Pacific Complete will approve Contractor EMPs and EWMSs and apply RMS/PC specifications to ensure compliance with this CoA. Design aspects would be addressed during detailed design.
	B9	Where temporary crossings in known Ouleyan Pygmy Perch habitat are proposed with culverts or pipes, the Applicant shall, in consultation with DPI (Fisheries): (a) determine the size of the culverts or pipes to facilitate fish passage, and (b) ensure that the culverts or pipes will not wash into the waterway in periods of high flows. Temporary culvert or pipe crossings shall be removed prior to the start of the Ouleyan Pygmy Perch spawning period.	NA	NA		6, 7, 8, 9	NA	5b, 5c	This requirement is addressed in Pacific Complete CEMP (Appendix B2 - Construction Flora and Fauna Management Plan). Pacific Complete will approve Contractor EMPs and EWMSs and apply RMS/PC specifications to ensure compliance with this CoA. Design aspects would be addressed during detailed design.
CONNECTIVITY									
	B10	Subject to conditions B11 and B12, the Applicant shall revise the Connectivity Strategy identified in the documents listed in condition A2(e), based on the outcomes of the Mitigation Framework required by condition D1. • The requirements for the Connectivity Strategy are contained in condition D2.	All	NA	Connectivity strategy does not apply to soft soil works as placement of surcharge material for connectivity structures. Connectivity strategy for these areas will be developed as part of detailed design.	All	NA	All	Connectivity strategy does not apply to soft soils works (waves) as placement of surcharge material will not constrain the outcome for connectivity structures. Connectivity strategies will be prepared as part of the detailed design for S3 to S11. Wave 5a, 5b, and 5c - with respect to fauna connectivity the early enabling construction works will not prevent connectivity solutions.
	B11	As part of detailed design, the Applicant shall further investigate design refinements for fauna crossings and associated exclusionary measures, between station 41 500 and station 60 000 to improve connectivity for the Coastal Emu, and in the proximity of station 96 000 and between station 137 800 and station 159 700 to improve connectivity for the Koala. Any changes to fauna crossings and exclusionary measures shall be included in the Connectivity Strategy required under condition D2.	NA	NA	Wave 1 and 3 soft soil works occur partly within change 41 500 and 80 000 however fauna crossings are not part of this early construction activity.	3, 4, 5, 9, 10, 11	NA	5a, 5c	Investigation of design refinements will be undertaken during detailed design. Connectivity strategies will be prepared as part of the detailed design for S3 to S11.
	B12	Investigations into the location and design of connectivity structures, including but not limited to those identified in the documents listed under conditions A2(c) and A2(d), shall be undertaken during detailed design with the input of a suitably qualified and experienced ecologist. The investigations will be undertaken in consultation with the GERRFA, DPI (Fisheries) and DOE and include workshops and on-site ground verification. The results of these investigations shall be detailed in the Connectivity Strategy required under condition D2.	All	NA	Connectivity structures are not included in Wave 1 and 3 soft soil construction activity.	All	NA	NA	To be addressed during detailed design. Connectivity strategies will be prepared as part of the detailed design for S3 to S11.
	B13	The Applicant shall minimise riparian vegetation clearing during construction and undertake a targeted revegetation program post construction to restore in-stream and riparian habitat to at least the pre-construction condition or better, unless otherwise agreed by DPI (Fisheries). All areas disturbed by the SSI that are in the vicinity of known Ouleyan Pygmy Perch habitat waterways shall be stabilised prior to the Ouleyan Pygmy Perch spawning period.	All	All		All	All	All	This requirement is addressed in Pacific Complete CEMP (Appendix B2 - Construction Flora and Fauna Management Plan, Appendix J Threatened Fish Management Plan). Pacific Complete will approve Contractor EMPs and EWMSs and apply RMS/PC specifications to ensure compliance with this CoA.
CONSTRUCTION NOISE									
	B14	The SSI shall be constructed with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures shall be implemented and 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. Note: • The Interim Construction Noise Guideline identifies particularly annoying activities that require the addition of 5d(B)(A) to the predicted level before comparing to the construction Noise Management Level.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 7 Environmental Control Measures) Pacific Complete will approve Contractor EMPs and EWMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B15	Construction activities associated with the SSI shall be undertaken during the following standard construction hours: (a) 7:00am to 6:00pm Monday to Friday, inclusive; and (b) 8:00am to 5:00pm Saturday; and (c) at no time on Sunday or public holidays.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 7 Environmental Control Measures and Appendix C Out of Hours Work Procedure). Pacific Complete will approve Contractor EMPs and EWMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).

Category	Part	Requirement	Section 1 and 2 (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
		Construction works outside the standard construction hours may be undertaken in the following circumstances: (a) no more than 5 dB(A) above rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and (b) for the delivery of materials required outside the standard construction hours by the NSW Police Force 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) between 6.00am and 7.00am and 6.00pm and 7.00pm Monday to Friday (except public holidays) in sparsely populated areas (these construction hours may be reviewed and/or revoked by the Secretary in consultation with the EPA in the case of unresolved noise complaints), or (e) low noise impact activities and work between: (i) 6.00am and 7.00am Monday to Friday; and/or (ii) 6.00am and 7.00pm Monday to Friday; or (f) works approved through an EPL; or (g) works approved by a Construction Environment Management Plan or Construction Noise and Vibration Management Plan for the SSI.	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Appendix C Out of Hours Work Procedure). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B16	Construction activities which cannot be undertaken during the standard construction hours for residential or other justifiable reasons (Out of Hours work) may be permitted outside the standard construction hours if the Applicant provides a Construction Environment Management Plan for the SSI, where that plan provides a process for the consideration of Out of Hours work. This consideration includes: (a) process for obtaining the Environmental Representative's approval for Out of Hours work; (b) details of the nature and need for activities to be conducted during the varied construction hours; (c) justifies the varied construction hours in accordance with the Interim Construction Noise Guideline (DECC, 2009). (d) provides evidence that consultation with potentially affected receivers and notification of the relevant council has been undertaken, that the issues raised have been addressed and all feasible and reasonable mitigation measures have been put in place; and (e) provides evidence of consultation with the EPA on the proposed variation in standard construction hours.	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Appendix C Out of Hours Work Procedure). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B17	Construction activities resulting in impulsive or tonal noise emission (such as rock breaking, rock hammering, pile driving) shall only be undertaken: (a) between the hours of 8.00am to 5.00pm Monday to Friday; (b) between the hours of 8.00am to 1.00pm Saturday; and (c) in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block. For the purposes of this condition, "continuous" includes any period during which there is less than a one hour respite between ceasing and recommencing any of the work, the subject of this condition. The works subject to this condition may be undertaken in sparsely populated areas within the standard construction hours.	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 7 Environmental Control Measures). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B18	The Applicant shall, where feasible and reasonable, limit high noise impact activities and work to the mid-morning and mid-afternoon periods, except in sparsely populated areas.	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 7 Environmental Control Measures). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B19	The Applicant shall, where feasible and reasonable, limit high noise impact activities and work to the mid-morning and mid-afternoon periods, except in sparsely populated areas.	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 7 Environmental Control Measures). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
CONSTRUCTION VIBRATION								
	B20	The SSI shall be constructed with the aim of achieving the following construction vibration goals: (a) for structural damage to heritage structures, the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration - Part 3 Effects of vibration on structures; (b) for damage to other buildings and/or structures, the vibration limits set out in the British Standard BS 7385-1:1999 - Evaluation and measurement of vibration in buildings - Guide for measurement of vibration and evaluation of their effects on buildings (and referenced in Australian Standard 2187.2 - 2006 Explosives - Storage and use - Use of explosives); and (c) for human exposure, the acceptable vibration values set out in Assessing Vibration - A Technical Guideline (Department of Environment and Conservation, 2005)	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 8 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B21	Blasting associated with the SSI shall only be undertaken during the following hours: (a) 9.00am to 5.00pm, Monday to Friday, inclusive; (b) 8.00am to 1.00pm on Saturday; and (c) at no time on Sunday or public holidays. Blasting outside the above hours and in accordance with the standard construction hours where (i) the approved construction hours are not applicable, or (ii) the approved construction hours are not applicable, shall be undertaken in accordance with the standard construction hours. This condition does not apply in the event of a direction from the NSW Police Force or other relevant authority for safety or emergency reasons to avoid loss of life, property loss and/or to prevent environmental harm.	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 8 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B22	The Applicant shall ensure that Ambient overpressure generated by blasting associated with the SSI shall not exceed the criteria specified in Table 1 when measured at the most affected residence or other sensitive receiver. * A sensitive site includes houses and low rise residential buildings, theatres, schools and other similar buildings occupied by people.	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 7 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs and EVMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).

Category	Part	Requirement	Section 1 and 2 (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
B23	The Applicant shall ensure that Ground Vibration generated by blasting associated with the SSI shall not exceed the criteria specified in Table 2 and Table 3 when measured at the most affected residence or other sensitive receiver Note • a sensitive site includes houses and low rise residential buildings, theatres, schools and other similar buildings occupied by people.	<p>The blasting criteria specified in conditions B22 and/or B23 may be increased where the Applicant has obtained the written agreement of the relevant landowner to increase the criteria. In obtaining the agreement the Applicant shall make available to the landowner:</p> <p>(a) details of the proposed blasting program and justification for the proposed increase to blasting criteria including alternatives considered (where relevant);</p> <p>(b) 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; and</p> <p>(c) the blast management and mitigation measures, and the procedures to be implemented to monitor blasting impacts.</p> <p>The Applicant shall provide a copy of the written agreement to the Secretary and the EPA, including details of the consultation undertaken (with clear identification of proposed blast limits and potential property impacts) prior to commencing blasting at the increased limits.</p> <p>(d) Any agreement reached may be subject to the application of this condition.</p> <p>(e) The Applicant shall not exceed the criteria specified in conditions B22 and/or B23 for future blasting at that receiver.</p> <p>(f) The blasting limit agreed to under any agreement for an occupied residential building can at no time exceed a maximum Peak Particle Velocity vibration level of 25 mm/s or maximum Airblast Overpressure level of 125 dBL.</p>	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 7 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs and EWMs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).	
B24	Wherever feasible and reasonable, piling activities shall be undertaken using quieter construction methods, such as bored piles or vibrated piles rather than impact or percussion piling methods.	<p>The blasting criteria specified in conditions B22 and/or B23 may be increased where the Applicant has obtained the written agreement of the relevant landowner to increase the criteria. In obtaining the agreement the Applicant shall make available to the landowner:</p> <p>(a) details of the proposed blasting program and justification for the proposed increase to blasting criteria including alternatives considered (where relevant);</p> <p>(b) 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; and</p> <p>(c) the blast management and mitigation measures, and the procedures to be implemented to monitor blasting impacts.</p> <p>The Applicant shall provide a copy of the written agreement to the Secretary and the EPA, including details of the consultation undertaken (with clear identification of proposed blast limits and potential property impacts) prior to commencing blasting at the increased limits.</p> <p>(d) Any agreement reached may be subject to the application of this condition.</p> <p>(e) The Applicant shall not exceed the criteria specified in conditions B22 and/or B23 for future blasting at that receiver.</p> <p>(f) The blasting limit agreed to under any agreement for an occupied residential building can at no time exceed a maximum Peak Particle Velocity vibration level of 25 mm/s or maximum Airblast Overpressure level of 125 dBL.</p>	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 7 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs and EWMs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).	
B25	Prior to the use of this dynamic compaction construction method, the Applicant shall undertake an assessment of vibration generated by dynamic compaction on nearby sensitive receivers. Feasible and reasonable mitigation measures shall be implemented to minimise vibration impacts.	<p>The blasting criteria specified in conditions B22 and/or B23 may be increased where the Applicant has obtained the written agreement of the relevant landowner to increase the criteria. In obtaining the agreement the Applicant shall make available to the landowner:</p> <p>(a) details of the proposed blasting program and justification for the proposed increase to blasting criteria including alternatives considered (where relevant);</p> <p>(b) 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; and</p> <p>(c) the blast management and mitigation measures, and the procedures to be implemented to monitor blasting impacts.</p> <p>The Applicant shall provide a copy of the written agreement to the Secretary and the EPA, including details of the consultation undertaken (with clear identification of proposed blast limits and potential property impacts) prior to commencing blasting at the increased limits.</p> <p>(d) Any agreement reached may be subject to the application of this condition.</p> <p>(e) The Applicant shall not exceed the criteria specified in conditions B22 and/or B23 for future blasting at that receiver.</p> <p>(f) The blasting limit agreed to under any agreement for an occupied residential building can at no time exceed a maximum Peak Particle Velocity vibration level of 25 mm/s or maximum Airblast Overpressure level of 125 dBL.</p>	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 7 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs and EWMs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).	
B26	During construction, affected educational institutions shall be consulted and reasonable steps taken to ensure that noise generating construction works in the vicinity of affected buildings are not undertaken during examination periods where practicable, unless other reasonable arrangements to the affected institutions are made at no cost to the affected institution.	<p>The blasting criteria specified in conditions B22 and/or B23 may be increased where the Applicant has obtained the written agreement of the relevant landowner to increase the criteria. In obtaining the agreement the Applicant shall make available to the landowner:</p> <p>(a) details of the proposed blasting program and justification for the proposed increase to blasting criteria including alternatives considered (where relevant);</p> <p>(b) 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; and</p> <p>(c) the blast management and mitigation measures, and the procedures to be implemented to monitor blasting impacts.</p> <p>The Applicant shall provide a copy of the written agreement to the Secretary and the EPA, including details of the consultation undertaken (with clear identification of proposed blast limits and potential property impacts) prior to commencing blasting at the increased limits.</p> <p>(d) Any agreement reached may be subject to the application of this condition.</p> <p>(e) The Applicant shall not exceed the criteria specified in conditions B22 and/or B23 for future blasting at that receiver.</p> <p>(f) The blasting limit agreed to under any agreement for an occupied residential building can at no time exceed a maximum Peak Particle Velocity vibration level of 25 mm/s or maximum Airblast Overpressure level of 125 dBL.</p>	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 7 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs and EWMs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).	
B27			NA	Harwood Primary School is located within 300m of the Wave 1 soft soil works area	4, 5, 8, 9	1, 3, 4	5c	This requirement is addressed in the Pacific Complete CEMP (Appendix B3 - Construction Noise and Vibration Management Plan, Section 6.5 Construction Vibration and Blasting Assessment, Section 7 Environmental Control Measures and Appendix B Blast Management Procedure). Pacific Complete will approve Contractor EMPs, EWMs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2). Harwood Primary School – 300m from Wave 1 soft soil works and 170m from the project alignment. Woodburn Primary School – 1.25km from the project alignment and Wave 4 Meadan High School – 640m from the project alignment and Wave 3 Broadwater Public School – 630m from the project alignment. Note: Chapter 15 of the EIS identifies schools in close proximity to the project. These schools were used as affected educational institutions. If additional institutions are identified this measures will be applied.
OPERATIONAL NOISE								
B28	The SSI shall be designed and operated with the objective of not exceeding the road noise criteria outlined in the NSW Road Noise Policy (DECCW, 2011).		All	Wave 1, 2 and 3 soft soil works do not involve the design or operation of a completed section of highway.	All	NA	NA	To be addressed during detailed design. Note that soft soil works do not involve the design or operation of a completed section of highway therefore do not include operational noise mitigation measures.

Category	Part	Requirement	Section 1 and 2 (Wave 1, 2 & 3)	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	B29	Where feasible and reasonable, operational noise mitigation measures shall be implemented at the start of construction (or at other times during construction) to minimise construction noise impacts.	All	All	NA	NA	To be addressed during detailed design. Note that soft soil works do not include a completed section of highway therefore do not include operational noise mitigation measures.
WATER QUALITY							
	B30	Except as may be expressly provided by an EPL, the Applicant shall comply with section 120 of the Protection of the Environment Operations Act 1997.	All	All	All	All	Pacific Complete has obtained an Environment Protection Licence (EPL) for S3-S11 (No. 20173, 29) issued by the EPA. The EPL includes conditions of approval for contractors (Wave 1 and Wave 2 Soft Soil Works) directly procured by RMS. This requirement is addressed in the Pacific Complete CEMP (Appendix B4 Construction Soil and Water Quality Management Plan). Pacific Complete will approve Contractor EMPs and EWMSs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
HYDROLOGY AND FLOODING							
	B31	The hydrological and flooding impacts resulting from the SSI are to be assessed during detailed design against the 'Design Objectives for Flood Management' described in Section 2.1 of the EIS Working Paper – Hydrology and Flooding. This shall include assessment against the 'Flood Management Objectives' and the 'Other Flood Impact Considerations' as well as the other requirements of this section of the EIS. The hydrology assessment shall include the refinement of or development of new flood models (where required) for the 14 catchments investigated during the EIS. These models shall be operated for the same design floods considered in the EIS, as well as the 2000 Year ARI and the probable maximum flood (PMF) design events.	All	NA	NA	NA	Flood modelling (final models) will be developed as part of detailed design. Soft soil works do not involve the design or operation of a completed section of highway. Wave 5a, 5b and 5c don't involve the design or operation of a completed section of highway. The final flood model will be developed as part of the detailed design.
	B32	For the Corindi, Shark Creek and Farrows Flat areas, flooding and hydrological impacts resulting from existing highway infrastructure shall be assessed. As part of this assessment, flood models shall assess the impacts of recent highway upgrades in these areas. Where the existing highway in these areas has resulted in adverse flooding and/or hydrological impacts, opportunities to reduce the quantum of those impacts shall be considered during the detailed design of the SSI, where feasible and reasonable.	All	All	1, 3	4, 5	Corindi Creek is within Section 1. Flood modelling (final models) will be developed as part of detailed design. Wave 5a, 5b and 5c don't involve the design or operation of a completed section of highway. The final flood model will be developed as part of the detailed design.
	B33	Where the objectives and considerations referred to in condition B31 cannot be complied with, the Applicant shall: (a) achieve compliance through modified embankment or drainage design. This might include new or duplicated drainage structures designed to minimise afflux and other impacts to waterways that traverse the road alignment, to the greatest extent practicable; or (b) achieve an acceptable level of mitigation of impacts through alternative design measures (e.g. raised access tracks) in consultation with the affected land-owner; or (c) reach agreement with affected landowners on impacts to property.	All	All	All	All	Noted.
CONSTRUCTION SOIL AND WATER MANAGEMENT							
	B34	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 Soil and Construction Vols 2A and 2B Main Road Construction (Department of Environment and Climate Change, 2008) shall be employed during the construction of the SSI to minimise soil erosion and the discharge of sediment and other pollutants to land and/or water.	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B4 Construction Soil and Water Quality Management Plan, Chapter 6 Environmental Control Measures). Pacific Complete will approve Contractor EMPs, EWMSs and ESCPAs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B35	Where available, and of appropriate chemical and biological quality, stormwater, recycled water or other water sources shall be used, where feasible and reasonable, in preference to potable water for construction activities, including concrete mixing and dust control.	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B4 Construction Soil and Water Quality Management Plan, Chapter 6 Environmental Control Measures). Pacific Complete will approve Contractor EMPs, EWMSs and ESCPAs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
LAND CONTAMINATION							
	B36	All surface water and groundwater shall be adequately treated as far as is practicable, prior to entering the stormwater system to protect the receiving water source quality.	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B4 Construction Soil and Water Quality Management Plan, Chapter 6 Environmental Control Measures). Pacific Complete will approve Contractor EMPs, EWMSs and ESCPAs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment	
		<p>Prior to the commencement of site preparation and excavation activities, or as otherwise agreed by the Secretary, in areas identified as having a moderate to high risk of contamination, a site audit shall be carried out by a suitably accredited contaminated site auditor. A Site Audit Report is to be prepared by the site auditor detailing the outcomes of Phase 2 contamination investigations within these areas. The Site Audit Report shall detail, where relevant, whether the land is suitable (for the intended land use) or can be made suitable through remediation.</p> <p>Where the investigations identify that the site is suitable for the intended operations and that there is no need for a specific remediation strategy, measures to identify, handle and manage potential contaminated soils, materials and groundwater shall be identified in the Site Audit Report and incorporated into the Construction Environmental Management Plan. Where the investigations identify that the site is suitable for the intended operations and that a remediation strategy is required, the Site Audit Report shall include a remediation strategy for addressing the site contamination, and how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater, and be incorporated into the Construction Environmental Management Plan.</p> <p>Where remediation is required, a Site Audit Statement(s) shall be prepared verifying that the site has been remediated to a standard consistent with the intended land use.</p> <p>Note</p> <ul style="list-style-type: none"> • Terms used in this condition have the same meaning as in the Contaminated Land Management Act 1997. 	NA	All	Contamination investigations have not identified any moderate to high risk areas within the section 1 and 2 project areas. Wave 3 soft soil works will impact on a potential contaminated site at the Mills Transport depot.	All	All	Potentially contaminated sites associated with the project will be reviewed during detailed design to determine those sites that will require a phase 2 contamination investigation. The results of phase 2 contamination investigations will determine whether the sites are suitable or unsuitable for their intended use. For those sites found to be unsuitable for their intended use, appropriate remediation measures, including remediation strategies will be developed and implemented.		
WATERCOURSE CROSSINGS										
	B37	<p>All crossings of known Giant Barred Frog habitat or waterways with the confirmed presence of the species shall be designed and constructed with bridges. Should the Applicant construct a crossing structure other than a bridge, the Applicant shall demonstrate reasonable connectivity for the Giant Barred Frog upstream and downstream of that crossing for a monitoring period of three consecutive years, or such other period agreed by the Secretary in consultation with the GEN-EPA.</p> <p>Demonstration of maintained habitat connectivity shall:</p> <p>(a) be based on baseline data that confirms the presence, nature and distribution of Giant Barred Frog population using a survey methodology that has been endorsed by the OCH-EPA, and detailed in the Mitigation Framework required in condition D1, and an assessment of the connectivity of the crossing site prior to commencement, or, if adequate baseline data is not provided to the satisfaction of the Secretary, be based on the assumption of occurrence of a population on either side of the crossing site, and</p> <p>(b) be based on evidence that the Giant Barred Frog has remained present upstream and downstream of the crossing site for the monitoring period, with periodic monitoring to occur at least biannually. Should the results of any instance of periodic monitoring record an absence of the Giant Barred Frog, the Applicant shall be required to undertake baseline data collection for the SSI. The SSI will be deemed as the completion of the baseline data collection and the Applicant shall be required to submit a report to the Secretary not later than 30 days of the completion of the baseline data collection. The Secretary may determine that the change is not a result of the SSI, the SSI will be deemed as the cause of the impact and the Applicant shall offset the loss of the habitat in accordance with this approval.</p> <p>Unless otherwise agreed by DPI (Fisheries), all crossings of Class 1 watercourses in known Oxleyan Pygmy Perch habitat shall be designed and constructed with a bridge or arch structure and, where feasible and reasonable, no supporting structures shall be installed within affected waterways.</p>	All	NA	Soft soil works will only have temporary crossings.	All	NA	All	NA	To be addressed during detailed design. Detailed design lot reports are required to detail how the design complies with the relevant environmental design criteria Pacific. Complete will review detailed design lot reports to ensure compliance with relevant CoAs. Note that soft soil works will only have temporary crossings. Wave 5a, 5b and 5c early enabling works will only have temporary crossings.
	B39	<p>Where any crossing of Class 1 watercourses in known Oxleyan Pygmy Perch habitat shall be designed and constructed with a bridge or arch structure and, where feasible and reasonable, no supporting structures shall be installed within affected waterways.</p>	NA	NA		6, 7, 8, 9	NA	5b, 5c	To be addressed during detailed design. Detailed design lot reports are required to detail how the design complies with the relevant environmental design criteria Pacific. Complete will review detailed design lot reports to ensure compliance with relevant CoAs.	
	B40	<p>Where any crossing of Class 1 watercourses in known Oxleyan Pygmy Perch habitat shall be designed and constructed with a bridge or arch structure and, where feasible and reasonable, no supporting structures shall be installed within affected waterways.</p>	NA	NA		6, 7, 8, 9	NA	5b, 5c	To be addressed during detailed design. Detailed design lot reports are required to detail how the design complies with the relevant environmental design criteria Pacific. Complete will review detailed design lot reports to ensure compliance with relevant CoAs.	
	B41	<p>Where an Oxleyan Pygmy Perch habitat waterway is realigned or its stream profile is changed, or an in-stream structure is installed in the waterway (both permanent and temporary construction structures), the Applicant shall ensure that the final design of that waterway does not result in water velocities exceeding 0.4 metres per second under normal flow conditions. The Applicant shall determine normal flow conditions to the satisfaction of DPI (Fisheries) through baseline monitoring of known Oxleyan Pygmy Perch habitat waterways.</p>	NA	NA		6, 7, 8, 9	NA	5b, 5c	To be addressed during detailed design. Detailed design lot reports are required to detail how the design complies with the relevant environmental design criteria Pacific. Complete will review detailed design lot reports to ensure compliance with relevant CoAs.	
	B42	<p>The Applicant shall ensure that the SSI does not increase the silt flux of waterways with known Oxleyan Pygmy Perch habitat by more than the relevant flood management objective in the documents referred to in condition A.2 for flood events up to the 1 in 100 year event.</p>	NA	NA		6, 7, 8, 9	NA	5b, 5c	Wave 5a, 5b and 5c don't involve the design or construction of structures. The final flood model will be developed as part of the detailed design.	
	B43	<p>The Applicant shall investigate the removal of the proposed embankment at station 145.2 and its replacement with an extension of the Richmond River bridge. The investigation shall consider issues around hydrology and flooding (including measuring the flooding objectives for bridges), constructability, cost, funding arrangements and visual impacts. The investigation shall include consideration of other relevant environmental impacts (noise, heritage, biodiversity, traffic etc.) and consider any alternative options. A copy of the investigation shall be submitted to the Secretary prior to the commencement of any bridge approach or embankment works in the vicinity.</p>	NA	NA		10	NA	NA	To be addressed during detailed design. Detailed design lot reports are required to detail how the design complies with the relevant environmental design criteria Pacific. Complete will review detailed design lot reports to ensure compliance with relevant CoAs.	
ABORIGINAL HERITAGE										

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	B44	<p>Prior to the commencement of construction affecting PAD site WWC Dirty Creek 1 and ancillary facilities at Section 4, Site 1, Section 4, Site 3, Section 7, Site 1, Section 10, Site 1a, and Section 11, Site 1a the Applicant shall:</p> <p>(a) undertake field investigation, and where required, an archaeological investigation of the site(s) using a methodology generally consistent with testing undertaken for the Environmental Impact Statement, and prepared in consultation with the OEH-EPA (Aboriginal heritage) and the Registered Aboriginal Parties, and</p> <p>(b) prepare a report on the results of the archaeological investigation, including recommendations (such as further archaeological work) in consultation with the OEH-EPA and to the satisfaction of the Secretary, and shall include, but not necessarily be limited to:</p> <p>(i) details of any objects of moderate to high significance are found to be present;</p> <p>(ii) recommendations for further investigations under condition B45 where impacts cannot be avoided; and</p> <p>(iii) details of management and mitigation measures to ensure there are no additional impacts due to pre-construction and construction activities; and</p> <p>(c) submit the report to the Registered Aboriginal Parties, the OEH-EPA (Aboriginal heritage) and the Secretary.</p> <p>Prior to the commencement of construction activities affecting Aboriginal sites WWC39, WWC46, Tyndale 2 site, RZMA, Site 11, EZ22, WWC37, Dualetem site (New Italy 1), The Gap Road 1, WX21 Site 8, Site 1, Site 3 and Site 4 and sites recommended by condition B44 for further investigation, the Applicant shall:</p> <p>(a) develop a detailed salvage strategy, prepared in consultation with the OEH-EPA (Aboriginal heritage) and the Registered Aboriginal Parties, and</p> <p>(b) undertake any further archaeological excavation works recommended by the results of the detailed salvage strategy.</p> <p>Within twelve months of completing the above work, unless otherwise agreed by the Secretary, the Applicant shall prepare a report containing the findings of the excavations, including artefact analysis and Aboriginal Site Impacts Recording Forms (ASIR), and the identification of final storage location for all Aboriginal objects recovered (testing and salvage), in consultation with the Registered Aboriginal Parties, the OEH-EPA (Aboriginal heritage) and the Secretary.</p> <p>Note:</p> <ul style="list-style-type: none"> Where archaeological testing has occurred as part of the environmental assessment and the results are included in the documents listed in condition A2, the sites listed shall be included in the final report prepared under condition B45. 	1	All	Pad sites identified in B44 do not occur in section 2	4, 7, 10, 11	NA	5c	As per RMS salvage program of works. Note that PAD site WWC Dirty Creek 1 does not occur within sections 3 to 11.
	B45	<p>Prior to the commencement of construction activities affecting Aboriginal sites WWC39, WWC46, Tyndale 2 site, RZMA, Site 11, EZ22, WWC37, Dualetem site (New Italy 1), The Gap Road 1, WX21 Site 8, Site 1, Site 3 and Site 4 and sites recommended by condition B44 for further investigation, the Applicant shall:</p> <p>(a) develop a detailed salvage strategy, prepared in consultation with the OEH-EPA (Aboriginal heritage) and the Registered Aboriginal Parties, and</p> <p>(b) undertake any further archaeological excavation works recommended by the results of the detailed salvage strategy.</p> <p>Within twelve months of completing the above work, unless otherwise agreed by the Secretary, the Applicant shall prepare a report containing the findings of the excavations, including artefact analysis and Aboriginal Site Impacts Recording Forms (ASIR), and the identification of final storage location for all Aboriginal objects recovered (testing and salvage), in consultation with the Registered Aboriginal Parties, the OEH-EPA (Aboriginal heritage) and the Secretary.</p> <p>Note:</p> <ul style="list-style-type: none"> Where archaeological testing has occurred as part of the environmental assessment and the results are included in the documents listed in condition A2, the sites listed shall be included in the final report prepared under condition B45. 	1	All	WWC39 and WWC46 are within the Section 1 project area	3, 4, 7, 8, 9, 10, 11	5a, 5c	As per RMS salvage program of works. Note that Aboriginal sites WWC39, WWC37 and WWC46 do not occur within sections 3 to 11.	
	B46	<p>Identified impacts to Aboriginal heritage, shall be minimised to the greatest extent practicable through both detailed design and construction, particularly with regard to the Aboriginal sites Gibbas Jali and the Melmo site, and the Aboriginal culturally significant places identified as Corral Massacres (section 1), Halfway Creek Ceremonial Site, Bruggan and Mindi spiritual sites (sections 1, 2, 5 and 10), Pillar Valley men's and women's sites, Place H, Place I and Place J. Where impacts are unavoidable, works shall be undertaken in accordance with the strategy outlined in the Construction Heritage Management Plan.</p>	All	All	Applicable to minimising Aboriginal heritage impacts.	3, 8, 9, 10, 11	NA	5a, 5c	To be addressed during detailed design. Detailed design lot reports are required to detail how the design complies with the relevant environmental design criteria Pacific Complete will review detailed design lot reports to ensure compliance with relevant CoAs. This requirement is also addressed in the Pacific Complete CEMP (Appendix B5 Construction Heritage Management Plan, Chapter 7 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs, EWMs and ESCPs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B47	<p>The Applicant shall not destroy, modify or otherwise physically affect Aboriginal sites WWC5, WWC7, WWC28, WWC115, WWC139, Tyndale 1, Scarred/engraved Tree (section 7), C3Z2, Saw Pit Creek (New Italy), Gibbas Jali 2, Cooks Hill, Rotoplaton, Law PAD, Law Scarred Tree, MST 3, C21, Malmo Scarred Tree 4, MST 2, MST 1, Rudgely Scarred Tree or Sarazza 1.</p>	All	NA		4, 7, 8, 9, 10, 11	NA	5c	To be addressed during detailed design. Detailed design lot reports are required to detail how the design complies with the relevant environmental design criteria Pacific Complete will review detailed design lot reports to ensure compliance with relevant CoAs. This requirement is also addressed in the Pacific Complete CEMP (Appendix B5 Construction Heritage Management Plan, Chapter 7 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs, EWMs and ESCPs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
NON - ABORIGINAL HERITAGE									
	B48	<p>Prior to the commencement of construction affecting the Convent (12-14 Rivers Street), Harwood (Item 21), the Applicant shall carry out further historical research and investigate the options for relocation of the convent building, in consultation with the Department of Planning and Environment and the OEH (Heritage Division), to the satisfaction of the Secretary.</p>	NA	NA		5	1	NA	RMS / Pacific Complete have undertaken a range of community and stakeholder consultation with respect to the option of relocating the Harwood Convent. Community consultations were provided in advance of a "Drop-In" Session and consisted of website update, media release, letters to key stakeholder/community groups. The Drop-In Session was held to discuss the convent with the RMS / Pacific Complete project team on 28 January 2016 (4pm-7pm) at the Harwood Community Hall. Expressions of interest were requested to be lodged in writing by 17 February 2016. A public tender is currently in progress for the relocation of the convent. The tender will close on 4 July 2016.
	B49	<p>Prior to the commencement of construction in proximity to the following heritage items: 21, 23 (Roler's well and orchard), 26, 28, 29, and 43, the Applicant shall complete all archival recordings, including photographic recording of these heritage items, unless otherwise agreed by the Secretary.</p> <p>The archival recording shall be undertaken by an experienced heritage consultant, in accordance with the Guidelines issued by the Heritage Council of NSW. The areas containing these items shall be clearly defined and any other items identified during the completion of the archival work shall be clearly defined and recorded. The consultant shall also complete the archival work in consultation with the local Aboriginal Society in the relevant local government area(s).</p>	NA	NA		5, 7, 9, 10	NA	5c	RMS engaged Jacobs to undertake the archival work including photographic recordings of the specified heritage items. The work has been completed and reports will be submitted relevant agencies.

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	B50	<p>Prior to construction affecting the following heritage items: 7, 23 (Roder's wall and orchard) and 28, the Applicant shall carry out further historical and physical archaeological investigations of these heritage items, in consultation with the Department of Planning and Environment and the OEH (Heritage Division), to the satisfaction of the Secretary. These investigations shall:</p> <p>(a) include archaeological investigations and excavation in accordance with the Heritage Council's Archaeological Assessments Guidelines (1999) using a methodology prepared, in consultation with the Department of Planning and Environment, and approved by the Secretary. The nomination for the Excavation Director shall demonstrate ability to comply with the Heritage Council's Criteria for the Assessment of Excavation Directors (July 2011);</p> <p>(b) provide for the detailed analysis of any heritage items discovered during the investigations;</p> <p>(c) include management options for these heritage items (including options for relocation and display); and</p> <p>(d) if the findings of the investigations are significant, provide for the preparation and implementation of a heritage interpretation plan.</p> <p>Within 12 months of completing the above work, unless otherwise agreed by the Secretary, the Applicant shall prepare a report containing the findings of the excavations, including artefact analysis, and the identification of a final repository for finds, prepared in consultation with the OEH (Heritage Division) and to the satisfaction of the Secretary. The report shall be submitted to the Department of Planning and Environment, the Heritage Council of NSW, and the local library and the local Historical Society in the relevant local government area(s).</p> <p>Note * Where archaeological testing has occurred as part of the environmental impact assessment for the SSI and the results are included in the documents listed in condition A2, the sites tested shall still form part of the methodology and final report prepared for the non-Aboriginal archaeological investigation program.</p>	2	All	Item 7 (Service Station Complex, Halfway Creek) is within the Section 2 project area	7, 9	NA	5c	RMS engaged Jacobs to undertake the required pre-construction heritage works. Field works completed. Analysis and reporting being finalised.
	B51	<p>The Applicant shall not destroy, modify or otherwise physically affect the heritage items listed in Table S-1, Historic (non-Aboriginal) Heritage Assessment Working Paper and Table S-38, Submissions/Preferred Infrastructure Report (RMS, November 2015).</p>	1	NA	Post office Lane, backyards, Comedi Beach is within the Section 1 project area	5, 7, 10	NA	5c	To be addressed during detailed design. Detailed design will include archaeological investigations and design controls with the relevant environmental design criteria. Pacific Complete will review detailed design for reports to ensure compliance with relevant CoAs. This requirement is also addressed in the Pacific Complete CEMP (Appendix B5 Construction Heritage Management Plan, Chapter 7 Environmental Mitigation and Management Measures). Pacific Complete will ensure Contractor EMPs, EWMs and ESCPs to comply with the CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
HERITAGE - GENERAL									
	B52	<p>Identified impacts to heritage sites shall be minimised where feasible and reasonable through both detailed design and construction, particularly with regard to the historic site known as the North Coast Railway Branch Trainway, Glenugie. Where impacts are unavoidable, works shall be undertaken in accordance with the actions to manage heritage construction impacts required by condition D25(d) and under the guidance of an appropriately qualified heritage specialist.</p>	2	NA		NA	NA	NA	This heritage item occurs in Section 2, therefore will not be impacted.
	B53	<p>This approval does not allow the Applicant to destroy, modify or otherwise physically affect human remains as part of the SSI.</p>	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B5 Construction Heritage Management Plan, Chapter 7 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs, EWMs, ESCPs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B54	<p>The Applicant shall not destroy, modify or otherwise physically affect any heritage items outside the SSI footprint, unless otherwise agreed by the Secretary in accordance with condition B74-BB54A.</p>	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B5 Construction Heritage Management Plan, Chapter 7 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs, EWMs, ESCPs to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B54A	<p>The Applicant may undertake archaeological investigations at sites outside the SSI boundary where the following works associated with the construction of the highway are proposed:</p> <ul style="list-style-type: none"> (a) utility or services or (b) access and service roads and driveways, or (c) or similar works required for the project that are located within 5 metres of the SSI boundary (with the exception of drainage works in flood prone areas where such activities can be investigated within 20 metres of the SSI boundary) <p>These investigations are permitted where this is required to assess the potential Aboriginal and non-Aboriginal archaeological impacts of the ancillary facility or other works on previously unidentified heritage sites, provided investigations undertaken under this condition shall be consistent with the requirements in condition B44 for Aboriginal Heritage and condition B50 for non-Aboriginal Heritage and with the Construction Heritage Management Plan or a methodology prepared to the satisfaction of the Secretary in consultation with OEH and in the results of any relevant archaeological investigations undertaken under this condition shall be consistent with the reporting requirements of condition B45 for Aboriginal heritage and condition B50 for non-Aboriginal heritage and for ancillary sites, as described in the assessment of the ancillary facility required under conditions B74 and B75.</p>			Condition introduced in Mod 2 post approval of Stage 1 Staging Report	All	All	All	Noted
TRANSPORT AND ACCESS									
	B55	<p>The measures to protect heritage sites near or adjacent to the SSI during construction shall be detailed in the Construction Heritage Management Plan.</p>	All	All		All	All	All	Pacific Complete CEMP including Appendix B5 Construction Heritage Management Plan has been approved (23 October 2015).

Category	Part	Requirement	Section 1 and 2 (Wave 1, 2 & 3)	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	B56	The SSI shall be designed with the objective of minimising adverse changes to existing access arrangements and services for other transport modes and, where feasible and reasonable, facilitate an improved level of access and service to other transport modes comparable to or better than the existing situation.	All	All	NA	NA	To be addressed during detailed design. Detailed design reports are required to detail how the design complies with the relevant environmental design criteria. Pacific Complete will review detailed design reports to ensure compliance with relevant COAs.
	B57	Safe pedestrian and cyclist access through or around worksites shall be maintained during construction. In circumstances where pedestrian and cyclist access is restricted due to construction activities, a satisfactory alternate route shall be provided and signposted.	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B1 Construction Traffic and Access Management Plan, Section 5.4.1 Management of Pedestrians and Section 5.4.2 Management of Contractors). Pacific Complete will approve Contractor EMPS, EWMSs and related traffic management safety plans (or similar) to ensure compliance with this COA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B58	Construction vehicles (including staff vehicles) associated with the SSI shall be managed to: (a) minimise parking or queuing on public roads; (b) minimise idling and queuing in local residential streets where practicable; (c) minimise the use of local roads (through residential streets and town centres) to gain access to construction sites and compounds; and (d) adhere to the nominated haulage routes identified in the Construction Traffic Management Plan.	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B1 Construction Traffic and Access Management Plan, Section 4 Construction Activities Management Plan, Section 4.5.1 Management of Construction Access Points, Section 4.5.2 Construction Site Office and Section 5.5 Construction Vehicle Management). Pacific Complete will approve Contractor EMPS, EWMSs and related traffic management safety plans (or similar) to ensure compliance with this COA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B59	In relation to new or modified local road, parking, pedestrian and cycle infrastructure, the SSI shall, where feasible and reasonable, be designed: (a) in consultation with the relevant council; (b) take into consideration existing and future demand, local safety and traffic network impacts; (c) to meet relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Engineering Practice; and (d) be certified by an appropriately qualified person that has considered the above matters.	All	All	NA	NA	To be addressed during detailed design. Detailed design reports are required to detail how the design complies with the relevant environmental design criteria. Pacific Complete will review detailed design reports to ensure compliance with relevant COAs.
PROPERTY AND LAND USE							
	B60	The Applicant shall ensure that the SSI 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.	All	All	All	All	To be addressed during detailed design.
	B61	Where the visibility of existing agricultural operations are identified to be impacted by the land requirements of the SSI, the Applicant shall, at the request of these landowners, employ a suitably qualified and experienced independent agricultural expert, whose appointment has been endorsed by the Secretary, to assist in identifying alternative farming opportunities for the land, including purchase of other residual land to enable existing agricultural activities to continue.	All	All	All	All	To be addressed during detailed design.
	B62	Unencumbered access to private property shall be maintained during construction unless otherwise agreed with the landowner in advance. A landowner's access that is physically affected by the SSI shall be reinstated to at least an equivalent standard, in consultation with the landowner.	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B1 Construction Traffic and Access Management Plan, Section 4.6.1 Haulage Routes and Section 5.6.6 Removal of Temporary Roadways and Detours). Pacific Complete will approve Contractor EMPS, EWMSs and related traffic management safety plans (or similar) to ensure compliance with this COA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B63	The Applicant shall, in consultation with relevant landowners, construct the SSI in a manner that minimises intrusion and disruption to agricultural operations/activities in surrounding properties (e.g. stock access, access to farm dams, etc.), unless otherwise agreed by the landowner.	All	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B1 Construction Traffic and Access Management Plan, Section 4.6.1 Haulage Routes). Pacific Complete will approve Contractor EMPS, EWMSs and related traffic management safety plans (or similar) to ensure compliance with this COA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
FORESTRY IMPACTS							
	B64	Any damage caused to property as a result of the SSI shall be rectified or the landowner compensated, within a reasonable timeframe, with the costs borne by the Applicant. This condition is not intended to limit any claims that the landowner may have against the Applicant.	All	All	All	All	Noted
	B65	Where the SSI traverses a state forest, the Applicant shall, in consultation with the NSW Forestry Corporation, ensure that construction does not unduly disrupt existing forestry activities, access for fire fighting and access for other activities within state forests, unless otherwise agreed by the NSW Forestry Corporation.	All	3, 6, 7	NA	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B1 Construction Traffic and Access Management Plan, Section 4.7.3 Property Access and Section 4.7.8 State Forest Road Network). Pacific Complete will approve Contractor EMPS, EWMSs and related traffic management safety plans (or similar) to ensure compliance with this COA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
AIR QUALITY							

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	B66	The SSI shall be constructed in a manner that minimises dust emissions from the site, including wind-blown and traffic-generated dust and tracking of material onto public roads. All activities on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, the Applicant shall identify and implement all feasible and reasonable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B6 Construction Air Quality Management Plan, Chapter 7 Environmental Control Measures). Pacific Complete will approve Contractor EMPs, EWMSS and ESCRs to ensure compliance with the requirements and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
HAZARDS AND RISK									
	B67	Dangerous goods, as defined by the Australian Dangerous Goods Code, shall be stored and handled strictly in accordance with: (a) all relevant Australian Standards; (b) for liquids, a minimum burst volume requirement of 100% of the volume of the largest single stored volume, within this burst, and (c) the Environment Protection Authority (EPA) Code of Practice for the Storage and Handling of Oil and Fuel in Bulk Containers (EPA Code of Practice for Bulk Containers). In the event of an inconsistency between the requirements listed from (a) to (c) above, the most stringent requirement shall prevail to the extent of the inconsistency.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B4 Construction Soil and Water Quality Management Plan, Chapter 6 Environmental Control Measures). Pacific Complete will approve Contractor EMPs and EWMSS to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
WASTE MANAGEMENT									
	B68	Waste generated outside the site shall not be received at the site for storage, treatment, processing, or disposal on the site, except as expressly permitted by a licence or waste exemption under the Protection of the Environment Operations Act 1997. If such a licence is required in relation to that waste.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B7 Construction Waste, Resource and Energy Management Plan, Chapter 6 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs and EWMSS to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B69	The reuse and/or recycling of waste materials generated on site shall be maximised as far as practicable, to minimise the need for treatment or disposal of those materials off site.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B7 Construction Waste, Resource and Energy Management Plan, Chapter 6 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs and EWMSS to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B70	All liquid and/or non-liquid waste generated on the site shall be assessed and classified in accordance with Waste Classification Guidelines (Department of Environment, Climate Change and Water, 2009).	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B7 Construction Waste, Resource and Energy Management Plan, Chapter 6 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs and EWMSS to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
	B71	All waste materials removed from the site shall only be directed to a waste management facility or premises lawfully permitted to accept the materials.	All	All		All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B7 Construction Waste, Resource and Energy Management Plan, Chapter 6 Environmental Mitigation and Management Measures). Pacific Complete will approve Contractor EMPs and EWMSS to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
UTILITIES AND SERVICES									
	B72	Utilities, services and other infrastructure potentially affected by construction and operation shall be identified prior to construction to determine requirements for access to, diversion, protection, and/or support. Consultation with the relevant owner and/or provider of services that are likely to be affected by the SSI shall be undertaken to make suitable arrangements for access to, diversion, protection, and/or support of the affected infrastructure as required. The cost of any such arrangements shall be borne by the Applicant.	All	All		All	All	All	To be addressed during detailed design. Detailed design for reports are required to detail how the design complies with the relevant environmental design criteria for the CoA. Pacific Complete will approve Contractor EMPs and EWMSS to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).
ANCILLARY FACILITIES									

Category	Part	Requirement	Section 1 and 2 (Wave 1, 2 & 3)	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	B73	<p>The sites for ancillary facilities that are associated with the construction of the SSI and that have not been identified and assessed in the documents listed in condition A2 shall:</p> <ul style="list-style-type: none"> (a) be located more than 50 metres from a waterway (100 metres for a State Environmental Planning Policy No. 14 wetland or known Orléyan Pygmy Parrot habitat waterway); (b) not impact on connectivity structures or vegetation (not including riparian vegetation) leading to a connectivity structure; (c) be located within or adjacent to the SSI boundary; (d) have ready access to the road network; (e) be located in areas of low ecological significance and require no clearing of native vegetation; (f) be located more than 50 metres from threatened species and endangered ecological communities and their habitats; (g) be located on relatively level land; (h) be located in areas of low archaeological significance or at least 200 metres (or at least 300 metres for a temporary batching plant) and comply with construction noise management levels at sensitive receivers; (i) be above the 2D year ARI flood level unless a contingency plan to manage flooding is prepared and implemented; (j) have minor impacts on flood storage and not result in obstruction of floodplain flow or leakage of culverts and drains; (k) not unreasonably affect the land use of adjacent properties; (l) operate in accordance with the construction hours set out in conditions B15 and B16; (m) provide sufficient area for the storage of material to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours; and (n) be located in areas of low heritage conservation significance (including areas identified as being of Aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the SSI. <p>The Applicant shall undertake an assessment of the facility against the above criteria in consultation with the relevant public authority(ies) and the relevant council. The assessment shall be approved by the Environmental Representative and included in the Ancillary Facilities Management Plan required under condition D21.</p>	All	All	All	All	<p>Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the Environmental Representative on 10 February 2016. The Applicant will seek approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of Appendix B9 Ancillary Facilities Management Plan (ER approved 10 February 2016).</p>
	B74	<p>Ancillary facilities that have not been previously identified and assessed in the documents listed in condition A2, and do not meet the criteria set out under condition B73, shall be approved by the Environmental Representative prior to its establishment. In obtaining this approval, the Applicant shall consult with the relevant public authority(ies) and the relevant council, and demonstrate to the satisfaction of the Environmental Representative, how the potential environmental impacts can be mitigated and managed to acceptable standards. The outcomes of the assessment shall be documented in a report and include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (a) a description of the site and its surroundings; (b) a description of the activities to be undertaken; (c) an assessment of the environmental impacts on the site and the surrounding environment, including, but not limited to noise, vibration, air quality, traffic and access during site establishment and operation, flora and fauna, heritage, erosion and sedimentation, water quality and light spill; (d) details of the mitigation, monitoring and management procedures specific to the ancillary facility that would be implemented to minimise environmental impacts; and (e) demonstrated overall consistency with the approved SSI (including impacts identified in the documents listed in condition A2). <p>A copy of this report shall be included in the Ancillary Facilities Management Plan.</p>	All	All	All	All	<p>Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the Environmental Representative on 10 February 2016. The purpose of the AFMP is to detail how Pacific Complete will assess, consult, gain approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of Appendix B9 Ancillary Facilities Management Plan (ER approved 10 February 2016).</p>
	B75	<p>Notwithstanding condition B74, ancillary facilities that have not been previously identified and assessed in the documents listed in condition A2, and result in additional impacts to biodiversity, heritage, flooding and noise beyond those approved for the SSI, shall be approved by the Secretary prior to their establishment. In order to obtain this approval, the Applicant shall undertake an assessment of the ancillary facility in accordance with condition B74 and forward a copy of this assessment report to the Secretary, as part of the approval submission, at least one month prior to the establishment of the facility.</p>	All	All	All	All	<p>Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the Environmental Representative on 10 February 2016. The purpose of the AFMP is to detail how Pacific Complete will assess, consult, gain approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of Appendix B9 Ancillary Facilities Management Plan (ER approved 10 February 2016).</p>
	B76	<p>The land on which ancillary facilities are located shall be rehabilitated to at least their pre-construction condition or better, unless otherwise agreed by the landowner.</p>	All	All	All	All	<p>Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the Environmental Representative on 10 February 2016. The purpose of the AFMP is to detail how Pacific Complete will assess, consult, gain approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of Appendix B9 Ancillary Facilities Management Plan (ER approved 10 February 2016).</p>
	B77	<p>Where changes are made to the boundary or use of an ancillary facility, including facilities identified in the documents listed in condition A2, the Applicant shall assess the facility against the criteria set out in conditions B74 and B75. The Applicant shall seek the approval of the Environmental Representative in accordance with condition B74, or</p> <ul style="list-style-type: none"> (a) does not meet the criteria set out under condition B73 the Applicant shall seek the approval of the Secretary in accordance with condition B75; (b) results in impacts to biodiversity, heritage, flooding and noise beyond those approved for the SSI, the Applicant shall seek the approval of the Secretary in accordance with condition B75. <p>The relevant approval shall be obtained prior to the establishment of the ancillary facility.</p>	All	All	All	All	<p>Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the Environmental Representative on 10 February 2016. The purpose of the AFMP is to detail how Pacific Complete will assess, consult, gain approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of Appendix B9 Ancillary Facilities Management Plan (ER approved 10 February 2016).</p>
	B78	<p>The Applicant shall ensure that the archaeological values of the site are protected and that the site is not used for any purpose that would be likely to result in the loss or damage to the archaeological values of the site. The Applicant shall ensure that the site is not used for any purpose that would be likely to result in the loss or damage to the archaeological values of the site. The Applicant shall ensure that the site is not used for any purpose that would be likely to result in the loss or damage to the archaeological values of the site.</p>	All	All	All	All	<p>Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the Environmental Representative on 10 February 2016. The purpose of the AFMP is to detail how Pacific Complete will assess, consult, gain approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of Appendix B9 Ancillary Facilities Management Plan (ER approved 10 February 2016).</p>
BORROW SITES							
		<p>Condition removed in Mod 2.</p>					<p>Notes: Condition removed in Mod 2.</p>

Category	Part	Requirement	Section 1 and 2 (Wave 1, 2 & 3)	Soft soils (Wave 1, 2 & 3)	Comments	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
B79		The Applicant shall ensure that material extracted from the borrow sites established for the SSI, is only used for the construction of the SSI subject to this approval, and no other sections of the Pacific Highway or other works	All	All		All	All	All	Pacific Complete will prepare site specific Borrow Site Management Plans as required by the project. This requirement will apply to all borrow site management plans prepared by Pacific Complete.
CONSTRUCTION ACTIVITIES									
B80		The Applicant shall ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition, and (b) operated in a proper and efficient manner.	All	All		All	All	All	Pacific Complete has an approved CEMP. Pacific Complete will approve Contractor EMPs and EWMSs and apply RMS/PC specifications to ensure compliance with this CoA.
OPERATIONAL PERFORMANCE									
B81		The Applicant shall ensure that during the operation of the SSI, water quality risks to the Woodburn Borefield drinking water catchment are minimised to the satisfaction of Focus Water	NA	All	Soft soil early works at Tuckombit canal is at the southern tip of the Woodburn Borefield	8	4	5c	To be addressed during detailed design. Detailed design reports are required to detail how the design will be implemented with relevant design criteria. Pacific Complete will detailed design reports to ensure compliance with relevant CoAs.

COMPLIANCE TRACKING - NSW CONDITIONS OF APPROVAL
Woolgoolga to Ballina SSI-4963
PART C - Community Information and Reporting



Reproduced from W2B Staging Report, March 2015.

Category	Part	Requirement	Stage 1				Stage 2			
			Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment	
COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT										
C1		<p>Prior to the commencement of construction or as otherwise agreed by the Secretary, the Applicant shall prepare and implement a Community Communication Strategy to the satisfaction of the Secretary. The Strategy shall provide mechanisms to facilitate communication between the Applicant (and its contractors), the Environmental Representative (see condition D22), the relevant council and community stakeholders (particularly adjoining landowners) on the construction environmental management of the SSI. The Strategy shall include, but not be limited to:</p> <ul style="list-style-type: none"> (a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners; (b) the frequency of communication to be undertaken, including the timing, progress and matters associated with environmental management; (c) the formation of community-based focus groups for key environmental management issues for the SSI. The Strategy shall provide detail on the structure, scope, objectives and frequency of the community-based focus groups; (d) procedures and mechanisms through which the community stakeholders can discuss or provide feedback to the Applicant and/or Environmental Representative in relation to the environmental management and delivery of the SSI; (e) procedures and mechanisms that would be implemented to resolve issues (disputes that may arise between parties on the matters relating to environmental management and the delivery of the SSI); and (f) procedures and mechanisms that would be implemented to resolve issues (disputes that may arise between parties on the matters relating to environmental management and the delivery of the SSI) that shall be addressed through the Community Communication Strategy include (but are not necessarily limited to): <ul style="list-style-type: none"> (i) traffic management (including property access, pedestrian access); (ii) heritage matters; (iii) landscaping and urban design matters; (iv) construction staging, hours and activities; (v) noise and vibration mitigation and management; (vi) air quality and dust; (vii) water quality and flooding matters; and (viii) biodiversity matters. <p>The Applicant shall maintain and implement the Strategy throughout construction of the SSI.</p>	All	All	An overarching Woolgoolga to Ballina Community Communication Strategy will be prepared.	All	All	An overarching Woolgoolga to Ballina Communication and Stakeholder Engagement Strategy has been prepared and approved. DPE Approval dated 13 May 2015.		
COMPLAINTS AND ENQUIRIES PROCEDURE										
C2		<p>Prior to the commencement of pre-construction and construction, or as otherwise agreed by the Secretary, the Applicant shall ensure that the following are available for community enquires and complaints for the duration of construction:</p> <ul style="list-style-type: none"> (a) a 24 hour telephone number(s) on which complaints and enquiries about the SSI may be registered; (b) a postal address to which written complaints and enquiries may be sent; (c) an email address to which electronic complaints and enquiries may be transmitted; and (d) a mediation system for complaints unable to be resolved. <p>The telephone number, the postal address and the email address shall be published in newspaper(s) (including in the local area prior to the commencement of construction and prior to the commencement of operation. This information shall also be provided on the website (or dedicated pages) required by this approval.</p>	All	All		All	All	Information and systems required by this condition have been established. Refer to the overarching Woolgoolga to Ballina Communication and Stakeholder Engagement Strategy (DPE Approval dated 13 May 2015). Relevant details have been included in the approved Pacific Compuls CEMP, refer to Section 6.3 Stakeholder and Community communication. Pacific Compuls CEMP shall ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).		
C3		<p>Prior to the commencement of pre-construction and construction, or as otherwise agreed by the Secretary, the Applicant shall prepare and implement a Construction Complaints Management System consistent with AS 4299. Complaints Handling and maintain the System for the duration of construction and up to 12 months following completion of the SSI.</p> <p>Information on all complaints received, including the means by which they were addressed and whether resolution was reached, with or without mediation, shall be maintained in a complaints register and included in the construction compliance reports required by this approval. The information contained within the System shall be made available to the Secretary on request.</p>	All	All	Roads and Maritime has developed an overarching Woolgoolga to Ballina Construction Complaints Management System.	All	All	Information and systems required by this condition have been established. Refer to the overarching Woolgoolga to Ballina Communication and Stakeholder Engagement Strategy (DPE Approval dated 13 May 2015). Relevant details have been included in the approved Pacific Compuls CEMP, refer to Section 6.3.2 Complaints and Enquiries Procedure. Pacific Compuls will approve Contractor EMPs and EWMS to ensure compliance with this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).		
PROVISION OF ELECTRONIC INFORMATION										
C4		<p>Prior to the commencement of pre-construction and construction, or as otherwise agreed by the Secretary, the Applicant shall establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the SSI, for the duration of construction and for 12 months following completion of the SSI. The Applicant shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not necessarily limited to:</p> <ul style="list-style-type: none"> (a) information on the current implementation status of the SSI; (b) a copy of the documents listed in condition A2, and any documentation supporting modifications to this approval that may be granted from time to time; (c) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the SSI; (d) the current status of the SSI; (e) the outcomes of compliance tracking in accordance with condition D22 of this approval; and (f) details of contact point(s) to which community complaints and enquiries may be directed, including a telephone number, a postal address and an email address. 	All	All	An overarching web site addressing all active project stages will be developed.	All	All	Information and systems required by this condition have been established. Refer to the overarching Woolgoolga to Ballina Communication and Stakeholder Engagement Strategy (DPE Approval dated 13 May 2015). Pacific Compuls will work closely with RMS to ensure the required information is made available.		

COMPLIANCE TRACKING - NSW CONDITIONS OF APPROVAL
Woolgoolga to Ballina SSI-4963
PART D - Environmental Management, Reporting and Auditing



Note only include wave 1, 2, 3&4

Reproduced from W2B Staging Report, March 2015.

Category	Part	Requirement	Stage 1			Stage 2			
			Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
D1		<p>The Applicant shall develop a framework for finalising mitigation measures for threatened species. This Mitigation Framework shall be developed by a suitably qualified and experienced ecologist in consultation with DPI (Fisheries), EPA, and D&E, and submitted to the satisfaction of the Secretary prior to commencement of detailed design of the relevant stage, unless otherwise agreed by the Secretary. The Mitigation Framework shall detail the process for finalising the biodiversity strategies, plans and programs required under the approval. The Mitigation Framework shall include:</p> <p>(a) a description of the methodology of all proposed pre-construction, species and habitat surveys, including surveys undertaken in the 2013-2014 spring and summer seasons and as part of the final design, and the methodology of all proposed post-construction monitoring and evaluation surveys, including surveys undertaken in the 2013-2014 spring and summer seasons and as part of the final design;</p> <p>(b) a summary of potential changes to the avoidance, mitigation and/or offset measures specified in the documents listed in condition A2, as justified by the results of surveys described in condition D1(a);</p> <p>(c) a summary of the potential avoidance, mitigation and/or offset measures for all species for which the proposed level of impact or mitigation required differs from that assessed in the documents listed in condition A2, including evidence that those measures would achieve the same or an improved biodiversity outcome;</p> <p>(d) provision for updating the relevant Threatened Species Management Plans required under condition D6; and</p> <p>(e) a schedule for submission of all biodiversity strategies, plans and programs required under this approval in accordance with the requirements for submission in the conditions below.</p>	All		To be developed and implemented as an overarching framework addressing all active project stages and updated as required.	All		All	Mitigation Framework approved by DPE on 8 May 2015.
D2 (b)-(g)		<p>The Applicant shall prepare and implement a Connectivity Strategy, to be submitted and approved by the Secretary prior to the commencement of construction. The Strategy shall describe the rationale for, and final design and location of, fauna connectivity structures for the SSI and shall demonstrate the effectiveness of connectivity measures for the species targeted for the crossing. The Strategy shall be developed from the draft Connectivity Strategy in the documents listed in condition A2 in consultation with the EPA, EPA, DPI (Fisheries) and D&E, to the satisfaction of the Secretary. The Strategy shall include:</p> <p>(a) details of all crossings for terrestrial and aquatic fauna, including but not limited to land bridges, bridge, arch and culvert crossings, and crossings for arboreal fauna;</p> <p>(b) justification for the location and design, and spacing of the connectivity structures, with reference to relevant State and Commonwealth threatened species guidelines and the results of on-ground surveys as required by D2(a);</p> <p>(c) details of the design and construction of connectivity structures (including occasional fencing) in terms of location, design and number of connectivity structures to mitigate impacts to the relevant threatened species, and that the crossings:</p> <p>(i) maintain or improve connectivity and movement pathways;</p> <p>(ii) reduce the risk of mortality for threatened species;</p> <p>(iii) are located at locations, at sufficient frequency along the alignment, based on the ecological requirements of the targeted species, including but not limited to home range size, movement patterns, and habitat use;</p> <p>(d) the results of surveys undertaken to determine the habitat, species movement patterns, distribution of species to confirm the design and location;</p> <p>(e) consideration of connectivity underpinning the proposed highway, state roads and local roads (including an assessment of the impact of road works on connectivity);</p> <p>(f) details of the design and construction of connectivity structures to be used by the local road network to ensure connectivity between local roads and state roads, or local roads (servicing over 100 vehicles per day) that are regarded as part of the SSI or experience an increase in traffic volumes during operation of the SSI;</p> <p>(g) commitment to implement the landscaping of vegetation leading to connectivity structures;</p>	All		To be implemented as an overarching strategy addressing all active project stages and updated as required.	All		NA	<p>The nature of the early enabling construction activities associated with Wave 5a, 5b and 5c is the same as that for soft soil works currently being undertaken as Waves 1, 2, 3 and 4. With respect to fauna connectivity, these early enabling construction works will not prevent Pacific Comptels, have been working closely with DPI Fisheries and EPA on connectivity design and how the early enabling construction works will be built. Bridge and culvert locations will remain open and Temporary and Permanent fauna exclusion fencing will be located as per the approved Threatened Species Management Plans. The siting of glider poles will be undertaken during main construction activities to ensure their functional requirements are met. It should be noted that the development of the Connectivity Strategies for Portions A, B, C and D are well advanced with their progression from Substantial Detailed Design (SD) to Final Detailed Design. The Connectivity Strategy will be updated to reflect the final design and construction of the permanent fauna connectivity structures as part of the Stage 2 works, unless otherwise agreed by DP&E/D&E.</p>
D2 (b)-(i)		<p>(h) a fencing strategy, describing the location, design and length of fencing, which must extend beyond the edges of habitat for threatened species;</p> <p>(i) an assessment of the flooding risk for proposed structures, and measures to confirm and provide for flood immunity of those structures in light of this assessment. The agreement of the EPA, EPA on flood immunity levels shall be obtained prior to the commencement of construction of the relevant stage;</p> <p>(k) commitment that all bridges in identified wildlife corridors, or adjacent to threatened species habitat, or are likely to provide connectivity for threatened species based on surveys undertaken in accordance with the Mitigation Framework required in condition D1, shall provide a minimum three metre wide dry passage from top of the scour protection to the top of the bank, with natural substrate and refuge features. Where this criteria cannot be achieved and with the agreement of the EPA, EPA, consideration shall be given to the use of suitable materials in, and the final form of, the scour protection to provide for the safe and effective passage of fauna;</p> <p>(l) detailed consideration of the effects of connectivity structures on the maintenance or improvement of population, viability and gene flow; and</p> <p>(m) detailed consideration of the effects of connectivity structures on the maintenance or improvement of population, viability and gene flow; and</p> <p>Where the location and/or design of connectivity structures has changed from that identified in the documents listed under conditions A2(c) and A2(e), the Strategy shall demonstrate how the new location and/or design would result in an improved biodiversity outcome. The Strategy shall clearly identify how the connectivity structures will work in conjunction with other biodiversity measures, such as complementary fauna exclusion fencing measures and the regeneration/replanting of native vegetation, to be implemented for the SSI.</p> <p>The Applicant shall demonstrate to the satisfaction of the Secretary how public authority comments on the Strategy have been addressed.</p> <p>The Strategy may be submitted in stages to suit the staging of the SSI.</p>	All		To be implemented as an overarching strategy addressing all active project stages and updated as required.	All		NA	<p>To be addressed during detailed design. Each design Portion (i.e. A, B, C and D) which covers Section 3 through to Section 11 will be required to prepare a Connectivity Strategy in accordance with the requirements of this CoA. Pacific Comptels will review detailed design deliverables to ensure compliance with the relevant CoAs.</p> <p>The nature of the early enabling construction activities associated with Wave 5a, 5b and 5c is the same as that for soft soil works currently being undertaken as Waves 1, 2, 3 and 4. With respect to fauna connectivity, these early enabling construction works will not prevent Pacific Comptels, have been working closely with DPI Fisheries and EPA on connectivity design and how the early enabling construction works will be built. Bridge and culvert locations will remain open and where required temporary wetway crossing will be utilised. Temporary and Permanent fauna exclusion fencing will be located as per the approved Threatened Species Management Plans. The siting of glider poles will be undertaken during main construction activities to ensure their functional requirements are met. It should be noted that the development of the Connectivity Strategies for Portions A, B, C and D are well advanced with their progression from Substantial Detailed Design (SD) to Final Detailed Design. The Connectivity Strategy will be prepared and approved prior to the physical commencement of the permanent fauna connectivity structures as part of the Stage 2 works, unless otherwise agreed by DP&E/D&E.</p>

BIODIVERSITY/OFFSET STRATEGY

Category	Part	Requirement	Section and (Wave 1, 2 & 3)	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
D3		<p>The Applicant shall prepare and implement a Biodiversity Offset Strategy to outline how the ecological values lost as a result of the SSI will be offset in perpetuity. The Strategy shall be developed following the draft Biodiversity Offset Strategy in the documents listed in condition A2, in consultation with the OEH, EPA, DPI (Fisheries) and DoE, to the satisfaction of the Secretary.</p> <p>Unless otherwise agreed to by the OEH, EPA, DPI (Fisheries) and DoE, offsets shall be provided on a like-for-like basis and at a minimum ratio of 4:1 for native vegetation (including salt marsh) impacted by the SSI or as required by the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (Commonwealth of Australia, 2012) and Offsets Assessment Guide (Commonwealth of Australia 2012), whichever is the greater.</p> <p>The Strategy shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (a) a description of the ecological values likely to be impacted through a biodiversity offset package, including to achieve a neutral or net-beneficial outcome for all threatened species and endangered ecological communities, likely to be impacted directly or indirectly during both the construction and operation of the SSI; (b) confirmation of the vegetation type/habitat (in hectares) to be cleared and their condition, and the size of offsets required (in hectares); (c) details of the available offset measures that have been selected to compensate for the loss of existing native vegetation (including mangroves, salt marsh and riparian vegetation), threatened and vulnerable species and Endangered Ecological Communities and their habitats, and identification of potential offset sites; (d) consideration of contingency measures for offsets to address potential changes to impacted areas as a result of detailed design changes; (e) a process for addressing and incorporating offset measures arising from changes in biodiversity impacts (where these changes are generally consistent with the biodiversity impacts identified for the SSI in documents listed under condition A2), including: <ul style="list-style-type: none"> (i) a process for identifying additional offset measures; (ii) changes to predicted impacts as a result of changes to mitigation measures; (iii) the identification of additional species/habitat through pre-clearance surveys and construction; and (iv) additional impact associated with the establishment of ancillary facilities; (f) the decision-making framework that would be used to select the final suite of offset measures to achieve the objectives and outcomes established within the Strategy, including the ranking of offset measures; and (g) options for securing and management of biodiversity offsets in perpetuity. <p>The Applicant must elect to satisfy this condition by identifying a suitable offset strategy which addresses impacts from multiple Pacific Highway Upgrade projects with the OEH, EPA, DPI (Fisheries) and DoE, for approval of the Secretary, including an agreement made with OEH, EPA, DPI (Fisheries) and DoE, shall be approved by the Secretary within a timeframe agreed to by the Secretary.</p> <p>The Biodiversity Offset Strategy shall be submitted to, and approved by, the Secretary prior to the commencement of construction work that would result in the disturbance of the relevant existing ecological communities, threatened species, or their habitat, unless otherwise agreed by the Secretary.</p>	All	All	An overarching Biodiversity Offset Strategy will be prepared for the project and will be updated as required	Biodiversity Offset Strategy Approved DPE 6 January 2016 and DoE 7 January 2016.
D4		<p>Prior to the commencement of construction work that would result in the disturbance of the relevant existing ecological communities, threatened species, or their habitat, unless otherwise agreed by the Secretary, the Applicant must conduct surveys to identify the extent and type of habitat that would be lost or degraded as a result of the final design of the SSI. The selection of the offset sites should be undertaken in consultation with the OEH, EPA, DPI (Fisheries) and DoE. Submission of the offset sites for approval should be accompanied by:</p> <ul style="list-style-type: none"> (a) details of offset sites to compensate the impacts on: <ul style="list-style-type: none"> (i) Koala populations in Colongardle/Bogoville, Broadwater and Woombat/Ville; (ii) Moorae, Quassa (Quassa sp., Moore Creek); (iii) Sandstone Rough-Barked Apple (Angophora rostrata); (iv) Singbun-Mint Bush (Prostanthera cancellata), and (v) Lowland Rainforest in Sub-tropical Australia; (b) details of the locations of the offset sites; (c) demarcation, through ground truthing survey or an alternative methods); the adequacy of the site(s), in terms of habitat suitability and presence of the relevant species, to offset the impacts of the SSI; (d) consideration of how the offsets achieve the outcomes required by the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy to the satisfaction of DoE, and (e) details of how the offset sites would be secured and managed in perpetuity. 	All	NA	Soft soil early works do not impact on the subject species identified in D4.	Threatened Biodiversity Offset Status Report (DPE Approval 6 January 2016 and DoE Approval 7 January 2016) - Note that this TBOSS excludes Section 9 and 10. An updated Threatened Biodiversity Offset Status Report was submitted for approval in mid June 2016 (which addresses the Koala Population Colongardle & Broadwater as well as Littoral Rainforest).
BIODIVERSITY OFFSET STRATEGY						
D5 (b)-(g)		<p>The Applicant shall prepare and implement (following approval) a Biodiversity Offset Package, within twenty-four months of approval of the Biodiversity Offset Strategy, or as otherwise agreed by the Secretary. The package shall detail how the ecological values lost as a result of the SSI will be offset. The Biodiversity Offset Package shall be prepared in consultation with the OEH, EPA, DPI (Fisheries) and DoE, for the approval of the Secretary, and shall (unless otherwise agreed by the Secretary) include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (i) the identification of the extent and type of habitat that would be lost or degraded as a result of the final design of the SSI; (ii) the identification of offset locations and types of offset measures to be used to compensate the impacts on the relevant species and ecological communities, including: <ul style="list-style-type: none"> (i) details of the final suite of the biodiversity offset measures selected and secured in accordance with the Biodiversity Offset Strategy including the identification of all offset sites; (ii) an assessment demonstrating how the offset area(s) achieve the outcomes required by the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy and user guide to the written satisfaction of DoE; (iii) the management and monitoring requirements for compensatory habitat works and other biodiversity offset measures proposed to ensure the outcomes of the package are achieved, including: <ul style="list-style-type: none"> (i) the monitoring of the condition of species and ecological communities at offset locations; (ii) details of who would be responsible for monitoring, reviewing, and implementing the Biodiversity Offset Package; and (iii) provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with the OEH, EPA, DPI (Fisheries) and DoE; and (iv) the monitoring and reporting on the effectiveness of these measures, and progress against the performance and completion criteria; (v) the results of targeted field surveys within the offset sites (undertaken at any ecologically appropriate time of the year) to assess and describe habitat suitability, presence/absence of threatened species and ecological communities and an assessment of the baseline population; (g) a description of the current quality (prior to any management activities) of the offset area(s). (iii) targeted management actions, regeneration and/or revegetation strategies to be undertaken on the offset area(s) to improve the ecological quality of these areas for the relevant individual and/or populations of the relevant species; (iv) performance and completion criteria for evaluating the management of the offset area, including contingency actions, criteria for triggering contingency actions and a commitment to the implementation of these actions in the event that performance objectives are not met, a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; (v) timing and responsibilities for the implementation of the provisions of the Biodiversity Offset Package and achieving performance objectives; (vi) details of who would be responsible for monitoring, reviewing, and implementing the Biodiversity Offset Package; and (vii) provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with the OEH, EPA, DPI (Fisheries) and DoE. <p>Land offsets shall be consistent with the Principles for the Use of Biodiversity Offsets in NSW. Any land offset shall be enduring and be secured by a conservation mechanism which is approved or maintained biodiversity outcome for the region.</p> <p>The Biodiversity Offset Package shall include details of the offset sites approved under condition D4, and timeframe for the delivery of the offset sites.</p> <p>Where monitoring required under conditions D8 and/or D9 indicates that biodiversity outcomes are not being achieved, remedial actions, as approved by the Secretary, shall be undertaken to ensure that the objectives of the Biodiversity Offset Package are achieved.</p> <p>The requirements of the Biodiversity Offset Package shall be implemented by the responsible parties according to the timetables set out in the Biodiversity Offset Package, unless otherwise agreed by the Secretary.</p> <p>Note:</p> <ul style="list-style-type: none"> - If an offset site proposed as a part of the Biodiversity Offset Strategy or Biodiversity Offset Package is already required to be protected as a result of a separate approval, only the management actions which can be demonstrated to be commensurate to those required for the separate approval, can be considered as an offset for this project in accordance with the EPBC Act-Environmental Offsets Policy 2012 (or subsequent published revisions). 	All	All	A project wide Biodiversity Offset Package will be prepared	A Biodiversity Offset Package will be prepared. Program currently being prepared
D5 (h)-(m)		<p>The Applicant shall prepare and implement (following approval) a Biodiversity Offset Package, within twenty-four months of approval of the Biodiversity Offset Strategy, or as otherwise agreed by the Secretary. The package shall detail how the ecological values lost as a result of the SSI will be offset. The Biodiversity Offset Package shall be prepared in consultation with the OEH, EPA, DPI (Fisheries) and DoE, for the approval of the Secretary, and shall (unless otherwise agreed by the Secretary) include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (i) the identification of the extent and type of habitat that would be lost or degraded as a result of the final design of the SSI; (ii) the identification of offset locations and types of offset measures to be used to compensate the impacts on the relevant species and ecological communities, including: <ul style="list-style-type: none"> (i) details of the final suite of the biodiversity offset measures selected and secured in accordance with the Biodiversity Offset Strategy including the identification of all offset sites; (ii) an assessment demonstrating how the offset area(s) achieve the outcomes required by the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy and user guide to the written satisfaction of DoE; (iii) the management and monitoring requirements for compensatory habitat works and other biodiversity offset measures proposed to ensure the outcomes of the package are achieved, including: <ul style="list-style-type: none"> (i) the monitoring of the condition of species and ecological communities at offset locations; (ii) details of who would be responsible for monitoring, reviewing, and implementing the Biodiversity Offset Package; and (iii) provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with the OEH, EPA, DPI (Fisheries) and DoE; and (iv) the monitoring and reporting on the effectiveness of these measures, and progress against the performance and completion criteria; (v) the results of targeted field surveys within the offset sites (undertaken at any ecologically appropriate time of the year) to assess and describe habitat suitability, presence/absence of threatened species and ecological communities and an assessment of the baseline population; (g) a description of the current quality (prior to any management activities) of the offset area(s). (iii) targeted management actions, regeneration and/or revegetation strategies to be undertaken on the offset area(s) to improve the ecological quality of these areas for the relevant individual and/or populations of the relevant species; (iv) performance and completion criteria for evaluating the management of the offset area, including contingency actions, criteria for triggering contingency actions and a commitment to the implementation of these actions in the event that performance objectives are not met, a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; (v) timing and responsibilities for the implementation of the provisions of the Biodiversity Offset Package and achieving performance objectives; (vi) details of who would be responsible for monitoring, reviewing, and implementing the Biodiversity Offset Package; and (vii) provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with the OEH, EPA, DPI (Fisheries) and DoE. <p>Land offsets shall be consistent with the Principles for the Use of Biodiversity Offsets in NSW. Any land offset shall be enduring and be secured by a conservation mechanism which is approved or maintained biodiversity outcome for the region.</p> <p>The Biodiversity Offset Package shall include details of the offset sites approved under condition D4, and timeframe for the delivery of the offset sites.</p> <p>Where monitoring required under conditions D8 and/or D9 indicates that biodiversity outcomes are not being achieved, remedial actions, as approved by the Secretary, shall be undertaken to ensure that the objectives of the Biodiversity Offset Package are achieved.</p> <p>The requirements of the Biodiversity Offset Package shall be implemented by the responsible parties according to the timetables set out in the Biodiversity Offset Package, unless otherwise agreed by the Secretary.</p> <p>Note:</p> <ul style="list-style-type: none"> - If an offset site proposed as a part of the Biodiversity Offset Strategy or Biodiversity Offset Package is already required to be protected as a result of a separate approval, only the management actions which can be demonstrated to be commensurate to those required for the separate approval, can be considered as an offset for this project in accordance with the EPBC Act-Environmental Offsets Policy 2012 (or subsequent published revisions). 	All	All	A project wide Biodiversity Offset Package will be prepared	A Biodiversity Offset Package will be prepared

Category	Part	Requirement	Section 1 and 2	Sort soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Sort soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment	
D6	D6	Prior to the commencement of construction of the relevant stage that would result in the disturbance of native vegetation for as otherwise agreed by the Secretary, the Applicant shall prepare and implement a Nest Box Plan to provide replacement hollows for displaced fauna. The Plan shall be prepared in consultation with the EPA OEH and to the satisfaction of the Secretary. This Plan shall be prepared by a suitably qualified and experienced ecologist and detail the number and type of nest boxes to be installed, which shall be justified based on the number and type of hollows removed based on pre clearing surveys, the density of hollows in the area to be cleared and in adjacent areas, and the availability of adjacent food resources. The Plan shall also provide details of maintenance protocols for the nest boxes including responsibilities, timing and duration.	All	All	A project wide strategy will be prepared that is progressively updated.	All	All	All	Nest Box Plan approved (DPE approval 17 February 2015)	
	D7	The Applicant shall prepare and implement a Flora Translocation Strategy to determine the feasibility and potential efficacy of translocation measures (as identified in the threatened species assessment) to be undertaken under condition D6, prior to the commencement of construction work that would result in the disturbance of threatened flora species for which translocation is proposed. The Strategy shall be prepared by a suitably qualified and experienced ecologist, in consultation with the EPA OEH, EPA and DoE, and to the satisfaction of the Secretary. The Strategy shall include: (a) a feasibility assessment of timeframe and staging requirements, availability of expertise, risk effectiveness analysis and availability/suitability of translocation sites, (b) detail of species specific information on the proposed methods of, and discussion of results of past recorded responses to, translocations, (c) a framework for the translocation process applicable to each affected species; and (d) consideration of appropriate compensatory habitat in the Biodiversity Offsets Package required under condition D5 where translocation is not reasonable or feasible.	All	All		All	All	All	Translocation Strategy Update 3 (for Section 3-11) Approved by DPE on 2 February 2016. DoE have confirmed no comment. Translocation Strategy Update 2 (Waves 1, 2 and 3) Approved by DPE on 11 June 2015.	
BIODIVERSITY THREATENED SPECIES MANAGEMENT PLANS										
D8 (b)-(c)	D8 (b)-(c)	The Applicant shall prepare and implement Threatened Species Management Plans to detail how impacts of the SSJ will be minimised and managed specifically for each species. Threatened Species Management Plans included in the documents listed in condition A2(c) (subject to condition D9), in consultation with EPA OEH, DPI (Fisheries) and DoE, and to the satisfaction of the Secretary, and shall include but not necessarily be limited to: (a) demonstration that adequate surveys have been undertaken to assess the impacts of the SSJ with reference to the Mitigation Framework developed under condition D1, including baseline data collected from surveys, undertaken by a suitably qualified and experienced ecologist on threatened species and ecological communities within all habitat areas to be cleared of vegetation for the SSJ, that are likely to contain these species and that are likely to be adversely impacted by the SSJ (as determined by a suitably qualified expert). The data shall address the distribution, abundance, habitat use and movement patterns of these species; (b) identification of potential impacts on each species; (c) a detailed description of avoidance, exclusion and mitigation and management measures to be implemented for each threatened species including measures to ensure that habitat values of habitats are compared to baseline data and maintain connectivity for the relevant species; (d) an adaptive monitoring program to assess the use of the mitigation measures identified in conditions B10 and D2. The monitoring program shall nominate appropriate and justified monitoring periods, performance parameters and criteria against which effectiveness of the mitigation measures will be measured and include operational road kill and fauna crossing surveys to assess the use of fauna crossings and exclusion fencing implemented as part of the SSJ; (e) monitoring methodology for threatened flora and fauna adjacent to the SSJ footprint; (f) goals and performance indicators to measure the success of mitigation measures, which shall be specific, measurable, achievable, realistic and timely (SMART), and be compared against baseline data; (g) methodology for ongoing monitoring of road kill, the species, distribution, abundance, habitat use and movement patterns, and the use of fauna crossings during construction and operation of the SSJ, including the proposed timing, and duration of that monitoring; (h) provision for the assessment of monitoring data to identify changes to habitat usage and whether this can be attributed to the SSJ.	All	All	Refer to the table in Section 7 of the Stage 1 Staging Report which identifies which plans apply to each section.	All	All	All	All	The following Threatened Species Management Plans have been prepared and approved: Threatened Flora Management Plan Update 1 (for Section 3-11) Approved by DPE on 2 February 2015; DoE Approval 5 May 2015. Threatened Flora Management Plan Update 2 (Sections 3 to 11) DPE Approval 21 August 2015. DoE Approval 4 September 2015. Threatened Rainforest Plants Threatened Mammal Management Plan Update 1 DPE Approval 7 May 2015. DoE Approval 12 May 2015. Threatened Mammal Management Plan Update 2 DPE Approval 21 October 2015. DoE Approval 25 October 2015. Threatened Fish Management Plan Update 1 DPE Approval 29 July 2015. Threatened Frog Management Plan DPE Approval 7 May 2015. Threatened Glider Management Plan DPE Approval 4 May 2015. Coastal Eru Management Plan (Sections 3 and 4, excluding Wave 3) DPE Approval 3 June 2015. Coastal Eru Management Plan (includes updates for Wave 3) DPE Approval 18 December 2015. Microbat Management Plan (Section 3 to 11) DPE Approval 3 to 5, Sections 11 and 12 and Mangrove Cut but excluding Iuka Population DPE approval on 4 February 2016. DoE approval on 29 February 2016. Koala Management Plan (Update 3) for Iuka Population, Broadwater (north of Lung Hill) and Coolgardie (Section 10) will be submitted for approval following receipt of DoE Approval for the Ballina Koala Plan. Ballina Koala Plan was submitted to DoE for approval in February 2016
	D9 (b)-(c)	(a) details of contingency measures that would be implemented in the event of changes to habitat usage patterns, entities, distribution, and movement patterns attributable to the construction or operation of the SSJ, based on adequate baseline data; (b) mechanisms for the monitoring, review and amendment of these plans; (c) provision for ongoing monitoring during operation of the SSJ (for operational/ongoing impacts) until such time as the use and effectiveness of mitigation measures can be demonstrated to have been achieved over a minimum of three successive monitoring periods, unless otherwise agreed by the Secretary in consultation with the EPA OEH, DPI (Fisheries) and DoE; (d) provision for annual reporting of monitoring results to the Secretary and the EPA OEH, DPI (Fisheries) and DoE, or as otherwise agreed by those agencies; (e) in developing the Plans, the Applicant shall demonstrate to the satisfaction of the Secretary and DoE, how the public authorities and expert reviewer recommendations provided for each draft plan in the documents listed in condition A2(c) have been addressed, including detailed justification of any variance from the recommendations of the expert reviewer of the management plans, including analyses of potential risk to the threatened species. The Plans must be submitted and approved by the Secretary prior to commencement of construction of the relevant stages of the action, and implemented prior to commencement of construction of the relevant stages, unless otherwise agreed by the Secretary.	All	All	Refer to the table in Section 7 of the Stage 1 Staging Report which identifies which plans apply to each section.	All	All	All	All	As above. Approved Threatened Species Management Plans for part of the approved Pacific Complex CEMP (i.e. Construction F10a and F10b) and the approved Threatened Species Management Plans for EMPS, EVMSs and ESCPs to ensure compliance with the relevant requirements of the various Threatened Species Management Plans
D9 (b)-(c)	D9 (b)-(c)	As part of the Threatened Species Management Plans required under condition D8, the Applicant shall measure and implement a Koala Management Plan to demonstrate the ongoing inclusion of the Koala population (Bogowie, Broadwater and Woomahulla). The Plan shall be prepared by a suitably qualified and experienced species expert and shall include, but not necessarily be limited to: (a) results of detailed surveys to determine: (i) the population status of the Coolgardie/Bogowie, Broadwater and Woomahulla Koala populations; (ii) habitat use and movement patterns of Koala populations within five kilometres of the proposed upgrade; and (iii) habitat areas likely to be fragmented by the SSJ, including the results of GPOT assessment and radio tracking (b) the results and adequacy of surveys shall be verified by an independent suitably qualified and experienced ecologist with appropriate qualifications and experience in Koala and road ecology. Where appropriate, the Applicant may verify the required area of survey specified under condition D8(b) and (c) by conducting additional surveys based on the information likely to be fragmented and/or related as a result of the SSJ; (c) a detailed description, including the location and design, of all proposed avoidance and mitigation measures.	NA	NA		6, 9, 10	NA	5b, 5c	Koala Management Plan (update 2) for Sections 3-8 (excluding Iuka population), Section 11 and Moore Cut, KMP (update 2) DPE approval 4 February 2016. DoE approval on 29 February 2016. Koala Management Plan (update 3) for Iuka population, Broadwater (north of Lung Hill) and Coolgardie (Section 10) was submitted to DoE for approval on 29 February 2016. Koala Management Plan (update 3) for Iuka population, Broadwater (north of Lung Hill) and Coolgardie (Section 10) was submitted to DoE for approval on 29 February 2016. Koala Management Plan (update 3) for Iuka population, Broadwater (north of Lung Hill) and Coolgardie (Section 10) will be submitted for approval following receipt of DoE Approval for the Ballina Koala Plan. Ballina Koala Plan was submitted to DoE for approval in February 2016	

Category	Part	Requirement	Section 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
		<p>(d) justification that the location and design of mitigation measures;</p> <p>(e) how this shall be reported on the Applicant's website within 24 hours of this occurring, and the record shall remain available for a period of at least five years, unless otherwise agreed by the Secretary;</p> <p>(f) include permanent fencing of the entire SSI for the length of the Coolgardie/Bagotville, Broadwater and Woomah/Iluka populations and for two kilometres beyond the distribution of the Coolgardie/Bagotville, Broadwater and Woomah/Iluka population, following the highway or to the nearest natural barrier to Koala movement (e.g. river), after baseline surveys are complete in accordance with condition D9(a) and prior to operation;</p> <p>(g) result in the complete, safe crossing of fauna crossings by the Koala. Fauna crossings shall be provided at a sufficient frequency to ensure that habitat connectivity is maintained or improved from pre-construction conditions, as determined by the independent ecologist and agreed by EPA, GEH, and DoE;</p> <p>(h) be in areas that are at a sufficient frequency to achieve (i) - (ix) based on site specific information contained in the survey results required by condition D9(a) and the ecological requirements of the Koala, including but not limited to home range size, local movement patterns and habitat use, in accordance with the advice of the independent ecologist and EPA, GEH;</p> <p>(i) all koala underpass structures shall have a minimum height and width of 2.4 metres and a maximum length of 40 metres, or a minimum height and width of 3 metres and a maximum length of 50 metres. The underpass/culvert entrance shall be located at ground level, and no higher in the fill. Structures that provide passage over the road shall have a minimum width of 30 metres and shall be treated with contiguous habitat features;</p> <p>(j) provide passage for koalas under or over the existing highway (where the existing highway forms part of the SSI) and service roads or local roads (servicing over 100 vehicles per day);</p> <p>(k) effectively minimise the risk of predation from dogs in both dedicated and combined crossings;</p> <p>(l) provide dry passage for dedicated fauna crossings and for combined fauna crossings to the satisfaction of EPA, GEH and DoE, at a flood immunity level determined in accordance with condition D2(c)(v);</p> <p>(m) provide habitat linkages to crossing structures from adjacent Koala habitat, and</p> <p>(n) ensure that pathways to connectivity structures are not impeded by ancillary facilities, rest areas, service roads or local roads;</p>	NA	NA		6, 9, 10	NA	5b, 5c	Koala Management Plan (update 2) for Sections 3-8 (excluding Iluka population), Section 11 and Morro Cut. KMP (update 2) DPE approval 4 February 2016. DoE approval on 29 February 2016. Koala Management Plan (update 3) for Iluka population, Broadwater (north of Lang Hill) and Coolgardie (Section 10) was submitted to DoE for approval on 29 February 2016. Pacific Complete will approve Contractor EMPs, EWMAs and ESCPs to ensure compliance with the relevant requirements of the Koala Management Plans.
	D9 (j)-(k)	<p>(e) if the mitigation measures discussed in condition D9(d) cannot be demonstrated to be effective to the satisfaction of the Secretary, in consultation with EPA, GEH and DoE, provision for the Plan to be revised to include the design and construction of a minimum of one dedicated underpass or land bridge every 500 metres. Underpass structures shall have a minimum height and width of three metres and a maximum length of 50 metres;</p> <p>(f) provision for the installation and vegetation planting of fauna overpasses prior to the commencement of construction;</p> <p>(g) a revegetation strategy to be implemented to increase connectivity adjacent to the SSI and leading to crossing locations, and the provision of vegetation planting on land bridges, to ensure the establishment of the vegetation prior to the commencement of construction;</p> <p>(h) details of the proposed monitoring methodology to ensure the effectiveness of the mitigation measures and the ongoing survival of the Coolgardie/Bagotville, Broadwater and Iluka populations;</p> <p>(i) include goals that demonstrate the mitigation measures are effective, including clear objectives, milestones, performance measures, corrective actions, and thresholds for corrective actions, and timeframes for completion;</p> <p>(j) occur until such time as the mitigation measures are demonstrated to be effective for three consecutive monitoring periods, or as agreed by the Secretary, to the satisfaction of the independent ecologist and GEH; and</p> <p>(k) (i) for the purposes of the Coolgardie/Bagotville population, consider the results of the surveys undertaken in the Koala habitat and population assessment Ballina Shire Council LGA (Bolinik Ecological Consultants Pty Ltd, November 2013) in determining the baseline population, and the results of the monitoring undertaken in accordance with condition D9(i) to determine if the mitigation measures are effective or changes to the population have occurred, the Secretary may require the Applicant to provide a report on the effectiveness of the corrective actions that have been implemented or proposed to be implemented, or a procedure for demonstrating that the change is not a result of the SSI. Should the Applicant be unable to demonstrate to the satisfaction of the Secretary that any change to the population is not attributable to the SSI, the SSI shall be deemed as the cause of the impact and the Applicant shall, within one month of these findings, provide to the satisfaction of the Secretary, in consultation with the EPA, GEH and DoE, the proposed corrective actions to address the impacts of the SSI. Any required corrective actions shall include, but not necessarily be limited to:</p> <p>(i) installation of further crossings or modifications to existing crossings and the provision of evidence of the complete, safe crossing of these fauna crossings by the Koala. Any additional crossings shall be provided at a sufficient frequency to ensure that habitat connectivity is maintained or improved from pre-construction conditions, within two years of their installation; and</p> <p>(ii) re-assessment of all revegetation areas and frequent reporting and maintenance including addressing failures.</p>	NA	NA		6, 9, 10	NA	5b, 5c	Koala Management Plan (update 2) for Sections 3-8 (excluding Iluka population), Section 11 and Morro Cut. KMP (update 2) DPE approval 4 February 2016. DoE approval on 29 February 2016. Koala Management Plan (update 3) for Iluka population, Broadwater (north of Lang Hill) and Coolgardie (Section 10) was submitted to DoE for approval in February 2016. Pacific Complete will approve Contractor EMPs, EWMAs and ESCPs to ensure compliance with the relevant requirements of the Koala Management Plans.
	D9 (j)-(k)	<p>(j) if the measures in condition D9(i) cannot be demonstrated to be successful within one year of their implementation, procedure for the submission of further offsets in accordance with conditions D5 and D9(i), to be provided within one year of these findings. Further offsets may include:</p> <p>(i) revegetation of cleared areas to improve connectivity; and/or</p> <p>(ii) strategic revegetation of cleared areas to improve connectivity; and/or</p> <p>(iii) development of a supplementary feeding program and/or breeding program; and/or</p> <p>(iv) development of a long term predator control program; and</p> <p>(v) evidence of consultation with species experts, EPA, GEH and DoE in addressing the requirements of this condition, and demonstration of how comments provided by the species experts, EPA, GEH and DoE, as a result of this consultation, have been addressed.</p> <p>The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI. The approved Koala Management Plan shall be implemented prior to the commencement of construction of the relevant stages.</p>	NA	NA		6, 9, 10	NA	5b, 5c	Koala Management Plan (update 2) for Sections 3-8 (excluding Iluka population), Section 11 and Morro Cut. KMP (update 2) DPE approval 4 February 2016. DoE approval on 29 February 2016. Koala Management Plan (update 3) for Iluka population, Broadwater (north of Lang Hill) and Coolgardie (Section 10) was submitted to DoE for approval in February 2016. Pacific Complete will approve Contractor EMPs, EWMAs and ESCPs to ensure compliance with the relevant requirements of the Koala Management Plans.
NOISE AND VIBRATION LAND USE SURVEY									
	D10	Prior to the commencement of construction, the Applicant shall undertake a land use survey to identify areas that are sensitive to construction vibration and construction ground-borne noise impacts. The results of the survey shall be incorporated into the Construction Noise and Vibration Management Plan.	All	All		All	All	All	Pacific Complete (Delivery Partner of Roads and Maritime Services) has an approved Construction Environmental Management Plan (CEMP) for the project. The CEMP includes noise and vibration management measures. The Construction Noise and Vibration Management Plan which was approved by DPE on 3 December 2015. Pacific Complete will approve Contractor EMPs and EWMAs to ensure compliance with construction noise requirements (CoAs and mitigation measures).
NOISE AND VIBRATION OPERATIONAL NOISE REVIEW									
	D11	The Applicant shall prepare a review of the operational noise mitigation measures proposed to be implemented for the SSI, within six months of commencing construction, unless otherwise agreed by the Secretary. The review shall be prepared in consultation with the EPA, to the satisfaction of the Secretary. The review may be submitted in stages to suit the staged construction of the SSI and sections of the SSI based on detailed design. The operational noise assessment shall be based on an appropriately calibrated noise model (which has incorporated additional noise monitoring, where necessary, for calibration purposes).	All	NA	Wave 1, 2 and 3 soft soil works do not include operational noise mitigation measures	All	NA	NA	To be addressed during detailed design. Each design portion (i.e. A, B, C and D) which covers Section 3 through to Section 11 will be required to prepare an Operational Noise Review in accordance with the requirements of the CoA. Pacific Complete will review detailed design deliverables to ensure compliance with the relevant CoAs.
WATER QUALITY MONITORING PROGRAM									

Category	Part	Requirement	Section and 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment	
	D12	<p>The Applicant shall prepare and implement a Water Quality Monitoring Program, to monitor the construction and operation impacts of the SSI on surface and groundwater quality and resources and wetlands, prior to construction. The Program shall be prepared in consultation with the OEH, EPA, DPI (Fisheries), NSW, DoE and Rous Water (in relation to the Woodburn borefields), to the satisfaction of the Secretary, and shall include but not necessarily be limited to:</p> <ul style="list-style-type: none"> (a) identification of surface and groundwater quality monitoring locations (including watercourses, waterbodies and SEPP14 wetlands) which are representative of the potential extent of impacts from the SSI; (b) the results of any groundwater modelling undertaken; (c) identification of works and activities during construction and operation of the SSI, including emergencies and spill events, that have the potential to impact on surface water quality of watercourses and wetlands; (d) development and presentation of parameters and standards against which any changes to water quality will be assessed, having regard to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 2000 (Australian and New Zealand Environment Conservation Council, 2000) or relevant baseline data; (e) representative background monitoring of surface and groundwater quality parameters for a minimum of twelve months (considering seasonality) prior to the commencement of construction, to establish baseline water conditions, unless otherwise agreed by the Secretary; (f) a minimum monitoring period of three years following the completion of construction or until the affected waterways and/or 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 bypasses) and ameliorative measures in the event that adverse impacts to water quality are identified; and (g) frequency and ameliorative measures in the event that adverse impacts to water quality are identified; and (h) reporting of the monitoring results to Department of Planning and Environment, OEH, EPA, DPI (Fisheries), NSW, DoE and Rous Water (in relation to the Woodburn borefields). 	All	All	A project wide water quality monitoring program is being prepared and implemented.	All	All	All	Pacific Highway Upgrade - Woolgoolga to Ballina Sections 3 to 11 Water Quality Monitoring Program (sixth issue, 21 August 2015) was approved for the Pacific Highway Upgrade project. The program for the Pacific Highway Upgrade project is detailed in the Pacific Highway Upgrade - Woolgoolga to Ballina Construction Soil and Water Quality Management Plan - Pacific Highway Upgrade - Woolgoolga to Ballina Construction Soil and Water Quality Management Plan - Pacific Highway Upgrade - Woolgoolga to Ballina Construction Soil and Water Quality Management Plan. Complete will manage the procurement of required surface water and groundwater monitoring and reporting etc during the construction and operational phase of the project as per the requirements of the Water Quality Monitoring Program.	
HYDROLOGICAL MITIGATION REPORT										
	D13	<p>The Applicant shall prepare and implement a Hydrological Mitigation Report for properties where flooding and/or hydrological impacts are predicted to exceed the relevant flood management objective in the documents listed in condition A2 as a result of the SSI. The Report shall be prepared by a suitably qualified expert and be based on detailed surveys (e.g. floor levels) and associated assessment of potentially flood affected properties in the Cornd, Clarence and Richmond river floodplains. The Report shall:</p> <ul style="list-style-type: none"> (a) identify properties in those areas likely to have an increase/decrease in impact and detail the predicted impact. The types of impacts to be considered include all those examined in the EIS including but not limited to changes in flood levels and velocities, alteration to drainage, reduction in flood evacuation access or capability, impacts on infrastructure, impacts on crops and agriculture, and impacts on the environment; (b) identify measures to be implemented to address these impacts; (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 SSI and cause localised soil erosion and/or pasture damage; (d) be developed in consultation with the relevant council, NSW State Emergency Service and directly affected landowners; (e) identify operational and maintenance responsibilities for items (a) to (c) inclusive; and (f) refer to the assessments described in conditions B31 and B32. <p>The report may be submitted in stages to suit the staged construction of the SSI</p> <p>Where any areas likely to have altered flood conditions until such time as works identified in the hydrological mitigation report have been completed, unless otherwise agreed by the Secretary.</p>	1	NA	Although soft soil works are located in the Clarence and Richmond river floodplains, flood modelling conducted during the detailed design indicates that hydrological impacts due to the construction of embankments in these areas are not predicted to exceed the relevant flood management objective.	All	NA	NA	Soft soils works on the floodplains of the Clarence and Richmond rivers are not predicted to exceed the relevant flood management objective.	Wave 5a, 5b and 5c do not involve the design or operation of a completed section of highway. The final flood model will be developed as part of the detailed design.
	D14	<p>Based on the mitigation measures identified in condition D13, the Applicant shall prepare and implement a final schedule of feasible and reasonable flood mitigation measures proposed at each directly affected property in consultation with the landowner. The schedule shall be provided to the relevant landowner(s) prior to the implementation/construction of the mitigation works, unless otherwise agreed by the Secretary. A copy of each schedule of flood mitigation measures shall be provided to the Department of Planning and Environment and the relevant council prior to the implementation/construction of the mitigation measures on the property.</p>	1	NA		All	NA	NA	To be addressed during detailed design if identified by the requirements of CoA D13 by each design Portion (A, B, C and D) which covers sections 3 to section 11. Pacific Complete will ensure detailed design deliverables to ensure compliance with the relevant CoA.	
	D15	<p>The Applicant shall employ a suitably qualified and experienced independent hydrological expert, whose appointment has been endorsed by the Secretary, to deal with all hydrological matters and asset landowners in negotiating feasible and reasonable mitigation measures.</p>	All	All	An individual is proposed to be engaged on a project-wide basis before construction commences	All	All	All	RMS has engaged a suitably qualified and experienced independent hydrological expert (Mark Babister) for the project.	
	D16	<p>The Applicant shall provide feasible and reasonable assistance to the relevant council 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 SSI.</p>	All	All		All	All	All	Noted.	
TRANSPORT AND ACCESS										
	D17	<p>The Applicant shall prepare and implement a Signage Policy to address the impact of towns (South Grafton, Ummarr, Tyndale, Woodburn, Broadwater and Wardell) which are bypassed by the SSI, at least six months prior to operation, unless otherwise agreed by the Secretary. The Policy shall be prepared in consultation with the relevant council and to the satisfaction of the Secretary.</p> <p>The Policy shall be consistent with the Guide - Signposting (RTA, July 2007), Tourist Signposting guide (RMS and Destination NSW 2012) and provide for signage that provides information to guide motorists through the towns of Ummarr, Tyndale, Woodburn, Broadwater and Wardell, and</p> <p>(b) the location of route markers that may be taken as an alternative to the highway.</p> <p>The Policy may be submitted in stages to suit the staged construction of the SSI.</p>	NA	NA		3, 5, 9 and 10	NA	Noted		
	D18	<p>The Applicant shall prepare and implement a Business Access Strategy to address changes to access to businesses along the highway, at least six months prior to operation. The Strategy shall be prepared in consultation with the relevant council, business owners and the New Italy Woodsum and to the satisfaction of the Secretary.</p> <p>The Applicant may incorporate the requirements of this condition into the Signage Policy for the SSI under condition D17.</p>	All	NA	Wave 1, 2 and 3 soft soils works do not involve the construction of an operational section of highway.	All	NA	NA	Noted	
ROAD DIAPYDATION										
	D19	<p>Upon determining the haulage route(s) for construction vehicles associated with the SSI, and prior to construction, an independent and qualified expert shall prepare a Road Diapydation Report. The Report shall assess the current condition of the road and describe mechanisms to restore any damage that may result due to its use by traffic and transport related to the construction of the SSI. The Report shall be submitted to the relevant council for review prior to the commencement of haulage.</p> <p>Following completion of construction, a subsequent Report shall be prepared to assess any damage to the road that may have resulted from the construction of the SSI. Measures undertaken to restore or restate roads affected by the SSI shall be undertaken in a timely manner, in accordance with the reasonable requirements of the relevant council, and at the full expense of the Applicant.</p> <p>Nothing in this condition restricts the Applicant commencing adjustments and minor upgrades to the existing road network to cater for construction traffic and installation of temporary project signage prior to the commencement of construction.</p>	All	All		All	All	All	Pacific Complete will procure road diapydation services to address the requirements of this CoA.	
URBAN DESIGN AND LANDSCAPING										

Category	Part	Requirement	Section 2	Section 3 to 11	Section 3 to 11	Wave 5a, 5b & 5c	Comment
		<p>The Applicant shall prepare and implement an Urban Design and Landscape Plan prior to the commencement of permanent built works and/or landscaping, unless otherwise agreed by the Secretary, to present an integrated landscape and design for the SSI. The Plan shall be prepared in accordance with the Roads and Maritime Services Urban Design and Visual Guidelines, the design principles outlined in the EIS, and the revegetation principles outlined in the EIS Working Paper—Biodiversity. The Plan shall be prepared by an appropriately qualified expert in consultation with the relevant council and community, to the satisfaction of the Secretary. The Plan shall include, but not necessarily be limited to:</p> <p>(a) identification of design principles and standards based on:</p> <ul style="list-style-type: none"> (i) local environmental values; (ii) heritage values; (iii) sustainability objectives; (iv) sustainable design and maintenance; (v) community amenity and privacy; (vi) relevant design standards and guidelines; and (vii) the urban design objectives outlined in Section 4.2 of the EIS Working Paper—Urban Design Landscape Character and Visual Impact; <p>(b) the location of existing vegetation and proposed landscaping (including use of indigenous and endemic species where possible). Details of species to be replanted/vegetated shall be provided, including their appropriateness to the area and habitat for treated species;</p> <p>(c) a description of indicators along the corridor (dry or moorland) impacted by the construction of the SSI (e.g. temporary ancillary facilities, access tracks, watercourse crossings, etc.) and the location of any other features that may be impacted by the construction of the SSI, including the location of any existing or potential biodiversity outcomes and visual integration;</p> <p>(d) take into account appropriate roadside plantings and landscaping in the vicinity of heritage items and ensure no additional heritage impacts;</p> <p>(e) a description of disturbed areas (including borrow sites) and details of the strategies to progressively rehabilitate, regenerate and/or revegetate these areas, including clear objectives and timelines for rehabilitation works, procedures for monitoring success of regeneration or revegetation, and corrective actions should regeneration or revegetation not conform to the objectives adopted;</p> <p>(f) 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), binning, materials and signs;</p> <p>(g) an assessment of the visual screening effects of existing vegetation and the proposed landscaping and built elements. Where properties have been identified as likely to experience high visual impacts as a result of the construction of the SSI, those measures shall be implemented during the construction of the SSI;</p> <p>(h) graphics such as sections, perspective views and sketches for key elements of the SSI, including, but not limited to built elements of the SSI;</p> <p>(i) strategies for progressive landscaping and other environmental controls such as erosion and sedimentation controls, drainage and noise mitigation;</p> <p>(j) monitoring and maintenance procedures for the built elements, rehabilitated vegetation and landscaping (including weed control), including performance indicators, responsibilities, timing and duration and contingencies where rehabilitation of vegetation and landscaping measures fail; and</p> <p>(k) evidence of consultation with the relevant council and community on the proposed urban design and landscape measures prior to its finalisation.</p> <p>The Plan may be submitted in stages to suit the staged construction program of the SSI.</p>	All	All	NA	NA	An Urban Design and Landscape Plan that addresses this condition is to be prepared for each relevant detailed design package. Wave 1, 2 and 3 soft soils works will not include landscaping.
	D20 (a)-(d)		All	All	NA	NA	<p>To be addressed during detailed design. Each design Portion (i.e. A, B, C and D) which covers Section 3 through to Section 11 will be required to prepare an Urban Design and Landscape Plan in accordance with the requirements of this CoA. Pacific Complete will review detailed design deliverables to ensure compliance with the relevant CoA.</p> <p>Soft soils works will not require urban design or landscaping.</p> <p>The nature of the early enabling construction activities associated with Wave 5a, 5b and 5c is the same as that for the soft soils works currently being undertaken as Waves 1, 2, 3 and 4. In terms of urban design and landscaping, these early enabling construction works do not comprise any elements of permanent works (e.g. permanent bridge structures, road pavement, road furniture etc) or landscaping. It should be noted that the development of the Urban Design and Landscape Plans for Portions A, B, C and D are well advanced with their progression from Substantial Detailed Design (SDD) to Final Detailed Design.</p>
	D20 (e)-(k)		All	All	NA	NA	<p>To be addressed during detailed design. Each design Portion (i.e. A, B, C and D) which covers Section 3 through to Section 11 will be required to prepare an Urban Design and Landscape Plan in accordance with the requirements of this CoA. Pacific Complete will review detailed design deliverables to ensure compliance with the relevant CoA.</p> <p>Soft soils works will not require urban design or landscaping.</p> <p>The nature of the early enabling construction activities associated with Wave 5a, 5b and 5c is the same as that for the soft soils works currently being undertaken as Waves 1, 2, 3 and 4. In terms of urban design and landscaping, these early enabling construction works do not comprise any elements of permanent works (e.g. permanent bridge structures, road pavement, road furniture etc) or landscaping. It should be noted that the development of the Urban Design and Landscape Plans for Portions A, B, C and D are well advanced with their progression from Substantial Detailed Design (SDD) to Final Detailed Design.</p>
ANCILLARY FACILITIES							
		<p>The Applicant shall prepare and implement an Ancillary Facilities Management Plan to detail the management of ancillary facilities associated with the SSI. The Plan shall be prepared in consultation with the EPA, OEH, DPI (Fisheries), DoE, and the relevant council, and to the satisfaction of the Environmental Representative, and shall include, but not necessarily be limited to:</p> <p>(a) a description of the ancillary facility (including a site layout plan), its components and details of the existing environment on and in the vicinity of the site;</p> <p>(b) details of the activities to be carried out at the facility, including the hours of operation, staging of operation and predicted date of commissioning;</p> <p>(c) a description of the plant, equipment and materials to be used and/or stored on the site, including dangerous and hazardous goods;</p> <p>(d) details of the light and heavy construction vehicle movements to and from each facility, including site access and routes(s) to be used during the establishment and operation of the facility; and an assessment of potential construction traffic impacts on the local road network and access tracks;</p> <p>(e) details of the proposed construction traffic management measures to be implemented to manage the impacts of the facility;</p> <p>(f) demonstrate compliance with the local and environmental criteria in condition B72(a)–(b72)(n);</p> <p>(g) details of the mitigation, monitoring and management procedures specific to the facility that would be implemented to minimise environmental and amenity impacts or, where this is not possible, feasible and reasonable measures to offset these impacts;</p> <p>(h) a description of how the management and mitigation measures set out in the documents listed in condition A2 will be implemented on the site, and if not, justification for such decisions, particularly on those sites assessed as having a high risk of flood impacts;</p> <p>(i) an assessment of alternative site layouts, where other noise management levels are predicted to be exceeded and acoustic treatment of residences is not proposed, or where such treatment is proposed consequent to the operational impacts of the SSI but will not be provided prior to establishment of an ancillary facility;</p> <p>(j) details of the proposed noise management measures to be implemented to manage the impacts of the facility, including any proposed construction activities associated with other road upgrade projects;</p> <p>(k) identification of the timing for the completion of activities at the facility and how the site will be decommissioned (including any necessary rehabilitation); and</p> <p>(l) mechanisms for the monitoring, review and amendment of this plan.</p> <p>The plan shall be approved by the Environmental Representative prior to the establishment of the ancillary facilities described therein. In considering the approval of the plan, the Environmental Representative shall take into account the Applicant's response to public authority and council comments on the plan.</p> <p>The Applicant may prepare a separate plan for the facility or include multiple sites within a single or multiple management plans.</p>	All	All	All	An Ancillary Facilities Management Plan that addresses this condition is to be prepared for each detailed design package.	
	D21		All	All	All	All	<p>Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the Environmental Representative on 10 February 2016.</p> <p>The purpose of the AFMP is to detail how Pacific Complete will manage the impacts of the SSI on the surrounding community, including the management of the site during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of Appendix B9 Ancillary Facilities Management Plan (ER approved 10 February 2016).</p>
BORROW SITES							
	D22	<p>The Applicant shall prepare and implement a Borrow Sites Management Plan, to manage the construction, operation and rehabilitation of the borrow sites used to source construction material for the SSI, prior to the commencement of construction at the borrow sites, or as otherwise agreed by the Secretary. The Plan shall be prepared in consultation with the EPA, OEH and DPI (Fisheries) and to the satisfaction of the Secretary, and shall include, but not necessarily be limited to:</p> <p>(a) identification of borrow sites to be used to source construction material for the SSI, including details of the location, size and use of the sites;</p> <p>(b) management and mitigation measures to be used to minimise surface and groundwater impacts, Aboriginal and non-Aboriginal heritage, air quality, noise and vibration, biodiversity and visual impacts;</p> <p>(c) consultation with sensitive receivers; and</p> <p>(d) details of the rehabilitation of the borrow site, including future landform and use of the borrow site, landscaping and revegetation, and measures that would be implemented to minimise or manage the ongoing environmental effects of the site.</p> <p>The Plan shall demonstrate that the construction and operation of the Lang Hill borrow site has no adverse impact on the known Ouleyan Pygmy Parach habitat/waterway.</p>	NA	3, 8, 10	NA	<p>No borrow sites are currently proposed for Stage 1.</p> <p>Pacific Complete will prepare site specific Borrow Site Management Plans as required by the project. This requirement will apply to all borrow site management plans prepared by Pacific Complete.</p>	
ENVIRONMENTAL REPRESENTATIVE							

Category	Part	Requirement	Section 2 and (Wave 1, 2 & 3)	Section 3 to (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	D23	<p>Prior to the commencement of construction of the SSI, or as otherwise agreed by the Secretary, the Applicant shall nominate for the approval of the Secretary a suitably qualified and experienced Environmental Representative(s) that is independent of the design and construction personnel. The Applicant shall employ the Environmental Representative(s) for the duration of construction, or as otherwise agreed by the Secretary. The Environmental Representative(s) shall:</p> <p>(a) be the principal point of advice in relation to the environmental performance of the SSI;</p> <p>(b) monitor the implementation of environmental management plans and monitoring programs required under the approval and advise the Applicant upon the achievement of these performance and impacts of the SSI;</p> <p>(c) have responsibility for considering and advising the Applicant on matters specified in the conditions of this approval, and other licences and approvals related to the environmental performance and impacts of the SSI;</p> <p>(d) ensure that environmental auditing is undertaken in accordance with the Applicant's Environmental Management System(s);</p> <p>(e) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(f) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(g) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(h) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(i) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(j) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(k) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(l) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(m) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(n) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(o) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(p) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(q) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(r) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(s) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(t) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(u) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(v) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(w) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(x) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(y) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p> <p>(z) be given the authority to approve minor amendments to the Construction Environmental Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environmental Management Plan;</p>	All	All	All	The Environmental Representative for the Woodgonga to Balina Pacific Highway Upgrade Project Murray Curtis of ERM.
	D24	The Environmental Representative shall prepare and submit to the Secretary a monthly report on the Environmental Representative's actions and decision on matters specified in condition D23 for the preceding month. The reports shall be submitted for the duration of construction of the SSI, unless otherwise agreed by the Secretary.	All	All	All	Noted
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN						
	D25 (b) (c)	<p>The Applicant shall prepare and implement (following approval) a Construction Environmental Management Plan for the SSI, prior to the commencement of construction, or as otherwise agreed by the Secretary. The Plan shall be prepared in consultation with the EPA, DEH, DPI (Fisheries), NOW and DoE and outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant government agencies and in accordance with the Guidelines for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The Plan shall include, but not necessarily be limited to:</p> <p>(i) a description of the measures to be taken to avoid, minimise and offset the environmental impacts of the SSI during construction, including approval, consultations and agreements required from authorities and other stakeholders under key legislation and policies;</p> <p>(ii) a description of the roles and responsibilities for relevant employees involved in the construction of the SSI, including relevant training and induction provisions for ensuring that employees, including contractors and sub-contractors, are aware of their environmental and compliance obligations under these conditions of approval;</p>	All	All	All	Separate Construction Environmental Management Plans are proposed for each component of Stage 1.
	D25 (d)	<p>(d) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase and details of how environmental performance would be managed and monitored to meet these issues; (e) measures to be taken to avoid, minimise and offset the environmental impacts of the SSI during construction, including approval, consultations and agreements required from authorities and other stakeholders under key legislation and policies;</p> <p>(i) measures to monitor and manage dust emissions including dust from stockpiles, blasting, traffic on unsealed public roads and materials tracking from construction sites onto public roads;</p> <p>(ii) measures to minimise hydrology impacts, including measures to stabilise bed and bank structures as required;</p> <p>(iii) measures for the handling, treatment and management of contaminated materials;</p> <p>(iv) measures to monitor and manage waste generated during construction including but not necessarily limited to: general procedures for waste classification, handling, reuse, and disposal; uses of secondary waste material in construction wherever feasible and reasonable; procedures for dealing with green waste including timber and mulch from clearing activities; measures for reducing demand on water resources;</p> <p>(v) measures to monitor and manage noise and vibration including but not necessarily limited to: noise and vibration monitoring; noise and vibration management plans; noise and vibration control measures;</p> <p>(vi) measures to monitor and manage air quality including but not necessarily limited to: dust and particulate matter monitoring; dust and particulate matter management plans; dust and particulate matter control measures;</p> <p>(vii) measures to monitor and manage water quality including but not necessarily limited to: water quality monitoring; water quality management plans; water quality control measures;</p> <p>(viii) measures to monitor and manage soil quality including but not necessarily limited to: soil quality monitoring; soil quality management plans; soil quality control measures;</p> <p>(ix) measures to monitor and manage biodiversity including but not necessarily limited to: biodiversity monitoring; biodiversity management plans; biodiversity control measures;</p> <p>(x) measures to monitor and manage heritage including but not necessarily limited to: heritage monitoring; heritage management plans; heritage control measures;</p> <p>(xi) measures to monitor and manage cultural heritage including but not necessarily limited to: cultural heritage monitoring; cultural heritage management plans; cultural heritage control measures;</p> <p>(xii) measures to monitor and manage social impacts including but not necessarily limited to: social impacts monitoring; social impacts management plans; social impacts control measures;</p> <p>(xiii) measures to monitor and manage economic impacts including but not necessarily limited to: economic impacts monitoring; economic impacts management plans; economic impacts control measures;</p> <p>(xiv) the issues identified in condition D25;</p> <p>(xv) details of compliance monitoring and reporting procedures during construction, consistent with the requirement of conditions C1 to C4;</p> <p>(xvi) details of compliance monitoring and reporting procedures during construction, consistent with the requirements of condition D27; and</p> <p>(xvii) details of compliance monitoring and reporting procedures during construction, consistent with the requirements of condition D28.</p> <p>The Plan shall be submitted for the approval of the Secretary no later than one month prior to the commencement of construction, or as otherwise agreed by the Secretary. The Plan may be prepared in stages, however, construction works shall not commence until written approval of the relevant stage has been received from the Secretary. The approval of a Construction Environmental Management Plan does not relieve the Applicant of any requirement associated with this SSI approval. If there is an inconsistency with an approved Construction Environmental Management Plan and the conditions of this SSI approval, the requirements of this SSI approval shall prevail.</p>	All	All	All	Pacific Complete (Delivery Partner of Roads and Maritime Services) has an approved Construction Environmental Management Plan (CEMP) covering Sections 3 to 11. The Pacific Complete CEMP was approved by DPE on 23 October 2015. Pacific Complete will approve Contractor EMPs, EWMs and ESCPs to ensure compliance with the Pacific Complete CEMP-relevant RMS/SPC environmental specifications and the requirements of this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).

Category	Part	Requirement	Section 2	Section 3 to 11	Wave 5a, 5b & 5c	Comment
D26 (a)		<p>As part of the Construction Environmental Management Plan for the SSI, the Applicant shall prepare and implement:</p> <p>(a) 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 EPA and shall be consistent with the guidelines contained in the Interim Construction Noise Guidelines (DECC, 2009) and shall include, but not necessarily be limited to:</p> <p>(i) identification of sensitive receivers and relevant construction noise and vibration goals applicable to the SSI stipulated in this approval;</p> <p>(ii) details of construction activities and an indicative schedule for construction works, including the identification of key noise and/or vibration generating construction activities (based on representative construction scenarios, including at ancillary facilities) that have the potential to generate noise and/or vibration impacts on surrounding sensitive receivers, particularly noise impacts;</p> <p>(iii) identification of feasible and reasonable measures proposed to be implemented to minimise and manage construction noise and vibration impacts (including construction traffic noise impacts);</p> <p>(iv) procedures and mitigation measures to ensure relevant vibration and blasting criteria are achieved, including a suitable blast program, applicable buffer distances for vibration sensitive works, use of low-vibration generating equipment/vibration dampeners or alternative construction methodology, and pre- and post-construction disposition surveys of sensitive structures where blasting and/or vibration is likely to result in damage to buildings and structures (including surveys being undertaken immediately following a monitored exceedance of the criteria); and</p> <p>(v) a description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often this monitoring would be conducted, compliance would be confirmed, monitoring would take place, how the results of this monitoring would be recorded and reported, and, if any exceedance is detected, how any non-compliance would be notified.</p> <p>(vi) an out-of-hours work (OOHW) protocol for the assessment, management and approval of works outside of standard construction hours as defined in condition B15, including a risk assessment process under which the Environmental Representative may approve out-of-hour construction activities. The OOHW protocol shall detail standard assessment, mitigation and notification requirements for high and low risk out-of-hour works, consultation procedures with the EPA, the relevant council and affected landowners;</p> <p>(vii) 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;</p> <p>(viii) 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 in the event of a breach;</p> <p>(ix) mechanisms for the monitoring, review and amendment of this plan.</p>	AI	AI	AI	<p>This requirement is addressed in the Pacific Complete CEMP (Appendix B) Construction Noise and Vibration Management Plan which was approved by DPE on 3 December 2015. Pacific Complete will approve Contractor EMPs, EVMs and EGCs to ensure compliance with the PC CEMP. Relevant RMS/PC environmental specifications and the requirements of this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).</p>
D26 (b)		<p>(a) a Construction Traffic and Access Management Plan to manage construction traffic and access impacts of the SSI. The Plan shall be developed in consultation with the relevant council and shall include, but not necessarily be limited to:</p> <p>(i) identification of construction traffic routes and construction traffic volumes (including heavy vehicle/spot haulage) on these routes;</p> <p>(ii) details of vehicle movements for construction sites and site compounds including parking, dedicated vehicle turning areas, and ingress and egress points;</p> <p>(iii) identification of construction impacts that could result in disruption of traffic, public transport, pedestrian and cycle access, property access, ingress and egress points, movements;</p> <p>(iv) details of management measures to minimise traffic impacts, including the priority road work traffic control measures, on-site vehicle queuing and parking areas and management measures to manage traffic movements, parking, loading and unloading at ancillary facilities during out-of-hours work;</p> <p>(v) details of measures to manage traffic movements, parking, loading and unloading at ancillary facilities during out-of-hours work;</p> <p>(vi) mechanisms for the monitoring, review and amendment of this plan.</p>	AI	AI	AI	<p>This requirement is addressed in the Pacific Complete CEMP (Appendix B) Construction Traffic and Access Management Plan which was approved by DPE on 23 October 2015. Pacific Complete will approve Contractor EMPs, EVMs and EGCs to ensure compliance with the PC CEMP. Relevant RMS/PC environmental specifications and the requirements of this CoA. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).</p>
D26 (c)		<p>(a) a Construction Soil and Water Quality Management Plan to manage surface and groundwater impacts during construction of the SSI. The Plan shall be developed in consultation with the EPA, DPI (Fisheries), NSW Water (in relation to the Yassoburn borefield), DOE and the relevant council and precinct, but not necessarily be limited to:</p> <p>(i) baseline soil and water quality and water impact assessment criteria consistent with Australian and New Zealand Environment Conservation Council (ANZECC) guidelines or relevant state specific baseline data collected for known Ouleyan Pymy Perch waterways;</p> <p>(ii) management measures to be used to minimise surface and groundwater impacts, including details of how silt and fill material required by the SSI will be sourced, handled, stockpiled, reused and managed; erosion and sediment control measures, safety control measures and the consideration of food safety;</p> <p>(iii) a Groundwater and Soil Safety report should geotechnical investigations determine the presence, extent and severity of soil events;</p> <p>(iv) an Acid Sulfate Soils contingency plan, consistent with the Acid Sulfate Soils Manual, to deal with the unexpected discovery of actual or potential acid sulfate soils, including procedures for managing the discovery of acid sulfate soils;</p> <p>(v) an Ouleyan Pymy Perch habitat waterway management framework to detail the measures and construction methods that will be employed to avoid direct discharge of construction water to known Ouleyan Pymy Perch habitat waterways and downstream impacts to suitable habitat;</p> <p>(vi) management measures for contaminated material and a contingency plan to be implemented in the case of unanticipated discovery of contaminated material during construction;</p> <p>(vii) procedures for monitoring the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often this monitoring would be undertaken, the locations where monitoring would take place, how the results of the monitoring would be recorded and reported, and, if any exceedance of the criteria is detected how any non-compliance can be notified, and mechanisms for the monitoring, review and amendment of this plan.</p>	AI	AI	AI	<p>This requirement is addressed in the Pacific Complete CEMP (Appendix B) Construction Soil and Water Quality Management Plan which was approved by DPE on 23 October 2015. Pacific Complete will approve Contractor EMPs, EVMs and EGCs to ensure compliance with the PC CEMP. Relevant RMS/PC environmental specifications and the requirements of this CoA.</p> <p>The exception to this are the approved CEMP documents associated with soft soil works (Wave 1 and Wave 2) provided by RMS (vi) Relevant to sections 6, 7, 8 and 9, not relevant to soft soil wave works.</p>
D26 (d)		<p>(a) 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 EPA, GEH, the NSW Heritage Council (for non-Aboriginal heritage) and Registered Aboriginal Parties (for Aboriginal heritage), and include, but not necessarily be limited to:</p> <p>(i) location to Aboriginal Heritage;</p> <p>(ii) details of further investigation and identification of Aboriginal cultural heritage sites within the SSI boundary;</p> <p>(iii) details of management measures to be carried out in relation to Aboriginal heritage, including a detailed methodology and strategies for protection, monitoring, salvage, and conservation, of sites and items associated with the SSI;</p> <p>(iv) procedures for dealing with previously unidentified Aboriginal objects (excluding human remains) including cessation of works in the vicinity, assessment of the significance of the items) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified archaeologist in consultation with Department of Planning and Environment, EPA, GEH and Registered Aboriginal Parties and assessment of the consistency of any new Aboriginal heritage impacts against the approved impacts of the SSI, and registration of the new site in the EPA, GEH's Aboriginal Heritage Information Management System (AHIMS) register;</p> <p>(v) details of site investigation, including the location of any new Aboriginal heritage sites, including any works in the area undertaken by the NSW Police Force, EPA, GEH, Registered Aboriginal Parties and not necessarily limited to the area undertaken by the NSW Police Force;</p> <p>(vi) heritage training and induction processes for construction personnel (including procedures for keeping records of inductions) and obligations under the conditions of this approval including site investigation, protection and conservation of Aboriginal cultural heritage, and</p> <p>(vii) procedures for ongoing Aboriginal consultation and involvement for the duration of the SSI, and</p> <p>(viii) in relation to non-Aboriginal Heritage:</p> <p>(A) identification of heritage items directly and indirectly affected by the SSI;</p> <p>(B) details of management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations, archival recordings and/or measures to be undertaken during construction works in the vicinity);</p> <p>(C) details of site investigation and identification of non-Aboriginal heritage items;</p> <p>(D) procedures for dealing with previously unidentified heritage objects, including cessation of works in the vicinity, assessment of the significance of the items) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified and impartial archaeologist in consultation with the GEH, NSW Heritage Council and Department of Planning and Environment, and assessment of the consistency of any new heritage impacts against the approved impacts of the SSI; and</p> <p>(E) heritage training and induction processes for construction personnel (including procedures for keeping records of inductions and obligations under the approval including site identification, protection and conservation of non-Aboriginal cultural heritage, and</p> <p>(F) mechanisms for the monitoring, review and amendment of this plan.</p>	AI	AI	AI	<p>The requirement is addressed in the Pacific Complete CEMP (Appendix B) Construction Heritage Management Plan which was approved by DPE on 23 October 2015. Pacific Complete will be submitting the Aboriginal and Non-Aboriginal Heritage and Education Training Package which forms Appendix A of the Construction Heritage Management Plan in February 2015 following the completion of the consultation period as of 12 February 2015. Pacific Complete will approve Contractor EMPs, EVMs and EGCs to ensure compliance with the PC CEMP. Relevant RMS/PC environmental specifications and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2).</p> <p>The exception to this are the approved CEMP documents associated with soft soil works (Wave 1 and Wave 2) provided by RMS.</p>

Category	Part	Requirement	Section 1 and (Wave 1, 2 & 3)	Section 2 to (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
D26 (e)		<p>(e) a Construction Flora and Fauna Management Plan to detail how construction impacts on ecology will be monitored and managed. The Plan shall be prepared by a suitably qualified and experienced ecologist and developed in consultation with the EPA, OEH, DPI (Fisheries) and DE, and shall include, but not necessarily be limited to:</p> <p>(i) details of pre-construction surveys undertaken by a suitably qualified and experienced ecologist to verify the SSI footprint based on detailed design;</p> <p>(ii) details of pre-construction surveys undertaken by a suitably qualified and experienced ecologist to verify the SSI footprint based on detailed design;</p> <p>(iii) details of impacted and adjoining areas showing vegetation communities, important flora and fauna habitat areas, locations where threatened species, populations or ecological communities have been recorded, including pre-clearing surveys to confirm the location of threatened flora and fauna species and associated habitat features;</p> <p>(iv) the identification of areas to be cleared and details of management measures (such as fencing, clearing procedures, removal and relocation of fauna during clearing, habitat tree management and construction worker education) to avoid any residual habitat damage or loss and to minimise or eliminate time lags between the removal and subsequent replacement of vegetation;</p> <p>(v) a protocol for the removal and relocation of fauna during clearing, including provision for engagement of a suitably qualified and experienced ecologist to identify locations where clearing native vegetation during the breeding/nesting periods of threatened species, where feasible and reasonable;</p> <p>(vi) details of general work practices and mitigation measures to be implemented during construction and operation to minimise impacts on native fauna and native vegetation (particularly threatened species and their habitats and EEC) not proposed to be cleared as part of the SSI, including, but not necessarily limited to, fencing of sensitive areas, measures for maintaining existing habitat features (such as burlin rock and tree branches etc), seed harvesting and appropriate topsoil management, construction worker education, weed management (including controls to prevent the introduction or spread of <i>Phytolacca cinerascens</i> and <i>Myrica</i> spp.), erosion and sediment control, including measures to prevent the spread of <i>Phytolacca cinerascens</i> and <i>Myrica</i> spp.);</p> <p>(vii) rehabilitation details, including identification of flora species and sources, and measures for the management and maintenance of rehabilitated areas;</p> <p>(viii) weed management measures focusing on early identification, suppression and control of invasive weeds and effective management controls;</p> <p>(ix) a protocol for managing aquatic and terrestrial pest animals/invasive species and plant species, and pathogens;</p> <p>(x) a description of how the effectiveness of these management measures would be monitored and linked to the monitoring undertaken as part of the Threatened Species Management Plans;</p> <p>(xi) a procedure for dealing with unexpected EEC/threatened species identified during construction, including cessation of work, and notification of the EPA, OEH, DPI (Fisheries) and other relevant agencies, including mitigation measures in consultation with these agencies (including relevant re-location measures) and updating of ecological monitoring and/or biodiversity offset requirements; and</p> <p>(xii) mechanisms for the monitoring, review and amendment of this plan.</p>	All	All	All	This requirement is addressed in the Pacific Complete CEMP (Appendix B2 Construction Flora and Fauna Management Sub-Plan). The Pacific Complete CEMP was approved by DPE on 23 October 2015. Pacific Complete will approve Contractor EMPs, EMMs and ESCPs to ensure compliance with the PC CEMP, relevant RWS/PC environmental management plans and approved CEMP documentation in place for soft soil works (Wave 1 and Wave 2).
COMPLIANCE MONITORING AND TRACKING						
D27		<p>The Applicant shall prepare and implement a Compliance Tracking Program, to track compliance with the requirements of this approval, prior to the commencement of construction and operation of the SSI, and include, but not necessarily be limited to:</p> <p>(a) provisions for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged);</p> <p>(b) provisions for periodic reporting of compliance status to the Secretary, including a Pre-Construction Compliance Report, prior to the commencement of construction, and a Pre-Operation Compliance Report prior to the commencement of operation. These reports may be staged to suit the staged construction/operation of the SSI;</p> <p>(c) a program for independent environmental auditing in accordance with ISO 18011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing;</p> <p>(d) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents;</p> <p>(e) procedures for dealing with any non-compliance identified during environmental auditing; review of compliance or incident management; and</p> <p>(f) provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.</p>	All	All	All	Compliance tracking is proposed at project-wide, individual stage, and individual construction package levels.
OPERATIONAL NOISE AND VIBRATION COMPLIANCE						
D28		<p>The Applicant shall undertake operational noise monitoring, to compare actual noise performance of the SSI against noise performance predicted in the review of noise mitigation measures required by condition D11, within 12 months of the commencement of operation of the SSI, or as otherwise agreed by the Secretary.</p> <p>The Applicant shall subsequently prepare an Operational Noise Compliance Report to document this monitoring. The Report shall include, but not necessarily be limited to:</p> <p>(a) noise monitoring to assess compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under condition D11 and documents listed in condition A2;</p> <p>(b) a review of the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy 2011;</p> <p>(c) noise monitoring undertaken, including monitoring sites at which SSI noise levels are ascertained, with specific reference to locations of impacts on sensitive receptors;</p> <p>(d) details of any complaints and enquiries received in relation to operational noise generated by the SSI between the date of commencement of operation and the date the report was prepared;</p> <p>(e) any required recalculations of the noise model taking into consideration factors such as noise monitoring and actual traffic numbers and proportions;</p> <p>(f) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and, if necessary, reassessment of feasible and reasonable mitigation measures; and</p> <p>(g) identification of additional feasible and reasonable measures to those identified in the review of noise mitigation measures required by condition D11, that would be implemented with the SSI, and reported to the Secretary and the EPA.</p> <p>The Applicant shall provide the Secretary and the EPA with a copy of the Operational Noise Report within 60 days of completing the operational noise monitoring referred to in (a) above or as otherwise agreed by the Secretary.</p> <p>Note</p> <ul style="list-style-type: none"> The audit may be staged to suit the staged operation of the SSI. 	All	All	All	Wave 1, 2 and 3 soft soil works do not involve the completion of an operational section of highway.
ENVIRONMENTAL MANAGEMENT SYSTEMS						
D29		<p>Prior to the commencement of operation, the Applicant shall incorporate the SSI into existing environmental management systems administered by the Applicant and prepared in accordance with the NSW Environmental Management System Model. The Applicant shall ensure that the SSI is consistent with the requirements of this SSI approval and that if there is an inconsistency between the existing environmental management systems and the conditions of this SSI approval, the requirements of this SSI approval shall prevail.</p>	All	All	All	Wave 1, 2 and 3 soft soil works do not involve the completion of an operational section of highway.
INDEPENDENT ENVIRONMENTAL AUDIT						
D30		<p>Within 12 months of the commencement of operation, and then as required by the Secretary, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the SSI. This audit shall:</p> <p>(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been approved by the Secretary;</p> <p>(b) include consultation with the relevant agencies;</p> <p>(c) assess the environmental performance of the SSI and assess whether it is complying with the requirements in this approval, and any other relevant approvals (including any other relevant approvals issued by the Secretary);</p> <p>(d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and</p> <p>(e) recommend measures or actions to improve the environmental performance of the SSI, and/or any strategy, plan or program required under these approvals.</p> <p>Note</p> <ul style="list-style-type: none"> This audit team shall be led by a suitably qualified auditor, and include experts in biodiversity, noise and vibration, hydrology and any other fields specified by the Secretary. The audit may be staged to suit the staged operation of the SSI. 	All	All	All	Wave 1, 2 and 3 soft soil works do not involve the completion of an operational section of highway.
D31		<p>Within 60 days of completing this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary and relevant public authorities, together with its response to any recommendations contained in the audit report.</p>	All	All	All	Wave 1, 2 and 3 soft soil works do not involve the completion of an operational section of highway.

Appendix B Application of Commonwealth Conditions of Approval

COMPLIANCE TRACKING - FEDERAL CONDITIONS OF APPROVAL Woolgoolga to Ballina EPBC 2012/6394



Transport
Roads & Maritime
Services

Reproduced from W2B Staging Report, March 2015.

Category	Part	Requirement	Stage 1			Stage 2			
			Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
STAGING OF THE ACTION									
1		The Staging Report as required by NSW approval condition A7 must be submitted to the Minister prior to the commencement of each of the proposed stages. In accordance with NSW approval condition A7, the Staging Report must outline how the proposal will be staged. The Staging Report must also outline the threatened species and communities, and migratory species impacted in each stage.	All	All		All	All	All	This document is a revised Staging Report for the Pacific Complete activities.
AVOIDANCE AND MITIGATION OF IMPACTS									
2		In order to minimise impacts to threatened species and communities, and migratory species, the approval holder must: a) Adhere to the clearance limits outlined in the NSW approval condition B1 b) Undertake pre-clearance surveys in accordance with NSW approval condition B5 c) Undertake all soil and water management measures in accordance with NSW approval condition B34 d) Design and construct any additional ancillary facilities in accordance with the requirements of NSW approval condition B73 to ensure that no impacts occur to threatened species and communities, and migratory species or their habitat.	All	All		All	All	All	A) RMS/Pacific Complete will ensure compliance (measuring, monitoring, reviewing, reporting) with the approved clearing limits specified by the NSW Project Approval during the detailed phase and construction phase of the project. The aim of any works will be to minimise the need to clear vegetation and reduce impacts to threatened species or EECs where reasonable and feasible. Clearing limits will be clearly shown on relevant issued for construction drawings and closely monitored and reported. B) This requirement is addressed in the Pacific Complete CEMP (Appendix B) and the Pacific Complete Environmental Management Specifications to ensure compliance with the EEMSS, EWMSS and any RMS/PC environmental specifications to ensure compliance with the requirement. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2). C) This requirement is addressed in Pacific Complete CEMP (Appendix B4 Construction Soil and Water Quality Management Plan). Pacific Complete will approve Contractor EMPs, EWMSS and ESCPs to ensure compliance with the requirement. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2). D) Pacific Complete has an approved Ancillary Facilities Management Plan (Appendix B9 of the Pacific Complete CEMP). The AFMP was approved by the ER on 10 February 2016. The purpose of the AFMP is to detail how Pacific Complete will assess, consult, gain approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of the Ancillary Facilities Management Plan.
3		In order to minimise impacts to the Oodjigay Puggay Faech, the approval holder must undertake the action in accordance with NSW approval conditions B7, B8, B9, B13, B40, B41 and B42.	NA	NA		6, 7, 8, 9	NA	5b, 5c	Requirements relating to the detailed design phase - to be addressed during detailed design. Detailed design lots are required to detail how the design complies with the relevant environmental requirements for the Pacific Complete project. This includes the design of the project in relation to relevant CoAs. Requirements relating to the construction phase - These requirements are addressed in the Pacific Complete CEMP (Appendix B2 - Construction Flora and Fauna Management Plan). Pacific Complete will approve Contractor EMPs, EWMSS and ESCPs and apply RMS/PC environmental specifications to ensure compliance with relevant CoAs. Separate and approved CEMP documentation is in place for soft soil works (Wave 1 and Wave 2). Wave 5a, 5b and 5c: early enabling works will only have temporary crossings.
4		In order to minimise impacts to the Giant Barred Frog, the approval holder must undertake the action in accordance with the requirements of NSW approval condition B39.	All	NA		NA	NA	NA	This is not applicable to sections 3-11. Habitat for the Giant Barred Frog only occurs in sections 1 and 2.
5		In order to ensure the long term viability of the Ballina Koala population, the approval holder must engage a suitably qualified expert to undertake population viability modelling of the Ballina Koala population over a time period of no less than 50 years, taking into account the impacts resulting from the road upgrade in Section 10. This modelling should consider the current proposed route and any proposed avoidance or mitigation measures as appropriate.	NA	NA		10, 11	2	NA	RMS engaged Niche Environment and Heritage (Dr Rod Kavanagh) to complete the PVA and Ballina Koala Plan. The Ballina Koala Plan was submitted to DoE for approval in February 2016. The Wave 2 project area is close to the eastern boundary of the Ballina Koala population, however this condition does not directly apply to the soft soil wave 2 works.
6		The approval holder must have the modelling required by Condition 5 peer reviewed by a second suitably qualified expert.	NA	NA		10, 11	2	NA	The Wave 2 project area is close to the eastern boundary of the Ballina Koala population, however this condition does not directly apply to the soft soil Wave 2 works.
7		In addition to the Koala Management Plan(s) required by NSW approval conditions D8 and D9, to ensure that an unacceptable impact will not occur to the Ballina Koala population, the approval holder must submit for the Minister's approval, a Ballina Koala Plan no less than 3 months prior to commencement of Section 10. The Minister will only approve the plan and the commencement of Section 10 of the action, if the impacts to the Ballina Koala population are demonstrated to be acceptable within the Ballina Koala Plan. The Ballina Koala Plan must include: a) the modelling required by condition 5 and the results of this modelling, and the peer review required by Condition 5 b) discussion of the future viability of the Ballina Koala population c) an analysis of the potential for future economic restrictions, any additional avoidances, mitigation or offsets, to be implemented by the approval holder to ensure that the impacts to the Ballina Koala population, and d) evidence that any additional avoidance and mitigation measures proposed have been considered in the modelling required in Condition 5. The approval holder must not commence Section 10 unless the Ballina Koala Plan has been approved by the Minister. The approved Plan must be implemented.	NA	NA		10, 11	2	NA	RMS engaged Niche Environment and Heritage (Dr Rod Kavanagh) to complete the PVA and Ballina Koala Plan. The Ballina Koala Plan was submitted to DoE for approval in February 2016. The Wave 2 project area is close to the eastern boundary of the Ballina Koala population, however this condition does not directly apply to the soft soil wave 2 works. Koala Management Plan (Update 2) for Sections 3-4 (excluding Iuka population), Section 11 and Mororo Cut was approved by DPE 4 February 2016. DoE approval 29 February 2016. Koala Management Plan (Update 3) for Iuka population, Broadwater (north of Lang Hill) and Coolgardie (Section 10) will be submitted for approval following receipt of DoE approval of the Ballina Koala Plan. Pacific Complete will approve Contractor EMPs, EWMSS and ESCPs to ensure compliance with the relevant requirements of the Koala Management Plans.

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	8	The approval holder must develop a Koala Management Plan(s) pursuant to the requirements of NSW approval conditions D8 and D9 for each relevant stage(s) of the Koala Management Plan must minimise impacts to the Koala to the extent possible for each relevant stage(s) for approval. The relevant stage(s) cannot commence until the Koala Management Plan for that stage is approved by the Minister. The approved Plan(s) must be implemented.	All	NA	Only applicable to condition D8	All	All	NA	Koala Management Plan (update 2) for Sections 3-8 (excluding Iluka population), Section 11 and Moore Crt. MPP (update 2) was approved by DPE 4 February 2016 and DoE on 29 February 2016. Koala Management Plan (update 3) for Iluka population, Broadwater (north of Lung Hill) and Coolgardie (Section 10) will be submitted for approval following receipt of DoE approval for the Balina Koala Plan. The Balina Koala Plan is expected to be submitted for approval in February 2016. Pacific Compelte will approve Contractor EMPs, EWSMS and ESCPs and apply RMS/SPC environmental specifications to ensure compliance with the requirements of the relevant Koala Management Plans.
	9	The Koala Management Plan, relevant to Section 10, must be consistent with the approved Balina Koala Plan and can only be submitted to the Minister for approval after the Balina Koala Plan has been approved by the Minister.	NA	NA		10	NA	NA	Notes: Koala Management Plan (update 3) for Iluka population, Broadwater (north of Lung Hill) and Coolgardie (Section 10) will be submitted for approval following receipt of DoE approval for the Balina Koala Plan to ensure compliance with this condition of approval.
	10	Should further offsets be required in accordance with NSW approval condition D9(a) or be proposed as part of the Balina Koala Plan, these must be in accordance with the EPBC Offsets Policy	NA	NA	(NB: NSW CoA 'D9(a)' does not exist - incorrect reference is D9)	6, 7, 10	NA	NA	Notes: To be addressed during detailed design and construction phases of the project. (NB: NSW CoA 'D9(a)' does not exist - incorrect reference is D9)
	11	The approval holder must develop a Threatened Mammal Management Plan(s) pursuant to the requirements of NSW approval condition D8 for each stage impacting on the Spotted-tail Quail and the Long-nosed Potoroo. The Threatened Mammal Management Plan must minimise impacts to the Spotted-tail Quail and Long-nosed Potoroo to the satisfaction of the Minister, and must be submitted to the Minister for approval. The relevant stage(s) cannot commence until the Threatened Mammal Management Plan for that stage is approved by the Minister. The approved Plan(s) must be implemented.	All	NA	Spotted Tailed Quails relevant to sections 1 and 2 and Wave 3. Long Nosed Potoroo is not relevant to any component of Stage1 (refer to Table 4-1).	6, 7, 10	NA	5b, 5c	The following Threatened Species Management Plans have been prepared and approved: Threatened Flora Management Plan Update 1 (Section 1, Section 2, Waves 1, 2 and 3) DPE Approval 30 April 2015, DoE Approval 5 May 2015. Threatened Flora Management Plan Update 2 (Section 3 to 11) DPE Approval 21 August 2015, DoE Approval 4 September 2015. Threatened Reintroduced Plants Management Plan (Section 2) DPE Approval 11 September 2015. Threatened Mammal Management Plan Update 1 DPE Approval 17 October 2015, DoE approval 22 October 2015. Threatened Mammal Management Plan Update 2 DPE Approval 21 October 2015, DoE approval 25 October 2015. Threatened Mammal Management Plan Update 3 DPE Approval 20 July 2015. Threatened Fish Management Plan DPE Approval 30 July 2015. Threatened Frog Management Plan DPE Approval 7 May 2015. Threatened Cider Management Plan DPE Approval 4 May 2015. Coastal Erua Management Plan (Sections 3 and 4, excluding Wave 3) DPE Approval 3 June 2015. Coastal Erua Management Plan (includes updates for Wave 3) DPE Approval 19 December 2015. Microbial Management Plan (Section 2) DPE Approval 19 December 2015. Threatened Invertebrates Management Plan (Section 3 to 6, 8, 9, 10, 11) DPE Approval 19 December 2015. Threatened Invertebrates Management Plan (Section 2) DPE Approval 19 December 2015. DoE approval on 23 February 2016. Koala Management Plan (Update 3) for Iluka Population, Broadwater (north of Lung Hill) and Coolgardie (Section 10) will be submitted for approval following receipt of DoE Approval for the Balina Koala Plan. Balina Koala Plan was submitted to DoE for approval in February 2016.
	12	The approval holder must develop a Threatened Flora Management Plan(s) pursuant to the requirements of NSW approval condition D8 for each stage impacting on EPBC Act listed flora species. The Threatened Flora Management Plan must minimise impacts to EPBC Act listed flora species to the satisfaction of the Minister and be submitted to the Minister for approval. The relevant stage(s) cannot commence until the Threatened Flora Management Plan for that stage is approved by the Minister. The approved Plan(s) must be implemented.	All	All	Refer to Table 4-1 for relevance of particular flora species.	All	All	All	Threatened Flora Management Plan Update 1 (Section 1, Section 2, Waves 1, 2 and 3) DPE Approved 30 April 2015, DoE Approval 5 May 2015. Threatened Flora Management Plan Update 2 (Sections 3 to 11) DPE Approval 21 August 2015, DoE Approval 4 September 2015.
	13	The approval holder must develop a Connectivity Strategy(ies) pursuant to the requirements of NSW approval conditions D2 for each stage impacting on listed species and ecological communities to the satisfaction of the Minister for approval. Commencement of the relevant stage(s) cannot occur until the Connectivity Strategy for that stage is approved by the Minister. The approved strategy(ies) must be implemented.	All	NA	A project-wide connectivity strategy will be provided and will be updated as required.	All	NA	NA	To be addressed during detailed design. Each design Ponton (i.e. A, B, C and D) which cover Sections 3 to 11) will be required to prepare a Connectivity Strategy in accordance with the requirements of the CoA. Pacific Compelte will review detailed design deliverables to ensure compliance with the relevant CoAs. The nature of the early enabling construction activities associated with Waves 5a, 5b and 5c is the subject of the early enabling construction strategy which has been developed as Waves 1, 2, 3, and 4. With respect to fauna connectivity, these early enabling construction works will not prevent connectivity solutions. Roads & Mainline and its delivery partner, Pacific Compelte, have been working closely with DPI Fisheries and EPA on connectivity design and how the early enabling construction works will be built. Bridge and culvert locations will remain open and where required temporary workway crossing will be utilised. Temporary and Permanent fauna exclusion fencing will be located as per the approved Threatened Species Management Plans. The siting of glider points will be undertaken during main construction activities to ensure their functional requirements are met. It should be noted that the development of the Connectivity Strategies for Pontons A, B, C and D are well advanced with their progression from Substantial Detailed Design (SDO) to Final Detailed Design. The Connectivity Strategy will be prepared and approved prior to the physical commencement of the permanent fauna connectivity structures as part of the Stage 2 works, unless otherwise agreed by DPE/DoE.

Category	Part	Requirement	Section 1 and 2	Soft sells (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft sells (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment
	14	In order to minimise impacts to threatened species and communities, and migratory species, the approval holder must develop and implement all Frameworks, Strategies, Plans or Programs, in accordance with the requirements of the following NSW approval conditions: a) The Mitigation Framework required by NSW approval condition D1 b) The Connectivity Strategy required by NSW approval condition D2 and the requirements of NSW approval condition B12 c) The Threatened Species Management Plans required by NSW approval condition D8 and D9 d) The Construction Soil and Water Quality Management Plan required by NSW approval condition D26(c) e) The Construction Flora and Fauna Management Plan required by NSW approval condition D26(e) f) The Borrow Site Management Plan required by NSW approval condition D22 g) The Water Quality Monitoring Program required by NSW approval condition D12 h) The Ancillary Facilities Management Plan required by NSW approval condition D21	All	All		All	All	All	A) NSW CoA D1 - Mitigation Framework approved by DPE on 8 May 2015. B) NSW CoAs D2 and B12 - To be addressed during detailed design. Each design Portion (i.e. A, B, C and D which cover Sections 3 to 11) will be required to prepare a Connectivity Strategy in accordance with the requirements of the CoAs. Pacific Complete will review detailed design deliverables to ensure compliance with CoA requirements. C) Of the required Threatened Species Management Plans the following are the process of gaining approval: Ballina Koala Management Plan was approved on 24 February 2016. Ballina Koala Management Plan was approved on 10 February 2016. Broadwater (north of Largo Hill) and Coogardie (Section) will be submitted for approval following receipt of DPE approval for the Ballina Koala Management Plan. D) This requirement is addressed in the Pacific Complete CEMP (Appendix B4 Construction Soil and Water Quality Management Plan) which was approved by DPE on 23 October 2015. E) This requirement is addressed in the Pacific Complete CEMP (Appendix B2 Construction Flora and Fauna Management Sub-Plan). The Pacific Complete CEMP was approved by DPE on 23 October 2015. F) Pacific Complete will prepare site specific Borrow site Management Plans and obtain the required approvals of the plans prior to construction activities commencing at the borrow sites. G) The Water Quality Monitoring Program (soth issue, 21 August 2015) was approved by DPE on 24 August 2015 and forms part of the Pacific Complete CEMP. H) Pacific Complete has an approved Biodiversity Offset Strategy (Appendix B3 Biodiversity Offset Strategy) which was approved by DPE on 10 February 2016. The purpose of the AEMP is to detail how Pacific Complete will assess, consult, gain approval and manage individual ancillary facility sites during the project. Site specific ancillary facility management plans will be prepared by Pacific Complete in accordance with the requirements of the AFMP (ER approved on 10 February 2016). Note that separate and approved CEMP documentation is in place for soft soil works (Waves 1 and Wave 2).
OFFSETTING OF RESIDUAL IMPACTS									
	15	The approval holder must prepare and implement a Biodiversity Offset Strategy and Biodiversity Offset Package that compensates for any residual significant impacts on threatened species and communities. The Biodiversity Offset Strategy and Biodiversity Offset Package must meet the requirements of the EPBC Offsets Policy and must be submitted to the Minister for approval.	All	All		All	All	All	Biodiversity Offset Strategy approved by DPE 6 January 2016 and DoE 7 January 2016. A Biodiversity Offset Package will be prepared (Program currently being prepared).
	16	The Biodiversity Offset Strategy and Biodiversity Offset Package must be prepared in accordance with the requirements NSW approval conditions D3, D4 and D5 Commencement cannot occur until the Biodiversity Offset Strategy required by condition 15 is approved by the Minister. Commencement of the relevant stages cannot occur until the information required by NSW approval condition D4 is approved by the Minister.	All	All	A project wide Biodiversity Offset Package will be prepared and updated as required	All	All	All	Biodiversity Offset Strategy approved by DPE 6 January 2016 and DoE 7 January 2016. A Biodiversity Offset Package will be prepared (Program currently being prepared).
	17	The approval holder must obtain approval of the Biodiversity Offset Strategy required by condition 15 of the approval and the information required by NSW approval condition D4 (Biodiversity Offset Status Report) within three months of commencement of sections 1 and 2 of the action.	All	All	A project wide Biodiversity Offset Package will be prepared and updated as required. Note reference (presumably in error) to 'strategy' here.	All	All	All	Biodiversity Offset Strategy approved by DPE 6 January 2016 and DoE 7 January 2016. A Biodiversity Offset Package will be prepared (Program currently being prepared). Note - Note that this TBOSS excludes Section 9 and 10. An updated Threatened Biodiversity Offset Status Report was submitted for approval in mid June 2016 (which addresses the Koala Population Coogardie & Broadwater as well as Littoral Rainforest).
	18	The Biodiversity Offset Package required by Condition 15 must be approved by the Minister and the approved Biodiversity Offset Package must be implemented within 24 months of the approval of the Biodiversity Offset Strategy.	All	All	A project wide Biodiversity Offset Package will be prepared and updated as required.	All	All	All	A Biodiversity Offset Package will be prepared noting it is required to be submitted within 24 months of 7 January 2016.
REPORTING AND AUDITING									
	19	Any survey data collected for the project must be collected and recorded so as to conform to a reasonable standard such that it can be readily used by a third party or to data standards notified from time to time by the Department. When requested by the Department, the proponent must provide to the Department all species and ecological survey data and related survey information from ecological surveys undertaken for matters of national environmental significance. This survey data must be provided within 30 business days of request, or in a timeframe agreed to by the Department in writing. The Department may use the survey data for other purposes.	All	All		All	All	All	Noted
	20	Within 14 days after the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement.	All	All		All	All	All	Proponent submitted its Staging Report (for Stage 1 - Section 1 - Section 2 and Soft Soils Waves 1 and 2) on 24 March 2015 which included indicative start dates for works. Proponent submitted an updated Staging Report for Stage 2 to the Department on 5 April 2016.
	21	Within three months of every 12 month anniversary of the commencement of the action, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any Frameworks, Strategies, Plans, or Package as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published. The approval holder must continue to publish the report until such time as agreed in writing by the Minister.	All	All	A project wide report will be prepared and updated as required.	All	All	All	Noted. The stage 2 start date is 1 April 2016
	22	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	All	All		All	All	All	Noted
REVISIONS									
	23	If the approval holder wishes to carry out any activity otherwise than in accordance with Frameworks, Strategies, Plans, Report or Package required by Conditions 7, 8, 10, 11, 12, 14, 15, 16 and 17, the approval holder must submit to the Department for the Minister's written approval a revised version of those Frameworks, Strategies, Plans, Report or Package. The revised plan or Package must commence until the Minister has approved the revised plan or agreement in writing. The Minister will not approve a revised plan or agreement, unless the revised plan or agreement would result in an equivalent or improved environmental outcome. If the Minister approves the revised plan or agreement that plan or agreement must be implemented in place of the plan or agreement originally approved.	All	All		All	All	All	Noted

Category	Part	Requirement	Section 1 and 2	Soft soils (Wave 1, 2 & 3)	Comment	Section 3 to 11	Soft soils (Wave 1, 2, 3 & 4)	Wave 5a, 5b & 5c	Comment	
	24	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species or communities to do so, the Minister may request that the approval holder submit for the Minister approval, or make revisions to any Frameworks, Strategies, Plans, Package, or Program specified in the conditions and submit the revised Frameworks, Strategies, Plans, Package, or Program for the Minister's written approval. The approval holder must comply with any such request. This approval or revised approved Frameworks, Strategies, Plans, Package, or Program must be implemented. Unless the Minister has approved or revised management Plans, then the approval holder must continue to implement the management Plans originally approved, as specified in the conditions.	All	All		All	All	All	Noted	
	25	If, at any time after 5 years from the date of this approval, the approval holder has not substantially commenced the action, then the approval holder must not substantially commence the action without the written agreement of the Minister.	All	All		All	All	All	Noted. Action has been substantially commenced.	
PUBLICATION OF PLANS										
	26	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the Frameworks, Strategies, Plans, or Package required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 438 of the EPBC Act, or used to verify compliance with the conditions of approval. The summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	All	All		All	All	All	Noted	
	27	Unless otherwise agreed to in writing by the Minister, the approval holder must publish all Frameworks, Strategies, Plans, or Package referred to in these conditions of approval on their website. Each management plan must be published on the website within 1 month of being approved.	All	All		All	All	All	Noted	

