



# APPENDIX A7

## Other relevant management measures

Whytes Lane to Pimlico Road Early Works – Wave 2

Woolgoolga to Ballina Pacific Highway Upgrade

OCTOBER 2015



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## Glossary / Abbreviations

CEMP	Construction Environmental Management Plan
CoA	Condition of approval
DP&I	Former NSW Department of Planning and Infrastructure (now DP&E)
DP&E	NSW Department of Planning and Environment
EEC	Endangered Ecological Community
ENM	Excavated Natural Material
EIS	Woolgoolga to Ballina Pacific Highway Upgrade Environmental Impact Statement (December, 2012)
EPA	NSW Environment Protection Authority
EP&A Act	<i>NSW Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Commonwealth Environmental Protection and Biodiversity Conservation Act 1999</i>
EPL	NSW Environment Protection Licence under the Protection of the Environment Operations Act 1997.
ESCP	Erosion and Sediment Control Plan
EWMS	Environmental Work Method Statements
FM Act	<i>NSW Fisheries Management Act 1994</i>
CHMP	Construction Heritage Management Plan
Minister, the	NSW Minister for Planning
NOW	NSW Office of Water
NPW Act	<i>NSW National Parks and Wildlife Act 1974</i>
OEH	NSW Office of Environment and Heritage
PoEO Act	<i>NSW Protection of the Environment Operations Act 1997</i>
Project, the	Whytes Lane to Pimlico Road Early Works – Wave 2
Secretary	Secretary of the Department of Planning and Environment
SEE Civil	SEE Civil Pty Ltd
SPIR	Woolgoolga to Ballina Pacific Highway Upgrade Submissions Preferred Infrastructure Report (November, 2013)
RMS, Roads and Maritime Services	NSW Roads and Maritime
VENM	Virgin Excavated Natural Material
WARR Act	<i>Waste Avoidance and Resource Recovery Act 2001</i>
CWEMP	Construction Waste and Energy Management Plan
WRAPP	Waste Reduction and Purchasing Policy

## 1 Other environmental mitigation and management measures

A range of environmental requirements are identified in the various environmental documents, including the EIS, Submissions / Preferred Infrastructure Report, supplementary assessments, Conditions of Approval and RMS documents, and from recent experience on similar road projects.

Relevant management measures and requirements for the project are included within the plans attached to this CEMP (Appendix B):

- Appendix B1 - Construction traffic and access management plan
- Appendix B2 - Construction flora and fauna management plan
- Appendix B3 - Construction noise and vibration management plan
- Appendix B4 - Construction soil and water quality management plan
- Appendix B5 - Construction heritage management plan
- Appendix B6 - Construction air quality management plan
- Appendix B7 - Construction waste and energy management plan
- Appendix B8 – Ancillary facilities management plan
- Appendix B9 – Borrow sites management plan – Note: The Appendix is not applicable to the Wave 2 project and therefore has been intentionally omitted.
- Appendix B10 – Construction contaminated land management plan
- Appendix B11 – Construction acid sulphate materials management plan

Other management measures to be addressed in construction (Visual, urban design and landscape, Traffic and transport, Land use and property and Social and economic) relevant to the Wave 2 Project which have not been captured by specific plans are described in this document, see Tables 1.1 to 1.4.

**Table 1-1 Visual, urban design and landscape management and mitigation measures**

ID	Measure / Requirement	When to implement	Responsibility	Reference
<b>VISUAL, URBAN DESIGN AND LANDSCAPE</b>				
UD1	<p>The built form of the project, including consideration of the height, bulk, scale, materials and finishes for:</p> <ul style="list-style-type: none"> <li>• Bridges.</li> <li>• Retaining walls.</li> <li>• Cuttings and embankments.</li> <li>• Road barriers.</li> <li>• Signage.</li> <li>• Fences.</li> <li>• Clear zones.</li> <li>• Topsoil management.</li> <li>• Water quality control ponds.</li> <li>• Fauna crossing.</li> <li>• Place marking and cultural plantings.</li> </ul> <p>The project will be designed in accordance with the design principles identified in Working Paper – Urban Design, Landscape Character and Visual Impact, and relevant Roads and Maritime guidelines.</p>	Pre-construction	Project Engineer / Site Engineer	Submissions / PIR (UD4)
UD2	Disturbed areas will be progressively revegetated throughout the construction period.	Construction	Construction Manager / Environment Manager	Submissions / PIR (UD7)
UD3	<p>Typical landscape treatments for ancillary facilities in agricultural areas will include:</p> <ul style="list-style-type: none"> <li>• Considering returning remnant agricultural land to agricultural uses.</li> </ul>	Construction	Construction Manager / Environment Manager	Submissions / PIR (UD9)

ID	Measure / Requirement	When to implement	Responsibility	Reference
	<ul style="list-style-type: none"> <li>· Providing screen planting.</li> <li>· Reinstating riparian vegetation through ancillary facilities, where practicable, in the open landscape.</li> <li>· Considering the visual landscape at each ancillary facility and considering restoration of important forest vegetation to prominent ridge lines or other landscape elements where feasible and reasonable.</li> <li>· Re-grading disturbed areas to achieve a sustainable and functional landform.</li> <li>· Stabilising all surfaces in accordance with good engineering and environmental practice.</li> </ul>			
UD4	Landscape and rehabilitation works will be monitored and remedial measures implemented where required until vegetation has stabilised.	Operation	Project Engineer / Site Engineer	Submissions / PIR (UD13)

**Table 1-2 Traffic and transport management and mitigation measures**

ID	Measure / Requirement	When to implement	Responsibility	Reference
<b>TRAFFIC AND TRANSPORT</b>				
T&T1	<p>Construction traffic management plans will be prepared and implemented for work sites. They will include:</p> <ul style="list-style-type: none"> <li>• Identification of all public roads to be used by construction traffic.</li> <li>• Management methods to direct construction traffic to use identified roads.</li> <li>• Identification of all public roads that may be partially or completely closed during construction, and the expected timing and duration of closures.</li> <li>• Details on likely impacts on existing traffic (including pedestrians, vehicles, cyclists and disabled persons).</li> <li>• Temporary traffic arrangement measures, including property access.</li> <li>• Details on access to construction sites, including entry and exit locations, and measures to prevent construction vehicles queuing on public roads.</li> <li>• A response plan for any incident involving construction traffic.</li> <li>• Mechanisms for monitoring, reviewing and amending the success of the plans.</li> </ul> <p>The traffic management plans be prepared in consultation with councils.</p>	Pre-construction and construction	Project Engineer / Site Engineer	Submissions / PIR (T&T1)
T&T2	<p>Traffic control schemes will be inspected as follows:</p> <ul style="list-style-type: none"> <li>• Pre-start and pre-closedown inspections of short-term traffic controls.</li> <li>• Weekly inspections of long-term traffic controls.</li> <li>• Night-time inspections of long-term traffic controls.</li> </ul>	Construction	Construction Manager / Environment Manager	Submissions / PIR (T&T3)
T&T3	<p>Vehicle movement plans and haulage route plans will be prepared. Drivers will be briefed on these vehicle movement plans during project induction.</p> <p>Deliveries be planned to occur outside peak traffic periods, where possible.</p> <p>To minimise queuing of construction vehicles on the highway, site personnel use two-way radios to call up haulage trucks from layover areas on a 'just in time' basis.</p>	Construction	Construction Manager / Environment Manager	Submissions / PIR (T&T4)



ID	Measure / Requirement	When to implement	Responsibility	Reference
T&T4	Applications for Road Occupancy licences will be submitted to Roads and Maritime Services and the relevant council at least 10 working days prior to proposed occupancy.	Pre-construction and construction	Project Engineer / Site Engineer	Submissions / PIR (T&T5)
T&T5	Pre-construction road dilapidation reports will be prepared for all roads likely to be used by construction traffic. Post-construction road dilapidation reports will be prepared following the completion of construction for all roads assessed prior to construction. Dilapidation resulting from construction activity will be repaired. Copies of road dilapidation reports will be sent to the relevant roads authority.	Pre-construction and construction	Project Engineer / Site Engineer	Submissions / PIR (T&T6)
T&T6	Access be maintained to properties during construction including, where necessary and feasible, temporary alternative access unless otherwise agreed with property owners. Where any legal access is permanently affected, alternative access to an equivalent standard to and from a public road will be provided where a property has no other legal means of access and where such alternative access is feasible and practical. Where alternative access arrangements are not feasible or practical and a property is left with no access to a public road, negotiations will be undertaken with the relevant property owner for acquisition of the property in accordance with the provisions of the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> .	Construction	Construction Manager / Environment Manager	Submissions / PIR (T&T7)
T&T7	Where changes in access affect bus stop locations, temporary alternatives will be provided in conjunction with bus operators and affected schools to maintain access during construction.	Construction	Construction Manager / Environment Manager	Submissions / PIR (T&T8)



**Table 1-3 Land use and property management and mitigation measures**

ID	Measure / Requirement	When to implement	Responsibility	Reference
<b>LAND USE AND PROPERTY</b>				
LU1	Ongoing communication and consultation will be undertaken with directly affected property owners about the property acquisition process. This includes the provision of information on the timing of acquisitions, and the process for property acquisitions under the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> and Roads and Maritime' Land Acquisition Policy (RTA, 1999).	Pre-construction	Project Engineer / Site Engineer	Submissions / PIR (LU1)
LU2	Ongoing consultation will be undertaken with directly affected property owners during the detailed design phase to identify measures to mitigate potential impacts on the use and viability of land. This will relate to matters such as adjustments to fencing, access, farm infrastructure and relocation of impacted ancillary structures, as required.	Pre-construction	Project Engineer / Site Engineer	Submissions / PIR (LU2)
LU3	Property adjustments will be completed for fencing, access tracks, cattle underpasses and other farm infrastructure in consultation with the impacted land owner.	Pre-construction	Project Engineer / Site Engineer	Submissions / PIR (LU3)
LU4	The Fencing Strategy will be further developed during detailed design, in consultation with relevant stakeholders. This will build upon the principles of the strategy described in Chapter 3 of the Submissions and Preferred Infrastructure Report (Roads and Maritime, 2013).	Pre-construction	Project Engineer / Site Engineer	Submissions / PIR (LU4)
LU5	Sterilisation and severance of land uses and lots will be minimised by amalgamating severed parcels of land together, where possible, with provision of road access, in accordance with the project's remnant land use strategy.	Pre-construction	Construction Manager / Environment Manager	Submissions / PIR (LU5)
LU6	A remnant land strategy to minimise land use severance and sterilisation, and a mitigation strategy for final land uses will be developed in consultation with cane industry stakeholders and Ballina Council.	Pre-construction	Project Engineer / Site Engineer	Submissions / PIR (LU7)
LU7	Access to properties near construction works will be maintained, including where required for the movement of farm equipment and livestock between properties, unless otherwise agreed with landowners.	Construction	Construction Manager / Environment Manager	Submissions / PIR (LU9)
LU8	Where temporary changes to property access are required during construction, alternative access will be determined in consultation with	Construction	Construction Manager / Environment	Submissions / PIR (LU10)

ID	Measure / Requirement	When to implement	Responsibility	Reference
	affected property owners and tenants.		Manager	
LU9	There will be ongoing communication with local communities about changes to the local road network, including likely delays and disruptions and alternative accesses if required.	Construction	Construction Manager / Environment Manager	Submissions (LU11) / PIR
<b>Construction impacts to primary industry, including forestry, an agriculture uses</b>				
LU10	Where possible, onsite reuse of any spoil is the preferred solution for managing the impacts, although alternative options for the reuse or disposal of spoil will be identified in the surplus material management plan.	Construction	Construction Manager / Environment Manager	Submissions (LU12) / PIR
LU11	Environmental management measures will be implemented to minimise potential for impacts on adjoining agricultural uses, including from changes in water quality and spread of weeds and pests.	Construction	Construction Manager / Environment Manager	Submissions (LU15) / PIR
LU12	Where pesticides are required during construction, implement appropriate environmental management measures to avoid potential impacts on adjoining agricultural properties.	Construction	Construction Manager / Environment Manager	Submissions (LU16) / PIR
LU13	There will be ongoing consultation and communication with managers of agricultural properties to identify any potential impacts on nearby construction workers from farm operations (ie use of pesticides on agricultural properties).	Construction	Construction Manager / Environment Manager	Submissions (LU17) / PIR
<b>Utilities and infrastructure</b>				
LU14	Relocation or adjustment of infrastructure will be planned to minimise disruptions and impacts on surrounding properties.	Construction	Construction Manager / Environment Manager	Submissions (LU19) / PIR
LU15	Communication will be undertaken with nearby communities about the timing and duration of potential disruptions to infrastructure.	Construction	Construction Manager / Environment Manager	Submissions (LU20) / PIR
<b>Property management</b>				
LU16	Roads and Maritime' land that is required for the project will be appropriately maintained. This will be undertaken by regional Roads and Maritime officers or a designated local authority. Roads and Maritime manage the leasing and maintenance of property identified as suitable for tenants.	Operation	Construction Manager / Environment Manager	Submissions (LU21) / PIR

ID	Measure / Requirement	When to implement	Responsibility	Reference
<b>Operational impacts to primary industries</b>				
LU17	Ongoing consultation will be undertaken with owners of agricultural properties affected by the project – through acquisition, changes to local access or fragmentation of properties – about potential impacts on farming operations and potential measures to manage or mitigate identified impacts.	Operation	Construction Manager / Environment Manager	Submissions (LU23) / PIR
LU18	The Cane Farm Strategy will be further developed during detailed design, in consultation with relevant stakeholders. This will build upon the principles of the strategy described in Chapter 3 of this Submissions and Preferred Infrastructure Report.	Pre-construction	Project Engineer / Site Engineer	Submissions (LU26) / PIR
<b>Property access</b>				
LU19	As far as possible, property accesses will be reinstated or new access provided, in consultation with impacted landowners.	Operation	Construction Manager / Environment Manager	Submissions (LU27) / PIR
<b>Utilities and infrastructure</b>				
LU20	Consultation will be undertaken with service and utility providers to verify locations, impacts and any relocation or construction protection work required.	Operation	Construction Manager / Environment Manager	Submissions (LU31) / PIR

**Table 1-4 Social and economic management and mitigation measures**

ID	Measure / Requirement	When to implement	Responsibility	Reference
<b>SOCIAL AND ECONOMIC</b>				
SE1	Consultation will be undertaken with residents and local communities closest to construction works about construction activities, including timing, duration and likely impacts.	Pre-construction construction	and Construction Manager / Environment Manager	Submissions / PIR (SE3)
SE2	Roads and Maritime will work with Councils affected by the upgrade, during detailed design, to discuss the classification of the existing Pacific Highway and, where appropriate, the required transfer process of state road assets to Council.	Pre-construction	Construction Manager / Environment Manager	Submissions / PIR (SE6)
SE3	Maintain access to properties near to the project during construction, including, where required, for the movement of farm equipment and livestock between properties, and for access to other affected agribusinesses.	Construction	Construction Manager / Environment Manager	Submissions / PIR (SE7)
SE4	Where temporary changes to property access are required during construction, alternative access will be determined in consultation with affected property owners and tenants.	Construction	Construction Manager / Environment Manager	Submissions / PIR (SE8)
SE5	Undertake early and ongoing communication and consultation with emergency services to allow planning for potential changes to response patterns and input into the design development.	Operation	Construction Manager / Environment Manager	Submissions / PIR (SE10)
SE6	The access arrangements for local traffic at Whytes Lane and the tie into the Ballina bypass upgrade will be reviewed together with any potential boundary refinements at the detailed design stage.	Pre-construction	Construction Manager / Environment Manager	Submissions / PIR (SE12)

## 2 Compliance management

### 2.1 Roles and responsibilities

The SEE Civil Project Team's organisational structure and overall roles and responsibilities are outlined in *Section 4.2 of the CEMP*. Specific responsibilities for the implementation of environmental controls are detailed in *Chapter 1 of this Plan*.

### 2.2 Training

Details regarding staff induction and training are outlined in Chapter 5 of the CEMP.

### 2.3 Monitoring and inspection

Regular monitoring and inspections will be undertaken during construction.

Additional requirements and responsibilities in relation to inspections, in addition to those in Table 1-1, are documented in *Section 8.1 and 8.2 of the CEMP*.

### 2.4 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental mitigation and management measures, compliance with this sub plan, CoA and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in *Section 8.3 of the CEMP*.

### 2.5 Reporting

Reporting requirements and responsibilities are documented in the *Sections 8.3, 8.4 and 8.5 of the CEMP*.

