



TOOLIJOOA ROAD FILL WORKS STAGE OF THE
FOXGROUND AND BERRY BYPASS PROJECT

STAGING REPORT

PREPARED BY ELEMENT ENVIRONMENT FOR FULTON HOGAN

31 JANUARY 2014



Toolijooa Road Fill Works

Stage 1 of the Foxground and Berry Bypass Project
Staging Report

Prepared for Fulton Hogan Pty Limited

31 January 2014

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Staging Report

DRAFT

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Document Control

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CONTENTS

1	INTRODUCTION	2
2	DOCUMENT PURPOSE AND SCOPE	6
3	FOXGROUND AND BERRY BYPASS PROJECT	6
3.1	GENERAL FEATURES	6
3.2	STAGING	9
4	PROPOSED TOOLIJOOA ROAD FILL WORKS	9
4.1	TOOLIJOOA ROAD FILL WORKS CONSTRUCTION DETAILS	10
4.1.1	ACCESS	10
5	RELEVANT CONDITIONS OF APPROVAL	13

FIGURES

Figure 1: Regional Context of the Project	4
Figure 2: Overview of the Project	5
Figure 3: Foxground and Berry Bypass Project - Approved Concept Design	8
Figure 4: Foxground and Berry Bypass Project - Indicative Program	9
Figure 5: Toolijooa Road Fill Works Layout	11
Figure 6: Existing and Proposed Landform	12

APPENDICES

Appendix A: Review of Conditions of Approval
Appendix B: Biodiversity Survey Report

1 INTRODUCTION

The Roads and Maritime Services (RMS) is upgrading the Princes Highway to provide a four lane divided highway between Waterfall and Jervis Bay Road, Falls Creek.

In September 2010 the Foxground and Berry Bypass Project (the Project) (MP10_0240) (refer Figure 1) was declared by the Minister for Planning to be a project to which Part 3A of the Environmental Planning and Assessment Act 1979 applies. An Environmental Assessment was prepared and placed on public exhibition in November - December 2012. The Submissions Report, which included changes to the proposal made following consideration of submissions made during the exhibition period, was submitted to the Minister for Planning and Infrastructure in May 2013. Approval of the Project was granted by the Minister on 22 July 2013.

The Project comprises an upgrade of 11.6 kilometres of the Princes Highway between Toolijooa Road north of Foxground and Schofield Lane south of Berry to achieve a four lane divided road (two lanes in each direction) with median separation (refer Figure 2). It includes bypasses of the towns of Foxground and Berry. The Project will be delivered under a design and construct (D&C) contract.

The project approval for the Project provides for the staged construction and/or operation of the Project, subject to submission of a Staging Report that identifies project stages and how the project approval conditions will be satisfied for those stages. Staging conditions of the project approval are as follows:

Staging

A9 The Proponent may elect to construct and/ or operate the project in stages. Where staging is proposed, the Proponent shall submit a Staging Report to the Director General prior to the commencement of the first proposed stage. The Staging Report shall provide details of:

(a) how the project would be staged including general details of work activities associated with each stage and the general timing of when each stage would commence; and

(b) details of the relevant conditions of approval, which would apply to each stage and how these shall be complied with across and between the stages of the project.

Where staging of the project is proposed, these conditions of approval are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stage(s).

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

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

Fulton Hogan is currently constructing the Gerringong upgrade project on behalf of the RMS, which involves the upgrade of the Princes Highway between Mount Pleasant and Toolijooa Road (the start of the Foxground and Berry Bypass Project).

Fulton Hogan have identified that surplus spoil (Virgin Excavated Natural Material - VENM) will be generated from Cut 7 in particular, with smaller volumes originating from various locations along the Gerringong upgrade project.

The planning for the Foxground and Berry Bypass has progressed and further design work has been undertaken to take advantage of the approximately 151,000m³ of surplus spoil generated by the Gerringong upgrade project. It is intended for the surplus spoil to be used to widen and enhance the appearance of the proposed road embankment that will be constructed on the property (known as the “Bologna Property”) on the western side of Toolijooa Road, at its intersection with the Princes Highway, to support the realignment of the Princes Highway to the south.

The Foxground and Berry Bypass concept design originally showed this proposed road embankment as a terraced embankment. This has been amended to use the available additional spoil to reshape this south facing embankment slope to a continuous grade.

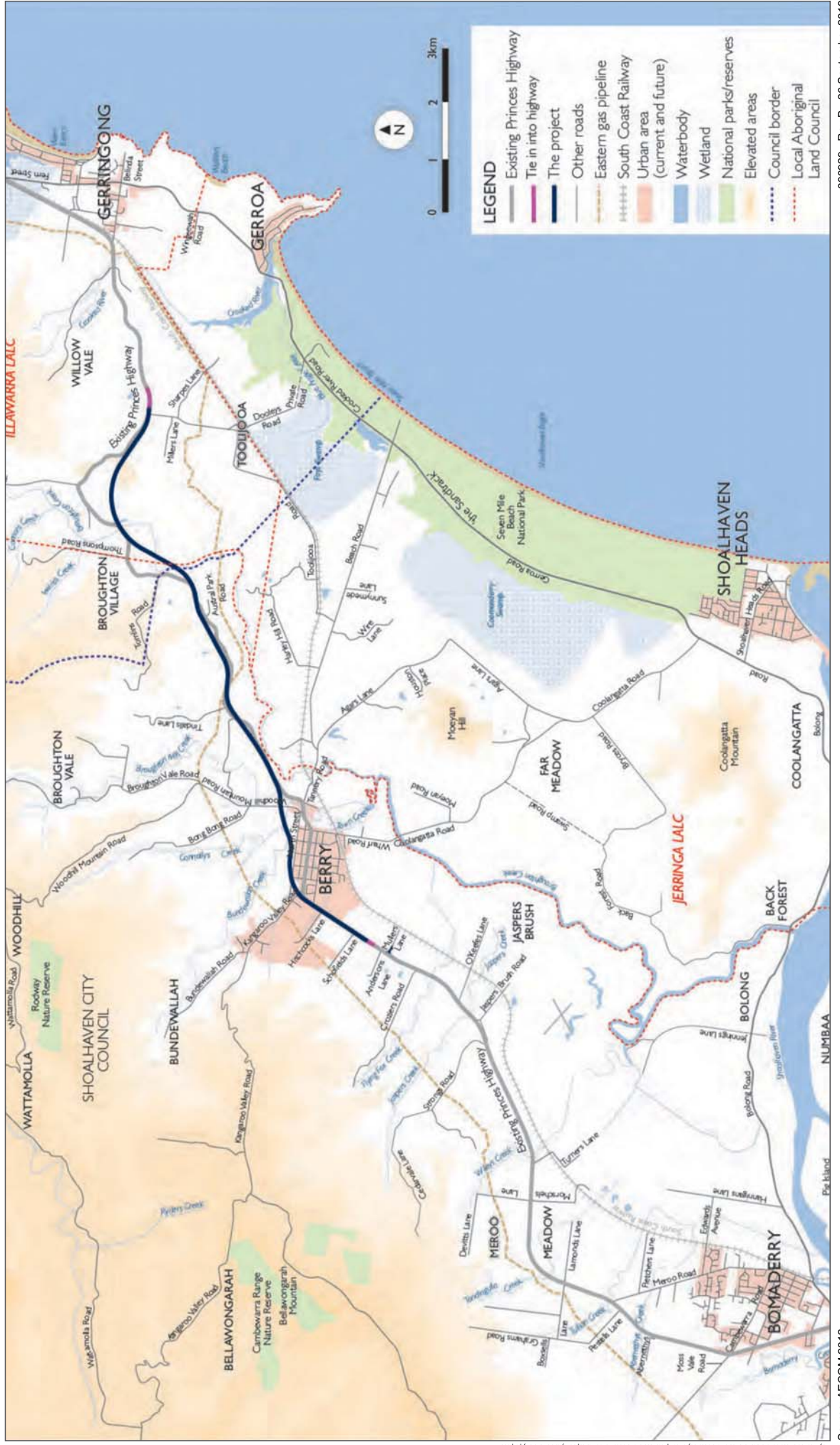
Extending the width of the embankment will make future provision for widening the Princes Highway to three lanes in the southbound direction, at this location. In addition, the fill will be placed on some of the property outside the road footprint to blend the embankment into the natural landform and reduce its apparent height by following the existing gradient.

The Toolijooa Road Fill Works, the first stage of the Foxground and Berry Bypass, is proposed to commence in late November 2013 and be completed in March 2014 weather permitting. The Toolijooa Road Fill Works will be constructed as a separate package of works from the rest of the Foxground and Berry Bypass Project.

This Staging Report has been prepared to meet the requirements of the Foxground and Berry Bypass Project approval, and to allow the implementation of the Toolijooa Road Fill Works as a separate stage of the broader Foxground and Berry Bypass Project.

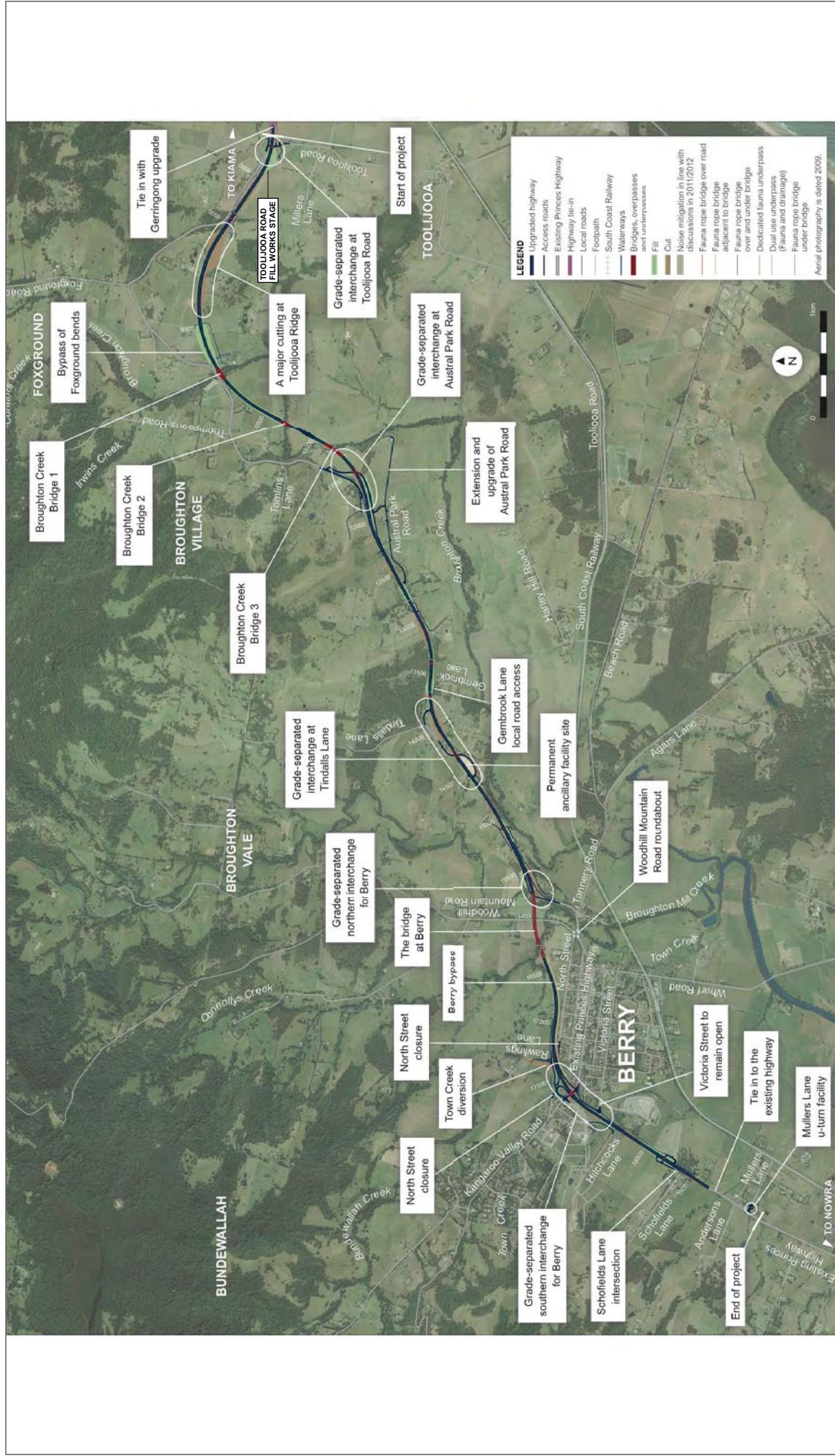
REGIONAL CONTEXT OF THE FOXGROUND AND BERRY BYPASS PROJECT

FIGURE 001



OVERVIEW OF THE FOXGROUND AND BERRY BYPASS PROJECT

FIGURE 002



2 DOCUMENT PURPOSE AND SCOPE

This Staging Report has been prepared to:

- Describe the work proposed as part of the Toolijooa Road Fill Works stage;
- Determine the relevance of each condition of the conditions of approval in relation to the proposed stage of works.

3 FOXGROUND AND BERRY BYPASS PROJECT

3.1 GENERAL FEATURES

Figure 3 provides the Approved Concept Design of the Foxground and Berry bypass Project. The Project, as described in the environmental assessment, comprises the following key features:

- Construction of a four lane divided highway (two lanes in each direction) with median separation;
- Bypasses of the Foxground bends and the Berry township;
- Construction of around 6.6 kilometres of new highway where the Project deviates from the existing highway alignment at Toolijooa Ridge, the Foxground bends and the Berry township;
- Provision for the possible widening of the highway (if required in the future) to six lanes within the road corridor and, in some areas, construction of the road formation to accommodate future additional lanes where safety considerations, traffic disruption and sub-optimal construction practices are to be avoided;
- Grade-separated interchanges at:
 - Toolijooa Road
 - Austral Park Road
 - Tindalls Lane
 - East of Berry at the existing Princes Highway, referred to as the northern interchange for Berry
 - West of Berry at Kangaroo Valley Road, referred to as the southern interchange for Berry
- A major cutting at Toolijooa Ridge (around 900 metres long and up to 26 metres deep);
- Six lanes (two lanes plus a climbing lane in each direction) through the cutting at Toolijooa Ridge for a distance of 1.5 kilometres;
- Four new highway bridges at:
 - Broughton Creek bridge 1
 - Broughton Creek bridge 2
 - Broughton Creek bridge 3
 - Berry
- Three highway overbridges:
 - Austral Park Road interchange, providing southbound access to the highway
 - Tindalls Lane interchange, providing southbound access to and from the highway
 - Southern interchange for Berry, providing connectivity over the highway for Kangaroo Valley Road along its existing alignment
- Eight underpasses including roads, drainage structures and fauna underpasses;
- Modifications to local roads, including Toolijooa Road, Austral Park Road, Gembrook Lane, Tindalls Lane, North Street, Queen Street, Kangaroo Valley Road, Hitchcocks Lane and Schofields Lane;
- Diversion of Town Creek into Bundewallah Creek upstream of its confluence with Connollys Creek and to the north of the Project at Berry;

- Modification to about 47 existing property accesses;
- Provision of a bus stop at Toolijooa Road and retention of the existing bus stop at Tindalls Lane;
- Dedicated u-turn facilities at Mullers Lane, the existing highway at the Austral Park Road interchange, the extension to Austral Park Road, and Rawlings Lane;
- Roundabouts at the southern interchange for Berry and the Woodhill Mountain Road junction with the exiting Princes Highway;
- Two culs-de-sac on North Street and the western end of Victoria Street in Berry;
- Tie-in with the existing highway about 75 metres north of Toolijooa Road and about 440 metres south of Schofields Lane;
- Left in/left out only provisions for direct property accesses to the upgraded highway;
- Dedicated public space with shared pedestrian/cycle facilities along the southern side of the upgraded highway from the playing fields on North Street to Kangaroo Valley Road;
- Ancillary operational facilities, including permanent detention basins, stormwater treatment facilities and a permanent ancillary facility site for general road maintenance.

As a result of the community consultation during the display of the environmental assessment changes were made to the Project including a number of property access and boundary adjustments, road alignment optimisation, as well as:

- Removal of turnaround facility on the Austral Park Road extension;
- Changed local road access arrangement for Gembrook Lane, opposite the Tindalls Lane interchange;
- Removal of retaining wall and reshaping of a constructed dam at the northern interchange for Berry;
- Realignment of the Town Creek diversion;
- Victoria Street to remain open with a two-way connection between Queen and Victoria streets and a southbound on-ramp south of Victoria Street;
- Modified Schofields Lane intersection with the provision of an underpass with connecting property accesses.

3.2 STAGING

In accordance with the Minister's condition of approval A9, the construction of the Foxground and Berry Bypass Project is currently proposed to be delivered in the following two stages:

1. Toolijooa Road Fill Works;
2. Remainder of the Foxground and Berry Bypass Project.

Details of the proposed Toolijooa Road Fill Works (Stage 1) are provided in section 4.

Construction is proposed to commence on the remainder of the Foxground and Berry Bypass Project (Stage 2) in 2014/15. An indicative program is provided in Figure 4 below.

Figure 4: Foxground and Berry Bypass Project - Indicative Program

Activity	2014	2015	2016	2017
Site establishment / site preparation		■		
Earthworks and drainage		■	■	
Relocation / protection of services		■		
Bridge construction		■	■	
Pavements			■	
Improvements to existing highway		■	■	■
Finishing works / other works			■	■

Source: RMS 2013

A request for proposals has recently been released to the market by RMS for the detailed design and construction of the Foxground and Berry Bypass Project. The appointed design and construction contractor may, in consultation with RMS, identify the need to introduce additional stages in the delivery of the Foxground and Berry Bypass Project to achieve cost and/or time efficiencies. If this were to be the case, then RMS would be required to ensure that an updated Staging Report (or advice that no changes to staging are proposed) is submitted to the Director General of the NSW Department of Planning and Infrastructure, prior to the commencement of each stage, identifying any changes to the proposed staging or applicable conditions.

4 PROPOSED TOOLIJOOA ROAD FILL WORKS

As mentioned previously, Fulton Hogan is currently constructing the Gerringong upgrade project on behalf of the RMS, which involves the upgrade of the Princes Highway between Mount Pleasant and Toolijooa Road (the start of the Foxground and Berry Bypass Project).

During the construction of the Gerringong upgrade project Fulton Hogan identified the need to dispose of excess cut material primarily from Cut 7 and investigated various options for the beneficial reuse of this material as fill, rather than its disposal to landfill.

The extreme eastern end of the Foxground and Berry Bypass project, requires the construction of an engineered (structural) fill on the western side of Toolijooa Road, at its intersection with the Princes Highway (refer Figures 2 and 3). Due to its proximity to the Gerringong upgrade project, this area was identified as the preferred site for the placement of the excess cut material.

4.1 TOOLIJOOA ROAD FILL WORKS CONSTRUCTION DETAILS

The stage involves a 151,000m³ engineered fill to support the realignment of the Princes Highway at the extreme eastern end of the Foxground and Berry Bypass Project (refer to Area 1 in Figures 5 and 6).

Approximately 29,000m³ of additional surplus spoil (VENM) will be used as non-engineered fill, immediately south of the Foxground and Berry Bypass project boundary (outside the road footprint) and adjoining the engineered fill (refer to Area 2 in Figures 5 and 6).

The Toolijooa Road Fill Works stage (Area 1) will be constructed first as an engineered fill designed to relevant RMS standards. The non-engineered spoil (Area 2) will then be placed to the south, compacted, landscaped and revegetated. Although the fill works comprise an engineered and non-engineered component, inside and outside the Foxground and Berry Bypass project boundary respectively, the entire fill will appear as one (refer Figure 6).

In revising the concept design, the original terraced road embankment has been reshaped using the available additional spoil, to a continuous grade, blending the embankment into the natural landform and reducing its apparent height by following the existing gradient (refer Figure 6).

The Toolijooa Road Fill Works stage is proposed to commence in late November 2013 and be completed in March 2014 weather permitting. The Toolijooa Road Fill Works stage will be constructed as a separate package of works from the rest of the Foxground and Berry Bypass Project.

The contractor selected to construct the following stage(s) of the Project, will build on the engineered fill established during the Toolijooa Road Fill Works stage, to bring the new road platform to its ultimate design height.

4.1.1 ACCESS

Access arrangements for the construction of the Toolijooa Road Fill Works stage are presented in Figure 5. Access arrangements include:

- Access and egress at the same point on Toolijooa Road, approximately 280m south of the Toolijooa Road - Princes Highway intersection; and
- Access only, directly off the Princes Highway approximately 240m west of the Toolijooa Road - Princes Highway intersection.

TOOLIJOOA ROAD FILL WORKS STAGE LAYOUT

Foxground and Berry Bypass Project

FIGURE 005

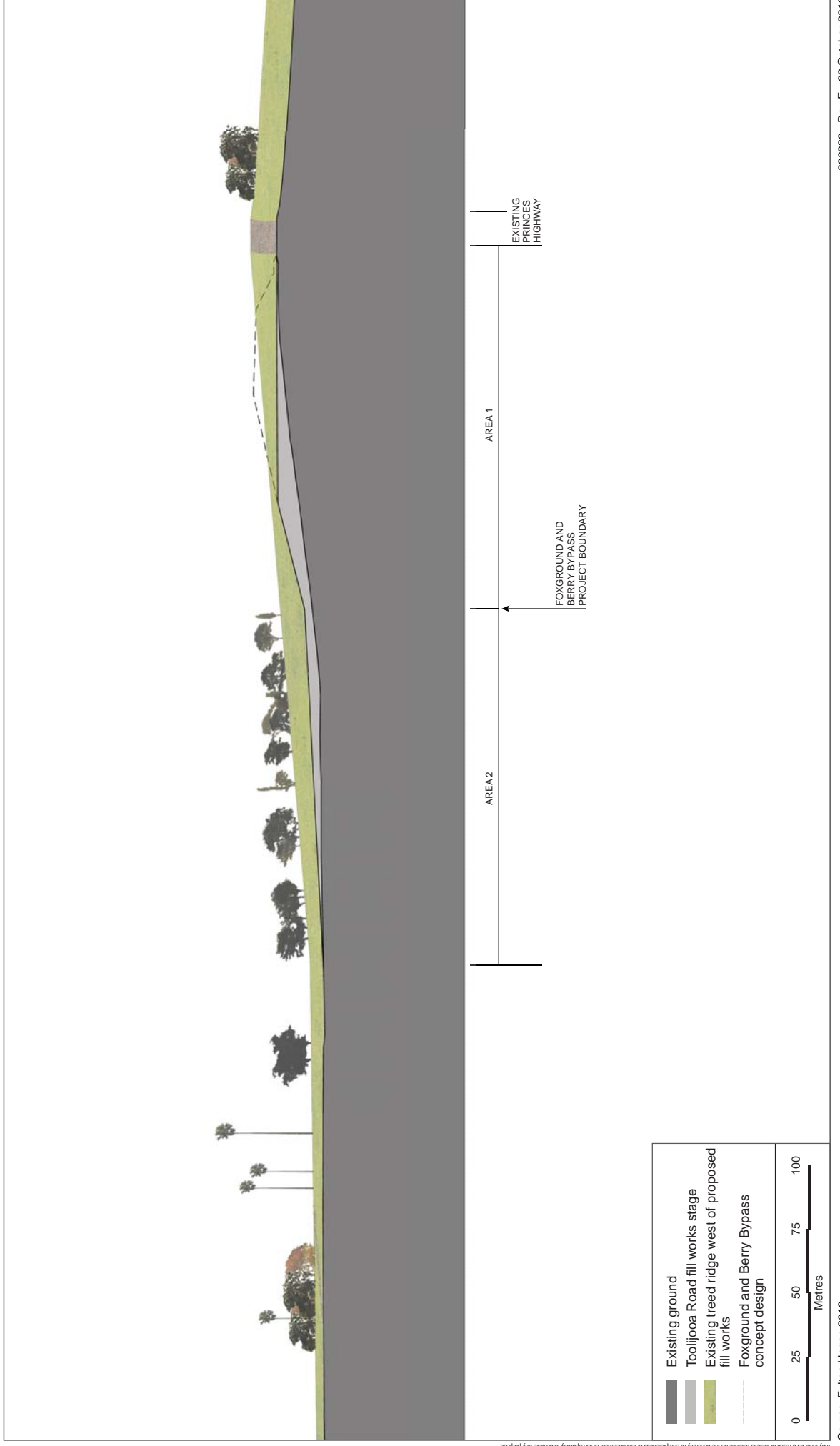


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EXISTING AND PROPOSED LANDFORM

Toolijooa Road Fill Works Project

FIGURE 006



5 RELEVANT CONDITIONS OF APPROVAL

In accordance with the requirements of condition of approval A9, an assessment of the Toolijooa Road Fill Works stage against the relevant requirements of the conditions has been undertaken. The results of this assessment are provided in Appendix A.

APPENDIX A

Review of Conditions of Approval

APPENDIX A - REVIEW OF CONDITIONS OF APPROVAL

SCHEDULE 2

PART A - ADMINISTRATIVE CONDITIONS

CoA	Condition	Relevant	Comments
Terms of Approval			
A1.	<p>The Proponent shall carry out the project generally in accordance with the:</p> <p>(a) Major Project Application MP10_0240;</p> <p>(b) <i>Princes Highway upgrade - Foxground and Berry Bypass - Environmental Assessment (Volumes 1-2)</i>, prepared by AECOM Australia Pty Ltd for Roads and Maritime Services and dated November 2012;</p> <p>(c) <i>Princes Highway upgrade - Foxground and Berry bypass - Submissions Report</i>, prepared by AECOM Australia Pty Ltd for Roads and Maritime Services and dated May 2013, including the revised Statement of Commitments contained therein; and</p> <p>(d) conditions of this approval.</p>	Yes	The Toolijooa Road Fill Works stage of works will be undertaken in accordance with the conditions outlined in A1 (a) to A1 (d).
A2.	<p>In the event of an inconsistency between:</p> <p>(a) the conditions of this approval and any document listed from condition A 1 (a) to A 1 (c) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and</p> <p>(b) any document listed from condition A1(a) to A1(c) inclusive, and any other document listed from condition A1(a) to A1(c) inclusive, the most recent document shall prevail to the extent of the inconsistency.</p>	Yes	Noted.
A3.	<p>The Proponent shall comply with any reasonable requirement(s) of the Director General arising from the Department's assessment of:</p> <p>(a) any reports, plans or correspondence that are submitted in accordance with this approval; and</p> <p>(b) the implementation of any actions or measures contained within these reports, plans or correspondence.</p>	Yes	Any reasonable requirement(s) of the Director General of the Department of Planning and Infrastructure will be complied with in relation to the Toolijooa Road Fill Works stage.
A4.	Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request.	Yes	All documents required under this approval will be made available for public inspection on request.

CoA	Condition	Relevant	Comments
A5.	<p>The Proponent shall notify the Director General and other relevant government agencies of any incident with actual or potential significant off-site environmental impacts on people or the biophysical environment as soon as practicable and within 24 hours after the occurrence of the incident. The Proponent shall provide full written details of the incident to the Director General within seven days of the date on which the incident occurred.</p> <p>Note: Where an incident also requires reporting to the OEHL and/or EPA the incident report prepared for the purposes of notifying the OEHL and/or EPA would meet this requirement</p>	Yes	<p>The Director General and other relevant government agencies will be notified of any incident with actual or potential significant off-site environmental impacts on people or the biophysical environment, in accordance with this condition.</p> <p>A Construction Environmental Management Plan will be prepared which includes an Environmental Incident Classification and Reporting Procedure (RMS, August 2013). This procedure includes processes to classify and report environmental incidents that may occur during RMS managed activities and to comply with its statutory obligations to report certain incidents.</p>
A6.	<p>The Proponent shall meet the requirements of the Director General or relevant government agency (as determined by the Director General) to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition A5, within such period as the Director General may require.</p>	Yes	<p>The Director General and other relevant government agencies' requirements (as determined by the Director General) to address the cause or impact of an incident reported in accordance with condition A5 will be met.</p> <p>A Construction Environmental Management Plan will be prepared which includes an Environmental Incident Classification and Reporting Procedure (RMS, August 2013). This procedure includes processes to classify and report environmental incidents that may occur during RMS managed activities and to comply with its statutory obligations to report certain incidents.</p>
Limits of Approval			
A7.	<p>This approval shall lapse ten years after the date on which it is granted, unless construction works the subject of this project approval are physically commenced on or before that date.</p>	Yes	<p>Noted. Construction of the Toolijooa Road Fill Works stage of the Foxground and Berry Bypass Project will commence in late November 2013 with the construction of the remainder of the project commencing in 2014/2015.</p>
Statutory Requirements			
A8.	<p>The Proponent shall ensure that all necessary licences, permits and approvals required for the development of the project are obtained and maintained as required throughout the life of the project. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such necessary licences, permits or approvals except as provided under section 75U of the Act. This shall include relevant certification requirements in accordance with section 109R of the Act.</p>	Yes	<p>The Construction Environmental Management Plan contains a register of all relevant environmental approvals, permits and licenses. The register will be maintained and will be reviewed prior to the commencement of construction of the Toolijooa Road Fill Works stage, at regular intervals during construction and at least annually as part of the management review.</p>

CoA	Condition	Relevant	Comments
Staging			
A9.	<p>The Proponent may elect to construct and/ or operate the project in stages. Where staging is proposed, the Proponent shall submit a Staging Report to the Director General prior to the commencement of the first proposed stage. The Staging Report shall provide details of:</p> <p>(a) how the project would be staged including general details of work activities associated with each stage and the general timing of when each stage would commence; and</p> <p>(b) details of the relevant conditions of approval, which would apply to each stage and how these shall be complied with across and between the stages of the project.</p> <p>Where staging of the project is proposed, these conditions of approval are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stage(s).</p> <p>The Proponent shall ensure that an updated Staging Report (or advice that no changes to staging are proposed) is submitted to the Director General prior to the commencement of each stage, identifying any changes to the proposed staging or applicable conditions.</p> <p>The Proponent shall ensure that all plans, sub-plans and other management documents required by the conditions of this approval and relevant to each stage (as identified in the Staging Report) are submitted to the Director General no later than one month prior to the commencement of the relevant stages, unless an alternative timeframe is agreed to by the Director General.</p>	Yes	<p>The Toolijooa Road Fill Works is proposed to be constructed as a separate stage of works. Accordingly, this document has been prepared to fulfil the requirements of this condition.</p>

PART B - PRIOR TO CONSTRUCTION

CoA	Condition	Relevant	Comments
Design			
B1.	<p>The Proponent shall, in consultation with the relevant council/s, investigate the need for a) potential future on and off ramps at Woodhill Mountain Road; and b) potential future left turn lane onto the new highway from Toolijooa Road.</p> <p>The investigation shall be undertaken to the satisfaction of Director General, and include consideration of the relevant environmental impacts (noise, flooding, heritage, biodiversity, traffic etc.) and consider any alternative options.</p>	No	<p>The purpose of the Toolijooa Road Fill Works stage is simply to construct an engineered fill to support a small portion of the southern realignment of the Princes Highway, to the west of the Toolijooa Road - Princes Highway intersection. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>The investigations required under this condition will be undertaken during the subsequent stage(s) of the Foxground and Berry Bypass Project.</p>
B2.	<p>The bridge piers at the Connollys Creek / Bundewallah Creek / Broughton Mill Creek crossing shall be located and designed in such a way to minimise visual impacts to Berry and the bridge piers at Broughton Creek crossing 3 are located and designed in such a way to minimise visual impacts to RMB 353 Princes Highway, Broughton Village. Evidence of how visual impacts have been minimised shall be provided to the Director General prior to the commencement of works that would influence the design of the bridge in this location.</p>	No	<p>The Toolijooa Road Fill Works stage does not involve the bridging of any creeks. The creeks identified in this condition fall outside of the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>
Biodiversity			
Mitigation Measures - Fauna and Waterway Crossings			
B3.	<p>The Proponent shall design (and implement) the fauna crossings identified in Table 5.1 of Appendix F of the document listed under condition A 1 (b), at the locations and in accordance with the minimum design principles identified in Table 5.1, unless otherwise agreed by the Director-General.</p>	No	<p>The locations of the fauna crossings identified in this condition fall outside of the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>
B4.	<p>Investigations into the design of fauna crossings identified in Table 5.1 of Volume 2 Appendix F of the document listed under condition A 1 (b) during detailed design shall be undertaken with the input of a suitably qualified and experienced ecologist and in consultation with OEH and DPI (Fishing and Aquaculture).</p>	No	<p>The locations of the fauna crossings identified in this condition fall outside of the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>
B5.	<p>The Proponent shall prepare a report on the final design of fauna and/or waterway crossings identified in Table 5.1 of Appendix F of the document listed under condition A 1 (b), where the location of the crossing has changed and/or the crossing does not meet the minimum design principles identified in Table 5.1. The report shall be submitted to the Director General prior to the commencement of construction of the relevant crossing, and shall demonstrate how the new location and/ or design would result in acceptable biodiversity outcomes. The report shall clearly identify how the fauna and/or waterway crossing will work in conjunction with complementary fauna exclusion fencing measures to be implemented for the project. The report shall be accompanied by evidence of consultation with OEH and DPI (Fishing and Aquaculture) in relation to the suitability of any changes to the location and/or crossing design.</p>	No	<p>The locations of the fauna and/or waterway crossings identified in this condition fall outside of the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>

CoA	Condition	Relevant	Comments
B6.	<p>The Proponent shall, in consultation with OEH and DPI (Fishing and Aquaculture), ensure that all waterway crossings are designed and constructed consistent with the principles of the <i>Guidelines for Controlled Activities Watercourse Crossings</i> (Department of Water and Energy, February 2008), <i>Policy and Guidelines for Fish Friendly Waterway Crossings</i> (NSW Fisheries, February 2004) and <i>Policy and Guidelines for Design and Construction of Bridges, Roads, Causeways, Culverts and Similar Structures</i> (NSW Fisheries 1999). Where multiple cell culverts are proposed for creek crossings, at least one cell shall be provided for fish passage, with an invert or bed level that mimics creek flows.</p>	No	<p>The Toolijooa Road Fill Works stage does not involve any waterway crossings. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>

CoA	Condition	Relevant	Comments
	Biodiversity Offsets		
B7.	<p>The Proponent shall, in consultation with the OEH and DPI (Fishing and Aquaculture), develop a Biodiversity Offset Strategy that identifies the available options for offsetting the biodiversity impacts of the project in perpetuity, with consideration to the <i>Principles for the use of biodiversity offsets in NSW</i> (OEH website http://www.environment.nsw.gov.au/biocertification/offsets.htm dated 17 June 2011). Unless otherwise agreed to by the OEH and DPI (Fishing and Aquaculture), offsets shall be provided on a like-for-like basis and at a minimum ratio of 4:1 for areas of high conservation value (including EEC, salt marsh, and poorly conserved vegetation communities identified as being more than 75% cleared in the catchment management area) and 2:1 for the remainder of native vegetation areas (including threatened species habitat, mangroves, seagrass, and non-EEC riparian vegetation). The Strategy shall include, but not necessarily be limited to:</p> <p>(a) the aims and objectives of the biodiversity offset strategy;</p> <p>(b) confirmation of the vegetation type/ habitat (in hectares) to be cleared and their condition, and the size of offsets required (in hectares);</p> <p>(c) details of the type of available offset measures that have been identified to compensate for the loss of threatened species and vulnerable and endangered ecological communities and/ or their habitats, and native vegetation (including mangroves, seagrasses, salt marsh and riparian vegetation). The measures shall achieve a neutral or net beneficial outcome for all the biodiversity values likely to be impacted directly or indirectly during both the construction and operation of the project;</p> <p>(d) the decision-making framework that would be used to select the final suite of offset measures to achieve the aims and objectives of the Strategy, including the ranking of offset measures;</p> <p>(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 project in the documents listed under condition A1), including:</p> <p>(i) changes to the footprint due to detailed design;</p> <p>(ii) changes to predicted impacts as a result of changes to mitigation measures;</p> <p>(iii) the identification of additional species/ habitat through pre-clearance surveys and construction;</p> <p>(iv) addressing outcomes of the ecological monitoring program; and</p> <p>(v) additional impacts associated with the establishment of ancillary facilities; and</p> <p>(f) options for the securing and management of biodiversity offsets in perpetuity.</p> <p>The Biodiversity Offset Strategy shall be submitted to the Director General for approval no later than 6 weeks prior to the commencement of construction that would result in the disturbance of native vegetation, unless otherwise agreed by the Director General.</p>	No	<p>A Biodiversity Offset Strategy is included in the Terrestrial Fauna and Flora Assessment for the Foxground and Berry Bypass Project (Biosis, 2012) that is included in the documents listed under condition A1. The Biodiversity Offset Strategy identified the need to offset residual impacts of the Foxground and Berry Bypass Project being the unavoidable loss of Riverbank forest which is equivalent to the Endangered Ecological Community (EEC) River-flat eucalypt forest.</p> <p>The Terrestrial Fauna and Flora Assessment, did not identify any threatened flora and fauna species or EEC on or within the vicinity of the Toolijooa Road Fill Works stage. The Toolijooa Road Fill Works stage, will therefore not involve the destruction, disturbance or any other impact to River-flat eucalypt forest, riparian vegetation or other threatened species or EEC's.</p> <p>As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>A revised Biodiversity Offset Strategy will be prepared and submitted to the Director General prior to the commencement of the subsequent stage(s) of the Foxground and Berry Bypass Project, which will involve the unavoidable loss of River-flat eucalypt forest.</p> <p>It must be noted that in addition to undertaking a review of the Terrestrial Fauna and Flora Assessment undertaken as part of the Foxground and Berry Bypass Project, LesryK Environmental Consultants were appointed to undertake a detailed flora survey (including fauna habitat) of the Toolijooa Road Fill Works stage to confirm the presence of any threatened flora, EECs and threatened fauna habitat. The results of this survey (September 2013) are included in Appendix B of this Staging Report and confirm that no threatened flora, EECs and threatened fauna habitat occurs on or in proximity to the Toolijooa Road Fill Works stage.</p>

CoA	Condition	Relevant	Comments
B8.	<p>Within two years of the date of approval of the Biodiversity Offset Strategy, unless otherwise agreed by the Director General, the Proponent shall prepare and submit a Biodiversity Offset Package for the approval of the Director General. The Package shall be developed in consultation with the OEH and DPI (Fishing and Aquaculture), and shall include, but not necessarily be limited to:</p> <p>(a) details of the final suite of the biodiversity offset measures to be implemented for the project demonstrating how it achieves the requirements of the Biodiversity Offset Strategy (including specified offset ratios);</p> <p>(b) the final selected means of securing the biodiversity values of the Package in perpetuity, including ongoing management, maintenance and monitoring requirements; and</p> <p>(c) timing and responsibilities for the implementation of the provisions of the Package over time.</p> <p>The requirements of the Package shall be implemented by the responsible parties according to the timeframes set out in the Package, unless otherwise agreed by the Director General.</p>	No	<p>As discussed in condition B7, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>A revised Biodiversity Offset Package will be prepared and submitted to the Director General for subsequent stage(s) of the Foxground and Berry Bypass Project.</p>

CoA	Condition	Relevant	Comments
	Ecological Monitoring		
B9.	<p>The Proponent shall develop an Ecological Monitoring Program to monitor the effectiveness of the biodiversity mitigation measures implemented as part of the project. The program shall be developed by a suitably qualified and experienced ecologist in consultation with the OEH and DPI (Fishing and Aquaculture) and shall include but not necessarily be limited to:</p> <p>(a) an adaptive monitoring program to assess the effectiveness of the mitigation measures identified in conditions B3 and B36(b) and allow amendment to the measures if necessary. The monitoring program shall nominate performance parameters and criteria against which effectiveness will be measured and include operational road kill surveys to assess the effectiveness of fauna crossings and exclusion fencing implemented as part of the project;</p> <p>(b) mechanisms for developing additional monitoring protocols to assess the effectiveness of any additional mitigation measures implemented to address additional impacts in the case of design amendments or unexpected threatened species finds during construction (where these additional impacts are generally consistent with the biodiversity impacts identified for the project in the documents listed under condition A 1);</p> <p>(c) monitoring shall be undertaken during construction (for construction-related impacts) and from opening of the project to traffic (for operation/ ongoing impacts) until such time as the effectiveness of mitigation measures can be demonstrated to have been achieved over a minimum of three successive monitoring periods after opening of the project to traffic, unless otherwise agreed by the Director General. The monitoring period may be reduced with the agreement of the Director General in consultation with the OEH and DPI (Fishing and Aquaculture), depending on the outcomes of the monitoring;</p> <p>(d) provision for the assessment of the data to identify changes to habitat usage and whether this can be directly attributed to the project;</p> <p>(e) details of contingency measures that would be implemented in the event of changes to habitat usage patterns directly attributable to the construction or operation of the project; and</p> <p>(f) provision for annual reporting of monitoring results to the Director General and the OEH and DPI (Fishing and Aquaculture), or as otherwise agreed by those agencies.</p> <p>The Program shall be submitted to the Director General for approval no later than 6 weeks prior to the commencement of construction that would result in the disturbance of native vegetation (unless otherwise agreed by the Director General).</p>	No	<p>As discussed in condition B7 and Appendix B of this Staging Report, the Toolijooa Road Fill Works stage supports minimal biodiversity values.</p> <p>Preparation of an Ecological Monitoring Program for the Toolijooa Road Fill Works Stage and therefore this condition is not considered relevant.</p> <p>An Ecological Monitoring Program will be prepared and submitted to the Director General for subsequent stage(s) of the Foxground and Berry Bypass Project.</p>
	Hydrology and Flooding		
B10.	<p>The Proponent shall ensure, where feasible and reasonable, that the project is designed to not exceed the afflux and other flooding criteria within the vicinity of the project as identified or predicted in the documents listed under condition A 1. New or duplicated drainage structures shall be designed to minimise changes to afflux and flooding to waterways that traverse the project alignment to the greatest extent practicable.</p>	No	<p>A Surface water, Groundwater and Flooding Assessment for the Foxground and Berry Bypass Project (AECOM, 2012) is included in the documents listed under condition A1. The Surface water, Groundwater and Flooding Assessment identified areas along the Foxground and Berry Bypass Project alignment that are susceptible to flooding, while also identifying aspects of the Project that could exacerbate</p>

CoA	Condition	Relevant	Comments
			<p>flooding e.g. construction of creek crossings including culverts and bridges as well as elevated embankment structures within floodplain land.</p> <p>The Toolijooa Road Fill Works stage is not located within flood prone land and does not involve the construction of creek or drainage line crossings. As the Toolijooa Road Fill Works stage only involves the construction of part of the engineered fill required to support a section of the eastern extent of the Foxground and Berry Bypass Project, permanent drainage structures will not be designed or constructed as part of this first stage. The focus from a hydrology and surface water management perspective during the Toolijooa Road Fill Works stage will be around appropriate erosion and sediment control, which will be managed in accordance with the Soil and Water Management Sub-plan (refer to condition B36 (d)).</p> <p>As such this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>Requirements of this condition will be considered and where relevant, complied with during subsequent stage(s) of the Foxground and Berry Bypass Project, which also involves detailed design.</p>
B11.	<p>The Proponent shall develop a Hydrological Mitigation Report for properties in the Broughton Creek, Town Creek, Bundewallah Creek and Shoalhaven floodplain areas where flood impacts are predicted to increase as a result of the project. The Report shall be based on detailed floor level survey and associated assessment of potentially flood affected properties in those areas. The Report shall:</p> <ul style="list-style-type: none"> (a) identify properties in those areas likely to have an increased flooding impact and detail predicted increased flooding impact; (b) identify mitigation measures to be implemented where increased flooding is predicted to adversely affect access, property or infrastructure; (c) identify measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the project and cause localised soil erosion and/or pasture damage; (d) be developed in consultation with the relevant council, NSW State Emergency Service and directly-affected property owners; and (e) identify operational and maintenance responsibilities for items (a) to (c) inclusive. <p>The Proponent shall not commence construction of the project on or within those areas likely to alter flood conditions until such time as works identified in the hydrological mitigation report have been completed, unless otherwise agreed by the Director General.</p>	No	<p>The Toolijooa Road Fill Works stage is not located within the Broughton Creek, Town Creek, Bundewallah Creek and Shoalhaven floodplain areas and/or other floodplain areas. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>

CoA	Condition	Relevant	Comments
B12.	Based on the mitigation measures identified in condition B11, the Proponent shall prepare a final schedule of feasible and reasonable flood mitigation measures proposed at each directly-affected property in consultation with the property owner. The schedule shall be provided to the relevant property owner(s) prior to the implementation/ construction of the mitigation works, unless otherwise agreed by the Director General. A copy of each schedule of flood mitigation measures shall be provided to the Department and the relevant council prior to the implementation/ construction of the mitigation measures on the property.	No	The Toolijooa Road Fill Works stage is not located within the Broughton Creek, Town Creek, Bundewallah Creek and Shoalhaven floodplain areas and/or other floodplain areas. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.
B13.	In the event that the Proponent and the relevant property owner cannot agree on feasible and reasonable flood mitigation measures to be applied to a property within one month of the first consultation on the measures (as required under condition B12), the Proponent shall employ a suitably qualified and experienced independent hydrological engineer, who has been approved by the Director General, for the purposes of this condition prior to the commencement of construction in the Broughton Creek, Town Creek, Bundewallah Creek and Shoalhaven floodplain areas affected by increased afflux from the project to advise and assist affected property owners in negotiating feasible and reasonable mitigation measures.	No	The Toolijooa Road Fill Works stage is not located within the Broughton Creek, Town Creek, Bundewallah Creek and Shoalhaven floodplain areas and/or other floodplain areas. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.
B14.	The Proponent shall provide assistance to the relevant council and/ or NSW State Emergency Service, to assist in the preparation of any new or necessary update(s) to the relevant plans and documents in relation to flooding, to reflect changes in flooding levels, flows and characteristics as a result of the project.	No	The Toolijooa Road Fill Works stage is not located within the Broughton Creek, Town Creek, Bundewallah Creek and Shoalhaven floodplain areas and/or other floodplain areas and is unlikely to exacerbate flooding in surrounding areas. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.
Sedimentation, Erosion and Water			
B15.	Prior to the commencement of construction, unless otherwise agreed by the Director General, the Proponent shall in consultation with the EPA and NOW, undertake groundwater modelling on the concept design for the project, subject to the modelling being revised should the detailed design have a significantly different impact on groundwater than the concept design. The modelling shall be undertaken by a suitably qualified and experienced groundwater expert and assess the construction and operational impacts of the proposal on the groundwater resources, groundwater quality, groundwater hydrology and groundwater dependent ecosystems and provide details of contingency and management measures in the groundwater management strategy required under condition B36(d).	No	The Toolijooa Road Fill Works stage is located in an elevated position, immediately south of the existing Princes Highway alignment, which is located on the top of a minor ridgeline. The Toolijooa Road Fill Works does not involve any cutting of slopes or excavation and therefore it is unlikely that groundwater will be intercepted during the construction of this stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage. Modelling will be undertaken on a project-wide basis prior to the commencement of construction of the subsequent stage(s).

CoA	Condition	Relevant	Comments
B16.	<p>The Proponent shall prepare and implement a Water Quality Monitoring Program to monitor the impacts of the project on surface and groundwater quality and resources and wetlands, during construction and operation. The Program shall be developed in consultation with the OEH, EPA, DPI (Fishing and Aquaculture) and NOW and shall include but not necessarily be limited to:</p> <p>(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 project;</p> <p>(b) the results of the groundwater modelling undertaken under condition B15;</p> <p>(c) identification of works and activities during construction and operation of the project, including emergencies and spill events, that have the potential to impact on surface water quality of potentially affected waterways;</p> <p>(d) development and presentation of parameters and standards against which any changes to water quality will be assessed, having regard to the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000</i> (Australian and New Zealand Environment Conservation Council, 2000);</p> <p>(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 Director General;</p> <p>(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 vegetation swales);</p> <p>(g) contingency and ameliorative measures in the event that adverse impacts to water quality are identified;</p> <p>(h) reporting of the monitoring results to the Department, OEH, EPA and NOW.</p> <p>The Program shall be submitted to the Director-General for approval 6 months prior to the commencement of construction of the project, or as otherwise agreed by the Director General. A copy of the Program shall be submitted to the OEH, EPA, DPI (Fishing and Aquaculture) and NOW prior to its implementation.</p>	Part	<p>The Toolijooa Road Fill Works stage is located in an elevated position, immediately south of the existing Princes Highway alignment, which is located at the top of a minor ridgeline.</p> <p>The Toolijooa Road Fill Works site drains southwards towards the valley bottom and into an un-named, non-perennial drainage line which follows a modified drainage pattern characterised by agricultural drains and excavated livestock watering holes. As there is no perennial water flow in the drainage line or visible water (other than the excavated impoundments) it would not be possible to implement a water quality monitoring program in accordance with condition B16. However in accordance with condition B36 (d), a Soils and Water Management Plan will be prepared for the Toolijooa Road Fill Works stage, which includes an Erosion and Sediment Control Plan. Soil and water management measures included within the Soils and Water Management Sub-plan will include water quality monitoring of sediment basins during the construction of the project, consistent with <i>Managing Urban Stormwater Soils and Construction Vols 1 and 2, 4th Edition</i> (Landcom, 2004) and <i>Managing Urban Stormwater Soils And Construction Vols 2A and 20 Main Road Construction</i> (Department of Environment and Climate Change, 2008).</p> <p>A Water Quality Monitoring Program will be prepared in accordance with this condition, prior to the commencement of construction of the subsequent stage(s).</p>
Heritage Impacts			
	Built and Landscape Heritage		
B17.	<p>Prior to pre-construction and construction impacts affecting 'Glen Devon' Federation Cottage (H11) and skid mounted work-site shed (H60), the Proponent shall carry out further historical research and investigate the options for relocation of these heritage items, in consultation with the department and the Heritage Council of NSW, to the satisfaction of the Director General.</p> <p>Additionally, for H11, the proponent shall:</p> <p>(a) undertake archaeological investigations in accordance with condition B20; and</p>	No	<p>The Toolijooa Road Fill Works stage does not affect 'Glen Devon' Federation Cottage (H11) and skid mounted work-site shed (H60). As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>The Heritage Division of OEH advised that as there is minimal impact to known heritage, the HMP for the Toolijooa Road Fill Works stage of the Foxground to Berry Bypass</p>

CoA	Condition	Relevant	Comments
	(b) provide for the preparation and implementation of a heritage interpretation plan.		does not require referral to the Heritage Council.
B18.	<p>Prior to the commencement of preconstruction and construction works in proximity to the following items G28 H11, H13, H15, H16, H17, H19, H21, H22, H23, H30, H45, H47, H53, H54, H55, H56, H62, H63, and the Southern Illawarra Coastal Plain and Hinterland Cultural Landscape (SICPH CL), and G2B A13, A14, A39, TRACL and MFT 12 the Proponent shall complete all archival recordings, including photographic recording. In addition detailed historical research shall be undertaken for the following items G2B H60, H61, H63, the SICPH CL and G2B A39.</p> <p>This work 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 identified and/or fenced until the completion of the archival recordings. Within 6 months of completing the above work, the Proponent shall submit a report containing the archival recordings and the historical research, where required, to the Director General, the Heritage Council of NSW, the local Council and the local Historical Society.</p>	No	<p>The Toolijooa Road Fill Works stage will not result in any direct or indirect impacts on those heritage items identified in this condition. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>It must be noted that the Toolijooa Road Fill Works stage is located to the east of the general location of TRACL and G2B H30 and is unlikely to result in any impacts on this Aboriginal Cultural Landscape or c19 road remnant respectively. However as a precautionary measure, the Toolijooa Road Fill Works stage will be undertaken in accordance with the actions to manage heritage construction impacts required by condition B36(e) and will be managed in accordance with the Construction Heritage Management Sub-plan. In addition to the above, a Landscape and Revegetation Management Plan will be developed for the Toolijooa Road Fill Works stage in accordance with condition B23. Construction of the Toolijooa Road Fill Works stage in accordance with the Landscape and Revegetation Management Plan will reduce the visual impact of this stage on the surrounding landscape.</p> <p>The Heritage Division of OEH advised that as there is minimal impact to known heritage, the HMP for the Toolijooa Road Fill Works stage of the Foxground to Berry Bypass does not require referral to the Heritage Council.</p>
B19.	<p>Prior to pre-construction and construction impacts affecting G2B H15, H19, H21, H22, H23, H30 and H55 the Proponent shall carry out further historical and physical archaeological investigations in relation to these road alignments, in consultation with the department and the Heritage Council of NSW, to the satisfaction of the Director General. These investigations must:</p> <ol style="list-style-type: none"> undertake archaeological investigations in accordance with condition B22; provide for the detailed analysis of any heritage items discovered during the investigations; include management options for these heritage items (including options for relocation and display); if the findings of the investigations are significant, provide for the preparation and implementation of a heritage interpretation plan. 	No	<p>The Toolijooa Road Fill Works stage will not result in any direct or indirect impacts on those heritage items identified in this condition. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>It must be noted that the Toolijooa Road Fill Works stage is located to the east of G2B H30. However as a precautionary measure, the Toolijooa Road Fill Works stage will be undertaken in accordance with the actions to manage heritage construction impacts required by condition B36(e) and will be managed in accordance with the Construction Heritage Management Sub-plan and is therefore unlikely to result in any impacts on this c19 road remnant.</p> <p>The Heritage Division of OEH advised that as there is minimal impact to known heritage, the HMP for the Toolijooa Road Fill Works stage of the Foxground to Berry Bypass does not require referral to the Heritage Council.</p>

CoA	Condition	Relevant	Comments
	Archaeology (Aboriginal and non-Aboriginal)		
B20.	<p>Prior to commencement of pre-construction and construction activities affecting Aboriginal site G2B PAD 1 the Proponent shall:</p> <p>(a) undertake archaeological investigation of this site using a methodology generally consistent with testing undertaken for the Environmental Assessment, and prepared in consultation with the OEH (Aboriginal heritage) and the Aboriginal stakeholders;</p> <p>(b) report on the results of the archaeological investigation, including recommendations (such as for further archaeological work) in consultation with the OEH and to the satisfaction of the Director General, and shall include, but not limited to:</p> <p>(i) consideration of measures to avoid or minimise disturbance to Aboriginal objects where objects of moderate to high significance are found to be present;</p> <p>(ii) where impacts cannot be avoided, recommendations for any further investigations under condition B21; and</p> <p>(iii) management and mitigation measures to ensure there are no additional impacts due to pre-construction and construction activities.</p>	No	The Toolijooa Road Fill Works stage does not directly affect and/or is not located in proximity to the heritage item identified in this condition. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.
B21.	<p>Prior to the commencement of pre-construction and construction activities affecting sites G2B A16, A18, A24, A29, A30, A31, A32, A33, A36, and G2B PAD1 the proponent shall:</p> <p>(a) develop a detailed salvage strategy, prepared in consultation with the OEH (Aboriginal heritage) and the Aboriginal stakeholders. The investigation program shall be prepared to the satisfaction of the Director General; and</p> <p>(b) undertake any further archaeological excavation works recommended by the results of the Aboriginal archaeological investigation program.</p> <p>Within twelve months of completing the above work, unless otherwise agreed by the Director General, the Proponent shall submit 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), prepared in consultation with the Aboriginal stakeholders, the OEH (Aboriginal heritage) and to the satisfaction of the Director General.</p> <p>Note: where archaeological testing has occurred as part of the Environmental Assessment and the results are included in the documents listed in condition A 1 (b) the sites tested must still form part of the final report prepared under B21(b).</p>	No	The Toolijooa Road Fill Works stage does not directly affect and/or is not located in proximity to those heritage items identified in this condition. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.

CoA	Condition	Relevant	Comments
B22.	<p>Prior to the commencement of pre-construction and construction activities affecting non-Aboriginal sites H11, H14, H19, H23, H28, H30, H48, H49, H53, and H55, the Proponent shall:</p> <p>(a) Undertake an Historic archaeological investigation program in accordance with the Heritage Council's <i>Archaeological Assessments Guideline</i> (1996) using a methodology prepared, in consultation with the OEH (Heritage Branch), and to the satisfaction of the Director-General. This work should be undertaken by an archaeological heritage consultant approved by the Director-General. The nomination for the Excavation Director shall demonstrate ability to comply with the Heritage Council's <i>Criteria for the Assessment of Excavation Directors</i> (July 2011).</p> <p>(b) Report on the results of the non-Aboriginal archaeological investigation program, including recommendations (such as for further archaeological work), in consultation with the Heritage Branch, OEH and to the satisfaction of the Director General, and shall include, but not necessarily be limited to:</p> <p>(i) consideration of measures to avoid or minimise disturbance to archaeology, where archaeology of non-Aboriginal archaeological significance is found to be present;</p> <p>(ii) where impacts cannot be avoided, recommendations for any further investigations for archaeology of historical archaeological significance; and</p> <p>(iii) management and mitigation measures to ensure there are no additional impacts due to pre-construction and construction activities.</p> <p>(c) Undertake any further archaeological excavation works recommended by the results of the non-Aboriginal archaeological investigation program.</p> <p>Within 12 months of completing the above work, unless otherwise agreed by the Director General, the Proponent shall submit 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 branch) and to the satisfaction of the Director General.</p> <p>Note: where archaeological testing has occurred as part of the environmental assessment and the results are included in the documents listed in condition A1(b) the sites tested must still form part of the methodology and final report prepared for the non-Aboriginal archaeological investigation program.</p>	No	<p>The Toolijooa Road Fill Works stage will not result in any direct or indirect impacts on those heritage items identified in this condition. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>It must be noted that the Toolijooa Road Fill Works stage is located to the east of G2B H30. However as a precautionary measure, the Toolijooa Road Fill Works stage will be undertaken in accordance with the actions to manage heritage construction impacts required by condition B36(e) and will be managed in accordance with the Construction Heritage Management Sub-plan and is therefore unlikely to result in any impacts on this c19 road remnant.</p>
Urban Design and Landscaping			
B23.	<p>The Proponent shall prepare and implement an Urban Design and Landscape Plan for the project. The Plan shall be prepared in consultation with the relevant council and shall present an integrated urban design for the project. The Plan shall include, but not necessarily be limited to:</p> <p>(a) a principal goal of achieving the urban design objectives outlined in Section 2.2 Volume 2 Appendix I of the document referred to in Condition A 1 (b);</p> <p>(b) location of existing vegetation and proposed landscaping (including use of indigenous and endemic species where possible) and design features;</p> <p>(c) graphics such as sections, perspective views and sketches for key elements of the project (including, but not limited to built elements such as retaining walls, cuttings, embankments, bridges, and noise barriers);</p>	Part	<p>As the Toolijooa Road Fill Works stage only involves part of a section of engineered fill, consideration of urban design elements are not applicable to the Toolijooa Road Fill Works stage. Development of a Landscape and Revegetation Management Sub-plan will be prepared for the Toolijooa Road Fill Works stage.</p> <p>An Urban Design and Landscape Plan will be developed for subsequent stage(s) of the Foxground and Berry Bypass Project.</p> <p>It is noted that condition B23 (g) relates to the North Street</p>

CoA	Condition	Relevant	Comments
	<p>(d) a description of locations along the project corridor directly or indirectly impacted by the construction of the project (e.g. temporary ancillary facilities, access tracks, watercourse crossings, etc.) and details of the strategies to progressively rehabilitate regenerate and/ or revegetate the locations with the objective of promoting biodiversity outcomes and visual integration. Details of species to be replanted/ revegetated shall be provided, including their appropriateness to the area and considering existing vegetation and habitat for threatened species;</p> <p>(e) an assessment of the visual screening effects of existing vegetation and the proposed landscaping. Where residences and businesses have been identified as likely to experience high visual impact as a result of the project and high residual impacts are likely to remain, the Proponent shall in consultation with affected receptors, identify opportunities for providing at-receptor landscaping to further screen views of the project. Where agreed to with the landowner, these measures shall be implemented during the construction of the project;</p> <p>(f) take into account appropriate roadside plantings and landscaping in the vicinity of heritage items and ensure no additional heritage impacts;</p> <p>(g) specific details on the landscape treatments for the North Street corridor, Town Creek diversion and Town Park.</p> <p>(h) strategies for progressive landscaping of other environmental controls such as erosion and sedimentation controls, drainage and noise mitigation;</p> <p>(i) location and design treatments for any associated footpaths and cyclist elements, and other features such as seating, lighting (in accordance with AS 4282-1997 <i>Control of the Obtrusive Effect of Outdoor Lighting</i>), fencing, and signs;</p> <p>(j) evidence of consultation with the relevant council and community on the proposed urban design and landscape measures prior to its finalisation; and</p> <p>(k) monitoring and maintenance procedures for the vegetated 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.</p> <p>The Plan shall be submitted for the approval of the Director General prior to the commencement of construction, unless otherwise agreed by the Director General. The Plan may be submitted in stages to suit the staged construction program of the project.</p>		<p>corridor, Town Creek diversion and Town Park. As these sites are not in the vicinity of the Toolijooa Road Fill Works stage, this component of the condition is not considered relevant.</p>
Signage Policy			
B24.	<p>The Proponent shall prepare a signage policy which addresses the bypassed towns of Foxground and Berry, in consultation with the relevant council.</p>	No	<p>The Toolijooa Road Fill Works stage, one completed, will not provide a bypass of the towns of Foxground and Berry. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>A signage policy will be prepared in accordance with this condition, during the delivery of the subsequent stage(s) of the Foxground and Berry Bypass Project.</p>

CoA	Condition	Relevant	Comments
B25.	The signage policy shall be consistent with the <i>Guide: Signposting</i> (RTA July 2007), <i>Tourist Signposting guide</i> (RMS and Destination NSW 2012) and provide information on the range of services available within Berry including advice on any parks that could be used as a rest area (and directional signage to these parks) and that that the route through the towns may be taken as an alternative to the highway.	No	The Toolijooa Road Fill Works stage, once completed, will not provide a bypass of the towns of Foxground and Berry. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage. A signage policy will be prepared in accordance with this condition, during the delivery of the subsequent stage(s) of the Foxground and Berry Bypass Project.
Property and Landuse			
B26.	The Proponent shall ensure that the project is designed to minimise land take impacts to surrounding properties (including agricultural properties) as far as feasible and reasonable, in consultation with the affected landowners. Where the viability of existing agricultural operations are identified to be impacted by the land requirements of the project, the Proponent shall as part of detailed design employ a suitably qualified and experienced independent agricultural specialist (that is approved by the Director General for the purpose of this condition), to assist in identifying alternative farming opportunities for the relevant properties.	No	The property on which the Toolijooa Road Fill Works stage is to be constructed, has been wholly acquired for the purposes of the Foxground and Berry Bypass Project and therefore agricultural practices on the property have ceased. In addition, the Toolijooa Road Fill Works stage is to be constructed within the approved concept design footprint and is not subject to detailed design. Detailed design will be undertaken during subsequent stage(s) of the Foxground and Berry Bypass Project. During detailed design, requirements of this condition will be adhered to where relevant. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.
B27.	The proponent shall discuss Crown Land transfer options with DPI (Crown Lands) and Shoalhaven Council, for Crown land located along the length of the project between Tannery Road and the northern interchange, with a view to reaching a mutually acceptable outcome for all parties. Evidence of consultation shall be provided to the Director General prior to the commencement of construction, with an agreed outcome to be reached, and submitted to the Director General, prior to the operation of the upgraded highway. In the event that a mutually acceptable agreement cannot be reached, the Director General must be advised in writing, to determine whether mediation may be required.	No	The Toolijooa Road Fill Works stage is not located on Crown Land between Tannery Road and the northern interchange. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.
B28.	The proponent shall, in consultation with Shoalhaven City Council, prepare a strategy for the use of the Council land adjacent the project at North Street (presently occupied by the Berry Riding Club) investigating options to minimise impacts on the riding club both during construction and operation of the project. The final option(s) shall be determined by the proponent prior to the commencement of construction of works in the vicinity of the riding club, in consultation with Shoal haven City Council and to the satisfaction of the Director General.	No	The Toolijooa Road Fill Works stage does not require the use of the Council land adjacent the project at North Street (presently occupied by the Berry Riding Club). As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.

CoA	Condition	Relevant	Comments
Compliance Tracking			
B29.	<p>The Proponent shall develop and implement a Compliance Tracking Program to track compliance with the requirements of this approval. The Program shall be submitted to the Director General for approval prior to the commencement of construction and relate to both the construction and operational phases of the project, and include, but not necessarily be limited to:</p> <p>(a) provisions for notification of the Director General of commencement of works prior to the commencement of construction and prior to the commencement of operation of the project (including prior to each stage, where works are being staged);</p> <p>(b) provisions for periodic review of project compliance with the requirements of this approval and the documents listed under condition A1, including the Statement of Commitments;</p> <p>(c) provisions for periodic reporting of compliance status against the requirements of this approval and the documents listed under condition A1, including the Statement of Commitments, to the Director General including at least one month prior to the commencement of construction and operation of the project and at other intervals during the construction and operation, as identified in the Program;</p> <p>(d) a program for independent environmental auditing in accordance with <i>ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing</i>;</p> <p>(e) mechanisms for reporting and recording incidents and actions taken in response to those incidents;</p> <p>(f) provisions for reporting environmental incidents to the Director General during construction and operation;</p> <p>(g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.</p>	Yes	A Compliance Tracking Program will be developed for the Toolijooa Road Fill Works stage in accordance with this condition.

CoA	Condition	Relevant	Comments
Community Information and Involvement			
<i>Provision of Electronic Information</i>			
B30.	<p>Prior to the commencement of construction, the Proponent shall establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the project. The Proponent shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not limited to:</p> <p>(a) information on the current implementation status of the project;</p> <p>(b) a copy of the documents referred to under condition A 1 of this approval, and any documentation supporting modifications to this approval that may be granted from time to time;</p> <p>(c) a copy of this approval and any future modification to this approval;</p> <p>(d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the project;</p> <p>(e) a copy of each current strategy, plan, program or other document required under this approval; and</p> <p>(f) the outcomes of compliance tracking in accordance with the requirements of condition B29.</p>	Yes	The existing RMS website contains dedicated pages for the provision of electronic information associated with the Foxground and Berry Bypass Project including the Toolijooa Road Fill Works stage. Documentation listed in condition B30 (a) - (f) including the CEMP and associated Sub-Plans, will be published.
<i>Complaints and Enquiries Procedure</i>			
B31.	<p>Prior to the commencement of construction, the Proponent shall ensure that the following are available for community complaints and enquiries during the construction period:</p> <p>(a) a telephone number on which complaints and enquiries about construction and operation activities may be registered;</p> <p>(b) a postal address to which written complaints and enquiries may be sent; and</p> <p>(c) an email address to which electronic complaints and enquiries may be transmitted.</p> <p>The telephone number, the postal address and the email address shall be published in a newspaper circulating in the local area prior to the commencement of construction and prior to the commencement of project operation. The above details shall also be provided on the website (or dedicated pages) required by this approval.</p>	Yes	Prior to the commencement of construction of the Toolijooa Road Fill Works stage, a telephone number, postal address and an email address will be made available for community complaints and enquiries during the construction period in accordance with the requirements of this condition.
B32.	<p>The Proponent shall prepare and implement a Construction Complaints Management System consistent with AS 4269 Complaints Handling prior to the commencement of construction activities and must maintain the System for the duration of construction activities.</p> <p>Information on all complaints received, including the means by which they were addressed and whether resolution was reached and whether mediation was required or used, shall be maintained by the Proponent and included in a complaints register. The information contained within the System shall be made available to the Director General on request.</p>	Yes	A Complaints and Enquiries Protocol, will be developed for the Toolijooa Road Fill Works stage of the Project, in accordance with the requirements of this condition.

CoA	Condition	Relevant	Comments
	Community Involvement		
B33.	<p>The Proponent shall prepare and implement a Community Communication Strategy for the project. This Strategy shall be designed to provide mechanisms to facilitate communication between the Proponent, the Contractor, the Environmental Representative, the relevant council and the local community (broader and local stakeholders) on the construction and environmental management of the project. The Strategy shall include, but not necessarily be limited to:</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) procedures and mechanisms for the regular distribution of information to stakeholders on the progress of the project and matters associated with environmental management; (c) procedures and mechanisms through which stakeholders can discuss or provide feedback to the Proponent and/or Environmental Representative in relation to the environmental management and delivery of the project; (d) procedures and mechanisms through which the Proponent can respond to enquires or feedback from stakeholders in relation to the environmental management and delivery of the project; and (e) procedures and mechanisms that would be implemented to resolve issues/ disputes that may arise between parties on the matters relating to environmental management and the delivery of the project. This may include the use of an appropriately qualified and experienced independent mediator. <p>Key issues that should be addressed in the Community Communication Strategy should include (but not limited to):</p> <ul style="list-style-type: none"> (i) traffic management (including property access, pedestrian access); (ii) landscaping/urban design matters; (iii) construction activities; and (iv) noise and vibration mitigation and management. <p>The Proponent shall maintain and implement the Strategy throughout construction of the project. The Strategy shall be approved by the Director General prior to the commencement of construction, or as otherwise agreed by the Director General.</p>	Yes	A Community Engagement Strategy will be prepared and implemented for the Toolijooa Road Fill Works stage of the Project. The Community Engagement Strategy will provide an approach to stakeholder and community communications in accordance with the requirements of this condition.

CoA	Condition	Relevant	Comments
Environmental Management			
	<i>Environmental Representative</i>		
B34.	<p>Prior to the commencement of construction of the project, or as otherwise agreed by the Director General, the Proponent shall nominate for the approval of the Director General a suitably qualified and experienced Environment Representative(s) that is independent of the design (including preparation of documentation referred to in condition A1), and construction personnel. The Proponent shall employ the Environmental Representative(s) for the duration of construction, or as otherwise agreed by the Director General. The Environment Representative(s) shall:</p> <p>(a) be the principal point of advice in relation to the environmental performance of the project;</p> <p>(b) be consulted in responding to the community concerning the environmental performance of the project where the resolution of points of conflict between the Proponent and the community is required;</p> <p>(c) monitor the implementation of environmental management plans and monitoring programs required under this approval;</p> <p>(d) monitor the outcome of environmental management plans and advise the Proponent upon the achievement of project environmental outcomes;</p> <p>(e) have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and other licences and approvals related to the environmental performance and impacts of the project;</p> <p>(f) ensure that environmental auditing is undertaken in accordance with the requirements of condition B29 and the project's Environmental Management System(s);</p> <p>(g) be given the authority to approve/ reject minor amendments to the Construction Environment Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environment Management Plan required under condition B35; and</p> <p>(h) be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.</p>	Yes	A suitably qualified and experienced Environmental Representative that is independent of the design and construction personnel for the Toolijooa Road Fill Works stage will be nominated for the approval of the Director General.

CoA	Condition	Relevant	Comments
	Construction Environmental Management Plan		
B35.	<p>The Proponent shall prepare and (following approval) implement a Construction Environmental Management Plan for the project. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant agencies and in accordance with the Guideline 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>(a) a description of activities to be undertaken during construction of the project or stages of construction, as relevant;</p> <p>(b) statutory and other obligations that the Proponent is required to fulfil during construction including approvals, consultations and agreements required from agencies and key legislation and policies. Evidence of consultation with relevant agencies shall be included identifying how issues raised by these agencies have been addressed in the Plan;</p> <p>(c) a description of the roles and responsibilities for relevant employees involved in the construction of the project 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> <p>(d) identification of ancillary facility site locations, including an assessment against location criteria outlined in condition C32;</p> <p>(e) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase and details of how environmental performance would be monitored and managed to meet acceptable outcomes including what actions will be taken to address identified potential adverse environmental impacts (including any impacts arising from the staging of the construction of the project and/ or concurrent construction works with adjacent Princes Highway Upgrade projects, as relevant). In particular, the following environmental performance issues shall be addressed in the Plan:</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 to monitor and manage impacts associated with the construction and operation of ancillary facilities,</p> <p>(iv) measures for the handling, treatment and management of contaminated materials,</p> <p>(v) measures to monitor and manage waste generated during construction including but not limited to: general procedures for waste classification, handling, reuse, and disposal; use of secondary waste material in construction wherever feasible and reasonable; procedures for dealing with green waste including timber and mulch from clearing activities; and measures for reducing demand on water resources (including the potential for reuse of treated water from sediment control basins);</p>	Yes	A Construction Environmental Management Plan for the Toolijooa Road Fill Works stage will be prepare and implemented in accordance with this condition.

CoA	Condition	Relevant	Comments
	<p>(vi) measures to monitor and manage spoil, fill and materials stockpile sites including details of how spoil, fill or material would be handled, stockpiled, reused and disposed and a stockpile management protocol detailing locational criteria that would guide the placement of stockpiles and management measures that would be implemented to avoid/ minimise amenity impacts to surrounding residents and environmental risks (including to surrounding water courses). Stockpile sites that affect heritage, threatened species, populations or endangered ecological communities require the approval of the Director General, in consultation with the OEH;</p> <p>(vii) measures to monitor and manage hazard and risks including emergency management; and</p> <p>(viii) the issues identified in condition B36;</p> <p>(f) details of community involvement and complaints handling procedures during construction, consistent with the requirements of conditions B30 to B33;</p> <p>(g) details of compliance and incident management consistent with the requirements of condition B29; and</p> <p>(h) procedures for the periodic review and update of the Construction Environmental Management Plan and sub-plans required under condition B35 and B36 respectively, as necessary (including where minor changes can be approved by the Environmental Representative).</p> <p>The Plan shall be submitted for the approval of the Director General no later than one month prior to the commencement of construction, or within such period otherwise agreed by the Director General. Construction works shall not commence until written approval has been received from the Director General.</p>		
B36.	As part of the Construction Environment Management Plan for the project required under condition B35, the Proponent shall prepare and implement the following sub plan(s):		
B36. (a)	<p>A Construction Traffic Management Sub-plan, prepared in accordance with the Roads and Maritime Service's <i>QA Specification G 10 - Control of Traffic and Traffic Control at Work Sites Manual</i> (2003) to manage disruptions to traffic movements as a result of construction traffic associated with the project. The sub-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 quantification of construction traffic volumes (including heavy vehicle/ spoil 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) details of potential impacts to traffic on the existing highway, the 'Sandtrack', and associated local roads, including, intersection level of service and potential disruptions to pedestrians, public transport, parking, cyclists and property access;</p> <p>(iv) details of temporary and interim traffic arrangements to address potential impacts;</p> <p>(v) details of evidence based mitigation measures to address potential impacts on the 'Sandtrack'.</p> <p>(vi) a response procedure for dealing with traffic incidents; and</p> <p>(vii) mechanism for the monitoring, review and amendment of this sub-plan.</p>	Yes	A Construction Traffic Management Sub-plan for the Toolijooa Road Fill Works stage will be prepare and implemented in accordance with this condition.

CoA	Condition	Relevant	Comments
B36. (b)	<p>A Construction Flora and Fauna Management Sub-plan to detail how construction impacts on ecology will be minimised and managed. The sub-plan shall be developed in consultation with the OEH and DPI (Fishing and Aquaculture) 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 construction boundaries/ footprint of the project based on detailed design and to confirm the vegetation to be cleared as part of the project (including tree hollows, threatened flora and fauna species and riparian vegetation);</p> <p>(ii) updated sensitive area vegetation maps based on (i) above and previous survey work;</p> <p>(iii) details of general work practices and mitigation measures to be implemented during construction to minimise impacts on native fauna and native vegetation (particularly threatened species and EECs) not proposed to be cleared as part of the project, including, but not necessarily limited to: fencing of sensitive areas, a protocol for the removal and relocation of fauna during clearing, engagement of a suitably qualified and experienced ecologist to identify locations where they would be present to oversee clearing activities and facilitate fauna rescues and re-location, clearing timing with consideration to breeding periods, measures for maintaining existing habitat features (such as bush rock and tree branches etc), seed harvesting and appropriate topsoil management, construction worker education, weed management (including controls to prevent the introduction or spread of <i>Phytophthora cinnamomi</i>), erosion and sediment control and progressive re-vegetation;</p> <p>(iv) specific procedures to deal with EEC/ threatened species anticipated to be encountered within the project corridor including re-location, translocation and/or management and protection measures;</p> <p>(v) a procedure for dealing with unexpected EEC/threatened species identified during construction including cessation of work and notification of the OEH, determination of appropriate mitigation measures in consultation with the OEH (including relevant re-location measures) and update of ecological monitoring and/ or biodiversity offset requirements consistent with conditions B7 and B8; and</p> <p>(vi) mechanism for the monitoring, review and amendment of this sub-plan;</p>	Part	<p>A Construction Flora and Fauna Management Sub-plan for the Toolijooa Road Fill Works stage will be prepared and implemented in accordance with this condition.</p> <p>There is no “sensitive vegetation” within the proposed Toolijooa Road Fill Works disturbance footprint or immediately adjacent areas. The preparation of sensitive area vegetation maps referred to in condition B36 (b) (ii) are not required and therefore this component of the condition is not considered relevant to the Toolijooa Road Fill Works stage of the Project.</p> <p>It is noted that condition B36 (b) (iv) relates to specific procedures to deal with EEC/threatened species anticipated to be encountered within the project corridor. A biodiversity survey was undertaken by a suitably qualified and experienced ecologist (Appendix B), who confirmed that no EECs and/or threatened species occur within the Toolijooa Road Fill Works stage. This is consistent with the Terrestrial Fauna and Flora Assessment for the Foxground and Berry Bypass Project (Biosis, 2012), which did not identify any threatened flora and fauna species or EEC on or within the vicinity of the Toolijooa Road Fill Works stage.</p> <p>As there are no EECs and/or threatened species within the Toolijooa Road Fill Works stage, this component of the condition is not considered relevant.</p>

CoA	Condition	Relevant	Comments
B36. (c)	<p>A Construction Noise and Vibration Management Sub-plan to detail how construction noise and vibration impacts will be minimised and managed. The sub-plan shall be developed in consultation with the EPA and include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (i) identification of nearest sensitive receptors and relevant construction noise and vibration goals applicable to the project; (ii) identification of key noise and/or vibration generating construction activities (based on representative construction scenarios, including at ancillary facilities) that have the potential to impact on surrounding sensitive receivers including expected noise/ vibration levels; (iii) identification of feasible and reasonable measures proposed to be implemented to minimise construction noise and vibration impacts (including construction traffic noise impacts); (iv) procedures for dealing with out-of-hour works in accordance with condition C4 and C6, including procedures for notifying the Director General concerning complaints received in relation to the extended hours approved under condition C4(e); (v) procedures and mitigation measures to ensure relevant vibration and blasting criteria are achieved, including a suitable blast program, applicable buffer distances for vibration intensive works, use of low-vibration generating equipment/vibration dampeners or alternative construction methodology, and pre-and post-construction dilapidation surveys of sensitive structures where blasting and/ or vibration is likely to result in damage to buildings and structures (including surveys being undertaken immediately following a monitored exceedance of the criteria); (vi) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity, as well as procedures for dealing with and responding to noise complaints; and (vii) a program for construction noise and vibration monitoring clearly indicating monitoring frequency, location, how the results of this monitoring would be recorded and, procedures to be followed where significant exceedances of relevant noise and vibration goals are detected; 	Part	<p>A Construction Noise and Vibration Management Sub-plan for the Toolijooa Road Fill Works stage will be prepared and implemented in accordance with this condition.</p> <p>It is noted that condition B36 (c) (v) refers to requirements when undertaking blasting. As no blasting will be undertaken during the Toolijooa Road Fill Works stage, this component of the condition is not considered relevant.</p>

CoA	Condition	Relevant	Comments
B36. (d)	<p>A Construction Soil and Water Quality Management Sub-plan to manage surface and groundwater impacts during construction of the project. The sub-plan shall be developed in consultation with the OEH, EPA, DPI (Fishing and Aquaculture) and NOW and include, but not necessarily be limited to:</p> <p>(i) identification of potential sources of erosion and sedimentation, and water pollution (including those resulting from maintenance activities);</p> <p>(ii) details of how construction activities would be managed and mitigated to minimise erosion and sedimentation consistent with condition C20;</p> <p>(iii) where construction activities have the potential to impact on waterways or wetlands (through direct disturbance such as construction of waterway crossings or works in close proximity to waterways or wetlands), site specific mitigation measures to be implemented to minimise water quality, riparian and stream hydrology impacts as far as practicable, including measures to stabilise bed and/or bank structures where feasible and reasonable, and to rehabilitate affected riparian vegetation to existing or better condition. The timing of rehabilitation of the waterways shall be identified in the sub-plan;</p> <p>(iv) a contingency plan, consistent with the <i>Acid Sulfate Soils Manual</i>, to deal with the unexpected discovery of actual or potential acid sulfate soils, including procedures for the investigation, handling, treatment and management of such soils and water seepage;</p> <p>(v) a tannin leachate management protocol to manage the stockpiling of mulch and use of cleared vegetation and mulch filters for erosion and sediment control;</p> <p>(vi) construction water quality monitoring requirements consistent with condition B16; and</p> <p>(vii) a groundwater management strategy, including (but not necessarily limited to):</p> <ol style="list-style-type: none"> i. description and identification of groundwater resources (including depths of the water table and water quality) potentially affected by the project based on baseline groundwater monitoring undertaken in accordance with condition B15; ii. identification of surrounding licensed bores, dams or other water supplies and groundwater dependant ecosystems and potential groundwater risks associated with the construction of the project on these groundwater users and ecosystems; iii. measures to manage identified impacts on water table, flow regimes and quality and to groundwater users and ecosystems; iv. groundwater inflow control, handling, treatment and disposal methods; and v. a detailed monitoring plan to identify monitoring methods, locations, frequency, duration and analysis requirements. 	Part	<p>A Construction Soil and Water Management Sub-plan for the Toolijooa Road Fill Works stage will be prepare and implemented in accordance with this condition.</p> <p>The Construction Soil and Water Management Sub-plan will also include an Erosion and Sediment Control Plan, which will be prepared by a suitably qualified and experience soil conservation specialist.</p> <p>It is noted that condition B36 (d) (v) refers to requirements for managing tannin leachate when stockpiling mulch and when using cleared vegetation and mulch filters for erosion and sediment control. As there is minimal woody vegetation that requires clearing during the Toolijooa Road Fill Works stage, this component of the condition is not considered relevant.</p> <p>It is also noted that condition B36 (d) (vii) refers to the development of a groundwater management strategy. The documentation referred to in condition A1 identifies the following activities that have the potential to impact on groundwater:</p> <ul style="list-style-type: none"> ▪ Deep excavations and cuttings; ▪ Establishing foundations and piling for bridges or other major structures in areas with shallow groundwater which may require localised dewatering; ▪ Compaction of shallow soils in areas of unconsolidated alluvial sediments. <p>The Toolijooa Road Fill Works stage is located in an elevated position, immediately south of the existing Princes Highway alignment, which is located near the top of a minor ridgeline. The Toolijooa Road Fill Works stage does not involve any cutting of slopes or excavation and therefore it is unlikely that groundwater will be intercepted during the construction of this stage. This component of the condition is therefore not considered relevant.</p> <p>Additional geotechnical investigations including groundwater modelling (in accordance with condition B15) and the development of a groundwater management strategy, will be undertaken during the detailed design phase of the project and/or prior to the commencement of construction of subsequent stage(s) of the Foxground and Berry Bypass Project.</p>

CoA	Condition	Relevant	Comments
B36. (e)	<p>A Construction Heritage Management Sub-plan to detail how construction impacts on Aboriginal and non-Aboriginal heritage will be avoided, minimised and managed. The sub-plan shall be prepared by an appropriately qualified heritage consultant(s) and be developed in consultation with the Heritage Council of NSW, the OEH (Aboriginal heritage), and registered Aboriginal stakeholders (for Aboriginal heritage), and include, but not necessarily be limited to:</p> <p>(i) In relation to Aboriginal Heritage:</p> <ul style="list-style-type: none"> i. details of management measures and strategies for protection, salvage, and/or conservation of sites and items that will be directly or indirectly impacted during construction (including further archaeological investigations, salvage measures and/or measures to protect unaffected sites during construction works in the vicinity); ii. procedures for dealing with previously unidentified Aboriginal objects (excluding human remains) including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can recommence by a suitably qualified archaeologist in consultation with the department, OEH and registered Aboriginal stakeholders and assessment of the consistency of any new Aboriginal heritage impacts against the approved impacts of the project, and notification to the OEH, in accordance with section 89A of the <i>National Parks and Wildlife Act 1974</i>, and the department; iii. procedures for dealing with human remains, including cessation of works in the vicinity and notification of the department, NSW Police Force, OEH and registered Aboriginal stakeholders and not recommencing any works in the area unless authorised by the department and/ or the NSW Police Force); and iv. induction processes (identification, protection) for construction personnel (including procedures for keeping records of inductions) and procedures for ongoing Aboriginal consultation and involvement; and <p>(ii) In relation to non-Aboriginal Heritage:</p> <ul style="list-style-type: none"> i. details of management measures and strategies for protection, excavation, archival recording and/or conservation of heritage items that will be directly or indirectly impacted during construction (including measures to protect unaffected items during construction works in the vicinity); ii. procedures for dealing with previously unidentified items of heritage significance, including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified and experienced archaeologist in consultation with the department and the Heritage Council of NSW and assessment of the consistency of any new non-Aboriginal heritage impacts against approved impacts of the project and notification of the Heritage Council of NSW, in accordance with Section 146 of the <i>NSW Heritage Act 1977</i>, and the department; iii. procedures for dealing with human remains, including cessation of works in the vicinity and notification of the department, NSW Police Force, the Heritage Council of NSW and not recommencing any works in the area unless authorised by the department, and/ or the NSW 	Yes	<p>A Construction Heritage Management Sub-plan for the Toolijooa Road Fill Works stage will be prepared and implemented in accordance with this condition.</p> <p>The Heritage Division of OEH advised that as there is minimal impact to known heritage, the HMP for the Toolijooa Road Fill Works stage of the Foxground to Berry Bypass does not require referral to the Heritage Council.</p>

CoA	Condition	Relevant	Comments
	Police Force); and iv. heritage induction processes (identification, protection) for construction personnel (including procedures for keeping records of inductions).		

PART C - DURING CONSTRUCTION

	Condition	Relevant	Comments
Biodiversity			
C1.	The Proponent shall employ feasible and reasonable measures to minimise the clearing of native vegetation during the construction of the project.	Yes	Clearing of native vegetation within the Toolijooa Road Fill Works stage will be limited to a few individual, planted native trees that are located within the gardens of the existing farmhouses and sheds. Clearing of native vegetation will be managed through the Construction Flora and Fauna Management Sub-plan.
Air Quality Impacts			
C2.	The Proponent shall employ feasible and reasonable measures (including cessation of relevant works, as appropriate) to ensure that the project is constructed in a manner that minimises dust generation, including wind-blown dust, traffic-generated dust, dust from stockpiles and material tracking from construction and ancillary facility sites onto public roads.	Yes	Feasible and reasonable measures to ensure that the Toolijooa Road Fill Works stage is constructed in a manner that minimises dust generation, will be managed through the Construction Environmental Management Plan.
Noise and Vibration Impacts			
Construction Hours			
C3.	The Proponent shall only undertake construction activities associated with the project during the following standard construction hours: (i) 7:00am to 6:00pm Mondays to Fridays, inclusive; and (ii) 8:00am to 1:00pm Saturdays; and (iii) at no time on Sundays or public holidays.	Yes	The construction hours for the Toolijooa Rod Fill Works stage will be consistent with those outlined in this condition. Standard construction hours will be stipulated in the Construction Noise and Vibration Management Sub-plan.

	Condition	Relevant	Comments
C4.	<p>Works outside of the standard construction hours identified in condition C3 may be undertaken in the following circumstances:</p> <p>(a) works that generate noise that is:</p> <ul style="list-style-type: none"> (i) no more than 5 dB(A) above rating background level at any residence; or (ii) no more than the noise management levels specified in Table 3 of the <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change, 2009) at other sensitive land uses; or <p>(b) for delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or</p> <p>(c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm;</p> <p>(d) For the area between Toolijooa Road and Tindalls Lane, encompassing Toolijooa cut, Broughton Creek floodplain and major bridge works (outside of Berry township) low noise impact activities and works as follows:</p> <ul style="list-style-type: none"> (i) between 6:00am and 7:00am Monday to Friday; and (ii) between 6:00pm and 7:00pm Monday to Friday; and (iii) 1:00pm and 5:00pm on Saturdays; and (iv) at no time after 6pm on a day preceding a public holiday long weekend; and (v) with the approval of the Director General in accordance with condition C6. 	Yes	<p>Any works as part of the Toolijooa Rod Fill Works stage, that are required outside of the standard construction hours identified in condition C3, will be conducted under the circumstances outlined in this condition and/or when satisfying the requirements stipulated in condition C6.</p> <p>Requirements for works that are to be undertaken outside of standard construction hours will be stipulated in the Construction Noise and Vibration Management Sub-plan.</p>
C5.	<p>Except as expressly permitted by an Environment Protection Licence issued for the project, high noise impact activities and works shall only be undertaken:</p> <ul style="list-style-type: none"> (a) between the hours of 8:00am to 6:00pm Mondays to Fridays; (b) between the hours of 8:00am to 1:00pm Saturdays; 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. <p>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.</p>	Yes	<p>High noise generating activities and works for the Toolijooa Road Fill Works stage will be undertaken in accordance with this condition.</p> <p>Requirements for high noise impact activities and works will be stipulated in the Construction Noise and Vibration Management Sub-plan.</p>

	Condition	Relevant	Comments
C6.	<p>Construction activities (Out of Hours work) may be allowed to occur outside the construction hours specified in condition C3 with the prior written approval of the Director General. Requests for Out of Hours approval will be considered for construction activities which cannot be undertaken during the construction hours specified in condition C3 for technical or other justifiable reasons and will be considered on a case by case or activity-specific basis. Request for Out of Hours work must be accompanied by:</p> <p>(a) details of the nature and need for activities to be conducted during the varied construction hours;</p> <p>(b) written evidence to the EPA and the Director General that activities undertaken during the varied construction hours are justified, appropriate consultation with potentially affected receivers and notification of the relevant Council has been undertaken, issues raised have been addressed, and all feasible and reasonable mitigation measures have been put in place; and</p> <p>(c) evidence of consultation with the EPA on the proposed variation in standard construction hours.</p> <p>Despite the above, Out of Hours work may also occur in accordance with an approved Construction Environment Management Plan or Construction Noise and Vibration Management Sub-plan for this project, where that plan provides a process for considering the above on a case by case or activity specific basis by the Proponent, including factors (a) to (c) above.</p>	Yes	<p>Construction activities outside the construction hours specified in condition C3 and for circumstances not identified in condition C4, will be carried out during the Toolijooa Road Fill Works stage, only if the requirements of this condition have been met.</p> <p>Requirements for undertaking construction activities outside the construction hours specified in condition C3 and for circumstances not identified in condition C4, will be stipulated in the Construction Noise and Vibration Management Sub-plan.</p>
C7.	<p>Blasting associated with the project shall only be undertaken during the following hours:</p> <p>(a) 9:00am to 5:00pm, Mondays to Fridays, inclusive;</p> <p>(b) 9:00am to 1:00pm on Saturdays; and</p> <p>(c) at no time on Sundays or public holidays.</p> <p>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.</p>	No	<p>No blasting will be required during the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>
	Construction Noise and Vibration Goals		
C8.	<p>The Proponent shall implement feasible and reasonable noise mitigation measures with the aim of achieving the construction noise management levels detailed in the <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change, 2009) during construction activities. Any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the Construction Noise and Vibration Management Sub-plan required under condition B36.</p>	Yes	<p>All feasible and reasonable mitigation measures will be implemented during the Toolijooa Road Fill Works stage, with the aim of achieving the construction noise management levels outlined in this condition.</p> <p>The management of any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the Construction Noise and Vibration Management Sub-plan.</p>

	Condition	Relevant	Comments						
C9.	<p>The Proponent shall implement all feasible and reasonable mitigation measures with the aim of achieving the following construction vibration goals:</p> <p>(a) for structural damage to heritage structures, the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration -effects of vibration on structures;</p> <p>(b) for damage to other buildings and/or structures, the vibration limits set out in the British Standard BS 7385-1:1990 - Evaluation and measurement for vibration in buildings. Guide for measurement of vibration and evaluation of their effects on buildings; and</p> <p>(c) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006).</p>	Part	<p>All feasible and reasonable mitigation measures will be implemented during the Toolijooa Road Fill Works stage, with the aim of achieving the construction vibration goals outlined in this condition.</p> <p>It is noted that conditions C9 (a), (b) and (c) are unlikely to be relevant to the proposed Toolijooa Road Fill Works stage as (a) no heritage structures are located in the vicinity of the proposed works, (b) the closest building to the proposed Toolijooa Road Fill Works is a residence on the opposite (northern) side of the Princes Highway, approximately 40 m at its closest point, which is within the safe working distance for cosmetic damage to buildings (>25 m), and (c) the general public is unlikely to be exposed to or come in close contact with the proposed works.</p> <p>Irrespective of this, construction activities will be managed in accordance with the Construction Noise and Vibration Management Sub-plan, which includes construction vibration goals and vibration management and mitigation measures.</p>						
C10.	<p>The Proponent shall ensure that airblast overpressure generated by blasting associated with the project does not exceed the criteria specified in Table 1 when measured at the most affected residence or other sensitive receiver.</p> <p>Table 1 - Airblast overpressure criteria</p> <table border="1" data-bbox="219 866 1249 1078"> <thead> <tr> <th data-bbox="219 866 687 959">Airblast overpressure (dB(Lin Peak))</th> <th data-bbox="687 866 1249 959">Allowable exceedance</th> </tr> </thead> <tbody> <tr> <td data-bbox="219 959 687 1034">115</td> <td data-bbox="687 959 1249 1034">5% of total number of blasts over a 12 month period</td> </tr> <tr> <td data-bbox="219 1034 687 1078">120</td> <td data-bbox="687 1034 1249 1078">0%</td> </tr> </tbody> </table>	Airblast overpressure (dB(Lin Peak))	Allowable exceedance	115	5% of total number of blasts over a 12 month period	120	0%	No	<p>No blasting will be required during the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>
Airblast overpressure (dB(Lin Peak))	Allowable exceedance								
115	5% of total number of blasts over a 12 month period								
120	0%								

	Condition	Relevant	Comments											
C11.	<p>The Proponent shall ensure that ground vibration generated by blasting associated with the project does not exceed the criteria specified in Table 2 when measured at the most affected residence or other sensitive receiver.</p> <p>Table 2 -Peak particle velocity criteria</p> <table border="1"> <thead> <tr> <th>Receiver</th> <th>Peak particle velocity (mm/s)</th> <th>Allowable exceedance</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Residence on privately owned land</td> <td>5</td> <td>5% of total number of blasts over a 12 month period</td> </tr> <tr> <td>10</td> <td>0%</td> </tr> <tr> <td>Non-Aboriginal Heritage item</td> <td>3</td> <td>0%</td> </tr> </tbody> </table>	Receiver	Peak particle velocity (mm/s)	Allowable exceedance	Residence on privately owned land	5	5% of total number of blasts over a 12 month period	10	0%	Non-Aboriginal Heritage item	3	0%	No	No blasting will be required during the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.
Receiver	Peak particle velocity (mm/s)	Allowable exceedance												
Residence on privately owned land	5	5% of total number of blasts over a 12 month period												
	10	0%												
Non-Aboriginal Heritage item	3	0%												
C12.	To ensure that the criteria specified in conditions C10 and C11 are satisfied at the most affected residence or other sensitive receiver, blasting trials shall be undertaken prior to the commencement of the project's blasting program, with results from the trial blasts used to determine site specific blast design to satisfy the relevant criteria.	No	No blasting will be required during the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.											
C13.	<p>The blasting criteria identified in conditions C10 and/or C11 may be exceeded where the Proponent has written approval from the Director General. In obtaining the Director General approval for any such exceedance the Proponent shall submit to the Director General:</p> <p>(a) a written agreement from the EPA and the relevant landowner to exceed the criteria;</p> <p>(b) details of the proposed blasting program and justification for the proposed increase to blasting criteria including alternatives considered (where relevant);</p> <p>(c) an assessment of the environmental impacts of the increased blast limits on the surrounding environment and most affected residences or other sensitive receivers including, but not limited to noise, vibration and air quality and any risk to surrounding utilities, services or other structures;</p> <p>(d) details of the blast management, mitigation and monitoring procedures to be implemented; and</p> <p>(e) details of consultation undertaken (including clear identification of proposed blast limits and potential property impacts) and agreement reached with the relevant landowners and EPA (including a copy of the agreement in relation to increased blasting limits).</p> <p>Unless otherwise agreed by the Director General, the following exclusions apply to the application of this condition:</p> <p>(a) any agreements reached may be terminated by the landowner at any time should concerns about the increased blasting limits be unresolved; and</p> <p>(b) the blasting limit agreed to under any agreement can at no time exceed a maximum Peak Particle Velocity vibration level of 25 mm/s or maximum Airblast Overpressure level of 125 dBL.</p> <p>The provisions under condition C13 (to increase applicable blast criteria in agreement with the</p>	No	No blasting will be required during the Toolijooa Road Fill Works stage. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.											

	Condition	Relevant	Comments
	relevant landowners) do not apply where the property is a non-Aboriginal heritage item.		
	Operational Noise Mitigation Review		
C14.	<p>Unless otherwise agreed by the Director General, within 6 months of commencing construction, the Proponent shall, in consultation with the EPA, prepare and submit for the approval of the Director General, a review of the operational noise mitigation measures proposed to be implemented for the project. The review shall:</p> <p>(a) confirm the operational noise predictions of the project based on detailed design. This operational noise assessment shall be based on an appropriately calibrated noise model (which has incorporated additional noise monitoring, where necessary for calibration purposes);</p> <p>(b) review the suitability of the operational noise mitigation measures identified in the documents listed under condition A 1 to achieve the criteria outlined in the <i>Road Noise Policy</i> (DECCW, 2011), based on the operational noise performance of the project predicted under (a) above; and</p> <p>(c) where necessary, investigate additional feasible and reasonable noise mitigation measures to achieve the criteria outlined in the <i>Road Noise Policy</i> (DECCW, 2011).</p>	No	<p>This condition requires confirmation of the operational noise predictions of the Project based on detailed design. Detailed design and construction of the Foxground and Berry Bypass Project will be undertaken subsequent to the Toolijooa Road Fill Works stage. The purpose of the Toolijooa Road Fill Works stage is to support the beneficial reuse of excess cut material from the Gerringong upgrade project and to construct part of the engineered fill required to support a portion of the realigned Princes Highway just west of the Toolijooa Road - Princes Highway intersection. As such, this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p>
Heritage Impacts			
C15.	This approval does not allow the Proponent to destroy, modify or otherwise physically affect human remains as part of the project.	Yes	If human remains were discovered during construction of the Toolijooa Road Fill Works stage, they would be managed in accordance with the Construction Heritage Management Sub-plan, which includes an Unexpected Archaeological Finds Procedure.
C16.	The Proponent shall not destroy, modify or otherwise physically affect Aboriginal sites A3, A20, A37-A39, and MFT 13-23 and non-Aboriginal sites H25, H26, H51, H52, H58, and H59.	Part	<p>Aboriginal site G2B A38 consists of a single surface stone artefact and an associated area of assessed archaeological potential. It is situated approximately 300 m south of the Princes Highway and approximately 250 m west of Toolijooa Road (refer to Figure 5 of this Staging Report). The artefact was located on the crest of a south facing, descending minor spur, in a basal slope valley context.</p> <p>Aboriginal site G2B A38 is located outside of the proposed Toolijooa Road Fill Works stage, however due to its proximity to the proposed works, appropriate site specific mitigation measures will be included in the Construction Heritage Management Sub-plan to ensure that this site is not destroyed, modified or otherwise physically affected.</p>
C17	Identified impacts to heritage (both Aboriginal and non-Aboriginal), shall be minimised to the greatest extent practicable through both detailed design and construction, particularly with regard to Aboriginal sites A 13, A 14, A 18 and TRACL, and historic sites H13, H20, H54, H62, H63 and the Southern Illawarra Coastal Plain and Hinterland Cultural Landscape. Where impacts are unavoidable, works shall be undertaken in accordance with the actions to manage heritage construction impacts required by condition B36(e) and under the guidance of an appropriately	Part	The Toolijooa Road Fill Works stage is located to the east of the general location of TRACL and is unlikely to have any direct impacts on this Aboriginal Cultural Landscape. However as the Toolijooa Road Fill Works stage is in proximity to TRACL, the works will be undertaken in accordance with the actions to manage heritage construction

	Condition	Relevant	Comments
	qualified heritage specialist.		impacts required by condition B36(e) and will be managed in accordance with the Construction Heritage Management Sub-plan. As the Toolijooa Road Fill Works stage is unlikely to have any direct impacts on this Aboriginal Cultural Landscape, works will not be required to be undertaken under the guidance of an appropriately qualified heritage specialist.
C18.	The proponent shall not destroy, modify or otherwise physically affect any heritage items outside the approved project footprint, unless otherwise agreed by the Director General in accordance with Condition C32 of this project approval.	Yes	Aboriginal site G2B A38 consists of a single surface stone artefact and an associated area of assessed archaeological potential. It is situated approximately 300 m south of the Princes Highway and approximately 250 m west of Toolijooa Road. The artefact was located on the crest of a south facing, descending minor spur, in a basal slope valley context. Non-Aboriginal heritage site G2B H30 is a relatively well preserved remnant portion of a c19 road, situated within the pasture field, along the crest and shoulder of the spurline, immediately south of the Princes Highway and to the west of the proposed Toolijooa Road Fill Works. This remnant is a portion of the original Berry Estate Road and was found to have local heritage significance. Aboriginal site G2B A38 and non-Aboriginal heritage site G2B H30, are located outside of the proposed Toolijooa Road Fill Works stage, however due to their proximity to the proposed works, appropriate site specific mitigation measures will be included in the Construction Heritage Management Sub-plan to ensure that these sites are not destroyed, modified or otherwise physically affected.
C19.	The measures to protect Aboriginal or historic heritage sites near or adjacent to the project during construction shall be detailed in the Heritage Management Sub-plan required under condition B36(e).	Yes	Aboriginal site G2B A38, non-Aboriginal heritage site G2B H30 and TRACL are located outside of the proposed Toolijooa Road Fill Works stage, however due to their proximity to the proposed works, appropriate site specific mitigation measures will be included in the Construction Heritage Management Sub-plan to ensure that these sites/cultural landscapes are not destroyed, modified or otherwise physically affected.
Sedimentation, Erosion and Water			
C20.	Soil and water management measures consistent with <i>Managing Urban Stormwater Soils and Construction Vols 1 and 2, 4th Edition</i> (Landcom, 2004) and <i>Managing Urban Stormwater Soils And Construction Vols 2A and 20 Main Road Construction</i> (Department of Environment and	Yes	Management of soil and water during construction will be in accordance with the Soil and Water Management Sub-plan, which will be prepared in accordance with the guidelines as

	Condition	Relevant	Comments
	Climate Change, 2008) shall be employed during the construction of the project for erosion and sediment control.		required by this condition.
C21.	Where available, and of appropriate chemical and biological quality, the Proponent shall use stormwater, recycled water or other water sources in preference to potable water for construction activities, including concrete mixing and dust control.	Yes	The use of alternative water sources to potable water for construction of the Toolijooa Road Fill Works stage, will be investigated and implemented, where available, and of appropriate chemical and biological quality. Requirements for investigating alternatives to the use of potable water for construction activities will be included in the Soil and Water Management Sub-plan.
C22.	All surface water and groundwater must be adequately treated prior to entering the stormwater system to protect the receiving water source quality.	Yes	Adequate treatment of surface water runoff (and groundwater although considered highly unlikely) from the Toolijooa Road Fill Works stage, prior to entering the stormwater system, will be in accordance with the Soil and Water Management Sub-plan.
Property and Landuse			
C23.	The Proponent shall construct the project in a manner that minimises impacts to private properties and other public or private structures (such as dams, fences, utilities, services etc) along the project corridor. In the event that construction of the project results in direct or indirect damage to such property or structure, the Proponent shall arrange and fund repair of the damage to a standard comparable to that in existence prior to the damage occurring, unless otherwise agreed by the relevant property or utility owner.	Yes	The Toolijooa Road Fill Works stage will be constructed in a manner that minimises impacts to private properties and other public or private structures. In the event that construction of the Toolijooa Road Fill Works stage results in direct or indirect damage to such property or structure, then the damage will be repaired in accordance with the requirements of this condition.
C24.	Access to private property shall be maintained during construction unless otherwise agreed with the property owner in advance. A landowner's access that is physically affected by the Project shall be reinstated to meet at least equivalent standard and / or relevant road safety standards, in consultation with the property owner.	No	No private property access will be impacted during the construction of the Toolijooa Fill Works stage. As such, this condition is not considered relevant Toolijooa Road Fill Works stage.
C25.	Any damage caused to property as a result of the project shall be rectified or the property owner compensated, within a reasonable timeframe, with the costs borne by the Proponent. This condition is not intended to limit any claims that the property owner may have against the Proponent.	Yes	The Toolijooa Road Fill Works stage will be constructed in a manner that minimises impacts to properties. In the event that construction of the Toolijooa Road Fill Works stage results in direct or indirect damage to such property, then the damage will be rectified or the property owner compensated in accordance with the requirements of this condition.
C26.	The Proponent shall, in consultation with relevant property owners, construct the project in a manner that minimises intrusion and disruption to agricultural operations/ activities in surrounding properties (e.g. stock access, access to farm dams etc), unless otherwise agreed by the relevant property owner.	No	The property on which the Toolijooa Road Fill Works stage is to be constructed, has been wholly acquired for the purposes of the Foxground and Berry Bypass Project and therefore agricultural operations on the property have ceased. There will be no impacts to agricultural operations/activities in surrounding properties during the construction of the Toolijooa Road Fill Works stage. As such, this condition is

	Condition	Relevant	Comments
			not considered relevant Toolijooa Road Fill Works stage.
Traffic Impacts			
C27.	<p>The roads likely to be used by the project's heavy construction vehicles shall be identified in the Construction Traffic Management Sub-plan required under condition B36(a).</p> <p>a) Road dilapidation reports shall be prepared for local roads likely to be used by the project's construction traffic, and a copy of the report(s) shall be provided to the relevant council, prior to use by the project's heavy construction vehicles. Any damage resulting from the use of the identified local roads by the project's heavy construction vehicles, aside from that resulting from normal wear and tear, shall be repaired at the cost of the Proponent, unless otherwise agreed by the relevant council.</p> <p>b) A road dilapidation report shall be prepared for the 'Sandtrack' and a copy of the report shall be provided to the relevant council, prior to commencement of construction. Should monitoring in accordance with Condition B36(a) reveal higher than anticipated volumes of traffic (as defined in the document referred to in Condition A 1 (b)) resulting in a higher rate of deterioration in the condition of local road infrastructure, consultation with the relevant Council shall be undertaken to determine mitigation measures in accordance with Condition B36(a). A report shall be prepared and submitted to the Director General at 12 months and 24 months after commencement of construction, and prior to operation, unless otherwise agreed by the Director General.</p>	Part	<p>Roads likely to be used by heavy construction vehicles during the construction of the Toolijooa Road Fill Works stage, will be identified in the Construction Traffic Management Sub-plan.</p> <p>Requirements of this condition relating to the preparation of road dilapidation reports and the rectification of damage to local roads used by construction traffic associated with the Toolijooa Road Fill Works stage, will be complied with where relevant.</p> <p>It is noted that condition C27(b) refers to the preparation of a road dilapidation report for 'Sandtrack' which will not be used for the construction of the Toolijooa Road Fill Works stage and therefore this component of the condition is not considered relevant.</p>
Waste Management			
C28.	The Proponent shall not cause, permit or allow waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the <i>Protection of the Environment Operations Act 1997</i> , if such a licence is required in relation to that waste.	Yes	Requirements of this condition will be incorporated into the Construction Environmental Management Plan.
C29.	The Proponent shall maximise the reuse and/or recycling of waste materials generated on site as far as practicable, to minimise the need for treatment or disposal of those materials off site.	Yes	Wherever possible waste materials will be reused and recycled during the construction of the Toolijooa Road Fill Works stage. Requirements for the reuse and recycling of waste materials will be included in the Construction Environmental Management Plan.
C30.	The Proponent shall ensure that liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with <i>Waste Classification Guidelines</i> (Department of Environment and Climate Change, 2008) and where removed from the site is directed to a waste management facility lawfully permitted to accept the materials.	Yes	<p>Liquid and/or non-liquid waste generated during the construction of the Toolijooa Road Fill Works stage will be assessed and classified in accordance with the guidelines identified in this condition and where removed from the site, will be directed to a waste management facility lawfully permitted to accept the materials.</p> <p>Requirements for the appropriate classification and disposal of waste will be included in the Construction Environmental Management Plan.</p>

	Condition	Relevant	Comments
Hazards and Risks			
C31.	<p>The Proponent shall store and handle dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:</p> <p>(a) relevant Australian Standards;</p> <p>(b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and</p> <p>(c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, Technical Bulletin (Environment Protection Authority, 1997).</p> <p>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.</p>	Yes	<p>During the construction of the Toolijooa Road Fill Works, no dangerous goods will be stored on site.</p> <p>There is the potential for asbestos to be present in the existing buildings located on the Toolijooa Road Fill Works site. A suitably qualified and licenced asbestos handling specialist will be appointed prior to the demolition of the buildings, to undertake a survey of all buildings on site and to remove and dispose of any asbestos containing materials at an appropriately licenced waste disposal facility.</p> <p>Requirements for the identification, handling, removal and disposal of asbestos and/or other hazardous materials located within the existing buildings and structures on site, will be included in the Asbestos Handling and Disposal Procedure contained within the Emergency Preparedness and Response Plan.</p> <p>It is also likely that construction machinery will be refuelled on site. Requirements for the refuelling of machinery will be included in the Soil and Water Quality Management Sub-Plan.</p>
Ancillary Facilities			
C32.	<p>Unless otherwise approved by the Director General in accordance with this condition, the sites for ancillary facilities (except stockpiles) associated with the construction of the project shall:</p> <p>(a) be located more than 50 metres from a waterway;</p> <p>(b) have ready access to the road network or direct access to the construction corridor;</p> <p>(c) not require native vegetation clearing beyond that already required by the project;</p> <p>(d) be sited on relatively level land;</p> <p>(e) be separated from the nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant);</p> <p>(f) not unreasonably affect the land use of adjacent properties;</p> <p>(g) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented;</p> <p>(h) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours; and</p> <p>(i) not impact on heritage items beyond those already impacted by project (including identified Aboriginal cultural value and archaeological sensitivity).</p>	No	<p>No ancillary facilities are required within the Toolijooa Road Fill Works stage.</p> <p>As such this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>If any ancillary facilities are required during the construction of the Toolijooa Road Fill Works stage, they will be established in accordance with the requirements of this condition and requirements for their establishment will be included in the Construction Environmental Management Plan.</p>

	Condition	Relevant	Comments
C33.	<p>Ancillary sites that do not meet the criteria set out under condition C32 of this approval shall be approved by the Director General prior to establishment. In obtaining this approval, the Proponent shall assess the ancillary facility against the criteria set out under condition C32 of this approval to demonstrate how the potential environmental impacts can be mitigated and managed to acceptable standards. Such assessment(s) can be submitted separately or as part of the Construction Environmental Management Plan required under B35 of this approval. The assessment shall include, but not necessarily be limited to:</p> <p>(a) a description of the ancillary facility, its components and the surrounding environment;</p> <p>(b) details on the activities to be carried out at the facility, including the hours of use and the storage of dangerous and hazardous goods;</p> <p>(c) an assessment of the environmental impacts on the site and the surrounding environment, including, but not limited to noise, vibration, air quality, traffic access, flora and fauna, heritage and light spill;</p> <p>(d) details on the mitigation, monitoring and management procedures specific to the ancillary facility that would be implemented to minimise the environmental impacts or, where this is not possible, feasible and reasonable measures to offset these impacts and an assessment of the adequacy of the mitigation or offsetting measures. This shall include consideration of restrictions on the hours of use or exclusion of certain activities;</p> <p>(e) details on the timing for the completion of activities at the ancillary facility and how the site will be decommissioned (including any necessary rehabilitation); and</p> <p>(f) demonstrated overall consistency with the approved project.</p> <p>The Proponent shall demonstrate to the satisfaction of the Director-General that there will be no significant adverse impact from that facility's construction or operation.</p>	No	<p>No ancillary facilities and/or sites are required within the Toolijooa Road Fill Works stage.</p> <p>As such this condition is not considered relevant to the Toolijooa Road Fill Works stage.</p> <p>If it was found during the construction of the Toolijooa Road Fill Works stage that ancillary sites are required to support the construction of this stage, that do not meet the criteria set out under condition C32, then the requirements of this condition will be complied with prior to the establishment of the ancillary facilities.</p> <p>Requirements for the establishment of ancillary facilities on sites that do not meet the criteria set out under condition C32, will be included in the Construction Environmental Management Plan if ancillary facilities are found to be required during the construction of the Toolijooa Road Fill Works stage.</p>
C34.	<p>The Director General's approval is not required for minor ancillary facilities (e.g. lunch sheds, office sheds, and portable toilet facilities, etc.) that do not comply with the criteria set out in condition C32 of this approval and which:</p> <p>(a) are located within an active construction zone within the approved project footprint; and</p> <p>(b) have been assessed by the Environmental Representative to have:</p> <p>(i) minimal amenity impacts to surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and</p> <p>(ii) minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the project; and</p> <p>(c) have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in a Construction Environment Management Plan for the project.</p>	Yes	<p>If it was identified that minor ancillary facilities as defined in this condition, that do not comply with the criteria set out in condition C32, are required to support the construction of the Toolijooa Road Fill Works stage, they will be established once the requirements of this condition have been met.</p> <p>Requirements for the establishment of minor ancillary facilities that do not meet the criteria set out under condition C32, will be included in the Construction Environmental Management Plan.</p>

PART D – PRIOR TO OPERATIONS

	Condition	Relevant	Comments
Operational Environment Management System			
D1.	Prior to the commencement of operation, the Proponent shall incorporate the project into its existing environmental management systems.	No	The proposed Toolijooa Road Fill Works is the first stage of construction of a fill embankment that will support the southern realignment of the Princes Highway at the extreme eastern end of the Project. Operation of this section of the realigned Princes Highway will only occur after the completion of subsequent stages of the Project. The contractor selected to construct the following stage(s) of the Project, will build on the engineered fill established during the Toolijooa Road Fill Works stage, to bring the new road platform to its ultimate design height. Requirements of this condition will be addressed by RMS, prior to the commencement of operation of the Project.

PART E - DURING OPERATIONS

	Condition	Relevant	Comments
Operational Noise			
E1.	<p>Within 12 months of the commencement of operation of the project, or as otherwise agreed by the Director General, the Proponent shall undertake operational noise monitoring to compare actual noise performance of the project against noise performance predicted in the review of noise mitigation measures required by condition C14, and prepare an Operational Noise 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 C14 and documents specified under condition A1 of this approval;</p> <p>(b) a review of the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy (EPA, 2011);</p> <p>(c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which project noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers;</p> <p>(d) details of any complaints and enquiries received in relation to operational noise generated by the project between the date of commencement of operation and the date the report was prepared;</p> <p>(e) any required recalibrations of the noise model taking into consideration factors such as 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 all 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 C14, that would be implemented with the objective of meeting the criteria outlined in the NSSt4/Road Noise Policy (EPA, 2011), when these measures would be implemented and how their effectiveness would be measured and reported to the Director General and the EPA.</p> <p>The Proponent shall provide the Director General 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 Director General.</p>	No	<p>The proposed Toolijooa Road Fill Works is the first stage of construction of a fill embankment that will support the southern realignment of the Princes Highway at the extreme eastern end of the Project. Operation of this section of the realigned Princes Highway will only occur after the completion of subsequent stages of the Project. The contractor selected to construct the following stage(s) of the Project, will build on the engineered fill established during the Toolijooa Road Fill Works stage, to bring the new road platform to its ultimate design height. Requirements of this condition will be addressed by RMS, within 12 months of the commencement of operation of the Project.</p>

APPENDIX B

Biodiversity Survey Report

Mr Neville Hattingh
Director
Element Environment
PO Box 1563
Warriwood NSW 2102

17 September 2013

Dear Neville,

Biodiversity Survey: Toolijooa Road Fill Works stage of the Foxground and Berry Bypass Project.

Introduction

A biodiversity survey was undertaken of the Toolijooa Road Fill Works site by LesryK Environmental Consultants on 11 September 2013.

The survey covered the Toolijooa Road Fill Works stage of the Foxground and Berry Bypass Project (refer to Area 1 in Attachment 1). The Toolijooa Road Fill Works site is located to the south west of the Toolijooa Road - Princes Highway intersection, within a section of the Foxground and Berry Bypass project.

The objectives of the biodiversity survey were:

- to confirm the findings of the Foxground and Berry Bypass Environmental Assessment (AECOM, 2012);
- to identify any native vegetation communities, endangered ecological communities or threatened flora and fauna species on the Toolijooa Road Fill Works site that may not have been identified as part of the environmental assessment process;
- to determine the relevance of the Ministers Conditions of Approval B7, B8 and B9 to the Toolijooa Road Fill Works stage. Conditions B7, B8 and B9 require the development of a Biodiversity Offset Strategy, Biodiversity Offset Package and an Ecological Monitoring Program respectively.

Survey Methodology and Findings

To achieve these objectives, foot traverses were conducted across the proposed Toolijooa Road Fill Works site. The investigation commenced at 9.00am, the weather at that time being strong winds, 40% cloud cover and temperatures in the order of 15 degrees.

Flora

The proposed Toolijooa Road Fill Works site is comprised of two residential dwellings and up to five sheds of varying sizes surrounded by landscaped driveways, garden beds, planted wind breaks, vegetable gardens, fruit trees and grazing paddocks (refer to Attachment 1 and 2).

The study area is dominated by non-native pasture grasses and horticulturally introduced exotic plants. No native vegetation communities were identified within the site.

The following native species were recorded within the proposed Toolijooa Road Fill Works stage:

- Tuckeroo (*Cupaniopsis anacardioides*) (x 9 individuals present);
- Deciduous Fig (*Ficus superba* var. *henneana*) (x 3 individuals present);
- Sweet Pittosporum (*Pittosporum undulatum*) (x 4 individuals present);
- Sydney Golden Wattle (*Acacia longifolia* var. *longifolia*) (x 1 individual present);
- Blackbutt (*Eucalyptus pilularis*) (x 1 individual present);
- Swamp Mahognay (*Eucalyptus robusta*) (x 1 individual present);
- Eucalypt (*Eucalyptus* sp.) (x 1 individual present);
- Bird's Nest Fern (*Asplenium australasicum*) (x 1 individual present);
- Mat Rush (*Lomandra longifolia*) (x 1 individual present); and
- Brush Box (*Lophostemon confertus*) (x 2 individuals present).

It is noted that Brush Box is not an endemic species, this plant originating in north-east NSW and coastal Queensland. It is a native species that has been widely planted outside of its natural distribution range.

Whilst the remaining species are native, given their locations within the grounds of the surveyed properties, with the exception of two of the figs, all are considered to have been planted (for example, the six Tuckeroos occur as a single line of plants adjacent to a fence, these trees obviously being planted as a part of a wind break – Attachment 2, Plate 1).

The two figs are considered to be endemic native trees. The locations of the two figs are identified on Attachment 1.

Given the nature of figs, and the relatively small size of the two plants present, it may be possible to use an excavator and collect each individual. These plants could be relocated locally and incorporated into the Foxground and Berry Bypass project landscape works.

Fauna habitat

During the survey, the presence of potential habitat for threatened fauna species was investigated. The old, vacated buildings on the property, which are to be demolished during the construction of the Toolijooa Road Fill Works stage, were inspected for the presence of roosting bats / microbats or for indicators that bats / microbats inhabit these built structures. No bats / microbats or their presence was detected during the survey.

No other potential habitat was identified on site for threatened fauna and/or migratory species identified in the Terrestrial Fauna and Flora Assessment for the Foxground and Berry Bypass Project (Biosis, 2012).

Conclusion

The study determined that:

- Only two endemic native plants are present within the Toolijooa Road Fill Works stage, these both being figs;
- The remainder of the native plants recorded are all planted, either within garden beds, as isolated individuals or as part of windbreaks;
- No native vegetation communities are present within the Toolijooa Road Fill Works stage;
- No threatened flora or fauna or EECs listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* or NSW *Threatened Species Conservation Act 1995* were recorded, or considered to occur, within the Toolijooa Road Fill Works site. As such, Ministers Conditions of Approval B7, B8 and B9 are not considered relevant to the Toolijooa Road Fill Works.

If you require any further information on this survey report of the proposed Toolijooa Road Fill Works stage, please contact the under signed on either (02) 9523 2016 or (0408) 25 8129.

Yours sincerely,



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LOCATION OF NATIVE SPECIES (BOTH PLANTED AND ENDEMIC) RECORDED

Toolijooa Road Fill Works Project

ATTACHMENT 1



DISCLAIMER: Accuracy of this information is not guaranteed. It is provided for information only and should not be used for any purpose other than that for which it was intended. The user of this information is advised to verify the accuracy of the information for their own purposes.

Attachment 2: Photographic record of area investigated.



Plate 1: Line of planted Tuckeroo's.



Plate 2: Landscaped garden bed composed of both native and exotic species.



Plate 3: Planted Sweet Pittosporum.



Plate 4: Planted Tuckeroo near shed and vegetable patch. Exotic fruit trees also present.