

Construction environmental management plan

Nambucca Heads to Urunga

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Glossary / Abbreviations

Abbreviation	Meaning
ASS	Acid sulfate soils
CEMP	Construction environmental management plan
Compliance audit	Verification of how implementation is proceeding with respect to a construction environmental management plan (CEMP) (which incorporates the relevant approval conditions).
CoA	Conditions of approval
Director-General	Director-General of the NSW Department of Planning and Environment (or delegate)
DP&E	Department of Planning and Environment
EA	Environmental Assessment
Ecological sustainable development	Using, conserving and enhancing the community's resources so that the ecological processes on which life depends are maintained and the total quality of life now and in the future, can be increased (Council of Australian Governments, 1992).
EPA	NSW Environment Protection Authority
ERG	Environmental Review Group – comprising representatives of Roads and Maritime, Environmental Representative, Project delivery team, regulatory authorities (EPA, DPI – Fisheries Conservation and Aquaculture, NOW) and councils (Nambucca Shire Council, Bellingen Shire Council).
EMS	Environmental management system
Environmental aspect	Defined by AS/NZS ISO 14001:2004 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Defined by AS/NZS ISO 14001:2004 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental incident	An unexpected event that has, or has the potential to, cause harm to the environment and requires some action to minimise the impact or restore the environment.
Environmental objective	Defined by AS/NZS ISO 14001:2004 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental policy	Statement by an organisation of its intention and principles for environmental performance.
Environmental target	Defined by AS/NZS ISO 14001:2004 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

Abbreviation	Meaning
Environmental Representative	A suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance.
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPL	Environment Protection Licence
ESCP	Erosion and Sediment Control Plan
Minister, the	Minister for Planning and Environment
NH2U	Nambucca Heads to Urunga (Stage 1 of the WC2U Project)
Non-compliance	Failure to comply with the requirements of the Project approval or any applicable license, permit or legal requirements.
Non-conformance	Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation.
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
Project, the	The Warrell Creek to Urunga Project
PESCP	Progressive Erosion and Sediment Control Plan
SoC	Statement of commitments
WC2U	Warrell Creek to Urunga

1 Introduction

1.1 Background

On behalf of the Australian and NSW governments, Roads and Maritime Services (Roads and Maritime) is progressively upgrading the Pacific Highway to dual carriageway between the Hunter and NSW/Queensland border.

In December 2006 the Warrell Creek to Urunga Project was declared by the then 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 for 60 days between January and March 2010. Following consideration of submissions made during the exhibition period, the submissions report, including changes to the proposal following consideration of submissions, was submitted to the then Minister for Planning seeking approval. Approval of the Project was granted on 19 July 2011.

The Warrell Creek to Urunga Pacific Highway upgrade Project comprises approximately 42 kilometres of dual carriageway road that would bypass the towns of Warrell Creek, Macksville, Newee Creek and Bellwood. As described in the Warrell Creek to Urunga Pacific Highway Upgrade Environmental Assessment, the Project is being delivered in stages with Stage 1 consisting of the 21 kilometre Nambucca Heads to Urunga section and Stage 2 consisting of the remaining 21 kilometres of dual carriageway between Warrell Creek and Nambucca Heads.

(It should be noted that since EA development, the reference to project chainages (i.e. the measurement of a point of the project from a defined starting point) has been revised. Chainages for the WC2U project in the EA started at 0m to approximately 42000m, i.e. the length of the Project. For any chainages referenced in EA, a figure of 41870m must be added to any chainages referred to in future environmental, design or construction documentation. The NH2U Project therefore runs from approximately chainage 61250 to chainage 83400).

Lend Lease has been awarded the contract to design and construct Stage 1 of the Project between Nambucca Heads and Urunga.

Further detail of the proposed staging of the Project is provided in the Staging Report (Roads and Maritime May 2013) which has been prepared in accordance with the requirements of Condition of Approval (CoA A5).

1.2 Purpose of this CEMP

This Construction Environmental Management Plan (CEMP) and sub plans have been prepared to comply with the Minister for Planning and Environment's Conditions of Approval for the Warrell Creek to Urunga Project. A detailed description of the Project is provided in Chapter 2.

This CEMP has been developed to be specific to Stage 1 of the Project, between Nambucca Heads and Urunga, to be delivered by Lend Lease.

The CEMP has been prepared in accordance with Roads and Maritime QA Specification G36 and the Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004). It is also consistent with AS/NZS ISO 14001.

The purpose of this CEMP is to provide a structured approach to the management of environmental issues during construction of the NH2U Project. Implementing this CEMP effectively will ensure that the Project team meets regulatory and policy requirements in a systematic manner and continually improves its performance.

The CEMP ensures the requirements of Roads and Maritime, the Project EA (and Statement of Commitments), Lend Lease EMS and the Minister’s Conditions of Approval (see Appendix A1 and Compliance Tracking Program) are met. This CEMP forms part of the Lend Lease Management System, an integrated quality, safety and environmental management system, which integrates all Management Plans created and implemented for this Project.

In particular, this CEMP:

- Describes the Project in detail including activities to be undertaken and relative timing.
- Provides specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts.
- Provides specific mechanisms for compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation.
- Describes the environmental management related roles and responsibilities of personnel.
- States objectives and targets for issues that are important to the environmental performance of the Project.
- Outlines a monitoring regime to check the adequacy of controls as they are implemented during construction.

This CEMP meets the requirements of CoA B30. The requirements of this condition and where they are met in this CEMP are shown in Table 1-1.

Table 1-1 CoA requirements for CEMP

CoA no.	Requirement	Reference
B30	Prior to the commencement of construction, the Proponent shall prepare and (following approval) implement a Construction Environmental Management Plan for the Project. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the EPA, DPI and relevant Council and include, but not necessarily be limited to:	This plan
B30 (a)	A description of all relevant activities to be undertaken during construction of the Project or stages of construction, as relevant.	Chapter 2
B30 (b)	Statutory and other obligations that the Proponent is required to fulfil during construction including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies. Evidence of consultation with relevant public authorities, shall be included identifying how issues raised by these public authorities have been addressed in the plan.	Compliance Tracking Program, Appendix A1, Section 1.2, Section 1.3
B30 (c)	A description of the roles and responsibilities for all relevant employees involved in the construction of the Project including relevant training and induction provisions for ensuring that all employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of approval.	Section 4.2, Section 4.3, Chapter 5

CoA no.	Requirement	Reference
B30 (d)	Identification of ancillary facility site locations, including an assessment against the location criteria outlined in condition C27.	Section 3.7, Appendix A4
B30 (e)	An environmental risk analysis to identify the key environmental performance issues associated with the construction phase and details of how environmental performance would be monitored and managed to meet acceptable outcomes including what actions will be taken to address identified potential adverse environmental impacts (including any impacts arising from concurrent construction works with adjacent Pacific Highway Upgrade Projects, as relevant). In particular, the following environmental performance issues shall be addressed in the Plan:	Section 3.4, Appendix A2
	i. Measures to monitor and manage dust emissions including dust generated by haulage trucks, traffic on unsealed public roads and stockpile management.	Appendix B6
	ii. Measures to monitor and manage waste generated during construction including but not necessarily limited to: general procedures for waste classification, handling, reuse, and disposal; how contaminated materials would be handled and disposed; use of secondary waste material in construction wherever feasible and reasonable; procedures for dealing with green waste including timber and mulch from clearing activities; and measures for reducing demand on water resources (including the potential for reuse of treated water from sediment control basins).	Appendix B7
	iii. Measures to monitor and manage spoil and fill including details of how excavated material would be handled, stockpiled, reused and disposed and a stockpile management protocol detailing location criteria that would guide the placement of stockpiles and minimum management measures (including rehabilitation) that would be implemented to avoid/ minimise amenity impacts to surrounding residents and environmental risks (including to surrounding watercourses).	Appendix B4
	iv. Measures to monitor and manage hazard and risks including emergency management.	Appendix A7 Section 7
	v. The issues identified in condition B31.	Appendices B1 to B7

CoA no.	Requirement	Reference
B30 (f)	Details of community involvement and complaints handling procedures during construction, consistent with the requirements of conditions B26 to B28.	Section 6.3
B30 (g)	Details of compliance and incident management consistent with the requirements of condition B25.	Chapter 7
B30 (h)	Procedures for the periodic review and update of the Construction Environmental Management Plan as necessary (including where minor changes can be approved by the Environmental Representative).	Chapter 9
B30	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.	Section 1.4

Table 1-2 SoC requirements for environmental management

SoC.	Requirement	Reference / Evidence
M1	The head contractor for the project will have an environmental management system.	Lend Lease have an ISO14001 accredited EMS
M2	Suitably qualified and experienced personnel will develop and implement project specific environmental management plans and procedures, incorporating as a minimum the mitigation and management measures in the environmental assessment.	This document and appendices have been developed by an experienced Approvals Manager and will be implemented by an experienced Environmental Manager
M3	RTA and the contractor will implement a performance and compliance program.	Section 8.4

This CEMP is the overarching document in the environmental management system for the Project that includes a number of management documents. These are described in Section 4.1. It is applicable to all staff and sub-contractors associated with the construction of the Project.

1.3 Consultation

Extensive consultation for the Project commenced during the route selection phase and continued during the environmental assessment of the concept design. The primary objective of consultation was to keep stakeholders well informed and involved during each stage of Project development.

Further consultation with relevant stakeholders and government authorities has continued through the development of this CEMP and sub plans. Those consulted include:

- Environment Protection Authority.
- Office of Environment and Heritage.
- Department of Primary Industries – Fisheries NSW, Forestry Corporation NSW, Agriculture NSW and NSW Office of Water.
- Department of Mineral Resources and Energy.
- Bellingen Shire Council.
- Nambucca Shire Council.
- Aboriginal stakeholders – Coffs Harbour and District LALC, Nambucca LALC, Unkya LALC, Bowraville LALC.

Consultation will continue throughout the Project with relevant stakeholders and government authorities. The outcomes of this consultation will be documented where relevant in subsequent revisions of the CEMP and the management review and is described further in Section 9.

1.4 Certification and approval

This CEMP has been approved by the Roads and Maritime Senior Project Manager, Lend Lease Project Director and Lend Lease Environmental Manager prior to submission to DP&E. Submission to DP&E is required no later than one month prior to commencement of construction or as otherwise agreed.

The CEMP must be approved by the Director-General of DP&E prior to the commencement of construction.

The sub-plans prepared under CoA B31 also require approval by the Director-General prior to commencement of construction. Further explanation and details of these documents are provided in Section 4.1.

1.5 Distribution

This CEMP is available to all personnel and sub-contractors via the Project document control management system. An electronic copy can be found on the [Project website](#).

The document is uncontrolled when printed. One controlled copy of the CEMP and supporting documentation will be maintained by the Quality Manager at the Project office.

Copies will be distributed via the Project document management system to:

- Project Director.
- Deputy Project Director.
- Area Managers.
- Environmental Representative.
- Environmental Manager.
- Community Relations Manager.
- Roads and Maritime Representative.
- Roads and Maritime Environmental Services Manager, Pacific Highway.

1.6 Revision

A document review process ensures that environmental documentation including this CEMP is updated as appropriate for the specific works that are occurring on-site. This includes the management review process described in Chapter 10.

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the Environmental Manager to prepare the revised documents.

The revised document will then be issued to the Roads and Maritime Project Manager and the Environmental Representative for certification of the changes. The Environmental Representative can approve minor changes to the CEMP. Minor changes would typically include those that:

- Are editorial in nature e.g. staff and agency/authority name changes.
- Do not increase the magnitude of impacts on the environment when considered individually or cumulatively.
- Do not compromise the ability of the Project to meet approval or legislative requirements.

Where the Environmental Representative deems it necessary, the amended CEMP will also be provided to relevant stakeholders for review and comment and forwarded to the Director-General for DP&E for approval.

Revised versions of the CEMP will be made available through the processes described in Section 1.5.

2 Project description

2.1 General features

The general features of the overall WC2U Project are:

- A 42 kilometre motorway style (class M) upgrade comprising of four-lane divided carriageways (two lanes each way), with a wide median allowing for the future addition of a third lane in each direction and a 110 kilometre per hour posted speed limit.
- Controlled access to the upgrade from four new grade separated interchanges and an upgrade to the existing Waterfall Way interchange at Raleigh.
- New major highway bridges across the Nambucca River at Macksville, the Kalang River at Urunga and Warrell Creek.
- Retention of the existing highway as a local access road between Warrell Creek and Urunga.
- Floodplain bridges and culverts across sections of the Gumma floodplain at Macksville and the Kalang floodplain at Urunga.
- Noise barriers and low noise pavements at various locations.
- At residence noise treatments to houses in locations where required.
- Permanent spill containment basins at environmentally significant watercourse crossings.
- Combined fauna underpasses/drainage structures at river and creek crossings and key habitat locations.
- A dedicated fauna underpass structure, combined drainage/underpass structures and a wide vegetated median for overhead fauna movement in sections of the Nambucca and Newry State Forests.
- A major rest area for heavy and light vehicles at the Nambucca interchange.
- Ancillary construction facilities, including compound sites, batching plant sites and stockpile sites.
- Public utility and service relocations including power lines, telecommunications, network water and sewer mains.

Figure 2-1 provides an overview of the Warrell Creek to Urunga Project.

2.2 Staging

As indicated in Section 1.1, the Project is proposed to be delivered in two main stages, being:

- Stage 1: Nambucca Heads to Urunga (Chainage 61,265 to Chainage 83,400), with a ramp and associated connections extending a further 0.5 kilometres north.
- Stage 2: Warrell Creek to Nambucca Heads (Chainage 41,870 to Chainage 61,265).

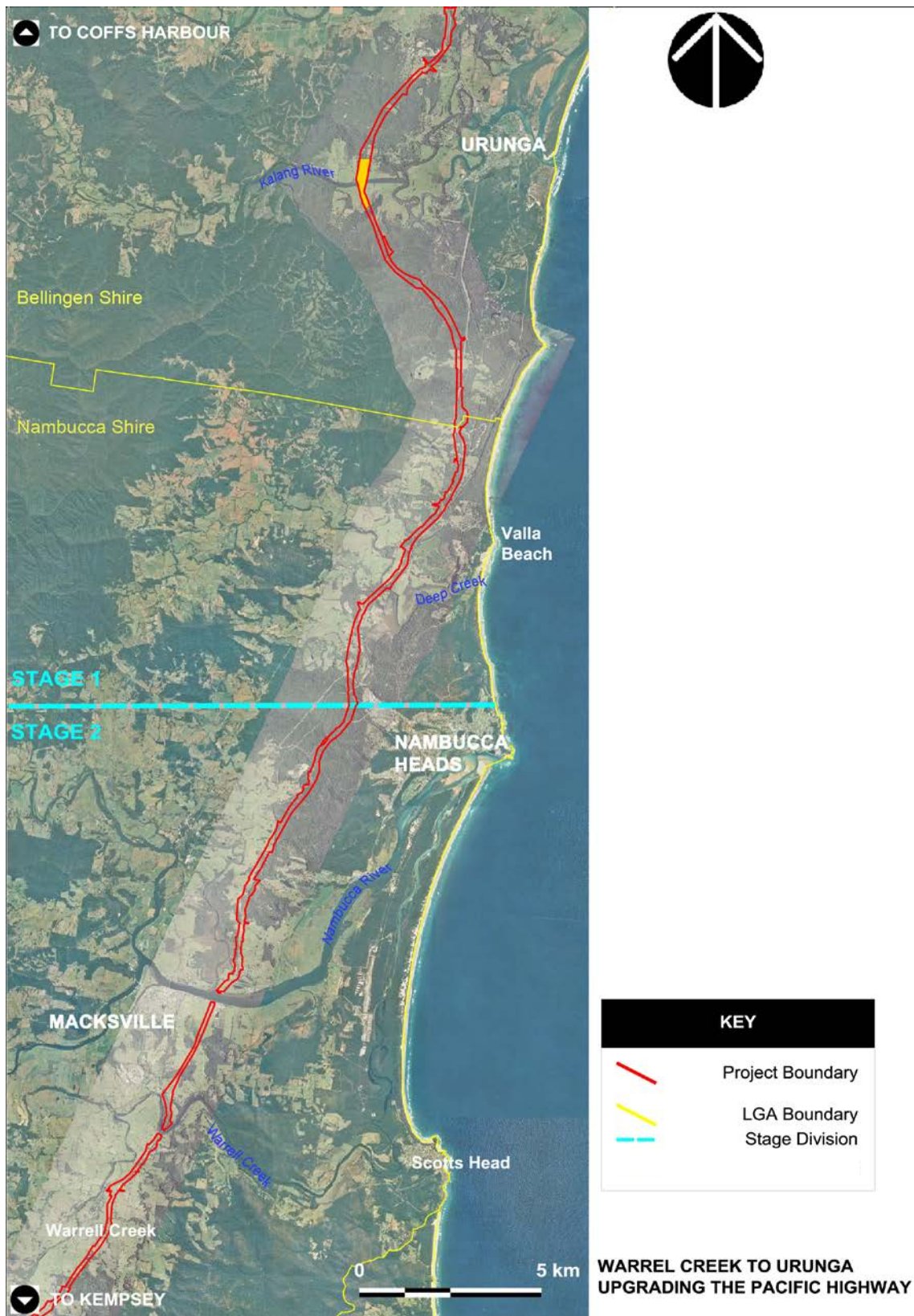
The split between Stage 1 and 2 is located to the north of the Nambucca interchange as shown on Figure 2-1. The extent of each of the stages is also shown on Figure 2-1.

The Nambucca Heads to Urunga Upgrade Project includes the design and construction of 22km of two-lane dual carriageway, with a southern upgrade section approximately 10km long from Nambucca Heads to North of Valla Beach, and a northern "bypass" section around Urunga.

The works, being delivered by Lend Lease, involves approximately 3,800,000m³ of earthworks, the construction of 36 Bridges, two complete interchanges and the refinement of the existing interchange at Waterfall Way, approximately 180,000m³ of concrete pavements including a section of CRCP for noise reduction, dedicated fauna crossings and landscaping

and revegetation works. It is these works, to be delivered by Lend Lease, that are the subject of this CEMP.

Figure 2-1 Location of Warrell Creek to Urunga Project



2.3 Construction activities and sequence

The following sequences of activities are anticipated for the construction of the NH2U Project:

- **Site establishment** – installing boundary fencing, construction facilities, environmental controls and carrying out pre-clearing vegetation fauna surveys.
- **Relocation or protection of services** – relocating and protecting electricity, gas, water and telecommunications infrastructure affected by the Project.
- **Site preparation** – removal of harvestable timber, clearing and grubbing, topsoil stripping and storage.
- **Earthworks** – undertaking cut and fills works along the alignment to achieve desired levels, removal of unsuitable material, batter and embankment shaping.
- **Structures** – building bridges, drainage and fauna underpass facilities.
- **Pavements** – forming sub and base layers and construction final pavement finishes.
- **Road furniture** – installing signage, line marking, safety barriers and fauna overpass structures.
- **Landscaping and restoration** – reuse of topsoil, planting of native plants and seeding disturbed areas with native and cover crops species (note this will take place throughout construction as elements of the Project are complete where ongoing disturbance is not anticipated).
- **Open to traffic** – decommission construction facilities and commissioning new road and related infrastructure.

The construction of the NH2U Project is expected to commence in June 2013 and opened to traffic in December 2015.

Construction hours and circumstances where construction activities may be undertaken outside of these times are detailed and assessed further in the Noise and Vibration Management Sub Plan – Appendix B3 to this CEMP.

2.4 Compound and ancillary facilities

A number of temporary compound and ancillary facilities will be required to support construction of the Project. Primary site compounds will be established for each stage of the Project. These sites will accommodate the majority of management, engineering, specialist and administrative personnel. Typically these facilities include:

- Office accommodation.
- Staff amenities.
- Light vehicle parking.
- A plant and equipment maintenance workshop.
- Material and chemical storage.

Due to the geographical scale of the Project, a number of ancillary facilities will also be required. These are generally located closer to active work zones and support site based construction personnel. Typically these facilities will include:

- Crib sheds and minimal office accommodation.
- Concrete batching plant.
- Mobile asphalt batching plant.
- Equipment storage.
- Material storage.

- Concrete casting areas.

Appendix A4 details the location, composition and purpose of compound and ancillary facilities currently required for the Project. A preliminary assessment of the ancillary facility criteria required by CoA C27 is also provided in Appendix A4 and the criteria further detailed in Section 3.7.2.

CoA 28 also provides an approval pathway for minor ancillary facilities (e.g. lunch sheds, office sheds, and portable toilet facilities) that do not meet the requirements of CoA C27. Further information about minor ancillary facilities is provided in Section 3.7.2.

3 Planning

3.1 Project environmental obligations

All construction personnel working on the Project have the following general obligations:

- Minimise pollution of land, air and water.
- Use pollution control equipment and keep it in proper working order.
- Preserve the natural and cultural heritage environment.
- Give notice to the Roads and Maritime and relevant authorities of a non-Aboriginal or Aboriginal heritage discovery.
- Minimise the occurrence of offensive noise.
- Be a good neighbour to surrounding land users.
- Keep the community informed of Project milestones, upcoming activities and duration of relevant aspects of the works.
- Use equipment with noise control features where available and ensure that it is properly maintained.
- Take all feasible and reasonable steps to ensure compliance with the requirements of this CEMP.

3.2 Legal and other requirements

A register of legal and other requirements for the Project is contained in Appendix A1. This register is maintained as a checklist. This register will be reviewed at regular intervals e.g. during management reviews, and updated with any applicable changes. Any changes made to the legal requirements register will be communicated to the wider team where necessary through toolbox talks, specific training and other methods detailed in Chapter 5.

3.3 Approvals, permits and licensing

A number of approvals, permits and licenses have and/or will be obtained for the Project. Appendix A1 contains a register of all relevant environmental approvals, permits and licenses. The register will be maintained by the Environmental Manager and will be reviewed prior to the commencement of construction and/or stages of construction, and at regular intervals during construction and at least annually as part of the management review.

The Environmental Assessment recognised that the following approvals and licences identified in the planning approval process would be obtained or are required for the Project:

- Project Approval under the Environment Planning and Assessment act 1979 (EP&A Act).
- Environmental protection licences (EPL) under the *Protection of the Environment Operations Act 1997* for the scheduled activities of “road construction”, “crushing, grinding and separating” and “extractive activities”.
- Approvals under the *Water Act 1912* for access to ground or surface water during construction. (Note, as a Water Sharing Plan is in place for the region, the requirements of the *Water Act 1912* are replaced by the *Water Management Act 2000*)

In accordance with CoA A6, all necessary licences, permits and approvals required for the development of the Project will be obtained and maintained as required throughout the life of the Project. No condition of the Project Approval removes the obligation for Roads and Maritime or Lend Lease to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 75U of the *EP&A Act*.

The Project Approval and Statement of Commitments are contained in the Compliance Tracking Program (required by CoA B25) and provide a reference to where each requirement is addressed by this CEMP or other Project documentation. A checklist of compliance with Roads and Maritime specification G36 is also included in Appendix A1.

3.4 Environmental aspects and impacts

A risk management approach will be used to determine the severity and likelihood of an activity's impact on the environment and to prioritise its significance. This process considers potential regulatory and legal risks as well as taking into consideration the concerns of community and other key stakeholders.

The objectives of risk assessment are to:

- Identify activities/aspects, events or outcomes that have the potential to adversely affect the local environment and/or human health/property.
- Qualitatively evaluate and categorise each risk item.
- Assess whether risk issues can be managed by environmental protection measures.
- Qualitatively evaluate residual risk with implementation of measures.

Risk assessments for the Project are based on AS/NZS 4360:1999, the Australian standard for risk assessments.

A Project environmental risk assessment has been undertaken for the NH2U Project and is included as Appendix A2 to this CEMP. This risk assessment details the environmental aspects identified for the project, the initial risk category prior to appropriate management strategies, and reference to the appropriate sub-plan detailing proposed mitigation strategies.

Each sub plan also details risks and proposed mitigation measures for topic specific issues. Ongoing risk assessments will also be performed using the risk assessment process described above during the preparation of environmental work method statements.

3.5 Environmental policy

The environmental policy describes Lend Lease commitment to continual improvement in environmental performance and compliance with applicable legal requirements.

The environmental policy is included in the CEMP which will be on the Project website, displayed at the site office and communicated to staff and other interested parties via inductions and ongoing awareness programs.

A copy of the environmental policy is provided in Appendix A3.

3.6 Objectives and targets

As a means of assessing environmental performance during construction of the Project, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of key issues identified through the environmental assessment and risk assessment process. The objectives and targets are consistent with the Project environmental policy and will assist in monitoring whether the commitments of the policy are being met.

The targets are incorporated into relevant environmental management sub-plans.

The performance of the Project against the objectives and targets will be documented in the Project construction compliance reports and at least on an annual basis as part of the management review.

Environmental objectives and targets for the Project are provided in Table 3-1 below.

Table 3-1 Environmental objectives and targets

Objective	Target	Measurement tool
Construction the Project in accordance with environmental approvals.	Full compliance with statutory approvals.	Audits, construction compliance reporting, management view.
Compliance with all legal requirements.	No regulatory infringements (PINs or prosecutions). No formal regulatory warning	Audits, construction compliance reporting, management view.
Implement a rigorous and comprehensive EMS that meets the requirements of AS/NZS ISO 14001.	Address non-conformances and corrective actions within specific timeframes.	Audits, management reviews.
Engage with the effected and broader community, minimise complaints and respond to any complaints within a suitable timeframe.	Disseminate regular Project updates and other information through the Project website and other tools identified in the Community Engagement Strategy. Record and respond to complaints within the timeframe specified in the Community Engagement Strategy.	Review complaints register, construction compliance report, audits.
Continuously improve environmental performance.	Develop and maintain a program of ongoing environmental training. Capture lessons learnt from environmental incidents to minimise repeat issues. Encourage and reward innovation and effort throughout the work force.	Construction compliance report, management review.

3.7 Project refinements

3.7.1 General changes

Refinements to the Project may result from detailed design refinement or changed circumstances throughout construction. Roads and Maritime is responsible for formally seeking approval from the Minister for any Project modifications and for documenting refinements that are consistent with the approved Project.

The Roads and Maritime Environmental Services Manager, Pacific Highway is responsible for the assessment of Project refinements and management of the consistency assessment process. The Project Environmental Manager is responsible for incorporating any new environmental impacts and/or new statutory approval requirements into the appropriate environmental management documentation.

Any design changes or changes in scope of works should be communicated to the Project Environmental Manager. The Environmental Manager will then undertake an additional environmental assessment and consistency review in consultation with the Roads and

Maritime Environmental Services Manager, Pacific Highway to determine if a Project modification may be required.

Should the consistency review determine that a Project modification may be required i.e. the impacts are of a nature and scale that it is not considered consistent with the Project approval, the Environmental Representative will be informed immediately and modification application under Section 75W of the *EP&A Act 1979* prepared and submitted to the Director-General DP&E for determination.

Roads and Maritime will approve all refinements that are deemed consistent with the Project approval.

3.7.2 Ancillary facilities assessment criteria

Ancillary facilities are defined as a “temporary facility for construction, including for example an office and amenities compound, construction compound, batch plant (concrete or bitumen), materials storage compound, maintenance workshop or testing laboratory”. Stockpiles are not included under this definition and are discussed in Section 3.7.3.

The location of the main site compound and ancillary facilities are nominated in Appendix A4. Circumstance may arise during construction where additional, or changes to the location of, ancillary facilities are required.

Where this situation arises, an assessment against the criteria detailed in CoA C27 will be undertaken. This criteria requires that ancillary facilities:

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

Note: for the purposes of criteria a) a “waterway” is defined as:

- Any Class 1 or Class 2 fish habitat waterways (as described in the NSW Fisheries guidelines).
- Any permanent or ephemeral drainage line with direct drainage to State Environmental Planning Policy No 14 Coastal Wetlands.
- Waters that are used for the purposes of human consumption.
- Waters that have a known *Maundia triglochinos* population.

Where this criterion is unable to be met for any proposed ancillary facility, an assessment demonstrating how adverse impacts from construction or operation of the facility can be mitigated and managed to an acceptable standard will be undertaken and provided to the Director-General for approval.

Modifications 1 and 2 to the Project approval were approved by DP&E on November 20 and December 4, 2012 respectively. These modifications firstly added a condition (CoA C28), and then made a minor wording change to CoA C28, that provides an approval pathway for minor ancillary facilities (e.g. lunch sheds, office sheds, and portable toilet facilities) that do not meet the requirements of CoA C27. Where such minor facilities are proposed, they may be approved by the Environmental Representative provided that they comply with the following criteria:

- a) are located within an active construction zone within the approved project footprint; and
- b) have been assessed by the Environmental Representative to have:
 - 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
 - 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
- 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.

3.7.3 Stockpile locality assessment

Stockpiles are not defined as an ancillary facility in the CoAs. During construction a number of temporary stockpiles will be required. Stockpile sites may be required to store material including, but not limited to:

- Excavated material to be used in fill embankments and other design features.
- ASS subject to treatment prior to reuse.
- Excavated material unsuitable for reuse in the formation.
- Excess concrete, pavement, rock, steel and other material stored for either future use in the Project or prior to removal from site.
- Topsoil, mulch, excess timber for landscaping and revegetation works.

Where these facilities are proposed, the stockpile locating criteria contained in the Stockpile Management Protocol (See Appendix I of the SWMP) will be considered and stockpile sites located accordingly.

The protocol also includes standard mitigation measures that will be implemented to minimise or avoid impacts on the environment.

4 Implementation and operation

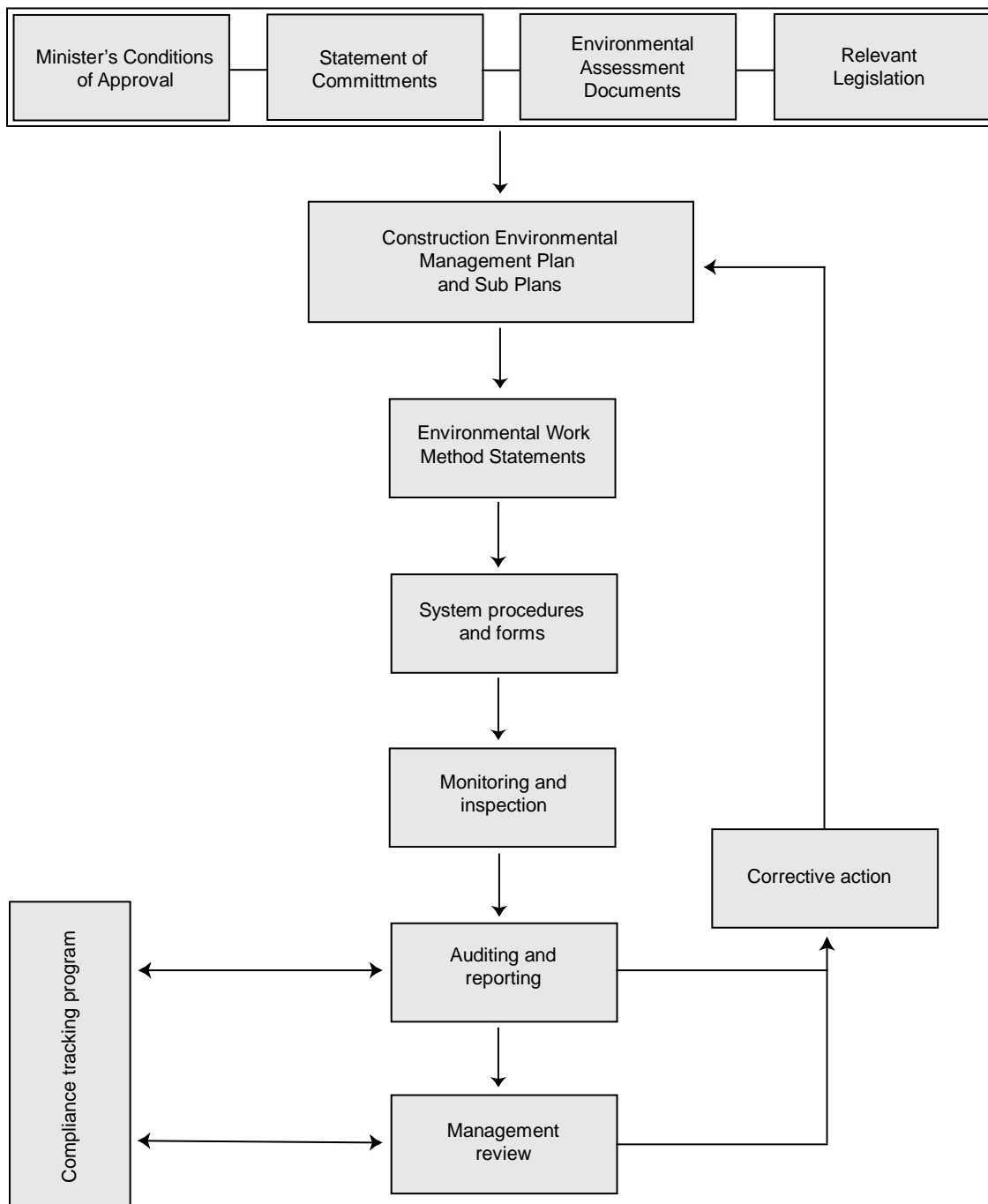
This CEMP is the overarching management plan for a suite of environmental management documents. It provides a structured and systematic approach environmental management.

The primary purpose of the system of documentation is to:

- Ensure compliance with all applicable environmental laws, obligations and approvals.
- To minimise environmental impacts.

The structure of the environmental management system for the Project is shown in Figure 4-1 below.

Figure 4-1 Environmental management system structure



4.1 Environmental management system documentation

4.1.1 Construction environmental management plan

This CEMP provides the system to manage and control the environmental aspects of the Project during pre-construction and construction. It identifies all requirements applicable to activities described in Chapter 2. It also provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled. The strategies defined in this CEMP have been developed with consideration of the Project approval requirement, safeguards and mitigation measures presented in the environmental assessment and approval documents. This CEMP establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the Project on the environment.

This CEMP is consistent with:

- Guideline for the preparation of Environmental Management Plans (DIPNR, 2004).
- AS/NZS ISO14001: 2004, '*Environmental Management Systems - requirements with guidance for use*'.
- Roads and Maritime QA Specification G36.
- Lend Lease Environmental System.

The CEMP and sub-plans required under CoA B31 will be provided to the Director-General for approval at least one month prior to the commencement of construction.

4.1.2 Environmental management sub plans

A number of environmental management sub-plans support the CEMP. These documents are prepared to identify requirements and processes applicable to specific impacts or aspects of the activities described in Chapter 2. They address requirements of the CoA, SoCs, other measures identified in the environment assessment documentation and the Lend Lease EMS.

Environmental strategies or procedures may also be developed as required throughout the Project. These will also guide environmental management of potential impacts on-site.

A list of construction sub-plans for the Project, and their approval requirements, are provided in Table 4-1. The Project Staging Report required by CoA A5 documents the required Project-wide environmental documentation to be prepared for the Project and the timing required for submission where required.

Table 4-1 Environmental management sub plans

Document name	Approval pathway
Construction traffic management sub plan	DP&E approval
Construction flora and fauna management sub plan	DP&E approval
Construction noise and vibration management sub plan	DP&E approval
Construction soil and water quality management sub plan	DP&E approval
Construction heritage management sub plan	DP&E approval
Air quality management sub plan	Roads and Maritime approval
Waste and energy management sub plan	Roads and Maritime approval

4.1.3 Environmental work method statements

Environmental work method statements (EWMS) are prepared to manage and control all activities that have the potential to negatively impact on the environment. EWMS will be prepared prior to the commencement of relevant construction activities on site and will incorporate relevant mitigation measures and controls from management sub plans. They also identify key procedures to be used concurrently with the EWMS. EWMS are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

EWMS will be prepared progressively in the lead up to and throughout construction in consultation with relevant members from the Project team, and approved by the Environment Manager.

EWMS for activities identified as having high environmental risk will undergo a period of consultation with stakeholders and authorities prior to approval. A list of upcoming/future EWMS will be provided to ERG participants during regular meetings. The ERG will determine which EWMS are high risk and require consultation and those that do not.

EWMS for activities likely to be considered high risk include:

- Working platforms in or adjacent to waterways.
- Temporary waterway crossings.
- Site compound establishment.
- Public road accesses and managing mud tracking.
- Batch plant establishment and operation.
- Managing runoff from curing processes.
- Clearing and grubbing.
- Sediment basin design, construction and management.
- Dewatering.
- Soft soil treatment.
- Piling.
- Blasting.
- Management of concrete works.
- Others as required.

All construction personnel and sub-contractors undertaking a task governed by an EWMS must participate in training on the EWMS, and acknowledge that they have read and understood their obligations prior to commencing work.

Regular monitoring, inspections and auditing against compliance with the EWMS will be undertaken by Project management, quality, and environmental personnel to ensure that all controls are being followed and that any non-conformances are recorded and corrective actions implemented.

A register of EWMSs will be maintained for the Project.

4.1.4 Progressive erosion and sediment control plans

Progressive Erosion and Sediment Control Plans (PESCPs) are planning documents that clearly show the site layout and the approximate location of erosion and sediment controls onsite. They cover all construction stages from initial vegetation clearing through to

rehabilitation when erosion and sediment controls are no longer required and are removed. PESCPs will be developed and implemented across the Project where there is a risk of erosion and sediment loss.

PESCPs may be produced in conjunction with Environmental Work Method Statement (EWMS) to provide more detailed site-specific environmental mitigation measures.

PESCPs will be developed by environment staff in consultation with the superintendent, site engineers, foreman and other relevant site personnel, as required. They will be modified to reflect site condition at the time of construction. The Environmental Manager will approve PESCPs in the first instance. Minor changes thereafter will be approved by environment staff in consultation with the Environmental Manager, as required.

PESCPs will be developed for all work areas prior to commencing activities.

4.1.5 Sensitive area plans

The Project traverses a diversity of environmental and socially sensitive areas/sites. To assist pre-construction planning and on-site construction management, these site constraints are consolidated on series of map-based sheets that extend the length of the Project. Sensitive area maps include information pertaining, but not limited, to:

- Noise sensitive receivers e.g. residential dwellings, educational institutions.
- Flora features, including threatened species and endangered ecological communities.
- Aboriginal and non-Aboriginal heritage sites, including items, places, objects and sites.
- Local waterways.
- Recorded threatened fauna sightings.
- National Parks / Nature Reserves.

The sensitive area plans are presented in Appendix A6. They are a working element of the CEMP and will be revised throughout construction to reflect true ground conditions and the most up-to-date information available on sensitive sites. Sensitive area plans will be used in conjunction with EWMS to help identify key risk areas and to promote ongoing communication to construction personnel during the Project.

4.1.6 System procedures, forms and other documents

The Project environmental management system procedures, forms and other documents provide instructions and records related to both environmental and non-environmental activities throughout the Project.

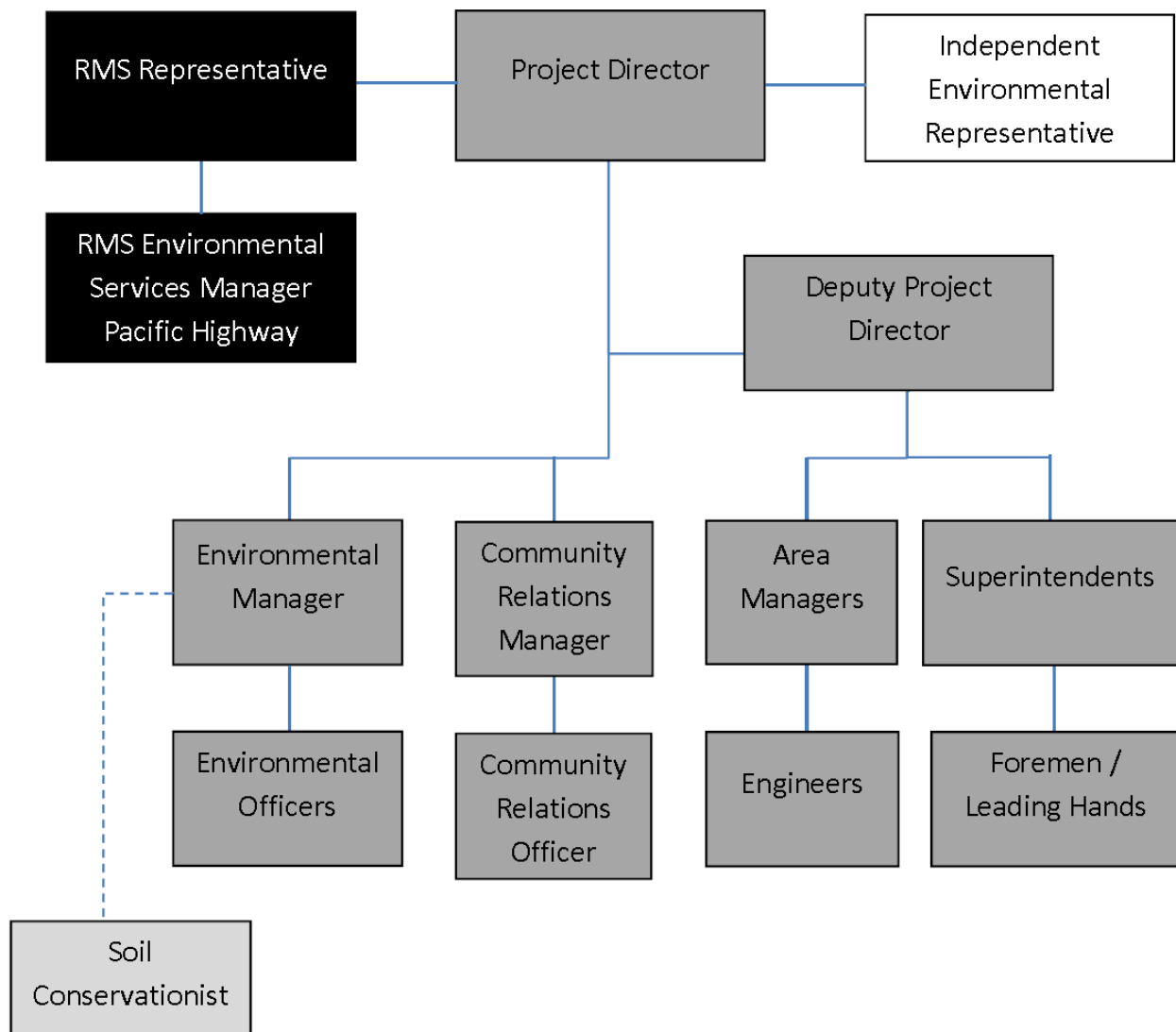
Project specific procedures will be developed in accordance with the requirements for the Project. Where applicable, existing Lend Lease procedures and work instructions will be applied or amended for use on the Project.

A register of relevant environmental procedures and forms will be maintained by the Environmental Manager.

4.2 Resources, roles, responsibilities and authority

The key environmental management roles and responsibilities for the construction phase of the Project are described below. The structure of these roles is shown in Figure 4-2.

Figure 4-2 Management structure



4.2.1 Environmental Representative

The environmental responsibilities for the Environmental Representative are defined in CoA B29 and include:

- a) Be the principal point of advice in relation to the environmental performance of the Project.
- b) Be consulted in responding to the community concerning the environmental performance of the Project.
- c) Monitor the implementation of all environmental management plans and monitoring programs required under this approval.
- d) Monitor the outcome of all environmental management plans and advise the Proponent upon the achievement of all Project environmental outcomes.
- e) Have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and all other licences and approvals related to the environmental performance and impacts of the Project.
- f) Ensure that environmental auditing is undertaken in accordance with the requirements of condition B25 and the Project Environmental Management System(s).

- g) Be given the authority to approve/reject minor amendments to the Construction Environment Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environment Management Plan required under condition B30 (see Section 1.6).
- 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.

4.2.2 Roads and Maritime Environmental Services Manager, Pacific Highway

The environmental responsibilities of the Roads and Maritime Environmental Services Manager include, but are not limited to, the following:

- Review any environmental management plans and related documents prepared for the Project.
- Review minor Project refinements that are consistent with the Project environmental assessment and approval documentation and recommend they be approved to the General Manager, Pacific Highway.
- Monitor the environmental performance of the Project in relation to Roads and Maritime requirements.

4.2.3 Roads and Maritime Representative

The environmental responsibilities of the Roads and Maritime Representative include (but are not limited to) the following:

- Evaluate and advise on compliance with Roads and Maritime environmental requirements.
- Review and approve any environmental management plans for the Project or related activities that are not required to be approved by the Director-General of DP&E.

4.2.4 Project Director / Deputy Project Director

The environmental responsibilities of the Project Director include (but are not limited to) the following:

- Ensure all works comply with relevant regulatory and Project requirements.
- Ensure the requirements of this CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements.
- Endorse and support the Project environmental policy attached at Appendix A3.
- Liaise with Roads and Maritime, Environmental Representative and other government authorities as required.
- Participate and provide guidance in the regular review of this CEMP and supporting documentation.
- Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of this CEMP.
- Ensure that all personnel receive appropriate induction training, including details of the environmental and community requirements.
- Ensure that complaints are investigated to ensure effective resolution.
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

4.2.5 Area Managers

The environmental responsibilities of the Area Managers include (but are not limited to) the following:

- Plan construction works in a manner that avoids or minimises impact to environment.
- Ensure the requirements of this CEMP are fully implemented.
- Ensure construction personnel manage construction works in accordance with statutory and approval requirements.
- Ensure environmental management procedures and protection measures are implemented.
- Ensure all Project personnel attend an induction prior to commencing works.
- Liaise with Roads and Maritime, Environmental Representative and other government authorities as required.
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

4.2.6 Superintendent

The environmental responsibilities of the Superintendent include (but are not limited to) the following:

- Communicate with all personnel and sub-contractors regarding compliance with the CEMP and site-specific environmental issues.
- Ensure all site workers attend an environmental induction prior to the commencement of works.
- Co-ordinate the implementation of the CEMP.
- Co-ordinate the implementation and maintenance of pollution control measures.
- Identify resources required for implementation of the CEMP.
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Environmental Manager / Environmental Officers.
- Co-ordinate action in emergency situations and allocate required resources.
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Area Manager and Environmental Manager.

4.2.7 Environmental Manager

The environmental responsibilities of the Environmental Manager include, but are not limited to, the following:

- Overall responsibility for the implementation of environmental matters on the Project.
- Development, implementation, monitoring and updating of the CEMP and sub plans in accordance with ISO14001.
- Report to Project Director and other senior managers on the performance and implementation of the CEMP.
- Ensure management reviews of the CEMP are undertaken annually, documented and actions implemented.
- Ensure environmental risks of the Project are identified and appropriate mitigation measures implemented.
- Identify where environmental measures are not meeting the targets set and where improvement can be achieved.
- Ensure environmental protocols are in place and managed.
- Ensure environmental compliance.

- Obtain and update all environmental licences, approvals and permits as required.
- Lead liaison with Environmental Representative and approval authorities.
- Manage environmental document control, reporting, inductions and training.
- Manage environmental reporting within the Project team and to the Roads and Maritime and regulatory authorities.
- Preparing reports on a monthly basis outlining the Project Works undertaken and the achievements that have been met, as well as identifying those areas where improvements were made.
- Oversee site monitoring, inspections and audits.
- Manage all subcontractors and consultants with regards to environmental matters, including assessing their environmental capabilities and overseeing the submission of their environmental documents.
- Prepare and/or distribute environment awareness notes.
- Review and approve PESCPs.
- Develop and facilitate induction, toolbox talks and other training programs regarding environmental requirements for all site personnel.
- Notify Roads and Maritime and relevant authorities in the event of an environmental incident and manage close-out of these.
- Stop activities where there is an actual or immediate risk of harm to the environment, or to prevent environmental non-conformities, and advise the Project Director, Area Manager and Superintendent.
- Assist the Community Relations Manager to resolve environment-related complaints.

4.2.8 Environmental Officer

For the purpose of the CEMP, Environmental Officer refers to the positions of both the Lend Lease Environmental Coordinator and Environmental Advisors. The environmental responsibilities of the Environmental Officers include, but are not limited to, the following:

- Assist in preparing the CEMP (including any future revisions) in accordance with all relevant requirements.
- Develop PESCPs in consultation with the superintendent, site engineers, foreman and other relevant site personnel, as required.
- Undertake site inspections, carry out monitoring activities and complete site checklists.
- Ensure monitoring records are appropriately maintained, reviewed and any non-compliance issues addressed.
- Manage the day-to-day environmental elements of construction.
- Record and provide written reports to the Environmental Manager of non-conformances or corrective actions with the CEMP. This may include the need to implement additional, or revise existing, mitigation measures.
- Assist in identifying environmental risks.
- Advise the Environmental Manager and Superintendent of the need to stop work immediately if an unacceptable impact on the environment is likely to occur or to require other reasonable steps to be taken by the Superintendent or site construction staff to avoid or minimise impacts.
- Provide reports to the Environmental Manager on any major issues resulting from the Project.
- Assist all site staff with issues concerning Project environmental matters.

- Assist in developing training programs regarding environmental requirements and deliver where required, including delivery of the environmental component of toolbox talks
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Area Manager, Superintendent and Environmental Manager.

4.2.9 Community Relations Manager

The environmental responsibilities of the Community Relations Manager include, but are not limited to, the following:

- Ensure that all community consultation activities are carried out.
- Report any environmental issues to the Environmental Manager raised by stakeholders or members of the community.
- Communicate general Project progress, performance and issues to stakeholders including the community.
- Maintain the 24 hour complaints hotline.

4.2.10 Community Relations Officer

The environmental responsibilities of the Community Relations Officer include, but are not limited to, the following:

Respond to community enquiries and complaints about the project utilising the agreed system and ensure the system is monitored and updated.

Prepare notifications to the community of project activities.

Assist the Lend Lease Community Relations Manager with information material for the central display centre.

Coordinate production of information for the web site with internal stakeholders and designer, including gaining internal and external approvals (website is managed by Roads and Maritime).

Draft advertising material and project manage through approvals and production process.

4.2.11 Project/Site Engineers

The environmental responsibilities of the site / Project engineers include (but are not limited to) the following:

- Provide input into the preparation of environmental planning documents as required.
- Ensure that instructions are issued and adequate information provided to employees that relate to environmental risks on-site.
- Ensure that the works are carried out in accordance with the requirements of the CEMP and supporting documentation, including the implementation of all environmental controls.
- Identify any environmental risks.
- Identify resource needs for implementation of CEMP requirements and related documents.
- Ensure that complaints are investigated to ensure effective resolution.
- Take action in the event of an emergency and allocate the required resources to minimise the environmental impact.
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent and Environmental Manager.

4.2.12 Foreman

The environmental responsibilities of the foreman include (but are not limited to) the following:

- Undertake any environmental duties as defined by the Superintendent or Project/site engineer.
- Control field works and implement/maintain effective environmental controls.
- Where required, undertake environmental risk assessment of works prior to commencement.
- Ensure site activities comply with EWMS and relevant records are kept.
- Ensure all site workers are site inducted prior to commencement of works.
- Attend to any spills or environmental incidents that may occur on-site.
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent.
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Area Manager, Superintendent or Environmental Manager.

4.2.13 Soil Conservationist

A consultant project soil conservationist will be appointed for the duration of the project. The project soil conservationist will:

Conduct ESCP reviews and site inspections weekly throughout the construction period as per the G36 Specification (or at an alternate timeframe agreed to by Roads and Maritime).

Inspections will be documented and any improvements, maintenance or actions required will be closed out in a timely manner.

Work alongside environmental personnel, construction personnel, drainage designers and engineers to advise on aspects of drainage design, culverts, chutes, drains, lining materials and timing.

Assist in project training in regards to project erosion and sediment control issues.

4.2.14 Wider Project Team (including sub-contractors)

Comply with the relevant requirements of the CEMP, or other environmental management guidance as instructed by a member of the Project's management.

- Participate in the mandatory Project/site induction program.
- Report any environmental incidents to the foreman immediately or as soon as practicable if reasonable steps can be adopted to control the incident.
- Undertake remedial action as required to ensure environmental controls are maintained in good working order.
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Area Manager, Superintendent or Environmental Manager.

4.3 Project team integration

The integration of the environment, construction and other Project teams is fundamental to the effective identification of environmental risks and implementation of the environmental controls in the field. Project management personnel support is critical to initiating and maintaining this integration. Techniques used to drive integration of the teams to achieve environmental outcomes may include:

- Project management personnel to identify and help communicate environment as a key result area at the beginning of the project and nominate key objectives/targets.
- Integrated planning sessions, where environmental risks and mitigations are a critical discussion aspect.
- Foremen/Engineers involved in ESCP and eWMS preparation.
- Environmental toolboxes by the environmental staff, the foremen and superintendent.
- Foremen / Superintendent to attend ERG inspections to understand Agency concerns.
- Foreman to be responsible and undertake rain inspections with environmental staff.
- Compound layout and open office environment where the environmental team is integrated into the engineering and community teams.
- Publication and display of sensitive area plans so that construction teams are aware of these areas.
- Weekly meetings with engineers and all foremen to discuss the upcoming activities and risks, including environmental aspects/concerns.

4.4 Sub-contractor management

Environmental requirements and responsibilities are to be specified to sub-contractors in the contract documentation. As part of the selection process, consideration will also to be given to their past environmental performance. The Environmental Manager, or delegate, will participate in the tender assessment and selection process where it is deemed necessary due to associated environmental risks.

All sub-contractors are required to work in accordance with the approved CEMP.

All sub-contractors are required to attend Project and/or site inductions where the requirements and obligations of the CEMP are communicated. A record of all sub-contractors inducted will be maintained as part of the Project induction and training register.

A standard monitoring form will be developed that will be used to assess:

- The sub-contractor's general work practices.
- The effectiveness of the sub-contractor's environmental protection measures.
- The sub-contractor's compliance with the requirements of this CEMP.
- The maintenance of environmental measures.

Where reckless or continued substandard environmental performance is displayed by any sub-contractors, either individuals or entire sub-contract teams may be issued warnings or removed from site.

4.5 CEMP availability

This CEMP will be made available for public inspection on request. Confidential information, which may include the location of threatened species, Aboriginal objects or places and personnel contact details, will be removed from all documents provided or made available to the public.

An electronic copy of the CEMP is provided on the [Project website](#).

5 Competence, training and awareness

To ensure that this CEMP is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements of this CEMP. The Environmental Manager will coordinate the environmental training in conjunction with other training and development activities (e.g. safety).

5.1 Environmental induction

All personnel (including sub-contractors) are required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. This is done to ensure all personnel involved in the Project are aware of the requirements of the CEMP and to ensure the implementation of environmental management measures.

Short-term visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times.

The Environmental Manager (or delegate) will conduct the environmental component of the site inductions.

The environmental component will include, but not limited to, an overview of:

- Relevant details of the CEMP including purpose and objectives.
- Key environmental issues.
- Conditions of environmental licences, permits and approvals.
- Specific environmental management requirements and responsibilities.
- Mitigation measures for the control of environmental issues.
- Incident response and reporting requirements.
- Information relating to the location of environmental constraints.

A record of all environment inductions will be maintained and kept on-site. The Environmental Manager may authorise amendments to the induction at any time. Possible reasons for changes to the induction may be Project modifications, legislative changes or amendments to this CEMP or related documentation.

The Environmental Representative will review and approve the induction program and monitor implementation.

5.2 Toolbox talks, training and awareness

Toolbox talks will be one method of raising awareness and educating personnel on issues related to all aspects of construction including environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction.

Toolbox talks will include details of EWMSs for relevant personnel. Toolbox talks will also be tailored to specific environmental issues relevant to upcoming works.

Relevant environmental issues may include (but are not limited to):

- Erosion and sedimentation control.
- Hours of work (including out of hours works).
- Emergency and spill response.
- Aboriginal and non-Aboriginal heritage.
- Threatened species, endangered ecological communities, clearing controls and vegetation protection.
- Weed management.

- Dust control.
- Litter and waste management.
- Noise management.

Toolbox attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact. Topics covered may include those detailed above, or others deemed necessary in the lead up to or during construction. An example of the training schedule is included below in Table 5-1 and will be further developed throughout construction.

Table 5-1 Example Environmental Training Schedule

Training	Senior Managers	Superintendent	Engineers	Environmental Staff	Community Staff	Foreman	Leading Hands	Labourers	Sub-Contractors	Design Staff	Administrative Staff
Project Induction	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Heritage Awareness	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Erosion and Sediment Control	✓	✓	✓	✓		✓	✓				
Spill response	✓	✓	✓	✓		✓	✓				

The Environmental Representative will review the training schedule and monitor implementation.

Another way to inform construction personnel will be through the development and distribution of awareness notes. These will typically take the form of a poster, booklet, or similar and will be distributed to engineers, leading hands, foreman and others with a responsibility for managing specific work locations or activities. This documentation will be used to inform the broader workforce through either daily pre-starts meeting (see section 5.3) or provision in worker crib sheds / break facilities.

5.3 Daily Pre-Start Meetings

The pre-start meeting is a tool for informing the workforce of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the works, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

The Foreman will conduct a daily pre-start meeting with the site workforce before the commencement of work each day (or shift) or where changes occur during a shift. Daily pre-start meetings are generally succinct in nature and take approximately 10-15 minutes.

The environmental component of pre-starts will be determined by relevant foreman and environmental personnel and will include any environmental issues that could potentially be impacted by, or impact on, the day's activities. All attendees will be required to sign on to the pre-start and acknowledge their understanding of the issues explained.

Pre-start topics, dates delivered and a register of attendees will be recorded.

6 Communication

6.1 Internal communication

Clear lines of communication throughout all levels and functions (e.g. management, staff and sub-contracted service providers), is key to minimising environmental impacts and achieving continual improvements in environmental performance.

The environmental team will meet regularly to discuss any issues with environmental management on-site, any amendments to plans that might be required or any new / changes to construction activities.

Regular meetings may also be scheduled with the Environmental Representative and relevant Roads and Maritime environmental staff. The purpose of these meetings would be to communicate ongoing environmental performance and to identify any issues to be addressed.

In addition, environment team members will participate in toolbox talks on at least a weekly basis. This forum will provide an opportunity for the environment team members to communicate on environmental performance, to advise on any upcoming sensitive environmental matters for future work areas and to receive feedback from on-site personnel.

Further internal communications regarding environmental issues and aspects will be through awareness training as described in Section 5.2.

6.2 External and government authority consultation

The Environmental Manager will be the main point of contact regarding specific environmental issues. The Environmental Manager has the responsibility to report on the ongoing environmental performance of the Project to Roads and Maritime, Environmental Representative and other government agencies. The Environmental Manager will report regularly to Roads and Maritime on progress and any key environmental matters and to the EPA through monthly EPL reports.

Relevant government agencies will be consulted throughout construction through their involvement in regular Environment Review Group (ERG) meetings. These meetings will discuss environmental performance, upcoming works, high risk activities and will include inspections or the work sites as required.

6.3 Stakeholder and community communication

6.3.1 Community involvement plan

A Community Involvement Plan (CIP) has been developed to provide an approach to stakeholder and community communications in accordance with the requirements of CoA B28. The plan identifies opportunities for providing information and consulting with the community and stakeholders during the construction phase of the Project. The plan defines:

- The engagement groups.
- The key messages of the Project.
- The range of tools that will be used to interact with community and stakeholders.

Communication tools defined in the plan include:

- Targeted community open days.
- Advertisements.
- Displays.

- Door-knock.
- Letterbox drops.
- Signage.
- Website.
- Focus meetings.
- 1800 number and email address.

The plan (which addresses the requirements of the Community Communications Strategy required by CoA B28) will be submitted to DP&E for approval prior to the commencement of construction.

6.3.2 Complaints and enquires procedure

A Complaints and Enquiries Procedure, consistent with *AS 4269: Complaints Handling*, will be developed for the Project, in accordance with the requirements of CoA B27.

All community inquiries and complaints related to the construction activities will be referred to the 24-hour community information line (1800 800 612). A postal address (PO Box 506, Nambucca Heads, NSW, 2448) and email address (nh2u@abigroup.com.au) has been provided for receipt of complaints and enquiries. The telephone number, the postal address and the email address was published in newspapers circulating in the local area prior to the commencement of construction and is provided on the Project website.

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

Attempts will be made to resolve all complaints in accordance with the CIP. An initial response to complaints will be provided within 24 hours of a complaint being received. A further detailed response, including steps taken to resolve the issue(s) that lead to the complaint, will be provided within 10 days. All complaints should be closed off in the stakeholder database. At all times the stakeholder will be kept informed of when they will receive a response.

The Environmental Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements in the management of any environmental issues resulting in community complaints.

7 Incidents and emergencies

7.1 Incident and Emergency Management

In the event of an environmental incident or emergency, the Lend Lease Environmental Incident / Emergency Response Protocol (Appendix A8) will be followed in the first instance. This basic protocol guides the initial actions required to be undertaken to avoid or minimise environmental harm and notify relevant Project personnel.

Once initial incident management has occurred, Roads and Maritime's Environmental Incident Classification and Reporting Procedure will be implemented. The full procedure is provided in Appendix A7. The Roads and Maritime procedure provides references to:

- Types of incidents.
- Criteria for classifying of environmental incidents.
- Processes for systematically responding to and managing emergency situations.
- Processes, and legal requirements (e.g. Acts, Regulations, EPL), for reporting and notification of an environmental incident.

The Roads and Maritime procedure covers the management of events such as, but not limited to:

- Spills of fuels, oils, chemicals and other hazardous materials.
- Unauthorised discharge from sediment basins or other containment devices.
- Unauthorised clearing or clearing beyond the extent of the Project boundary or premises.
- Inadequate installation and subsequent failure of temporary erosion and sediment controls.
- Unauthorised damage or interference to threatened species, endangered ecological communities or critical habitat.
- Unauthorised harm or desecration to Aboriginal objects and Aboriginal places.
- Unauthorised damage or destruction to any State or locally significant relic or Heritage item.
- Unauthorised damage to marine vegetation and mangroves.
- Unauthorised dredging or reclamation works within a watercourse.
- Potential contamination of waterways or land.
- Accidental starting of a fire or a fire breaking out of containment.
- Any potential breach of legislation, including a potential breach of a condition of: an environment protection licence; CoA approval; or any agency permit condition.
- Works undertaken without appropriate approval or assessment under the *Environmental Planning & Assessment Act 1979*.
- Works undertaken that are not in accordance with a Project assessment.
- Unauthorised dumping of waste.

In addition to the requirements of the Roads and Maritime procedure, incidents will be managed to be consistent with Lend Lease company procedure *LL702 Environmental Incidents and Emergencies*. Lend Lease will also develop a Project wide Emergency Response and Preparedness Plan, including environmental response, and will be required by the POEO Act 1997 to prepare a Pollution Incident Response Management Plan (PIRMP) as the site will require an Environment Protection Licence.

Typically, environmental incidents will be notified verbally immediately and in writing within 1 hour of any incident occurring to the Roads and Maritime Representative and the Environmental Representative. Incident reports will be provided to Roads and Maritime Representative and the Environmental Representative following relevant investigation conclusion, including lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident. All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident.

Changes to notification requirements contained within the POEO Act commenced on the 6 February 2012. These changes require immediate notification of any incident which causes actual or potential harm to the health or safety of human beings or ecosystems is not minor; or if actual or potential loss or property damage (including clean-up costs) associated with a pollution incident exceeds \$10,000, to the following organisations:

- EPA (via the EPA pollution line 131 555).
- Ministry of Health (via the Public Health Unit).
- WorkCover Authority.
- Local Authority (i.e. council) if the EPA is not the appropriate authority.
- Fire and Rescue NSW.

Where an incident involves an Aboriginal site, relevant Registered Aboriginal Parties will be notified and their input sought in closing out the incident.

Roads and Maritime Environment Branch and the Project team will maintain all records relating to environmental incidents.

In accordance with the requirements of CoA B25, the Compliance Tracking Program will document:

- Mechanisms for reporting and recording incidents and actions taken in response to those incidents.
- Provisions for reporting environmental incidents to the Director-General during construction and operation.
- Procedures for rectifying any non-compliance identified during review of incident management.

7.2 Incident Investigation

All incidents will be documented, and where required, due to the severity or ongoing nature of the incident, investigations conducted and action plans established in order that the event does not occur again. Where lessons are learnt from the investigation or current procedures are identified as being ineffective, the CEMP will be revised by the Environmental Manager to include the improved procedures or requirement.

An environmental investigation includes the following basic elements:

Identifying the cause, extent and responsibility of the incident.

- Identifying and implementing the necessary corrective action.
- Identifying the personnel responsible for carrying out the corrective action.

Implementing or modifying controls necessary to avoid a repeat occurrence of the incident.

Recording any changes in written procedures required.

- Advising the environmental authority(ies) if any substantial pollution has occurred.

Roads and Maritime form 624 and Lend Lease company systems shall be used when completing an incident investigation.

8 Inspections, monitoring and auditing

8.1 Environmental inspections

8.1.1 Weekly and rainfall site inspections

The Environmental Manager and/or Environmental Officers will undertake weekly and rainfall inspections of the work sites to evaluate the effectiveness of environmental controls. The Environmental Officers will record inspection findings on an inspection checklist form.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority.

8.1.2 Environmental Representative, Roads and Maritime and ERG inspections

The Environmental Representative, Roads and Maritime staff and members of the ERG will undertake regular inspections of works sites, and in particular critical activities throughout construction of the Project. Inspections by the Environmental Representative and Roads and Maritime Project staff would typically occur on a weekly or fortnightly basis depending on the complexity and anticipated risks associated with the stage of construction.

ERG inspections will typically be less frequent, likely on a monthly basis (or alternate timeframe depending on the construction staging of Project). The ERG will be maintained for the duration of the Project and will meet regularly and undertake environmental inspections. The role the ERG is to provide proactive advice on environmental management issues and review the environmental performance of the Project. Section 8.6 describes the process if the ERG raise non-conformances or issues requiring corrective/preventative action during site inspections.

A member of the Project environment team will participate in all Environmental Representative, client and ERG inspections, and records maintained. Deficiencies and required actions will be analysed and prioritised at the completion of the inspection and timeframes for implementation of corrective actions agreed. This is detailed further in Section 8.6.

8.1.3 Pre-work inspections

Prior to the commencement of works on each shift, an inspection will be carried out and will include a check of relevant environmental controls and resources required to ensure effective operation and maintenance. Works are not to commence unless inspections are found to be satisfactory.

The foreman will undertake the inspections.

8.2 Environmental monitoring

Monitoring will be undertaken to validate the impacts predicted for the Project, to measure the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management sub-plans and summarised in Table 8-1 below.

Table 8-1 Summary of environmental monitoring required by Project approval

CoA	Description	Relevant Sub-Plan	Reporting Requirements
B10 (c) and B31 (b)	Ecological Monitoring for construction related impacts	Flora and Fauna Management Sub Plan (Appendix B2)	Annual reporting of results to the Director-General and EPA
B17 and B31 (d)	Water Quality Monitoring Program	Soil and Water Management Sub Plan (Appendix B4)	Reporting of results to DP&E, EPA and DPI
B21	Monitoring procedures for the built elements and landscaping (including weed control)	Urban Design and Landscape Plan	Refer UDLP
B29 (c) and (d)	Monitoring of implementation and outcomes of EMPs and monitoring programs by Environmental Representative	NA	Report to Roads and Maritime
B30 (e) (i)	Monitoring of dust emissions	Construction Air Quality Management Sub Plan (Appendix B6)	Refer Sub Plan
B30 (e) (ii)	Monitoring of construction waste	Construction Waste and Energy Management Sub Plan (Appendix B7)	Refer Sub Plan
B30 (e) (iii)	Monitoring of spoil and fill	Soil and Water Management Sub Plan (Appendix B4)	Refer Sub Plan
B30 (e) (i)	Monitoring of construction hazard and risks	Roads and Maritime Environmental Incident Classification and Reporting (Appendix A7)	Refer Appendix A7
B31 (a) (vii)	Monitoring of construction traffic	Construction Traffic Management Plan (Appendix B1)	Refer Sub Plan
B31 (c) (vii)	Construction noise and vibration monitoring	Construction Noise and Vibration Management Sub Plan (Appendix B3)	Refer Sub Plan
C14	Protection/monitoring of Aboriginal cultural heritage sites	Heritage Management Sub Plan (Appendix B5)	Refer Sub Plan

The process for each type of monitoring described is detailed further in the relevant sub plan as detailed in Table 8-1.

Where a non-conformance is detected or monitoring results are outside of the expected range and are directly attributable to the Project (i.e. are influenced by factors under the direct control of the Project e.g. noise from construction equipment), the process described in Section 8.6 will be implemented. Steps in the process will typically include:

Non-conformances identified as part of the weekly inspections will be actioned and closed out in a timeframe agreed to between the Environmental Officer and relevant member of the construction team on site.

- If required, an analysis of the results by the Environmental Manager in more detail with a view of determining possible causes for the non-conformance.
- If required, a site inspection by the Environmental Manager or delegate.
- Advising relevant personnel of the problem.
- Identifying and agreeing on actions to resolve or mitigate the non-conformance.
- Implementing actions to rectify or mitigate the non-conformance.

A non-conformance Environmental Incident Report and/or Environmental Improvement Notice may be issued by the Environmental Manager in response to the non-conformance problem if it is found to be construction related.

The timing for any improvement will be agreed between the relevant Engineer/Superintendent and Environmental Manager based on the level of risk (e.g. a significant risk will require immediate action).

All environmental monitoring equipment shall be maintained and calibrated according to manufacturer's specifications and appropriate records kept.

8.3 Auditing and reporting

Table 8-2 presents auditing requirements that are applicable to the Project.

8.3.1 Lend Lease audits

Internal auditing will be undertaken generally on a six monthly basis throughout the Project. The purpose of auditing is to verify compliance with:

- This CEMP and Sub Plans.
- Approval requirements (CoAs, SoCs).
- Any relevant legal and other requirements (e.g. licenses, permits, regulations, Roads and Maritime contract documentation).

An audit checklist will be developed and amended as necessary to reflect changes to this CEMP, subsequent approvals and changes to Acts, regulations or guidelines.

8.3.2 Independent external audits

External auditing will be undertaken by an independent environment auditor in accordance with ISO 19011:2003 - *Guidelines for Quality and/ or Environmental Management Systems Auditing*.

Table 8-2 Audit requirements

No.	Audit	Requirement	Timing	Responsibility	Recipient
1	Internal audit	Verify compliance with approval and legal requirements, Roads and Maritime specifications and construction documentation	The first audit within three months of the commencement of construction and then at six monthly intervals there after. The final submitted within five working days of contract completion date.	Environmental Manager	Project Director, Roads and Maritime
2	External independent audit	Verify compliance with approval and legal requirements, Roads and Maritime specifications, construction documentation and any other commitments.	Six monthly	Environmental Manager	Project Director, Roads and Maritime

8.4 Compliance tracking program

A Compliance Tracking Program has been developed for the overall WC2U Project. The requirements of the Compliance Tracking Program, as prescribed in CoA B25, include:

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

- f) Provisions for reporting environmental incidents to the Director-General during construction and operation.
- g) Procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.

The Compliance Tracking Program describes how the requirements of CoA B25 will be met and sets out a program and frequency for compliance reporting and independent auditing. The compliance reporting required under the Compliance Tracking Program will record how the CoA and SoCs have been addressed.

Lend Lease will complete the required construction compliance reports relevant to the Nambucca Heads to Urunga section and provide to Roads and Maritime for submission to DP&E. A summary of the required compliance reporting, as required by CoA B25, is provided in Table 8-3.

Table 8-3 Compliance reporting

No.	Report	Requirement	Timing	Responsibility	Recipient
1	Compliance tracking program CoA B25 (a)	Describes how the requirements of CoA B25 will be met and sets out a program and frequency for compliance reporting and independent auditing.	Prior to construction	Roads and Maritime	DP&E
2	Compliance Reporting CoA B25 (c)	Report on compliance and performance against approval requirements. The compliance reporting required under the Compliance Tracking Program will record how the CoA and SoCs have been addressed.	Prior to construction, six months following the commencement of construction and then at yearly intervals thereafter. Prior to commencement of operation.	Environmental Manager submit to Roads and Maritime. Roads and Maritime to review and submit to DP&E	DP&E and ER

8.5 Other reporting

Prior to, during and following construction, various reports will be prepared to fulfil internal Roads and Maritime and Lend Lease reporting needs and requirements under the Project approval. Table 8-4 sets out the reporting requirement applicable to the Project, timing of the reporting, who is responsible for managing preparation of the reports and the intended recipient(s).

Additional reporting may be necessary as the works progress. In such a circumstance, Table 8-4 will be amended to reflect these changes.

Table 8-4 Reporting requirements

No.	Report	Requirement	Timing	Responsibility	Recipient
1	Monthly environmental report	For incorporation in Project Monthly Reports including environmental statistics (i.e. incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues	Monthly	Environmental Manager	Roads and Maritime Lend Lease
2	EPL monthly report	Details of all non-compliances with conditions of EPL, measures taken to prevent recurrence, and details of discharges from sediment basins where water quality results exceed EPL conditions.	Within 10 working days of the end of each calendar month.	Environmental manager	EPA
3	EPL annual returns	Report on compliance with EPL.	Within 60 days of the anniversary of the EPL.	Environmental Manager	EPA
4	ER inspection report	Report of site environmental performance following routine inspections.	Monthly	Environmental Representative	Roads and Maritime/D P&E
5	Environmental risk assessment	Conducted for each construction stage, Project changes and significant issues.	Prior to construction during development of CEMP and as required thereafter.	Environmental Manager	Roads and Maritime

No.	Report	Requirement	Timing	Responsibility	Recipient
6	Monitoring results	Report on monitoring data recorded and potential exceedances against criteria.	As required	Environmental Manager, Environmental Officer (s)	Roads and Maritime
7	Roads and Maritime and/or EPA environmental inspection reports	Response to matter raised in Roads and Maritime and/or EPA site inspections.	As required. Typically every two weeks for Roads and Maritime inspection reports and monthly for EPA inspection reports.	Environmental Manager, Environmental Officer (s)	Roads and Maritime/EPA

8.6 Non-conformity, corrective and preventative actions

Any member of the Project team may raise a non-conformance or improvement opportunity. The Lend Lease Project Quality Plan describes the process for managing non-conforming work practises and initiating corrective/preventative actions or system improvements.

The Environmental Representative, Roads and Maritime Representative or public authority may also raise a non-conformance or improvement opportunity using the same process. A non-conformance is the failure or refusal to comply with the requirements of this CEMP and supporting documentation.

For each non-conformance identified a corrective/preventative action (or actions) must be implemented. In addition any environmental management improvement opportunities can be initiated as a result of incidents or emergencies, monitoring and measurement, audit findings or other reviews. Improvement opportunities may also result in the implementation of corrective/preventative actions.

Non-conformances will be resolved according to the Lend Lease company procedure *LL107 Non-conformance, Corrective and Preventive Action*. The Environmental Manager will issue an Environmental Inspection Report or an Environmental Improvement Notice in response to poor or inappropriate work methods or environmental controls, equipment selection, maintenance of controls, or other identified concerns.

An Environmental Inspection Report will be issued for deficiencies that are minor in nature but require rectification. An Environmental Improvement Notice will be issued for more serious issues that present an immediate need for action or for repeat non-conformances where a warning is required to be issued for poor performance.

Corrective/preventative actions and improvement opportunities will be entered into Lend Lease's quality system database and include detail of the issue, action required and timing and responsibilities. The record will be updated with date of close out and any necessary notes. The database will be reviewed regularly to ensure actions are closed out as required.

Non-conforming activities may be stopped, if necessary, by the Environmental Manager, Environmental Officers or Project / Site Engineer following consultation with the Area Manager or delegate. The works will not commence until a corrective / preventative action has been closed out. The Environmental Representative may also stop works in these

circumstances. In such circumstances a non-conformance report must be prepared in accordance with the Quality Plan.

Procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management are also documented in the Compliance Tracking Program.

9 Review and improvement

Management reviews are undertaken as part of the continual improvement process. Lend Lease's Environmental Manager will review the CEMP and its operation and implementation at least every twelve months from construction commencement. Between the scheduled reviews, a register of issues will be maintained to ensure that any issue raised by internal and external personnel associated with the Project is recorded.

The purpose of the review is to ensure that the system is meeting the requirements of the standards, policies and objectives and, if not, to amend the CEMP to ensure compliance. The Project Director will review and approve changes to the system.

This review will be held every 12 months and will consider:

- Client comments.
- Agency comments.
- Complaints.
- New environmental assessments or updated risk assessments
- Effectiveness of environmental management documentation implementation.
- Management effectiveness.
- Potential improvements to the environmental management documentation.
- Adequacy of resources.
- Findings of audits.
- Environmental objectives and targets.
- Environmental performance.
- Compliance with legal and other requirements.
- Critical non-conformance or repeated non-conformances.
- Organisation changes.
- Effectiveness of training and inductions.

The outcomes of the review could include amendments to this CEMP and related documentation, revision to the Project's environmental management system, risk assessment review, re-evaluation of the Project objectives and targets as well as feeding into other Project documents.

Any changes to the CEMP, sub plans or other documentation prescribed by the CoA will be advised to Roads and Maritime, the Environmental Representative and Agencies/DP&E (where relevant) for approval. This is described further in Section 1.6.

10 Documentation

10.1 Environmental records

The Environmental Manager is responsible for maintaining all environmental management documents as current at the point of use. Types of records include:

- All monitoring, inspection and compliance reports/records.
- Correspondence with public authorities.
- Induction and training records.
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action.
- Community engagement information.
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken.

All environmental management documents are subject to ongoing review and continual improvement. This includes times of change to scheduled activities or to legislative or licensing requirements.

Only the Environmental Manager, or delegate, has the authority to change any of the environmental management documentation.

10.2 Document control

Lend Lease, or Roads and Maritime where relevant, will coordinate the preparation, review and distribution, as appropriate, of the environmental documents listed above. During the Project, the environmental documents will be stored at the main site compound.

Lend Lease will implement appropriate document control processes to control the flow of documents within and between Roads and Maritime, stakeholders and sub-contractors.

The process will also ensure that documentation is:

- Developed, reviewed and approved prior to issue.
- Issued for use.
- Controlled and stored for the legally required timeframe.
- Removed from use when superseded or obsolete.
- Archived.

A register, and distribution list if appropriate, will identify the current revision of particular documents or data.

Appendices

Appendix A1

Register of legal and other requirements

Table 5 Legal register

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
General				
<i>Environmental Planning and Assessment Act, 1979</i>	All	Comply with the terms Minister for Planning and Infrastructure's approval for the project. Obtain the Minister's approval for any project modifications that are not consistent with the planning approval.	S75W	Yes
Water				
<i>Water Management Act 2000</i>	Water access and use.	Do not take water from a water source (a lake, river or estuary or place where water occurs naturally on or below the surface of the ground, and includes coastal waters) without an access licence. Do not use of water on land (unless supplied by a water utility, irrigation corporation etc or in accordance with basic landholder rights) without a water use approval.	S56 S60A S89 S91A	No
<p>With the exception of controlled activity approvals, the <i>Water Management Act 2000</i> (WM Act) only applies in relation to those water sources covered by operational water sharing plans – these areas cover most of the State's major regulated river systems.</p>				

* Note that pursuant to Schedule 6A of the *Environmental Planning and Assessment Act 1979*, the project is a transitional Part 3A project. The provisions of Part 3A therefore continue to apply.

Act	Activity / aspect	Requirement	Reference	Part 3A * applicability
<i>Water Management Act 2000</i>	Water management works	Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.	S90 S91B S91C S91D	No
<i>Water Management Act 2000</i>	Waterfront land.	Do not deposit material, excavate, or remove material within a watercourse bank, shore or bed, or on land 40 metres inland, or interfere with the likely flow of water to such a body, without a controlled activity approval.	S91	No Public authorities are exempt from the need to obtain a controlled activity approval. Water Management (General) Regulation 2004 (cl.39A)
<i>Protection of the Environment Operations Act 1997</i>	Water pollution	Do not cause water pollution except in accordance with the conditions of any EPA licence.	S120 S122	Yes
Noise				
<i>Protection of the Environment Operations Act 1997</i>	Plant maintenance and operation	Do not operate plant if it emits noise caused by poor maintenance or operation.	S139	Yes
<i>Protection of the Environment Operations Act 1997</i>	Materials management	Do not cause noise by failing to properly and efficiently deal with materials.	S140	Yes
Contaminated material				

Act	Activity / aspect	Requirement	Reference	Part 3A * applicability
<i>Protection of the Environment Operations Act 1997</i>	Land pollution	Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed landfill and which is operated in accordance with the regulations.)	S142A – S142E	Yes
<i>Contaminated Land Management Act 1997</i>	Reporting contamination	<p>Notify the EPA if:</p> <p>Contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water.</p> <p>Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land.</p> <p>Contamination meets other criteria that may be prescribed by the regulations.</p>	S60	Yes
Biodiversity				
<i>Noxious Weeds Act 1993</i>	Weed control	<p>As a public authority occupier of land, control noxious weeds on the land as required under the control category or categories specified in relation to the weeds concerned.</p> <p>Notify relevant control authority within 3 days of becoming aware that a notifiable weed (W1 weed) is on land. (or ought reasonably to have known).</p> <p>Must not scatter or cause to scatter notifiable weed material.</p>	S13 S16 S30	Yes

Act	Activity / aspect	Requirement	Reference	Part 3A * applicability
<i>National Parks and Wildlife Act 1974</i>	Native fauna	Do not harm any animal that is of a threatened species population or ecological community, or its habitat except in accordance with a planning approval.	Part 8A	Yes
		Do not harm critical habitat except as in accordance with a planning approval.	S98	Yes
		Do not harm native fauna (other than listed unprotected fauna) except in accordance with a planning approval or licence.	S120, S127, 132C	Yes
<i>Native Vegetation Act 2003</i>	Flora and vegetation conservation	native Only clear native vegetation in accordance with a planning approval or property vegetation plan.	S12	Yes
<i>National Parks and Wildlife Act 1974</i>	Flora and vegetation conservation	native Do not pick protected native plants without a licence.	S117 S131	Yes
<i>Fisheries Act 1994</i>	<i>Management</i> Dredging reclamation	or Provide the Minister for Primary Industries 28 days notice of planned dredging or reclamation work.	S199	Yes
<i>Fisheries Act 1994</i>	<i>Management</i> Mangroves, seagrasses and marine vegetation	and Do not harm any mangroves, seagrasses or other marine vegetation on public water land protected by the regulations without a permit.	S205	No
<i>Fisheries Act 1994</i>	<i>Management</i> Fish passage	Do not block fish passage without a permit	S219	No
<i>Environment Protection Biodiversity Conservation Act, 1999 (Commonwealth)</i>	Flora and conservation	fauna Do not kill, injure or take a member of a listed threatened species without a permit.	Part 13	Yes
		Comply with the terms of any EPBC Act approval for the project.		NA

Act	Activity / aspect	Requirement	Reference	Part 3A * applicability
Waste				
<i>Protection of the Environment Operations Act 1997</i>	Littering	<p>Do not litter in a public place or an open private place. Do not litter from a vehicle. This includes cigarette butts.</p> <p>Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises.</p> <p>Do not deposit advertising material on or in vehicles.</p>	Part 5.6A	Yes
<i>Protection of the Environment Operations Act 1997</i>	Waste transportation	<p>and Do not undertake a scheduled waste activity unless in accordance with an environmental protection licence.</p> <p>A licence must be obtained when construction and demolition wastes are applied to land under certain circumstances. This includes the reincorporation of crushed road base material back into roads and the placing of excess fill material onto properties. A licence is not required if the material:</p> <p>Is VENM.</p> <p>Does not exceed 200 tonnes in the Sydney, Newcastle and Wollongong areas, or 20,000 tonnes outside these areas.</p> <p>Is covered by a “general exemption”. Current exempted materials are ENM, recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land.</p> <p>A licence must be obtained if more than 2,500 tonnes (or cubic metres) is stored on a stockpile site at any one time, or more than 30,000 tonnes of waste is received per year from off site.</p>	Part 3.2 Schedule 1	Yes

Act	Activity / aspect	Requirement	Reference	Part 3A * applicability
		Only transport waste to a facility that can lawfully accept the waste.	S143	Yes
		Do not dispose of waste in a manner that harms or is likely to harm the environment.	S115	Yes
Protection of the Environment Operations (Waste) Regulation 2005	Waste transportation and	Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.	Regulation cl.49	Yes
		Comply with record keeping requirements in relation to the transport of certain types of waste.	Regulation Part 3	Yes
Heritage				
<i>Heritage Act 1977</i>	Heritage	Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage Register without approval from the Heritage Council.	S56-57	No
		Do not disturb or excavate land with knowledge or reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed; or Do not disturb or excavate land on where a relic has been discovered or exposed.	S139	No

Act	Activity / aspect	Requirement	Reference	Part 3A * applicability
		Notify the heritage Council on discovery of a relic	S146	Yes
<i>National Parks and Wildlife Act 1974</i>	Aboriginal places and objects	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	S86 S90	No
		Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	S89A	Yes
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)</i>	Protection of areas and objects	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	S20	Yes
		Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	S22	Yes
General				
<i>Protection of the Environment Operations Act 1997</i>	Harming the environment	Do not risk harming the environment by wilfully or negligently: disposing of waste unlawfully. causing any substance to leak, spill or otherwise escape (whether or not from a container); or emitting an ozone depleting substance	S115 S116 S117	Yes
<i>Protection of the Environment Operations Act 1997</i>	Control equipment	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	S167	Yes
<i>Protection of the Environment Operations Act 1997</i>	Notification of pollution incidents	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	S148	Yes

Act	Activity / aspect	Requirement	Reference	Part 3A * applicability
<i>Protection of the Environment Operations Act 1997</i>	Site licensing	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an activity, unless the premises are licensed by the EPA. This applies to “road construction”, “crushing, grinding and separating” and “extractive activities. (and any other scheduled activity undertaken for the Project)	S47 S48	Yes
<i>Environmentally Hazardous Chemicals Act, 1985</i>	Hazards and risks	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	S28	Yes
<i>Dangerous Goods (Road and Rail Transport) Act 2008</i>	Hazards and risks	Ensure that dangerous goods are transported in a safe manner.	S9	Yes
<i>Pesticides Act 1999</i>	Hazards and risks	Use pesticides in an environmentally sensitive manner. Do not use an unregistered pesticide without a permit. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label. Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. Compliance with pesticide codes of practice is required.	S12 S13 S14 S15 S17	Yes
<i>National Greenhouse and Energy Reporting Act, 2007 and Regulations 2008</i>	Greenhouse gas emissions	Accounting and reporting of greenhouse gases produced and energy consumed during construction. Applicability dependent on thresholds.	-	Yes

Table 6 Roads and Maritime G36 requirements

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3	Implement a Contractors Environmental Management System (EMS)	This document
3.1	An environmental policy must be included.	Appendix A3
3.2 c)	Prepare and implement a CEMP in accordance with Clause 4 and ISO 14001 Clause 4.3.3.	This document
3.3 a)	Nominate the Environmental Manager directly responsible for ensuring that the requirements of the CEMS are implemented and maintained.	Section 4.2
3.3 b)	Indicate how suitable resources will be assigned to ensure that the CEMP is fully implemented.	Section 4.2
3.5	Include a matrix or index in the CEMP showing where the environmental protection requirements of G36 have been addressed. Advise Roads and Maritime Representative of any change to the CEMS or CEMP.	This table Chapter 9
3.7	Monitor and evaluate environmental performance.	Chapter 8
3.10	Schedule and undertake CEMS audits and CEMP compliance audits.	Section 8.3
4.1.1	A CEMP must be prepared and include environmental protection practices, resources and sequence of activities required to comply with relevant environmental legislation, conditions of any applicable licence, approval and permit, ISO 14001 Clause 4.	This document
4.1.1	The CEMP must be either incorporated as part of the project quality plan.	Noted

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
4.2	The CEMP must indicate the names, responsibilities and authority of your site management personnel who have primary responsibility for implementing the CEMP, monitoring its effectiveness, rectifying and reporting any environmental deficiencies, controlling further construction activities until deficiencies are rectified and keeping your environmental records.	Section 4.2 Contacts
4.2	The CEMP must identify the Environmental Manager as the authorised contact person for communications with the Roads and Maritime Representative and the Environment Protection Authority (EPA) on environmental matters.	Section 4.2
4.2	A project soil conservationist must be appointed for the duration of the project. The soil conservationist will review all erosion, sediment and water pollution plans, controls and measures prior to installation.	Appendix B4 CEMP 4.2.12
4.4.1	<p>The CEMP must include details of:</p> <ul style="list-style-type: none"> • Key emergency response personnel showing responsibilities and contact details including all-hours telephone numbers. • Emergency services (e.g. ambulance, fire brigade, spill clean-up services). • Communications strategy (internal and external). <p>Containment measures to be taken in the event of emergency situations that may arise during the Contractor's Work and procedures for restoration.</p>	<p>Contacts, Section 4.2</p> <p>Contacts</p> <p>Chapter 7 Appendix A7</p>
4.4.2	All Environmental Incidents must be managed and reported in accordance with the RTA Environmental Incident Classification and Management Procedure.	Appendix A7

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
4.4.2	<p>EPA will be notified via the EPA Environment Line (telephone 131 555) of any environmental incidents or pollution incidents on or around the Site in accordance with Part 5.7 of the Protection of the <i>Environment Operations Act 1997</i> (NSW) (POEO Act), in the following circumstances:</p> <ul style="list-style-type: none"> If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial. <p>If actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds \$10,000.</p>	Appendix A7
4.4.2	Prepare an Incident Emergency Spill Plan as part of the CEMP.	Appendix A7 SWMP
4.5	Ensure that all staff and subcontractors working on the Site are provided with environmental training to achieve a level of competence and awareness appropriate to their assigned activities before they commence their assigned activities.	Chapter 5
	Identify at least two persons (and their contact telephone numbers) who will be available to be contacted by EPA on a 24 hour basis and who have authority to take immediate action to shut down any activity, or to effect any pollution control measure, as directed by an authorised officer of EPA.	Contacts
4.8.1	Notify local residents about new or changed construction activities which will affect access to their properties or otherwise significantly disrupt residents' use of their premises.	Section 6.3
4.8.3	Inform residents of the proposed work outside normal working hours.	Section 6.3
4.10	Report on complaint about any environmental issue, including pollution, arising from the Works.	Section 6.3

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
4.11	Maintain environmental records to demonstrate compliance with the CEMP.	Section 8.3, Section 8.4, Section 8.5
4.13	Undertake inspections and surveillance, and report on performance on high risk events and activities, works in environmentally sensitive areas, the adequacy of operational controls, and measurements for aspects where compliance limits have been specified.	Section 8.2, Section 8.3, Section 8.4
4.14.1	Develop and implement a risk-based auditing program.	Section 8.3
4.15	Implement a waste and recycling material data collection program.	Appendix B7
5	Identify the location of environmentally sensitive areas and adjacent sensitive receivers.	Appendix A6
6.2	Identify obligations under environmental legislation relevant to the Work.	Appendix A1
6.3	Obtain all necessary approvals, licences and permits required for the work and carry out work in accordance with the requirements.	Section 3.3
6.4	Identify construction activities and access requirements to the construction site and the other areas affected by the Work. Ancillary facility management	Appendix B1 CEMP 3.7 Appendix A4
6.5	Prepare and implement a soil and water management plan addressing: <ul style="list-style-type: none"> • Erosion and sedimentation control. • Water extraction. • Dewatering. • Works in waterways. • Impacts on groundwater from construction. 	Appendix B4

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
6.6	Prepare and implement an air quality management plan.	Appendix B6
6.7	Prepare and implement a Noise and Vibration Management Plan.	Appendix B3
6.9	Manage clearing, mulch, flora and fauna.	Appendix B2
6.12	Plan and execute the Work so as to minimise the possibility of pollution of the Site and adjoining areas from chemicals, dangerous goods and other potential contaminants.	Appendix B4
6.13, 6.14	Prepare and implement a Heritage Management Plan to manage Aboriginal and non-Aboriginal heritage.	Appendix B5
6.15	Manage contaminated land.	Appendix B4
6.16	Prepare and implement a Waste Management Plan.	Appendix B7
6.18	Reinstate all disturbed areas both on and off the Site.	Appendix B4, Urban Design and Landscape Plan

Appendix A2

Environmental aspects and impacts register

This Environmental Aspect and Impact Register has been prepared by the Nambucca Heads to Urunga development team to supplement the Environmental Risk Analysis conducted as part of the Environmental Assessment (EA).

The identification of significant construction activities and associated impacts that could eventuate during construction of the Project is central to the selection of appropriate environmental safeguards.

The risk management process involved an assessment of all specific project activities/aspects in or near environmentally sensitive areas and resulted in the development of a list of environmental risks (effects and impacts) and a corresponding risk mitigation strategy and risk ranking. Each environmental risk was categorised, based on the following:

- The environmental aspect.
- Relative scale of the potential impact.
- Type of potential impact.
- Likelihood of occurrence.

The identification of risks included a review of the proposed works, the CoA, SoC, and review of the environmental risks identified by the EA and subsequent Submissions Report.

Table 1 Aspects and impacts register

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
Air quality	<ul style="list-style-type: none"> General earthworks. Vegetation clearing. Open excavation works. Spoil handling. Stockpiling Vehicular movements on unsealed roads. Material haulage Quarrying/ Crushing. Vehicle emissions. Handling of chemicals, waste and hazardous goods Blasting. Lime stabilisation of material Batch Plant Mulch Handling 	<ul style="list-style-type: none"> Complaints from neighbours, including loss of amenity, dust in living areas, swimming pools. 	B (moderate)	<ul style="list-style-type: none"> Induct personnel on air quality issues and safeguards. Use water carts on unsealed surfaces and stockpiles. Utilise safe dust suppressants to reduce dust generation. Use street sweepers to reduce dust in areas of dust build up. Modify or cease operations during high winds. All trucks on public roads to cover loads. Vehicles, equipment, machinery used and all facilities – designed, operated and maintained to control the emission of smoke, dust, odours and fumes. All disturbed areas stabilised, revegetated and/or landscaped as soon as practicable. Minimise tracked mud/dust on public roads. No burning or incineration of any material at any time. Monthly dust monitoring throughout construction. Avoid “hot-work” during total fire bans and obtain any necessary permits/exemptions from the Rural Fire Service. WorkCover licensing requirements will be complied with for the storage of hazardous substances and dangerous goods. Appropriately stocked spill kits will be readily available at all chemical storage locations and during chemical use. Material Safety Data Sheets (MSDSs) will be obtained, complied with and retained on site for all required chemicals. Pesticide use will be in accordance with the Pesticides Act, 1999. <i>In situ</i> liming of materials. 	C (Low)	AQMP EWMS SWMP Complaints procedure Induction
		<ul style="list-style-type: none"> Potential adverse health effects. 	C (Low)			
		<ul style="list-style-type: none"> Degradation of water quality and other aspects of the natural environment. 	C (Low)			
		<ul style="list-style-type: none"> Dust on agriculture 	B (moderate)			
		<ul style="list-style-type: none"> Health risks to neighbours and members of the public from release of gases and/or smoke. 	C (Low)			
Biodiversity	<ul style="list-style-type: none"> Clearing of native vegetation. Stockpile / haul road construction near vegetation. Works near and in creeks / temporary crossings. General earthworks near vegetation. Vehicular movements. Open excavation works. Decommissioning of farm dams Asphalt, curing, sealing near sensitive areas Waterway crossings State Forests’ works Unexpected finds 	<ul style="list-style-type: none"> Loss of habitat for threatened species. 	A (High)	<ul style="list-style-type: none"> Induct personnel on biodiversity issues and mitigation measures. Prior to construction – identify and fence all flora and fauna habitat areas required to be protected as identified in the Environmental Assessment and/or detailed design documentation. Minimise clearing of all vegetation and undertake progressive revegetation. Locate and construct fauna crossings as identified in the Environmental Assessment and/or detailed design documentation. Widen medians to allow for safe fauna passage Implement fish crossings where required Implement ongoing weed monitoring and management programs. Disturbed areas will be monitored for effective soil stabilisation and restoration / rehabilitation. Implement a staged clearing process and undertake fauna rescue during clearing as required. Engage arborist to provide advice on habitat tree health and provide ongoing advice. Design and construct all temporary waterway crossings to maintain fish passage. Undertake threatened species management as required under the Environmental Assessment and/or detailed design 	B (moderate)	FFMP EWMS Vegetation Clearing procedure Fauna handling procedure Induction DPI protocol for dam decommissioning
		<ul style="list-style-type: none"> Potential longer term impacts associated with increased habitat fragmentation. 	A (High)			
		<ul style="list-style-type: none"> Direct impact to flora or fauna during construction. 	B (moderate)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
		<ul style="list-style-type: none"> Accidental clearing 	A (High)	<ul style="list-style-type: none"> documentation / Approval. Implement washing procedures to prevent the spread of pests and disease. Undertake monitoring as required in the Approval. Implement DPI's protocol for dam decommissioning in regards to weeds, exotic fish, etc Undertake mitigation as per the fauna management strategies. Implement controls to minimise and contain run-off from asphalt, curing and sealing works. Regular maintenance of controls at waterway crossings Installation of adequate controls for waterway crossings, including rock size, length, width at crossing. Community consultation regarding NH2U works vs State Forests. Maintain water regimens as much as possible – e.g. ensure works do not cause flooding or cause ecosystems to dry out. Site visit with State Forests to identify boundaries prior to clearing. Workshop potential further Koala crossing at southern end of project as per MCOA requirement. FFMP to contain procedure for unexpected finds. Ensure protective fencing is accurate, clearly visible, robust and consistent to minimise accidental clearing, Consider use of machine controls to minimise accidental clearing. Ensure ecologists are sufficiently resourced, with experienced wildlife handlers to assist. 	B (moderate)	
		<ul style="list-style-type: none"> Ecologists under-resourced during clearing 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Direct or indirect impact to water quality 	A (High)		B (moderate)	
		<ul style="list-style-type: none"> Negative community perceptions regarding flora and fauna impacts. 	B (moderate)		C (Low)	
Aboriginal heritage	<ul style="list-style-type: none"> Early works including non-substantial construction activities eg services relocations. Initial clearing and/or grubbing of vegetation. Initial removal of topsoil. Construction of site compounds and spoil / mulch and / or equipment stockpile areas. Temporary access roads during construction. Works outside boundaries 	<ul style="list-style-type: none"> Impact to identified heritage items prior to completion of any required salvage program. Impact (machinery, procedure vibration, stockpiles) during the construction period to identified sites Impact to undiscovered or undocumented heritage sites Change in visual integrity of cultural area Finding / disturbing burials or human remains 	<p>A (High)</p> <p>A (High)</p> <p>B (moderate)</p> <p>A (High)</p> <p>C (Low)</p>	<ul style="list-style-type: none"> Prior to construction – identify and assess Aboriginal heritage items on proposed sites and predict potential impacts. Induct personnel on heritage issues and mitigation measures. Protect identified heritage items with protective fencing or flagging and signage from being disturbed during construction. Undertake salvage works in accordance with the HMP prior to impacting site. If design changes or construction activities impact on areas outside of those identified in the EA, OEH and relevant Aboriginal groups will be consulted and approval obtained pre any required salvage. Contact Roads and Maritime for advice on all actual or potential heritage issues Implement unexpected find procedures as required. Maintain regular and consistent consultation with AFG/ Aboriginal stakeholders OEH and Aboriginal stakeholders to review HMP. Consultation with State Forests Cultural Heritage officer regarding heritage finds. 	<p>B (moderate)</p> <p>B (moderate)</p> <p>C (Low)</p> <p>B (moderate)</p> <p>C (Low)</p>	<p>HMP</p> <p>EWMS</p> <p>Unexpected finds procedure</p> <p>Induction</p> <p>Heritage awareness training</p>
Non-Aboriginal heritage	<ul style="list-style-type: none"> Early works including non-substantial construction 	<ul style="list-style-type: none"> Impact to identified heritage items. 	B (moderate)	<ul style="list-style-type: none"> Prior to construction – identify and assess non- Aboriginal heritage items on proposed sites and predict potential 	C (Low)	<p>HMP</p> <p>EWMS</p>

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> activities eg services relocations. Initial clearing and/or grubbing of vegetation. Initial removal of topsoil. Construction of site compounds and spoil / mulch and / or equipment stockpile areas. Temporary access roads during construction. Works outside boundaries 	<ul style="list-style-type: none"> Vibration damage during the construction period to identified sites. 	B (moderate)	<ul style="list-style-type: none"> impacts. Induct personnel on heritage issues and safeguards. Protect identified heritage items with protective fencing or flagging from being disturbed during construction. Undertake archival recording as specified in the HMP. Regular inspection of heritage protection fencing. Contact Roads and Maritime for advice on all actual or potential heritage issues Implement unexpected find procedures as required. Landholder consultation. Consultation with State Forests Cultural Heritage officer regarding heritage finds. 	C (Low)	CNVMP Unexpected finds procedure Induction Heritage awareness training
		<ul style="list-style-type: none"> Impact to undiscovered or undocumented heritage sites. 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Change in visual integrity of heritage sites. 	B (moderate)		C (Low)	
Noise and vibration	<ul style="list-style-type: none"> Site establishment. Earthworks. Batch plant. Bridge works. Piling. Paving. Saw cutting. Blasting. Crushing and screening. Rock hammering and drilling. Ancillary Sites Out of hours works 	<ul style="list-style-type: none"> Noise impacts on sensitive receivers during construction. 	A (High)	<ul style="list-style-type: none"> Liaise (agreements where applicable) with local communities and affected residents. Adherence to working hours in CNVMP unless otherwise approved. Implement operational noise mitigation measures as early as possible. Respite periods for particularly noisy/ short duration activities (in accordance with regulatory guidelines and/or CNVMP). Construction equipment selected, operated and maintained to minimise noise impacts and where necessary fitted with silencers and "smart" reversing alarms. Reduced use of horns to signal trucks loaded where residences close by. Minimise impacts from saw cutting/ use effective shielding. Regular noise monitoring to monitor predicted verses actual noise levels. Implementing management measures where generated noise is found to be excessive and agreements are not in place. Managing construction vehicle routes and speed of vehicles. Modelling vibration impacts and monitoring where impacts are predicted. Establish and maintain complaints management system. Building condition reports on potentially impacted buildings as required by Project approval. Undertake trial blasting to establish site law for follow up blasting. Discuss noise and vibration monitoring results at each ERG. Engage residents early and seek resident agreements re: Out of Hours Works, Blasting, as early as possible. 	A (High)	CNVMP EWMS Blasting procedure / Management Plan Negotiated agreements Complaints procedure Induction
		<ul style="list-style-type: none"> Vibration impacts on nearby receptors, including heritage. 	B (moderate)		C (Low)	
Soil and water quality	<ul style="list-style-type: none"> Clearing and grubbing. Earthworks. Storage of fuels, chemicals and other dangerous goods. Maintenance of plant and equipment, including servicing and refuelling. Sediment basin management. Drainage works. Concrete works. Batch plant. 	<ul style="list-style-type: none"> Erosion and movement of soils. 	A (High)	<ul style="list-style-type: none"> Appropriately designed erosion control structures (eg sedimentation basins, ERSED-straw bales, silt fences and sand bags) will be installed, maintained and cleaned regularly. Locate spoil stockpiles, plant and equipment away from drainage lines, watercourses or stormwater drains in accordance with established criteria. Install clean water diversions to ensure clean and dirty water are not mixed on site. Storage, compound access and parking areas sealed, as early during works as practicable. 	B (moderate)	SWMP EWMS SWMP Basin management procedure Induction Targeted ERSED training Design for temporary waterway crossings Unexpected Discovery of Contaminated Land Procedure
		<ul style="list-style-type: none"> Captured dirty water discharge from basins. 	A (High)		B (moderate)	
		<ul style="list-style-type: none"> Dirty water not captured and leaves site. 	A (High)		B (moderate)	
		<ul style="list-style-type: none"> Contamination of sediment basins and /or waterways from spills. 	B (moderate)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> Temp access road construction / removal from waterway areas. Bridge construction. Contaminated Sites. Acid Sulphate Soils and Rock Concrete Management/ runoff Waterway diversions Design of temporary crossings Sediment basin construction and management 	<ul style="list-style-type: none"> Disturbance to creeks from access road construction. Haul road washout from flood event. Contaminants in water/sediment of farm dams to be decommissioned Water quality impacts from acid sulphate soils/rock Water quality impacts from concrete, asphalt, curing compound run-off / spills Failure of sediment basin or inadequate management Vandalism of sediment basin outlet pipes causing dirty water discharge Failure of temporary creek crossings Disturbance on unidentified contaminated land eg historical agricultural practice such as tick dips. 	<p>A (High)</p> <p>A (High)</p> <p>B (moderate)</p> <p>A (High)</p> <p>A (High)</p> <p>B (moderate)</p> <p>B (moderate)</p> <p>B (moderate)</p> <p>B (moderate)</p>	<ul style="list-style-type: none"> Chemical storage meets WorkCover and EPA bunding/storage requirements. Wheel mud reduction/ cleaning measures at exit of all sites where required. Well designed temporary waterway crossings minimising risk of fines in waterways and designed to address larger flow volumes. EWMS to detail temp water crossing requirements. Buffer zones of vegetation will be maintained adjacent to waterways for as long as practical. Rehabilitation and landscaping works of disturbed areas undertaken as soon as the works are completed and/or progressively where possible. Appropriately designed, implemented and maintained silt control systems to mitigate risk of water pollution during upgrade of the creek bridges. Detailed investigation and planning to design and construct waterway crossings including understand rivers & risk/ velocity flood levels. Implement concrete washout process within bunded areas. Implement controls to minimise and contain run-off from asphalt, curing/new concrete and sealing works. Provide and maintain spill kits. Consult / confirm with EPA and Primary Industries for temporary creek crossings construction / removal methods. Establish clean water catch drains/ diversion early in Project before topsoil stripping. Design drainage to maximise dirty water to sediment basins. Engage soil conservationist to advise on ERSED issues. Establish dedicated ERSED crews for the Project. Establish protection from hydrocarbon spills early by installing oil booms prior to works in a waterway. Install signage at discharge points to assist workers to understand implications of dirty water release in sensitive areas. Meet new Roads and Maritime Dewatering guidelines. Implement appropriate procedures to identify, contain, handle and manage contaminated material. Monitor water quality regularly. Investigate and plan early for PASS/ASS treatment measures, transport, re-use, storage to be located in less sensitive areas. PASS/ AASS mitigation and management measures to be highlighted in management plan. Sediment basins to be constructed to meet required quality specifications. Ensure adequate resources are allocated for basin management. Establish access to basins to allow for inspection and maintenance. Ensure basin security, regarding potential unauthorised discharges. Use syphons in basins where possible Spread gypsum in basin inlets prior to rain. Establish stable discharge points for basins. Investigate opportunities to reuse basin water, eg: at the 	<p>B (moderate)</p> <p>A (High)</p> <p>C (Low)</p> <p>B (moderate)</p> <p>B (moderate)</p> <p>B (moderate)</p> <p>C (Low)</p> <p>C (Low)</p> <p>C (Low)</p>	<p>Lessons Learnt /Planning Sessions</p> <p>Acid Sulphate Soil Management Plan</p> <p>Remediation Action Plans for contaminated sites</p> <p>Flood Evacuation Plan</p> <p>Roads and Maritime Tannin Management Guidelines</p>

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> batch plant. Ensure early installation of ERSED controls and ensure they are robust. Testing of water and sediment in farm dams which are to be decommissioned. 		
Water management	<ul style="list-style-type: none"> Extraction of groundwater. Water use for dust suppression, washing of plant and equipment, landscaping, compaction etc. Water use for drinking water, hand washing, toilets etc. Excavation water table. Use of water for concrete batching Quarrying. General earthworks and construction. Extraction of water from creeks 	<ul style="list-style-type: none"> Groundwater interception and ingress into excavations/ cuttings. 	B (moderate)	<ul style="list-style-type: none"> Investigate "Turkeys Nest" type basins for storing captured stormwater. Prioritise the use of captured stormwater over other sources. Re-use / recycle water where possible. Minimise excavations proposed to intercept groundwater. Drainage / bridging layers in floodplain. Rock for bridging layers to minimise fines and well designed drainage to limit fine material entry to bridging layers. Hydrogeologist to be used to obtain advice Monitor vegetation Monitor Groundwater Minimise extraction of water from creeks when they are in low flow 	B (moderate)	SWMP EWMS Basin management procedure Induction Groundwater management strategy
		<ul style="list-style-type: none"> Reduction of aquifer storage. 	C (High)		C (Low)	
		<ul style="list-style-type: none"> Changes to the natural groundwater flow in the area surrounding the Project due to compaction of the road surface. 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Changes in the recharge and runoff patterns as a result of construction. 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Groundwater changes resulting in impact to groundwater dependant vegetation 	B (moderate)		B (moderate)	
		<ul style="list-style-type: none"> Contamination of groundwater due to construction activities. 	B (moderate)		C (Low)	
Mulch and tannin	<ul style="list-style-type: none"> Vegetation clearing and storage of mulch 	<ul style="list-style-type: none"> Tannin impacts on waterways. 	A (High)	<ul style="list-style-type: none"> Implement the Roads and Maritime mulch and tannin protocol. Consider excess mulch early and identify sources for reuse/ recycle eg. quarries, community, etc 	C (Low)	Roads and Maritime Tannin Management Guideline
Flooding	<ul style="list-style-type: none"> Waterway crossings. Transverse drainage. Bridge pier locations. Bridge openings. Haul and bridge roads. Temporary Crossings Connection to existing drainage Waterway platforms 	<ul style="list-style-type: none"> Restriction to flow paths causing localised flooding. 	B (moderate)	<ul style="list-style-type: none"> Design drainage structures to cope with design flood events and Environmental Assessment commitments. Locate compounds / plant / storage above flood level events stated in the CoA, or develop contingency plans. Design and build temporary crossings to be stabilised and minimise scour / erosion during flood events. Install scour protection as early as possible. Look at predicting flood events from gauges or rainfall predictions. Design and construct Project in accordance with CoA and SoC. Design inverts of culverts to prevent water logging. Ensure adequate connection to existing culverts. Afflux considerations for rock platforms Collect information on water flows and impacts from potential rock platforms- e.g. Water diversion/ scour modelling Consider sizes of pipes/ culverts for temp crossings- larger pipes as better for fish passage Design of flood conveyance measures as well as pipe sizes for platforms and crossings 	C (Low)	SWMP EWMS Establish design for temporary waterway crossings./ platforms Flood contingency/ evacuation plans- including detail on timing of flood levels
		<ul style="list-style-type: none"> Changes to flood levels – increased impact to receivers. 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Stormwater inflow to site – clean stormwater getting mixed with dirty site water. 	A (High)		B (moderate)	
		<ul style="list-style-type: none"> Flood damage to plant / equipment / satellite compounds. 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Erosion of haul/ access road during large flood events. 	A (High)		A (High)	
Spoil and Fill	<ul style="list-style-type: none"> Cuts. Fill areas. Borrow pits. Quarries. Haulage of spoil and fill. 	<ul style="list-style-type: none"> Demand on local resources – local quarries / suppliers. 	B (moderate)	<ul style="list-style-type: none"> Design for balanced earthworks where possible. Refer to mitigation measures stated in the Air Quality (Dust) row above and Traffic and Transport Management row below. Off site spoil movements to be monitored and tracked on the 	C (Low)	SWMP Spoil and fill management procedure Acid sulfate soil management procedure
		<ul style="list-style-type: none"> ERSED issues from cuts / batters / stockpiles. 	A (High)		B (moderate)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> Stockpiling. Spoil areas. 	<ul style="list-style-type: none"> Sensitive area damage from stockpiling. 	A (High)	<p>site waste disposal register as per the EPA guidelines, including characterisation of the spoil to determine correct disposal locations and volumes.</p> <ul style="list-style-type: none"> Ensure offsite disposal locations are appropriately approved. Spoil to be beneficially reused, on or off site, where applicable and meeting environmental requirements. Includes reuse of excavated material, either as fill, or as earth mounds for noise control, or beautification, shielding or revegetation mounds on site. All loads accessing public roads to be covered to prevent any loss of material, which may cause driver safety issues. Only locate stockpiles in accordance with criteria in CEMP. Implement appropriate procedures to identify, contain, handle and management contaminated material. Classify and dispose of any contaminated land in accordance with EPA guidelines. Ensure quarries hold the correct licences and are authorised to supply the required quantities. Ensure controls are adequate for size and type of stockpile _ Establish acid treatment site/pad early Consider time required for approval of ancillary facility sites Undertake early planning and approval if spoil disposal areas are proposed to be made permanent 	B (moderate)	<p>EWMS AQMP CEMP Unexpected Discovery of Contaminated Land Procedure</p>
		<ul style="list-style-type: none"> Disturbance on unidentified contaminated land eg historical agricultural practice such as tick dips. 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Exposing acid sulphate soils or potential acid sulfate soils or acid sulfate rock 	A (High)		B (moderate)	
Waste Management	<ul style="list-style-type: none"> Generation of waste during construction activities including building materials, excess unsuitable spoil material, vegetation material. Asbestos management Litter/house keeping 	<ul style="list-style-type: none"> Excessive waste being directed to landfill. 	B (moderate)	<ul style="list-style-type: none"> Apply waste hierarchy principles – avoid-reduce-reuse-recycle. Waste materials contained in waste bins or other suitable containers, and collected for recycling, reuse or disposal by the licensed waste contractor. Separate, contain, manage and dispose contaminated waste to prevent migration and further contamination whilst maintaining compliance with EPA requirements. Label and store all liquid waste containers in a bunded area prior to removal off-site. Undertake inspections of the worksite and waste storage areas to ensure litter / debris is regularly cleaned up and contained on site. Establish recycling system early on in Project. Establish good segregation areas for concrete and waste concrete is not to be transported off site for land disposal. Section 143 Notices Under the PoEO Act and provision of a letter to landholder highlighting the need for a “s.143 Notice”, the Contractor’s role and the respective roles of the Roads and Maritime and the landholder in ensuring that the waste is appropriately managed. Consider types of waste, how each waste type will be used as a beneficial use and address in the approvals that no other type of waste will be used. 	C (Low)	<p>WEMP OHS Plan including information for management of Asbestos EWMS Waste reporting register</p>
		<ul style="list-style-type: none"> Incorrect disposal of contaminated waste. Meeting POEO VENM, ENM and mulch requirements. 	A (High)		B (moderate)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Implement VENM/ENM guidelines regarding testing, treatment requirements. Contact Council tips early and ensure they are approved to take the required wastes Identify any asbestos prior to impacting it. Implement management procedures as identified in the WEMP. Retain all disposal dockets. Ensure regular housekeeping and undertake training regarding littering. 		
Traffic and transport	<ul style="list-style-type: none"> Haulage of material. Import of material / plant / equipment. Travel to / from site. Management of access to state forest or local access Traffic speed School bus stop locations/ interactions 	<ul style="list-style-type: none"> Accidents - Safety of commuters, pedestrians, cyclists, contractors and subcontractors. Insufficient access to State Forest / private property Delays to road users of Pacific Highway and local roads Disruption to parking and to public transport (including school and public buses) 	A (High)	<ul style="list-style-type: none"> Develop and update Traffic Management Plans for all stages of work. Identify and assess roads likely to be affected by Project construction and develop methods to minimise traffic increases. Undertake before and after dilapidation surveys on local roads Traffic controllers and / or signage for both egress and ingress off the work sites. All vehicles carrying materials to be adequately covered to prevent any loss of material, which may cause driver safety issues. Ongoing consultation with Forestry's and local residents Consider potential relocation of school bus stop locations Exit controls/dirt tracking- consider early controls which minimise maintenance Note - Local road load limits apply to quarries Ensure access agreements in place with State Forests 	B (moderate)	TMP EWMS Induction
Visual Impact, Landscaping and Rehabilitation	<ul style="list-style-type: none"> Cuttings and cut finishes. Bridge design Revegetation / landscaping. Removal of visually prominent native vegetation. Evening / night works. Rehabilitation of disturbed land. 	<ul style="list-style-type: none"> General public aesthetic impacts 	B (moderate)	<ul style="list-style-type: none"> Landscape and rehabilitation plan including extensive seeding planting in required areas will be developed and implemented. Landscape treatments will incorporate the surrounding landscape types and vegetation patterns and address view scapes. Embankments and cuttings will be stabilised by the use of appropriate landscape treatments. The use of night-lighting will be minimised where possible during the construction phase and directed away from residential areas. Site compounds and areas surrounding them will be kept tidy and be regularly cleaned and maintained. Undertake landscaping and revegetation works in accordance with the approved Urban Design and Landscape Management Plan. 	C (Low)	UDLMP EWMS
		<ul style="list-style-type: none"> Failed landscaping 	B (moderate)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
		<ul style="list-style-type: none"> Heritage related visual. 	A (High)	<ul style="list-style-type: none"> Monitoring of landscaping and revegetation works and weed control to ensure successful rehabilitation outcomes in accordance with UDLP. Early collection of seed and propagation. Consider potential for managing topsoil to preserve seed bank where possible Consider incorporating mulch into topsoil Investigate initial strategy for early revegetation e.g. Seed mix, with planting to follow later. Stakeholder engagement on UDLMP. 	B (moderate)	
General Environmental Management	<ul style="list-style-type: none"> Environmental management / supervision. Incident response. Culture Failure to capture learning's Design team interaction 	<ul style="list-style-type: none"> Non-compliance with CEMP, SoC, MCoA, legislative requirement. 	A (High)	<ul style="list-style-type: none"> Ensure all environmental personnel are trained in the CEMP and all associated documents. EO / EM diligence in including requirements from CEMP and procedures into EWMS and training. Regular review of environmental management documents. Regular review of compliance with environmental management documents, SoC, CoA, EPL and other licences, etc. Regular environment team meetings. Environmental Manager to be involved in design and construction meetings. Training in environmental emergency response. Ensure NCR process is followed. Environmental Coordinator/Adviser Site Inspections/ Audits Ensure proper reporting to Agencies including being transparent, consistent, open and up front Let agencies know early if commitments are unable to be achieved and why. Ensure all lessons learnt are captured and disseminated throughout team through use of planning sessions. Ensure design team has regular attendance on site throughout project. 	B (moderate)	CEMP Procedures Roads and Maritime Incident Management Guidelines/ procedures EWMS Compliance Tracking Program Internal / external audits Planning session template
		<ul style="list-style-type: none"> Failure to follow requirements of strategies / procedures. 	A (High)		B (moderate)	
		<ul style="list-style-type: none"> Failure to report environmental issues. 	A (High)		B (moderate)	
		<ul style="list-style-type: none"> Inconsistent advice to construction personnel. 	B (moderate)		C (Low)	
		<ul style="list-style-type: none"> Inadequate response to environmental incident/ emergency. 	A (High)		B (moderate)	

Appendix A3

Environmental policy

Policy

Environment Policy

Engineering, Australia



Lend Lease's Engineering business (Engineering) aspires to be an organisation that protects and sustains the natural environment in which our commercial activity is undertaken.

We comply with environmental legislation, regulations and other requirements as a minimum, and support initiatives that go beyond compliance requirements. We measure and report our performance against internationally recognised standards and we operate and maintain an Environmental Management System.

In implementing this policy, our objectives are to:

- Identify and manage risks to, and impacts on, the environment arising from work activities; and
- Foster environmental awareness and encourage a genuine respect for environmental protection in employees.

We will take a socially responsible attitude to the environment by:

- Recognising the need for ecological and resource sustainability;
- Reducing our energy and water usage across our business operations;
- Recovering resources within our waste streams for recycling;
- Identifying environmental concerns and sensitivities;
- Monitoring and reviewing this policy, environmental management objectives, targets and outcomes as the basis of a commitment to continual improvement;
- Communicating openly with clients, governments and the community on environmental issues;
- Developing and using the best applicable environmental protection techniques to achieve a positive environmental outcome, including the prevention of pollution; and
- Communicating this policy to all employees and subcontractors and make it available to the public.

We explore every opportunity to demonstrate a positive impact on the environment in all our construction activities, as well as in our supply chain. We exhibit leadership in sustainability through continual improvement of our environmental performance.

A handwritten signature in black ink, appearing to be "BG", written over a light blue horizontal line.

Brian Gillon
A/Managing
Director June 2015

Appendix A4

Ancillary facilities assessment criteria

Revision history

Revision	Date	Description	Approval
0	Feb 2013	Updated to include NH2U specific ancillary facilities	
1	Feb 2013	Additional sites (10, 16, 23, 24) and minor updates to above assessment	
1.1	Mar 2013	Additional site (25). For issue to ERG	
1.2	May 2013	Update following ERG review and further construction planning	
2	July 2013	Updated following DP&I comments and advice on impact to heritage sites	
3	July 2014	Minor update to change RMS to Roads and Maritime, update to include approved sites and clarify footnotes.	
4	Aug 2014	Minor update to include minor ancillary site 26 (28 Alex Pike Drive)	

Table 8 Ancillary facilities assessment against CoA 27

The project has undertaken early review of ancillary and stockpile sites and this has focussed on selecting sites in cleared areas and selecting sites in optimum locations where possible. The project is heavily constrained in regards to ancillary and stockpile sites as much of the area is State Forest and there are extensive areas of steep slopes and waterways.

Site	Chain age	Purpose	Land Tenure	a) Be located more than 50 m from a waterway;	b) Have ready access to the road network or direct access to the construction corridor;	c) Be located in areas of low ecological significance and require minimal clearing of native vegetation (not beyond that already required by the project);	d) Be located on relatively level land;	e) Be separated from the nearest residence by at least 200 m (or at least 300 m for a temporary batching plant);	f) Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented;	g) Not unreasonably affect the land use of adjacent properties;	h) Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries outside standard construction hours;	i) Be located in areas of low heritage conservation significance (including identified aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the project.	Is criteria met?	Additional actions required
1	62500	Material laydown / batch plant	Roads and Maritime	Yes. Waterway buffers apply to the site.	Yes. Direct access to construction corridor.	Yes.	Yes	Yes	At current level, site partially below 20 ARI, therefore contingency plan, or site locations outside 20ARI required if site is established prior to rest area construction. Once the rest area is established, area will be above 20 year ARI.	Yes	Yes	Yes.	Yes, provided flood plan is in place	Flood contingency plan or the relocation of site facilities outside the 20ARI flood levels. Maintain 50m buffer zone to waterways. Prior to establishing batch plant, ensure rest area earthworks are complete and above 20year ARI.
25	63800	ASS Treatment Area	Roads and Maritime	Yes	Yes, Direct access to construction corridor.	Yes	Yes	Yes.	Site partially below 20 ARI, therefore contingency plan, or site locations outside 20ARI required	Yes	Yes	Yes	Yes, provided flood plan is in place	If parts of the site within 20 year ARI are proposed to be used, a flood contingency plan will be prepared and implemented prior to site use
2	64000	Auld Close satellite office / material storage	Roads and Maritime	Yes. Waterway buffers apply to the site.	Yes. Direct access to construction corridor.	Yes. Site features native veg and EEC but has suitable constraint free area for minor stockpiling or satellite office.	Yes	No. Nearest residence within 200 m.	Yes	Yes but only for use as minor stockpile and satellite office.	Yes. No raw material storage would be required.	Yes.	No	Consultation with nearest residences will be undertaken. Written agreements will be obtained from all residences within buffer zone before establishing within the buffer zone. Evidence of consultation and an assessment against all criteria with proposed mitigation measures will be provided to the Director General for approval.
4	64100	Satellite office / material storage / ASS Treatment Area	Roads and Maritime	Yes	Yes. Direct access to construction corridor.	Yes. Site features native veg but has suitable constraint free area for minor satellite office.	Yes	No. Nearest residence within 200 m.	Yes	Yes but only for use as minor satellite office.	Yes	Yes	No	Approval received from the Director General for this site on 15/11/13.
9	69000	Material laydown / satellite office	Roads and Maritime	Yes.	Yes. Direct access to construction corridor and to Burkes Lane	Yes. Site significantly constrained by native vegetation, however no vegetation will be cleared for facility	No. Parts of the site are not considered relatively level	Yes.	Yes	Yes	Yes.	Yes	No	Approval received from the Director General for this site on 15/11/13.
12A Stage 1	72100	Main Compound / Store / material laydown / car park / asphalt plant	Private	Yes. Waterway buffers apply to the site.	Yes. Direct access to the construction corridor.	Yes.	Yes.	Yes.	Yes	Yes.	Yes.	Yes. Defined artefact scatter identified to the south of the site, but will be delineated and buffer zone established prior to commencement (or salvaged as per CHAR recommendations)	Yes	Commercial agreement with landowner for use of the land prior to use. Establish and maintain buffer zone for heritage site and waterway Site 12A Stage 1 approved by Roads and Maritime on 13/5/13.
12A Stage 2	72100	Store / material laydown / car park / Soil Laboratory	Private	Yes. Waterway buffers apply to the site.	Yes. Direct access to the construction corridor.	Yes.	Yes.	Yes.	Yes	Yes.	Yes.	No.	No	Commercial agreement with landowner for use of the land prior to use. Approval received from the Director General for Site 12A Stage 2 on 4/12/13.

Site	Chain age	Purpose	Land Tenure	a) Be located more than 50 m from a waterway;	b) Have ready access to the road network or direct access to the construction corridor;	c) Be located in areas of low ecological significance and require minimal clearing of native vegetation (not beyond that already required by the project);	d) Be located on relatively level land;	e) Be separated from the nearest residence by at least 200 m (or at least 300 m for a temporary batching plant);	f) Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented;	g) Not unreasonably affect the land use of adjacent properties;	h) Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries outside standard construction hours;	i) Be located in areas of low heritage conservation significance (including identified aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the project.	Is criteria met?	Additional actions required
12B Stage 1	71800	Main Compound / batch plant / asphalt plant / precast area / laboratory / material laydown	Private	Yes. Waterway buffers apply to the site.	Yes. Direct access to the construction corridor.	Yes.	Yes.	Yes. Site requires 300 m batching plant residential buffer.	Yes	Yes.	Yes.	Yes. PAD site identified to the south of the site, but will be delineated and buffer zone established prior to commencement	Yes	Commercial agreement with landowner for use of the land prior to use. Establish and maintain buffer zone for PAD site and waterway. Site 12B Stage 1 approved by Roads and Maritime on 29/10/13.
12D	71800	Material laydown / workshop	Roads and Maritime	Yes. Waterway buffers apply to the site.	Yes. Direct access to the construction corridor.	Yes.	Yes.	Yes. Site requires 200 m ancillary facility buffer.	Yes	Yes	Yes	Yes.	Yes	Buffer zones to waterways and residents.
Martells Rd Crushing Facility	75600	Material crushing, processing and storage facility	State Forest	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Approval received from the Director General for this site on 11/4/14.
14C	77400	Material laydown / satellite office / batch plant	Roads and Maritime and Private	Yes. Waterway buffers apply to the site.	Yes. Direct access to the construction corridor	Yes. Site contains some native vegetation and EEC which will be protected	Yes.	No.	Site partially below 20 ARI, therefore contingency plan, or site locations outside 20ARI required	Yes.	Yes.	No.	No	Commercial agreement with landowner for use of the land prior to use. An assessment against all criteria with proposed mitigation measures will be provided to the Director General for approval. Salvage activities following DP&I approval to impact.
15	78000	Stockpile / satellite office / material storage	Roads and Maritime and Private	Yes. Waterway buffers apply to the site.	Yes. Direct access to the construction corridor	Yes.	Yes	Yes.	Site below 20 ARI, therefore contingency plan required	Yes.	Yes.	Yes.	Yes, provided flood plan is in place	Commercial agreement with landowner for use of the land prior to use. Flood contingency plan prepared and implemented. Roads and Maritime approval required for works outside the project boundary.
23	77900	Material storage / satellite office	Roads and Maritime	Yes.	Yes. Adjacent to South Arm Road and the road corridor	Yes.	Yes.	Yes	Site below 20 ARI, therefore contingency plan required.	Yes	Yes	Yes	Yes, provided flood plan is in place	Flood contingency plan prepared and implemented. Lease required from Roads and Maritime for use of the land prior to use.
24	78200	Batch plant / materials stockpile	Roads and Maritime	Yes	Yes. On and directly adjacent the road footprint	Yes.	Yes. Site would be established once fill for road is complete	Yes, including a 300m batch plant buffer	Yes, once fill for road formation is complete.	Yes	Yes	Yes. Within road alignment	Yes	Complete all road fill activities prior to establishing batch plant to ensure site is above 20yr ARI and on relatively level land
16	78200	Satellite office / materials laydown	Roads and Maritime	Yes.	Yes. Direct access to the construction corridor and to South Arm Road	Yes. Native vegetation to the north will be protected.	Yes	No. Nearest residence within 200 m of the driveway.	Yes	Yes.	Yes.	Yes.	No	Approval received from the Director General for Site 16 on 15/11/13 and for the expansion of Site 16 on 11/4/14.
26 (28 Alex Pike Dr)	Adjacent to Ch. 82100	Minor crib facility & material laydown / storage / stockpiling	Private (Industrial property at Lot 2 DP1073 517)	Yes. 50m buffer to southern wetland will be implemented	Yes. Direct access to the construction corridor and to Alex Pike Drive	Yes. Site was previously an approved pre-cast yard (DA No: 2011/DA-175). No native vegetation is required to be cleared.	Yes. Site is level from previous development	Yes. Nearest residence is 475m away on Short Cut Rd.	Yes. Site is above 20 ARI flood level	Yes. The adjoining properties are existing industrial premises.	Yes	Yes. Site is completely disturbed from previous approved pre-cast development (DA No: 2011/DA-175).	Yes	Nil.
21	83300	Satellite office / material storage	Roads and Maritime	Yes.	Yes. Direct access to the construction corridor	Yes. Site contains some native vegetation which would be protected	Yes.	No. Nearest residence within 200 m.	Yes	Yes but only for use as minor satellite office.	Yes.	Yes.	No	The site will likely be defined as a minor ancillary facility and may be permissible with approval from the ER under CoA 28. Consultation with nearest residences will be

Site	Chain age	Purpose	Land Tenure	a) Be located more than 50 m from a waterway;	b) Have ready access to the road network or direct access to the construction corridor;	c) Be located in areas of low ecological significance and require minimal clearing of native vegetation (not beyond that already required by the project);	d) Be located on relatively level land;	e) Be separated from the nearest residence by at least 200 m (or at least 300 m for a temporary batching plant);	f) Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented;	g) Not unreasonably affect the land use of adjacent properties;	h) Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries outside standard construction hours;	i) Be located in areas of low heritage conservation significance (including identified aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the project.	Is criteria met?	Additional actions required
														undertaken. If site is not approved under C28, written agreements will be obtained from all residences within buffer zone before establishing facility and evidence of consultation and an assessment against all criteria with proposed mitigation measures will be provided to the Director General for approval.
22	83100	Satellite office / materials laydown	Roads and Maritime	Yes.	Yes. Direct access to the construction corridor	Yes.	Yes.	No. Nearest residence within 200 m.	Yes	Yes but only for use as minor stockpile and satellite office.	Yes.	Yes.	No	The site will likely be defined as a minor ancillary facility and may be permissible with approval from the ER under CoA 28. Consultation with nearest residences will be undertaken. If site is not approved under C28, written agreements will be obtained from all residences within buffer zone before establishing facility and evidence of consultation and an assessment against all criteria with proposed mitigation measures will be provided to the Director General for approval.

Footnote 1: Detailed site layouts (in relation to shed/ site positions and locations, exact areas of “relatively level land”, access etc.) are still to be determined and would be discussed with Roads and Maritime and agencies in ERGs/ inspections/ email advices.

Footnote 2: For sites outside the current approved project boundary, Lend Lease will provide an environmental assessment to Roads and Maritime to determine consistency/ assessment against ancillary criteria and the project approval.

Footnote 3: Following development of detailed ancillary site layout and access, any ancillary sites that causes any criteria of CoA27 to not be complied with, will be submitted to the Director General for approval in accordance with C27. An assessment of how any impacts of not meeting the criteria will managed to acceptable standards will be provided to the Director General in these circumstances.

Footnote 4: Any new ancillary sites will be assessed against the above criteria, and where required approval obtained as per Footnote 2 and 3.

Footnote 5: All relevant mitigation measures detailed in the CEMP and sub plans will apply as a minimum to each site (e.g. dust, noise, complaints, soil and water etc.)



Ancillary facility



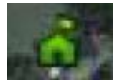
EEC



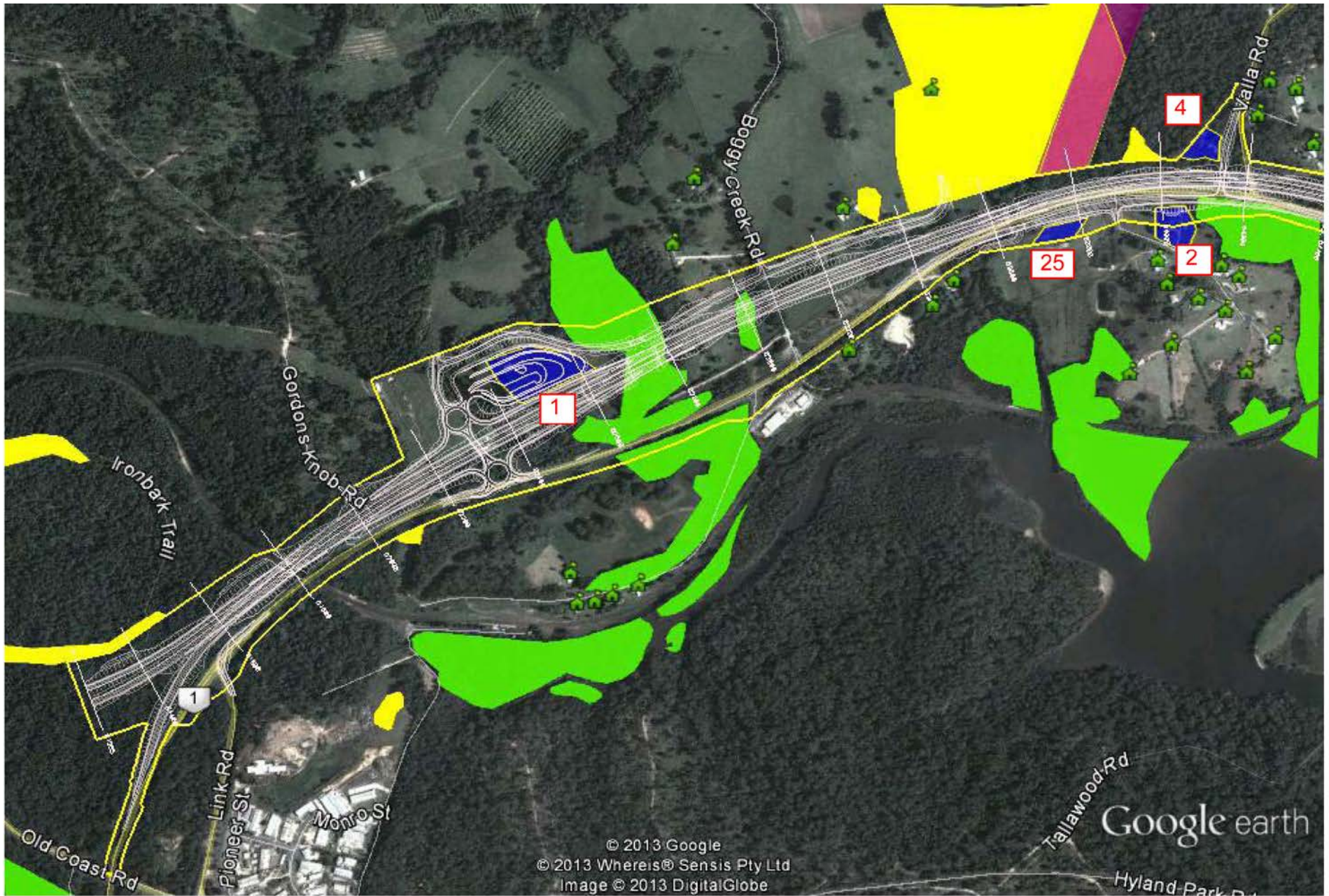
Indigenous heritage (including buffer zones)



Non-Indigenous heritage



Sensitive residential receiver



Google earth

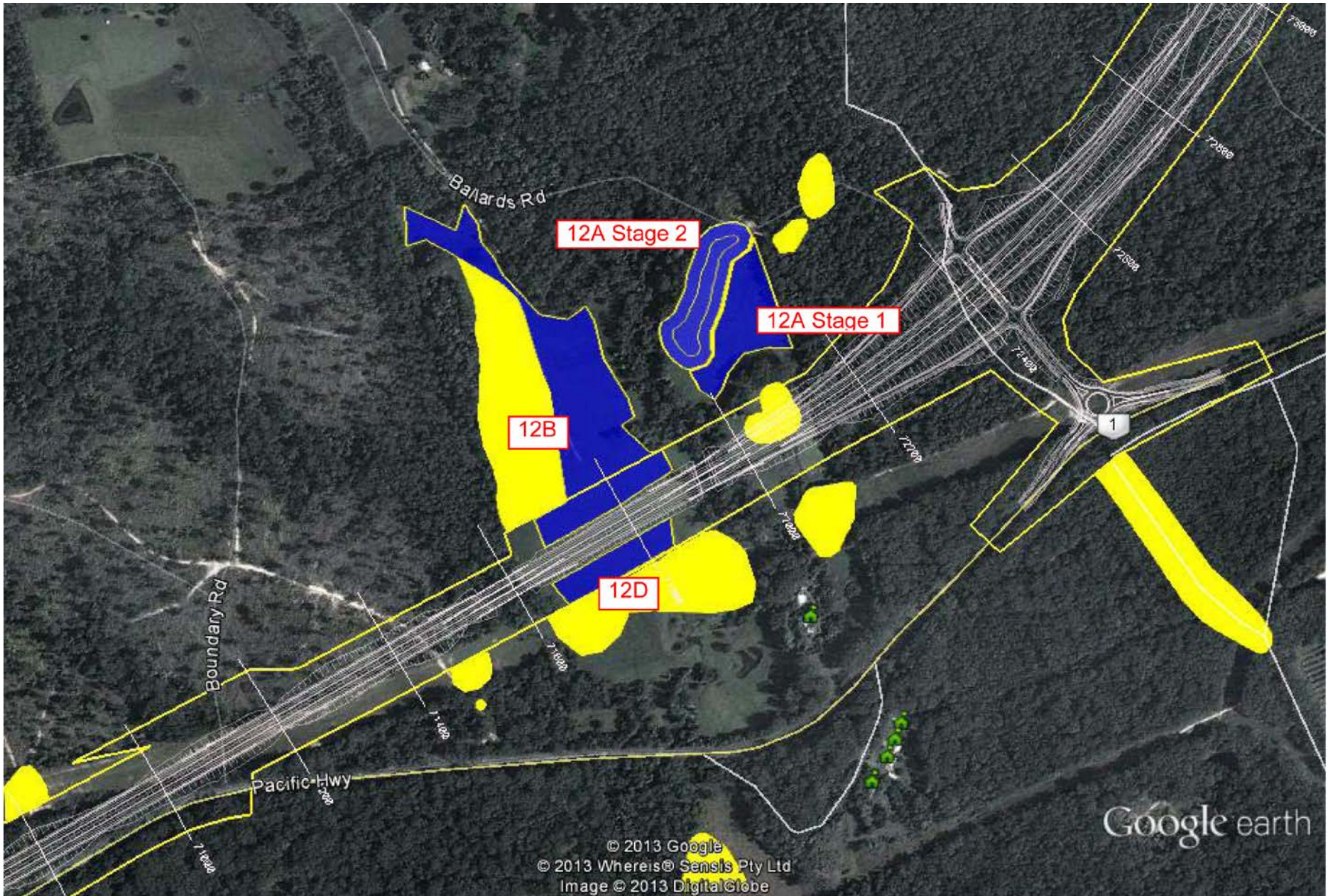
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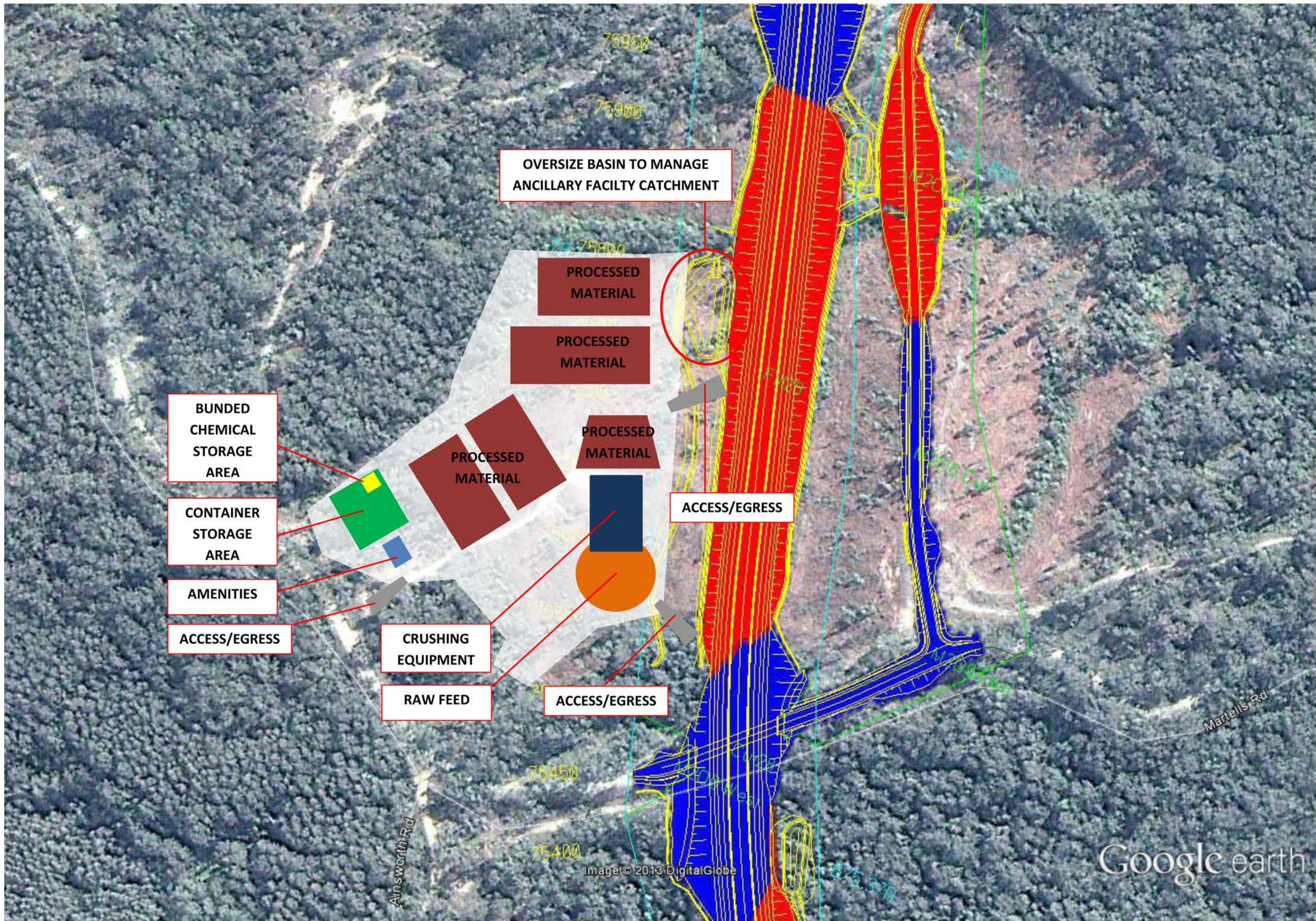




Google earth



Martells Rd Crushing Facility

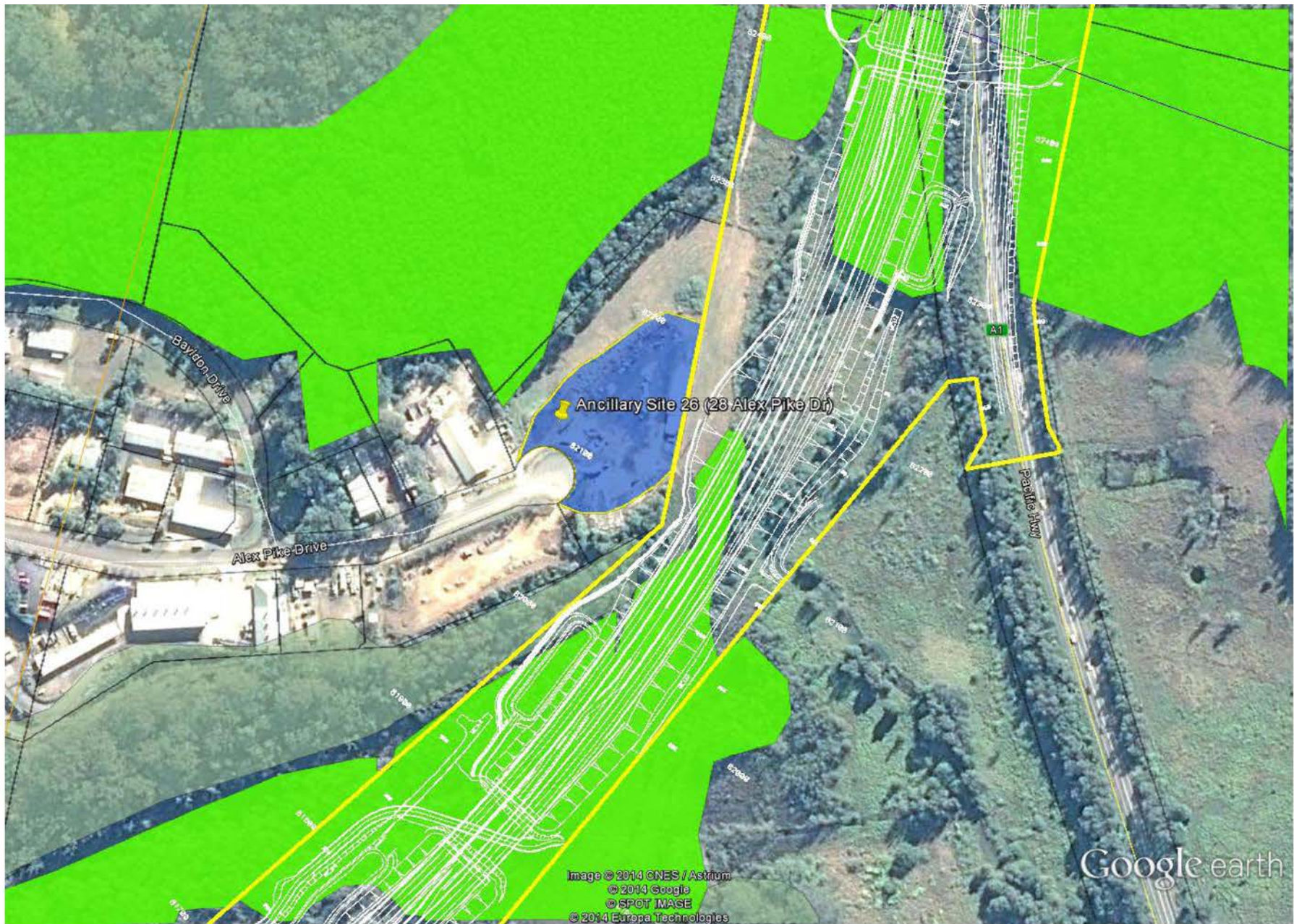




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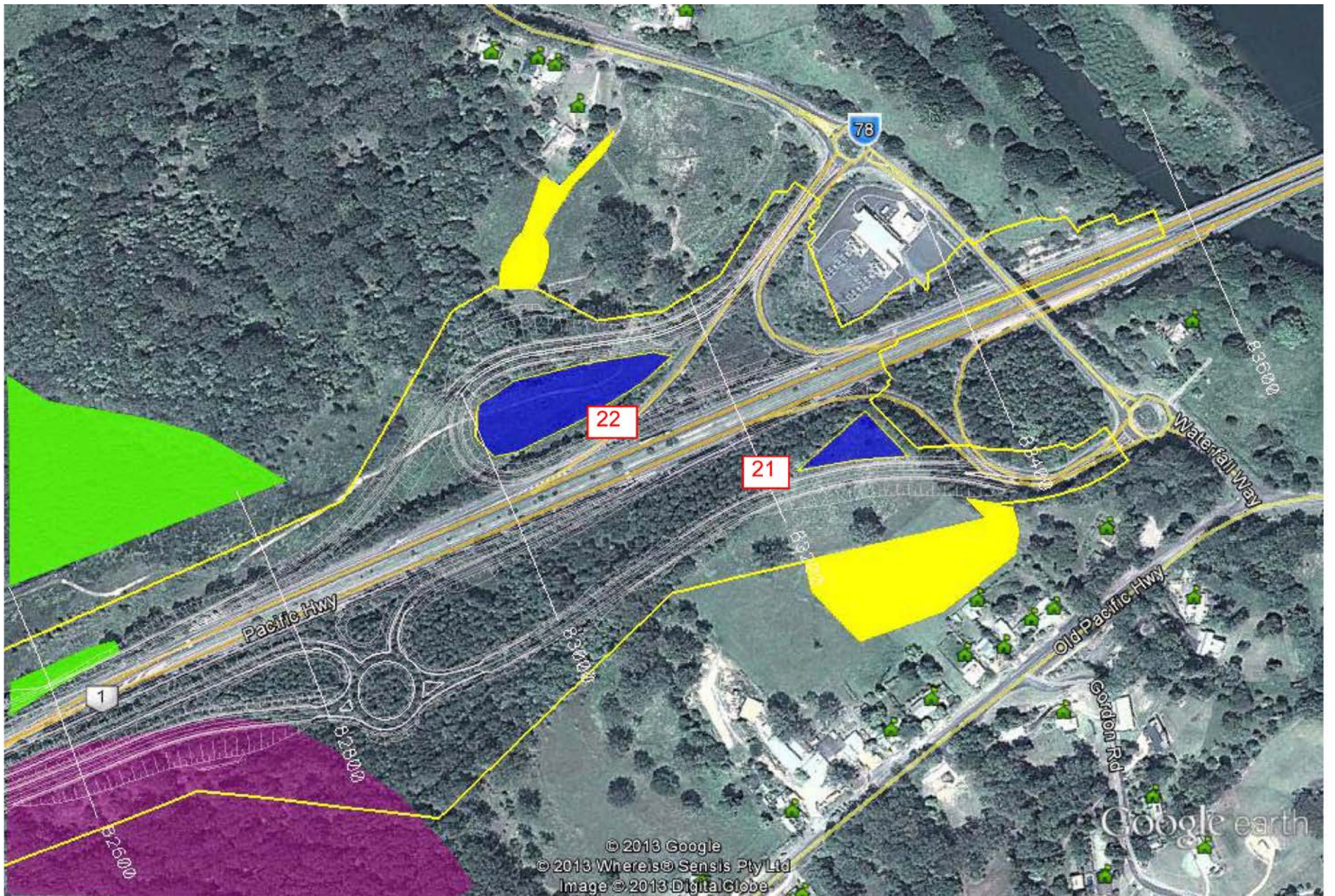
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Appendix A5

Document register

Table 1 Environmental document register

Environmental management document	Purpose	Document title	Location (if applicable)	Approval requirement
Environmental Policy	Policy	Lend Lease Environmental Policy	CEMP Appendix A3	Lend Lease Managing Director
Construction environmental management plan	Policy Legal and other requirements Risk assessment Objectives and targets Roles and responsibilities Communication and training Monitoring, auditing and reporting Corrective action Management review Management actions	Nambucca Heads to Urunga Construction Environmental Management Plan	This document	Director-General, DP&I
Environmental management sub plans	Objectives and targets	Construction traffic management sub plan	CEMP Appendix B1	Director-General, DP&I
	Roles and responsibilities	Construction flora and fauna management sub plan	CEMP Appendix B2	Director-General, DP&I
	Legal and other requirements	Construction noise and vibration management sub plan	CEMP Appendix B3	Director-General, DP&I
	Training	Construction water quality management sub plan	CEMP Appendix B4	Director-General, DP&I
	Monitoring, auditing and reporting			

Environmental management document	Purpose	Document title	Location (if applicable)	Approval requirement
	Management actions	Construction heritage management sub plan	CEMP Appendix B5	Director-General, DP&I
		Construction air quality management sub plan	CEMP Appendix B6	Roads and Maritime
		Construction waste and energy management sub plan	CEMP Appendix B7	Roads and Maritime
Urban design and landscape management	Objectives Materials Methodology	Urban design and landscape management plan		Director-General, DP&I
Compliance tracking program	Compliance status Auditing Recording and reporting	Compliance tracking program		Director-General, DP&I
Environmental procedures / plans / strategies / protocols	Operational controls and instructions	Working around trees guideline	FFMP Appendix H	Roads and Maritime / Project Director
		Fauna handling and rescue procedure	FFMP Appendix I	Roads and Maritime / Project Director
		Unexpected threatened species / EEC find procedure	FFMP Appendix J	Roads and Maritime / Project Director
		Weed management plan	FFMP Appendix K	Roads and Maritime / Project Director
		Out of hours works procedure	NVMP Appendix C	Roads and Maritime / Project Director
		Spoil and fill management procedure	SWMP Appendix B	Roads and Maritime / Project Director

Environmental management document	Purpose	Document title	Location (if applicable)	Approval requirement
		Acid sulfate soil management procedure	SWMP Appendix C	Roads and Maritime / Project Director
		Roads and Maritime Tannin management guideline	SWMP Appendix D	Roads and Maritime / Project Director
		Groundwater management strategy	SWMP Appendix E	Roads and Maritime / Project Director
		Unexpected discovery of contaminated lands procedure	SWMP Appendix F	Roads and Maritime / Project Director
		Roads and Maritime dewatering practice note	SWMP Appendix G	Roads and Maritime / Project Director
		Sediment basin management and discharge procedure	SWMP Appendix H	Roads and Maritime / Project Director
		Stockpile management protocol	SWMP Appendix I	Roads and Maritime / Project Director
		Unexpected heritage finds procedure	HMP Appendix E	Roads and Maritime / Project Director
Environmental forms / checklists / registers	Monitoring and auditing Recording and reporting	A separate environmental registers / forms / checklist register will be developed and regularly updated throughout construction. The Environmental Manager will be responsible for this document.		
Environmental work method statements	Management measures Operational controls	A separate EWMS register will be developed and regularly updated throughout construction. The Environmental Manager will be responsible for this document.		

Appendix A6

Sensitive area plans

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- Aboriginal Heritage Assessment Boundary (RMS)
- Clearing Limit Boundary (NH2U Project - FDD)
- EPL Boundary (NH2U Project)
- NH2U Design
- Drainage Culverts
- Groundwater Monitoring Bores
- NSW Registered Groundwater Bores
- SEPP 14 Wetlands
- Aboriginal Artefacts
- Aboriginal Heritage Areas and Required Exclusion Zones
- Non Aboriginal Heritage Areas
- Noise Construction Receivers
- Contaminated Sites
- Frog Habitat**
 - Giant Barred Frog Habitat
 - Green Thighed Frog Habitat

- Microbat Box Locations
- Microbat Habitat
- Fauna Underpass
- Threatened Fauna**
 - Black Necked Stork
 - Glossy Black Cockatoo
 - Glossy Black Cockatoo (feeding signs)
 - Grey Headed Flying Fox
 - Grey Headed Flying Fox (roost camp)
 - Koala (scats and scratchings)
 - Little Bent Wing Bat
 - Osprey (nest site)
 - Pied Oystercatcher
 - Powerful Owl
 - Sooty Oystercatcher
 - Wompoo Fruit Dove
 - Yellow Bellied Glider
 - Spider Orchid Habitat
 - Hollow Bearing Trees
 - Threatened Flora Species
 - Threatened Flora Species 50m Buffer
 - Threatened Flora Translocation Sites

- Vegetation Type**
 - Freshwater Wetlands (EEC)
 - Mangroves
 - Lowland Rainforest (EEC)
 - Saltmarsh (EEC)
 - Swamp Forest -
 - Swamp Oak (EEC)
 - Swamp Mahogany / Paperbark (EEC, Core Koala Habitat)
 - Open Forest -
 - Scibbly Gum
 - Blackbutt (Koala Habitat)
 - Moist Open Forest -
 - Flooded Gum (Koala Habitat)
 - White Mahogany / Grey Gum / Ironbark (Core Koala Habitat)
 - Mixed Floodplain Forest (EEC, Koala Habitat)

A3 0 50 100 150 200 250
SCALE 1:5000m

REV	ZONE	AMENDMENTS	APPD	DATE

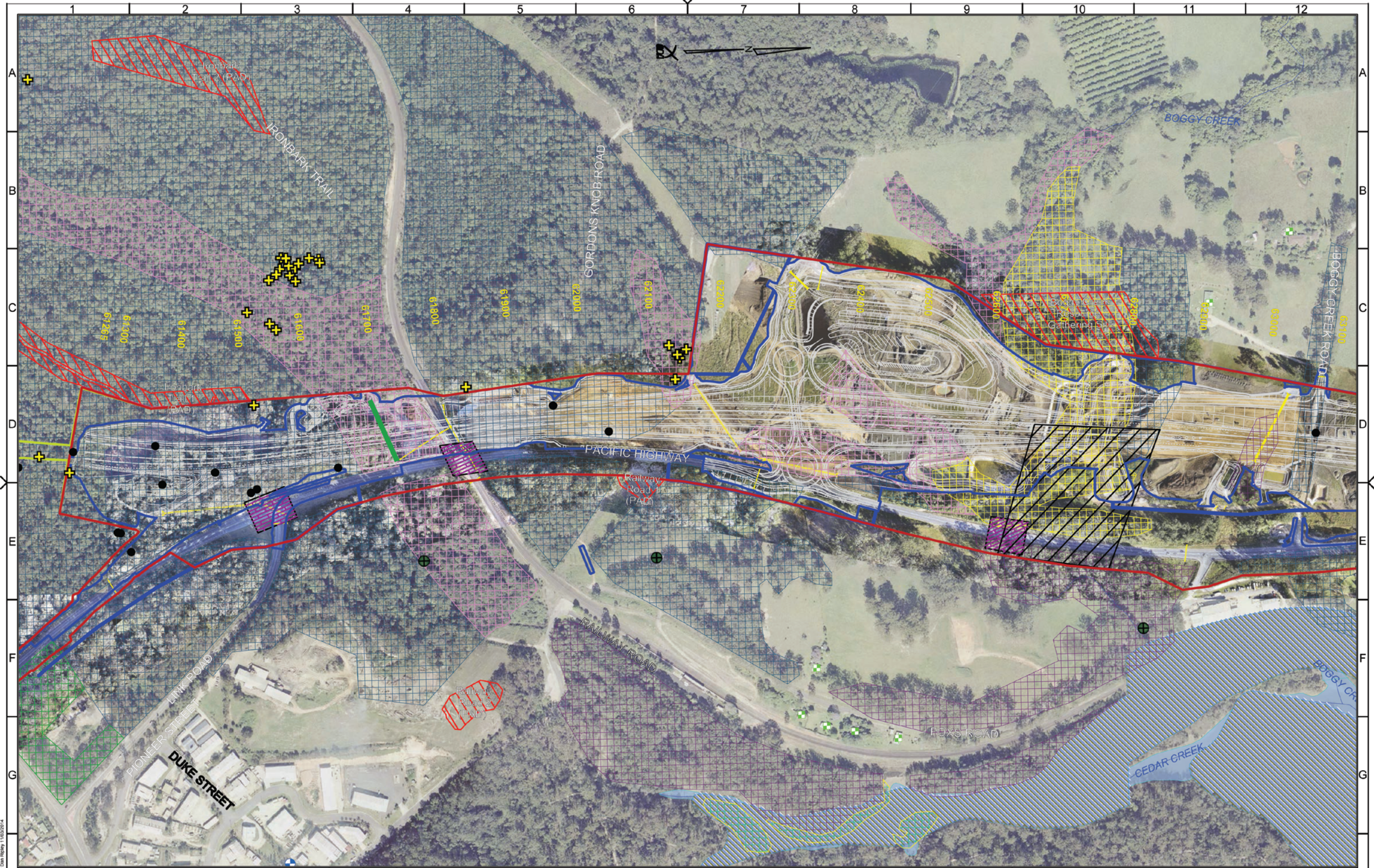
GENERAL NOTES / REFERENCES
 Nambucca Heads to Urunga
 H10 Pacific Highway Upgrade
 REVISION DATE: 10/10/2014
 Scale 1:5000 @ A3

Lend Lease Engineering
 Nambucca Heads to Urunga
 Ballards Road, Valla, NSW, 2448
 Ph 02 6692 2300

SURVEYED / DRAWN BY
 Rob Corbett
 COORDINATE SYSTEM
 MGA Zone 56
 HEIGHT DATUM
 A.H.D.
 SCALE 5000
 PLOT DATE: Thu Oct 16 11:06:07 2014
 LOCATION: NH2U
SENSITIVE AREA PLANS
 SHEET 1 of 14

1 2 3 4 5 6 7 8 9 10 11 12

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



REV	ZONE	AMENDMENTS	APP'D	DATE

GENERAL NOTES / REFERENCES
 Nambucca Heads to Urunga
 H10 Pacific Highway Upgrade
 REVISION DATE: 10/10/2014
 Scale 1:5000 @ A3

Lend Lease
 Engineering
 Nambucca Heads to Urunga
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 Ph 02 6692 2300

SURVEYED / DRAWN BY
 Rob Corbett
 COORDINATE SYSTEM
 MGA Zone 56
 HEIGHT DATUM
 A.H.D
 SCALE
 5000

PLOT DATE: Thu Oct 16 11:09:29 2014
 LOCATION: NH2U
SENSITIVE AREA PLANS
 SHEET 2 of 14

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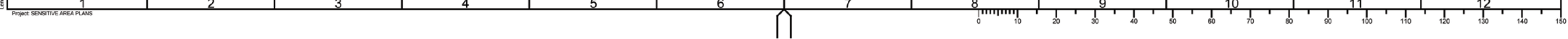
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GENERAL NOTES / REFERENCES
 Nambucca Heads to Urunga
 H10 Pacific Highway Upgrade
 REVISION DATE: 10/10/2014
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Lend Lease Engineering
 Nambucca Heads to Urunga
 Ballards Road, Valla, NSW, 2448
 Ph 02 6692 2300

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 Rob Corbett
 COORDINATE SYSTEM
 MGA Zone 56
 HEIGHT DATUM
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PLOT DATE: Thu Oct 16 11:10:29 2014
 LOCATION: NH2U
SENSITIVE AREA PLANS
 SHEET 3 of 14



Nambucca Heads to Urunga
 Appendix A6 Sensitive Area Plans



Lend Lease Engineering File Name: E:\110\1102014

REV	ZONE	AMENDMENTS	APP'D	DATE

GENERAL NOTES / REFERENCES
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 H10 Pacific Highway Upgrade
 REVISION DATE: 10/10/2014
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 LOCATION: NH2U
SENSITIVE AREA PLANS
 SHEET 4 of 14

Nambucca Heads to Urunga
 Appendix A6 Sensitive Area Plans



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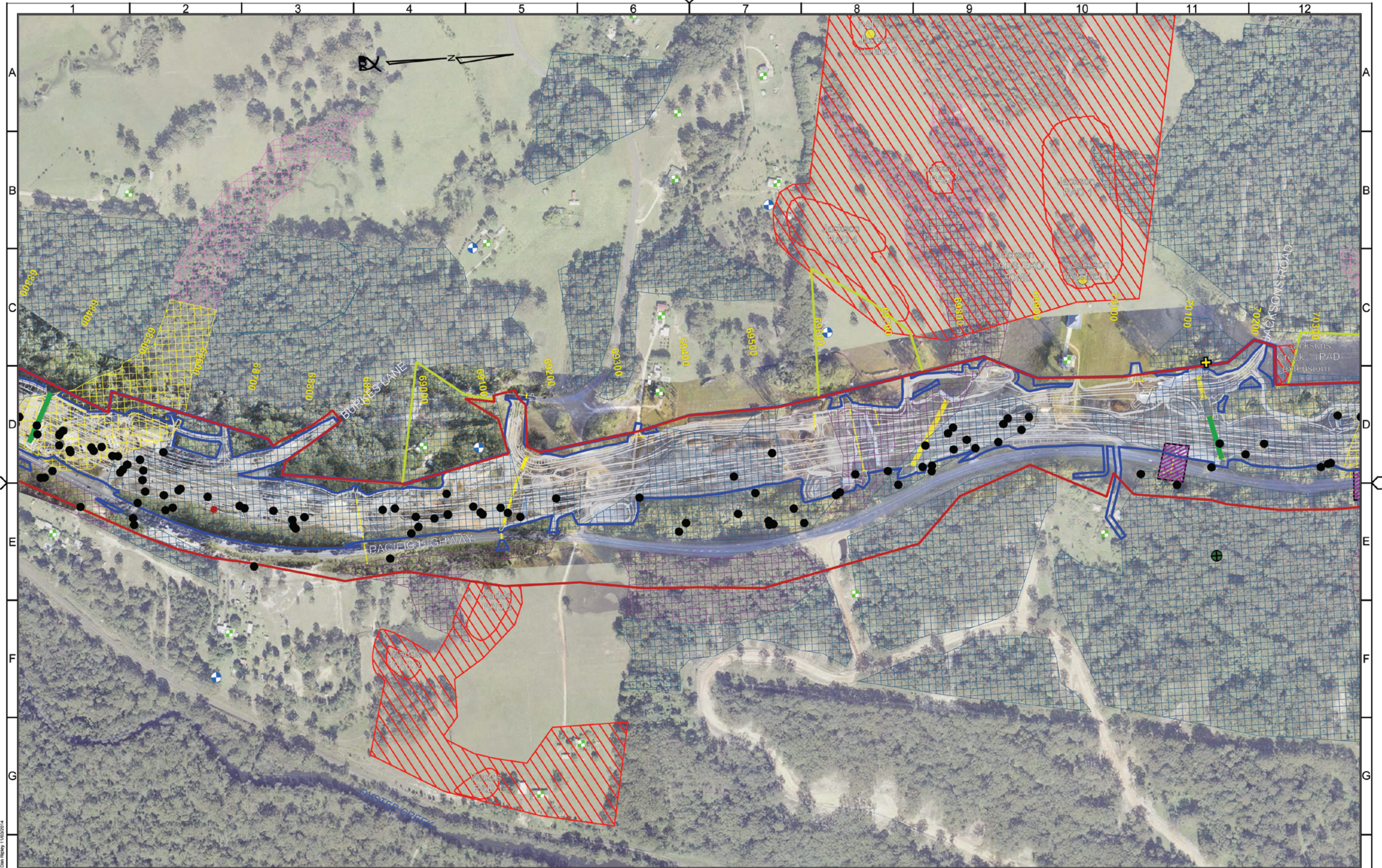
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 REVISION DATE: 10/10/2014
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 A.H.D.
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PLOT DATE: Thu Oct 16 11:12:22 2014
 LOCATION: NH2U
SENSITIVE AREA PLANS
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REV	ZONE	AMENDMENTS	APP'D	DATE

GENERAL NOTES / REFERENCES
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 H10 Pacific Highway Upgrade
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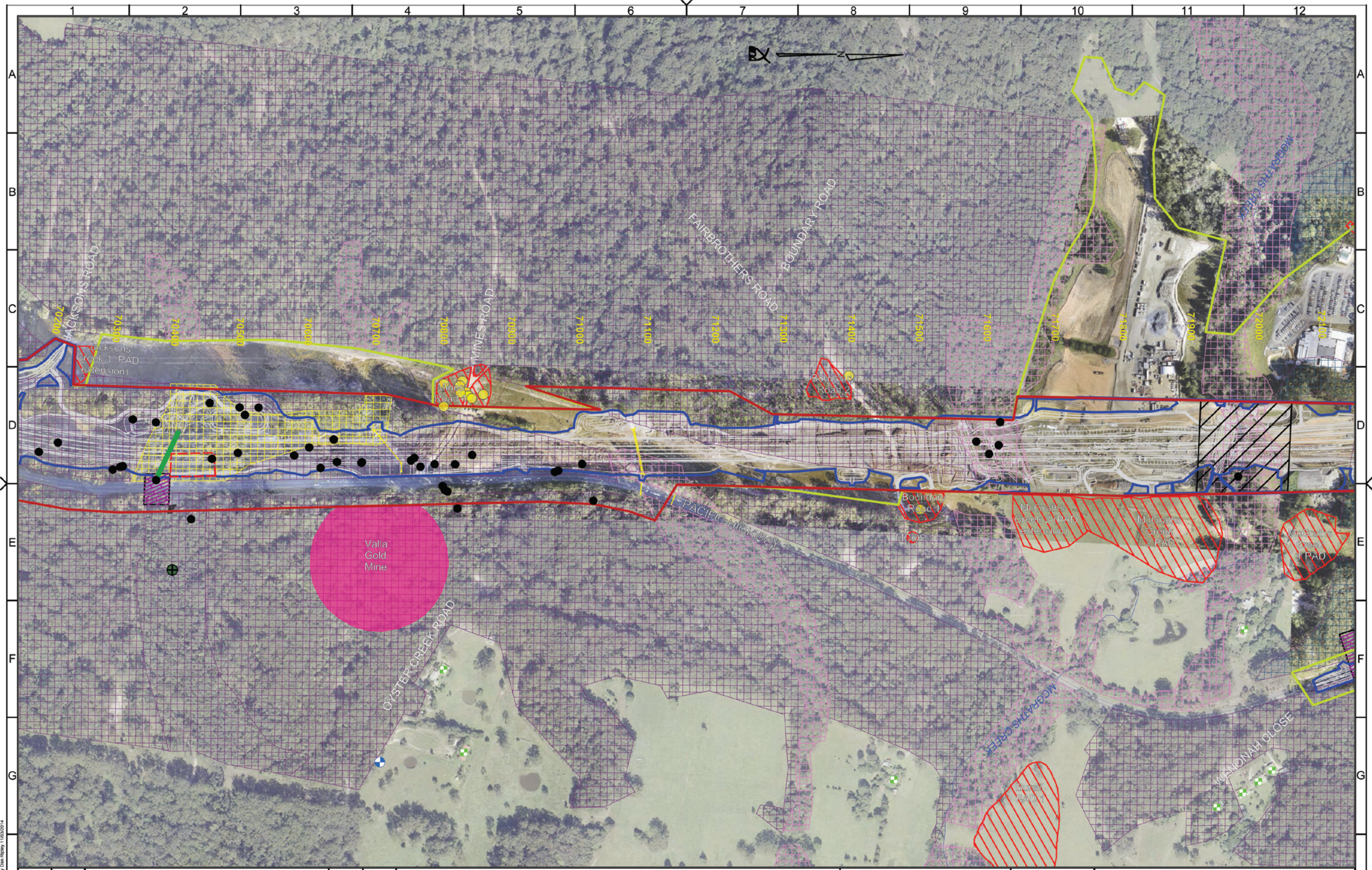
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SENSITIVE AREA PLANS
 SHEET 6 of 14



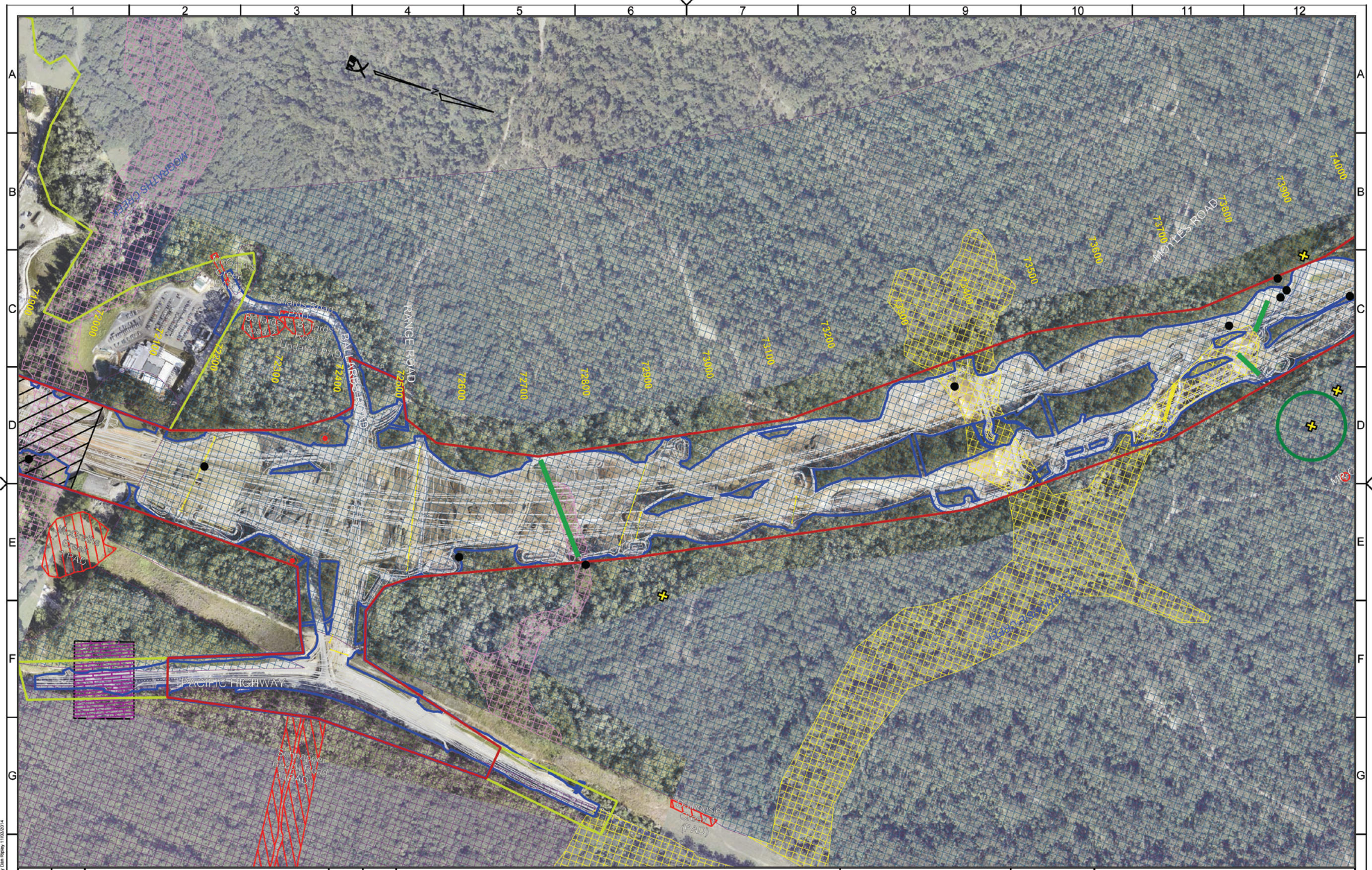
Nambucca Heads to Urunga
 Appendix A6 Sensitive Area Plans



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SCALE 5000	SHEET 7 of 14	



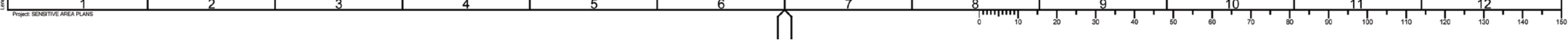
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 H10 Pacific Highway Upgrade
 REVISION DATE: 10/10/2014
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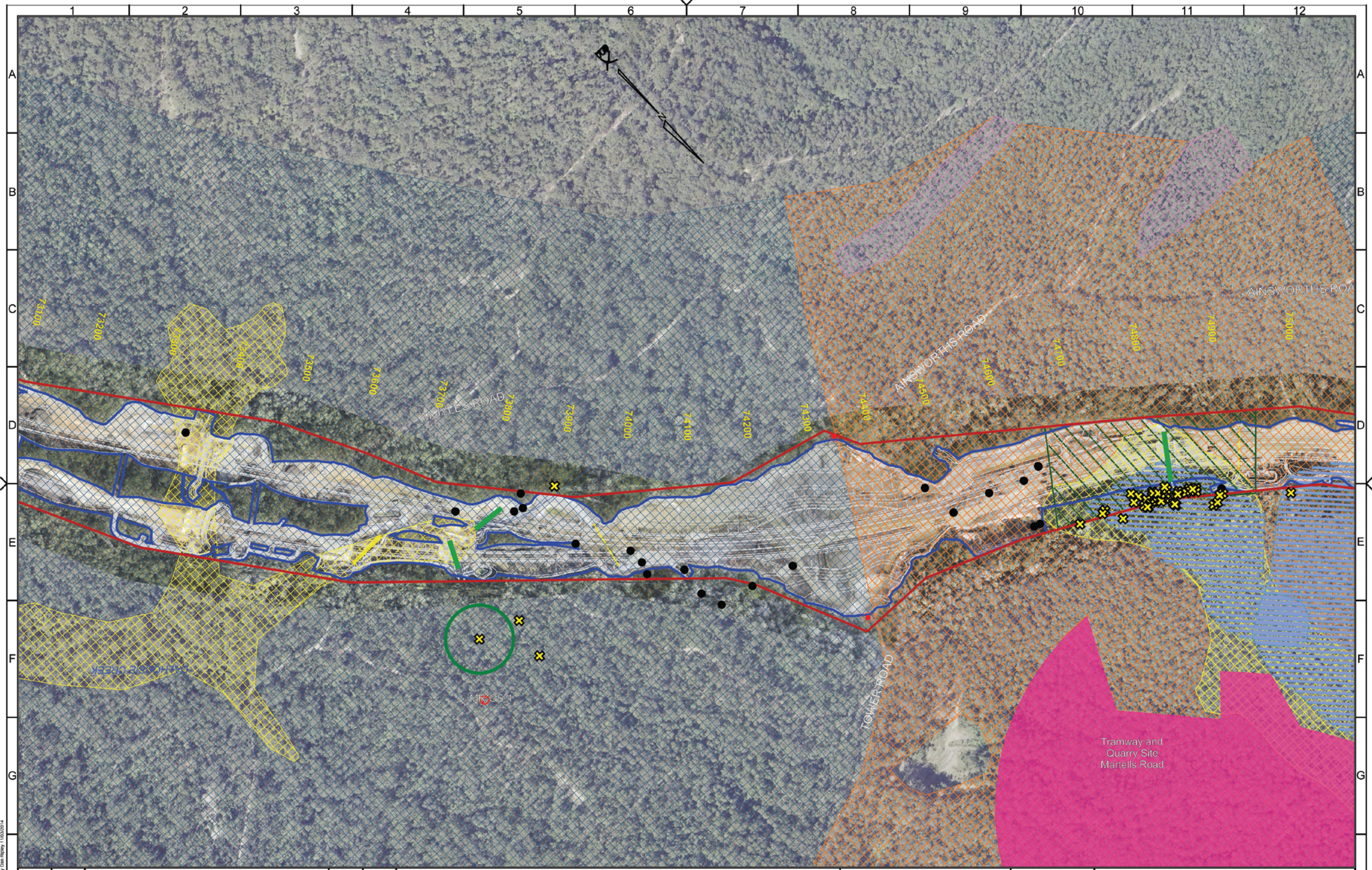
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SENSITIVE AREA PLANS
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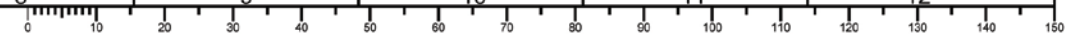
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 Ph 02 6692 2300

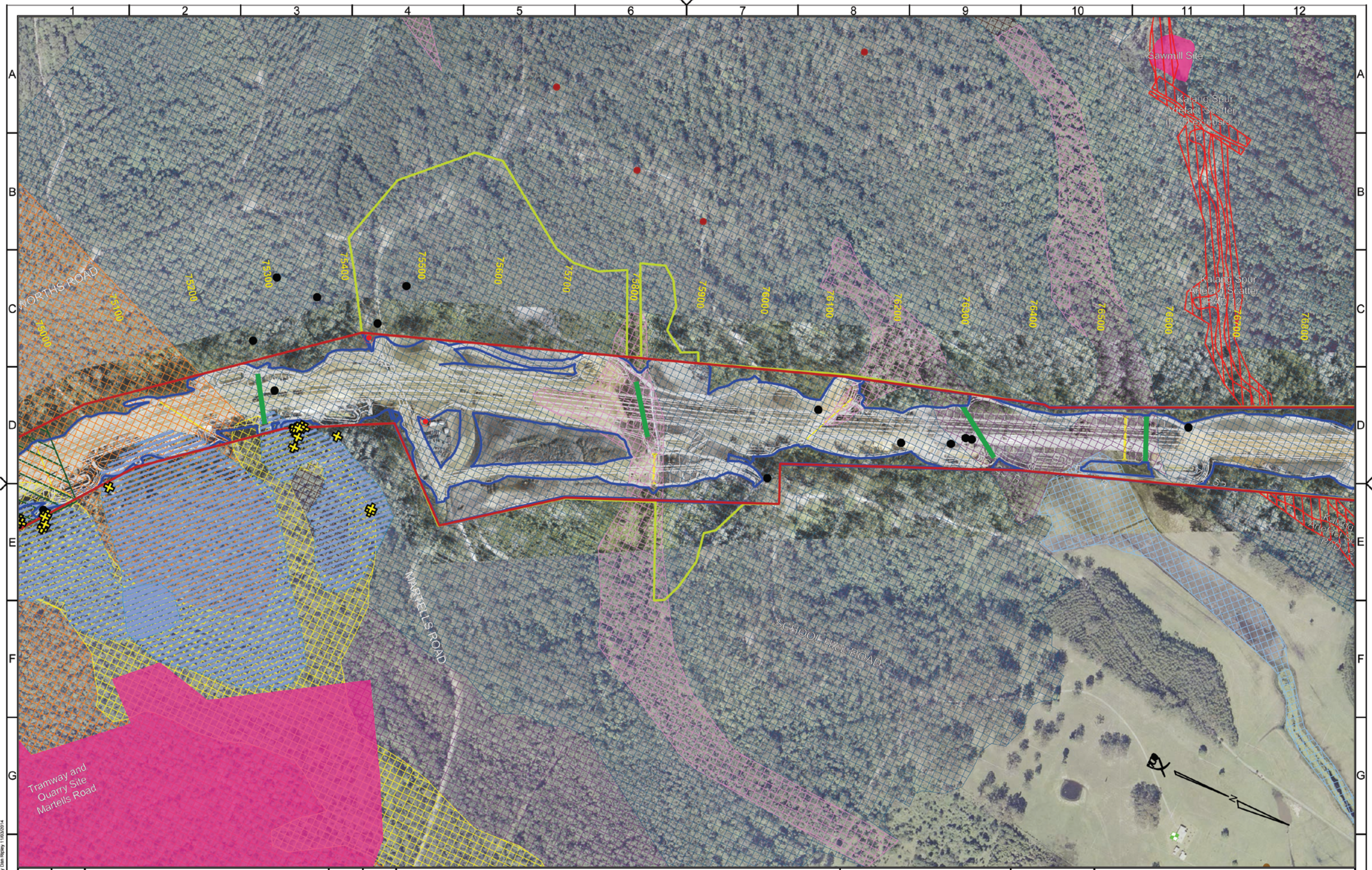
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 LOCATION: NH2U
SENSITIVE AREA PLANS
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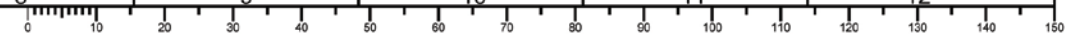
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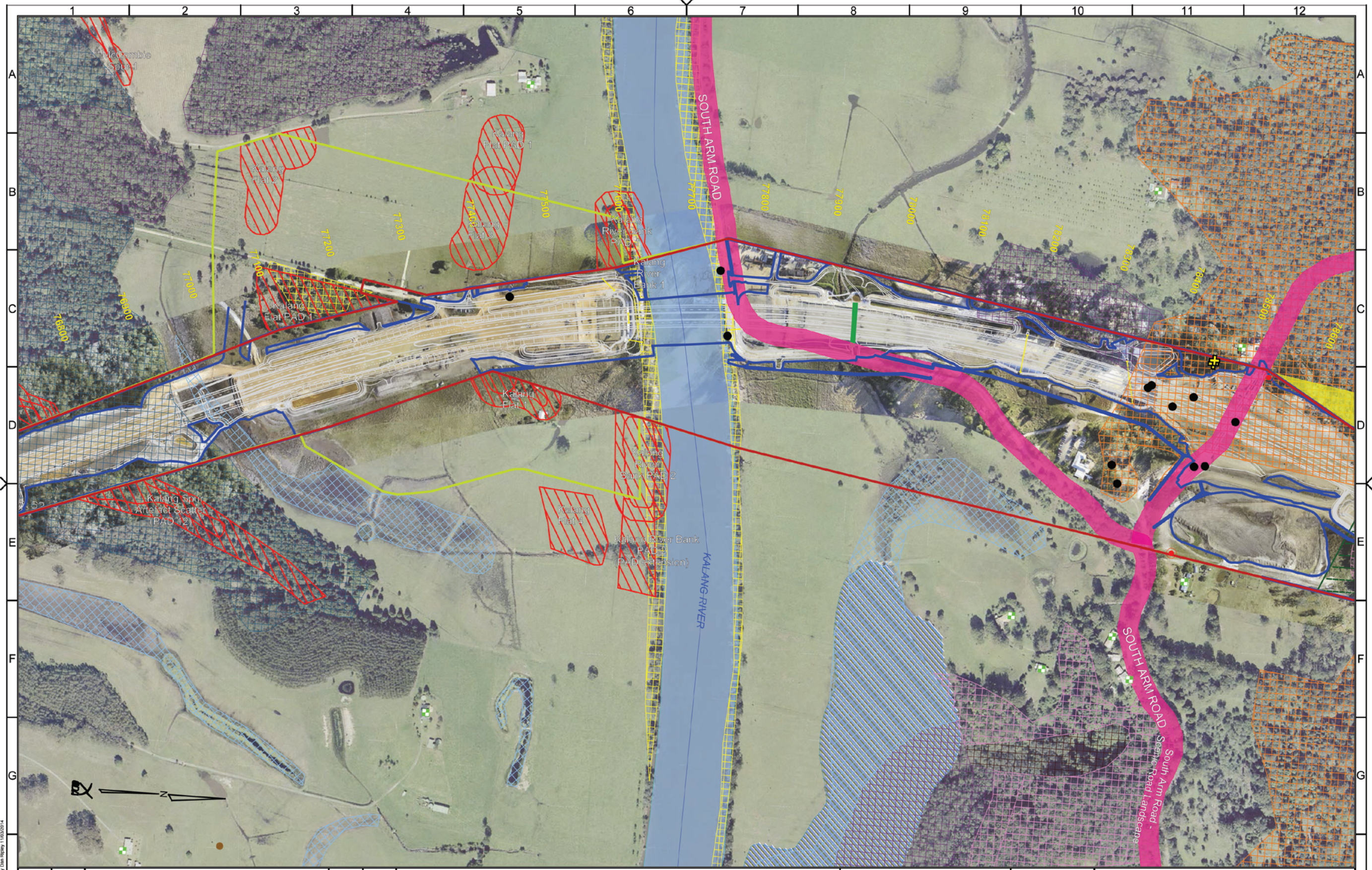
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 Nambucca Heads to Urunga
 H10 Pacific Highway Upgrade
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 Ph 02 6692 2300

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PLOT DATE: Thu Oct 16 11:16:55 2014
 LOCATION: NH2U
SENSITIVE AREA PLANS
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REV	ZONE	AMENDMENTS	APP'D	DATE

GENERAL NOTES / REFERENCES
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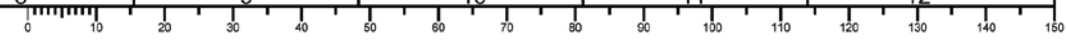
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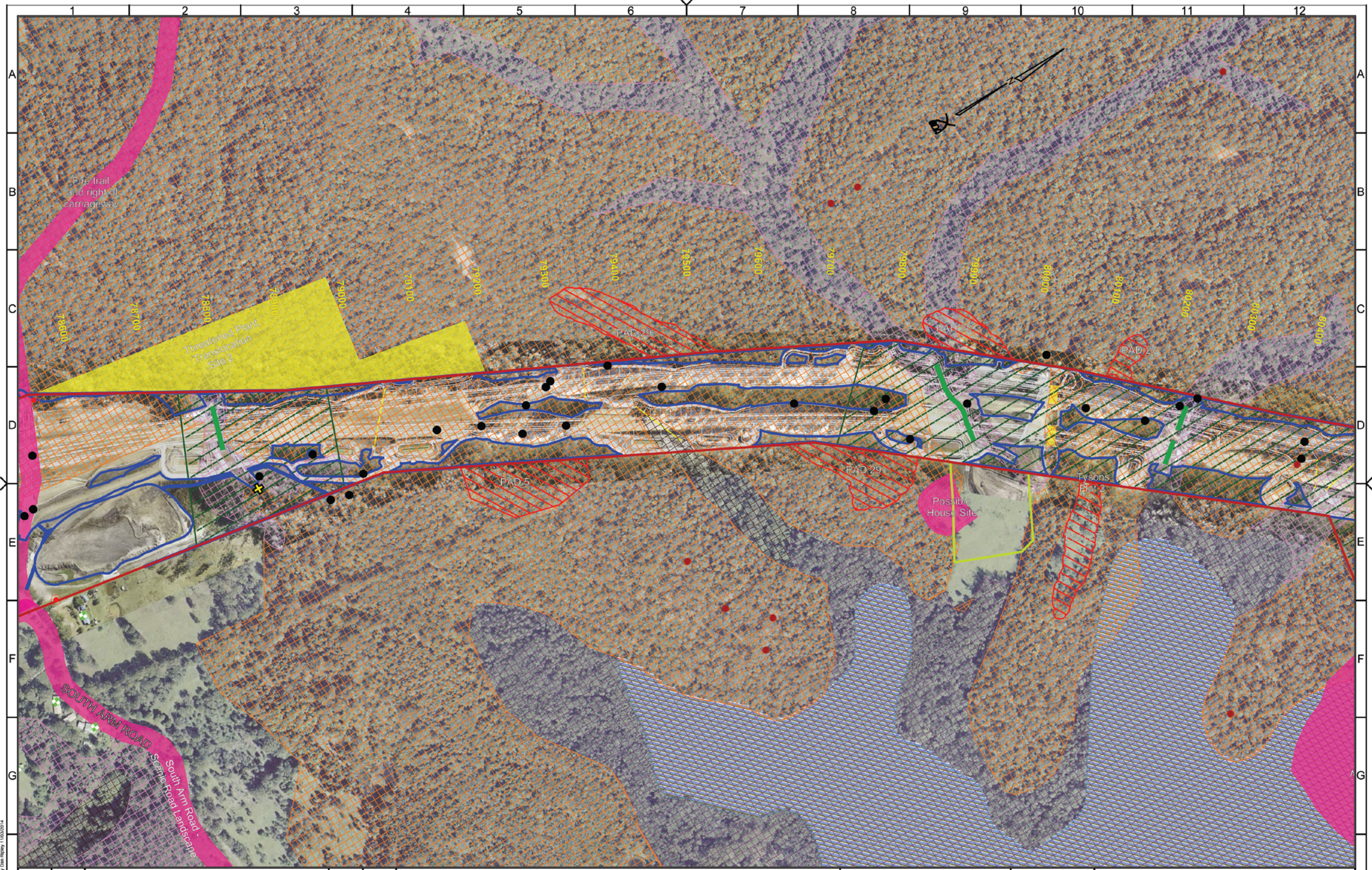
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PLOT DATE: Thu Oct 16 11:17:48 2014
 LOCATION: NH2U
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 SHEET 11 of 14

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REV	ZONE	AMENDMENTS	APP'D	DATE

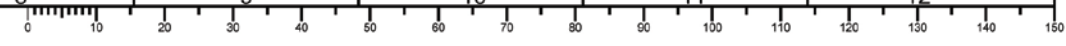
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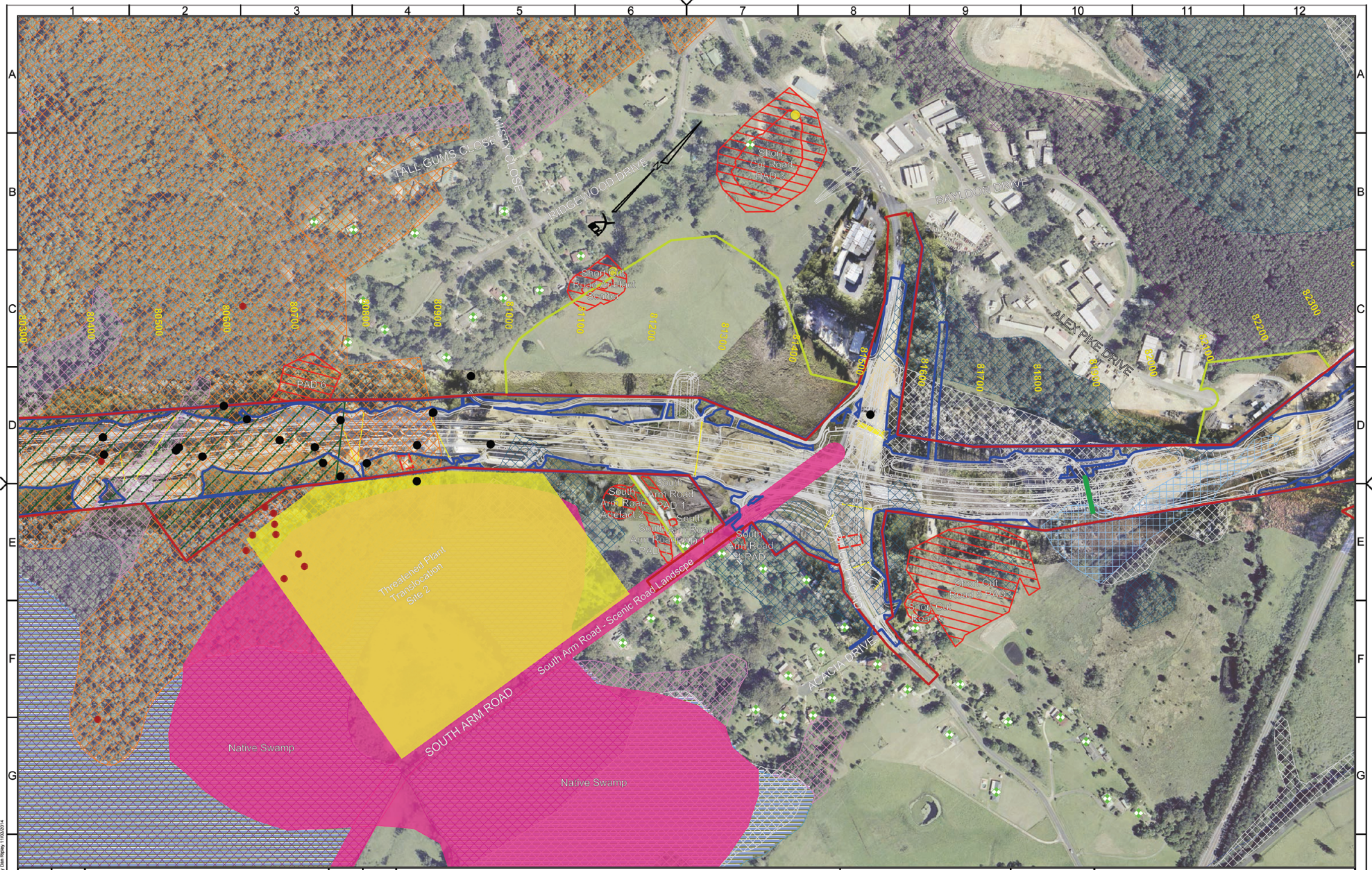
Lend Lease
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 SHEET 12 of 14

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 REVISION DATE: 10/10/2014
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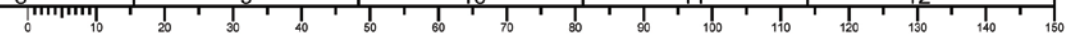
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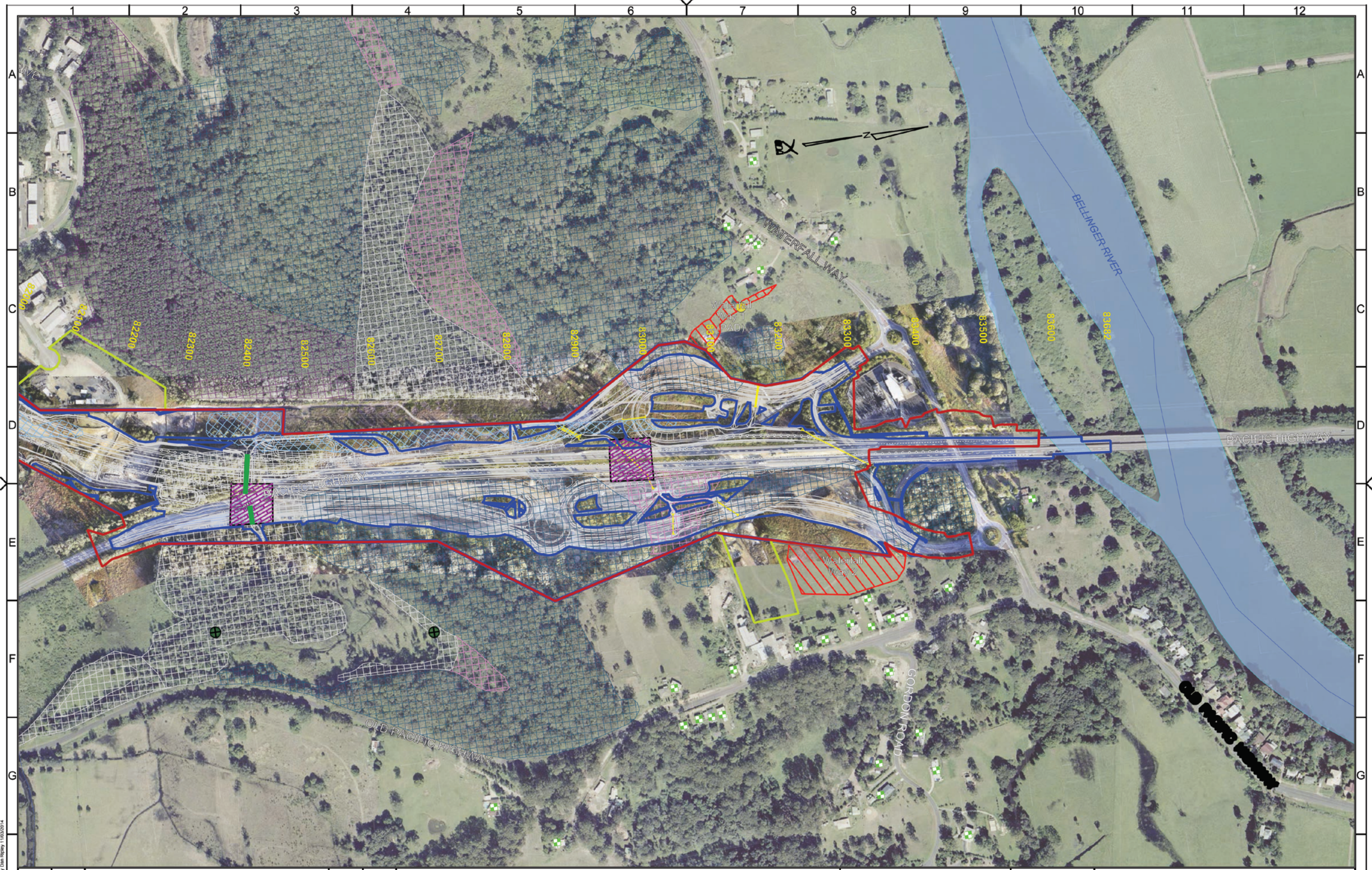
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Rob Corbett
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PLOT DATE: Thu Oct 16 11:19:38 2014
 LOCATION: NH2U
SENSITIVE AREA PLANS
 SHEET 13 of 14

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 LOCATION: NH2U
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 SHEET 14 of 14

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Appendix A7

Roads and maritime environmental incident classification and reporting



Transport
Roads & Maritime
Services

ENVIRONMENTAL INCIDENT CLASSIFICATION AND REPORTING PROCEDURE

June 2015

About this release

Title	Environmental Incident Classification and Reporting Procedure
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Approval and authorisation		Name
Prepared By	Environment Manager Environment Performance Improvement	Sean Hardiman
Approved By	Principal Manager Environment Operations	David Featherston

Document Status	Date
Version 4.11	02 June 2015

Version	Date	Revision Description
1.0	14.11.2007	Classification and Management of Environmental Incidents and Hazards. Environmental incidents classified under two categories.
1.1	22.11.2007	Additional definitions included.
1.2	10.12.2007	Clarified definition of Senior Environmental Officer
2.0	08.02.2008	Title change. New incident category (Cat 3) included.
2.1	14.02.2008	Appendix 1 Environmental Incident Report Form & instructions included.
2.2	11.04.2008	Environmental Incident Report Form & instructions included in Guidance material
2.3	09.07.2008	Minor changes to category 1 incident types; discharge of waters, critical habitat and failure to comply with a REF determination.
3.0	16.06.2011	Sections from Guidance document included in Procedure. Requirement to notify Chief Executive and relevant Directors of significant category 1 incidents. Appendices included.
3.1	22.12.2011	Significant changes to formatting.
4.0	27.04.2012	Title change to Environmental Incident Classification And Reporting Procedure. Update to include Maritime Division. Unexpected threatened species find to be managed in accordance with Biodiversity Guidelines included in reportable events. Significant changes to notification of material harm. Reportable event category included.
4.2	29.05.2012	Changes to reportable events, including unexpected contamination finds. Update to notification of material harm.
4.3	31.08.2013	Legal Branch revision and update following recommendations in "The External Review of Roads and Maritime Services' Handling of Contaminated Material on the Pacific Highway Herons Creek to Stills Road Section" by Brian Gilligan dated February 2013.
4.4	01.10.2013	Update Maritime Division contact and inclusion of document history
4.5	11.11.2013	Update contact positions, edit references to RMS
4.6	10.06.2014	Update contact positions, update incident form.
4.7	06.08.2014	Clarify that unexpected find of asbestos is a reportable event. Update to meet Web Content Accessibility Guidelines version 2.0 (WCAG 2.0)
4.8	16.09.2014	Update Contacts page
4.9	25.09.2014	Clarification on reportable event notification email address
4.10	13.03.2015	Update on report sign off process to ensure Environment Manager signoff and acknowledgement. Reference to RMD incident fact sheet. Priority reference to Part 5.7 incidents. General formatting and editorial amendments
4.11	20.05.2015	Update of the incident form work flow to ensure Project Manager approval and Regional Environment Manager concurrence. Clarification of a Category 2 procedural / administrative/ documentation incident

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1 BACKGROUND

1.1 Purpose

To ensure that Roads and Maritime Services has processes to classify and report environmental incidents that may occur during Roads and Maritime managed activities and to comply with its statutory obligations to report certain incidents.

1.2 Scope and Coverage

This Procedure is for the use of all Roads and Maritime staff in all regions and divisions where environmental incidents may occur, including where incidents occur during the course of Roads and Maritime's contractors or alliance members undertaking works. The procedure is to clearly define the requirements of Roads and Maritime staff and contractors to report environmental incidents. The procedure does NOT cover environmental incidents caused by traffic accidents or boating accidents nor marine oil and chemical spills covered by the National Plan¹.

The Roads and Maritime Environmental Incident Classification and Reporting Procedure relates to incidents involving Roads and Maritime or its contractor/alliance partners and is for internal reporting processes as outlined in this procedure..

1.3 Responsibilities

All Roads and Maritime staff and contractors are responsible for reporting an environmental incident in accordance with this procedure when they become aware of the incident. Regional Maintenance Delivery (RMD) shall manage environmental incidents in accordance with the RMD Environmental Incident Fact Sheet at this [link](#).

2 CLASSIFICATION, NOTIFICATION AND REPORTING PROCESS

2.1 Environmental Incident Classification

There are three categories of environmental incidents / events that are to be identified and managed as shown in shown in Table 1.

- Category 1 Incidents -- potentially the most serious incidents. They generally reflect breaches of environmental legislation.
- Category 2 Incidents - are generally less environmentally serious and generally have lower maximum penalties. Nevertheless, there are sound policy reasons why these incidents need to be identified and reported, including in order to track potential trends that may lead to Category 1 incidents if not addressed
- Reportable Events - This category captures events that occur outside the scope of reasonable controls and mitigation.

¹ The National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances

Table I Environmental Incident Classification Categories

Incident Category	Primary Legislative Requirements and offence provisions
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Category 1</p> <p>Pollution Incidents Breaches of the <i>Protection of the Environment Operations Act POEO Act (1977)</i> particularly s.148 (notification requirements).</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Pollution incidents which cause, or threaten to cause, material harm to the environment, that is, actual or potential harm to the health or safety of humans or ecosystems that is not trivial or that results in actual or potential loss or damage over \$10K must be NOTIFIED to the EPA and other relevant authorities.</p> </div> <p>Conservation Breaches Breaches of the <i>National Parks & Wildlife Act (1974)</i> NPW Act Fisheries Management Act (1999) FMA Act and the <i>Environment Protection and Biodiversity Conservation Act (1999)</i>. EPBC Act</p>	<p>Discharge of waters from site not in accordance with any applicable Minor Works memo or safeguard / Part 5 determination / approval / licence condition</p> <ul style="list-style-type: none"> ▪ (EP&A Act particularly s.115W, s.76A, s.115W: POEO Act particularly s.64)
	<p>Pollution, or potential pollution, of waters with sediment or chemicals/fuels/oils that travel beyond the site boundary causing or potentially causing adverse impact to the environment, including discharges or spills to waters from the Rozelle Maritime marina or Maritime operated vessels</p> <ul style="list-style-type: none"> ▪ (s.120 POEO Act – water pollution, sediment laden water, chemical/oil spill and sewage/septic overflow)
	<p>Emission of excessive levels of dust, or an offensive odour or noise that travel beyond the site boundary and might impact on nearby land users</p> <ul style="list-style-type: none"> ▪ (s.126 POEO Act - dust exceeding reasonable levels without active management measures in place, s.129 - offensive odour; s.139 - offensive noise)
	<p>Unauthorised disposal or transport of waste</p> <ul style="list-style-type: none"> ▪ s.143 POEO Act – Unlawful transporting or depositing of waste
	<p>A spill or other incident that causes pollution to land or residual environmental impact.</p> <ul style="list-style-type: none"> ▪ (s.116 POEO Act – spills and leaks generally, s.142 – pollution of land)
	<p>Unauthorised harm or damage to native vegetation, threatened species, endangered populations, endangered ecological communities or critical habitat.</p> <ul style="list-style-type: none"> ▪ NPW Act particularly s.118A, s.118C and s.118D
<p>Unauthorised harm to threatened aquatic species and protected marine vegetation or unauthorised dredging or reclamation works within a watercourse.</p> <ul style="list-style-type: none"> ▪ FMA Act (1994) particularly s. 199 and 204A. NPW Act particularly s.118A, s.118C and s.118D. 	
<p>A fire that travels beyond the boundary causing or potentially causing adverse impact on the environment or community.</p>	
<p>Heritage Breaches Breaches of the Heritage Act (1977) and NPW Act (1974), EPBC Act (1999)</p>	<p>Unauthorised harm to Aboriginal objects and Aboriginal places.</p> <ul style="list-style-type: none"> ▪ NPW Act particularly s.86 and s.87. EPBC Act 1999 s.15A, B & C

Incident Category	Primary Legislative Requirements and offence provisions	
	<p>Unauthorised damage to any State or locally significant relic or Heritage item</p> <ul style="list-style-type: none"> ▪ <i>Heritage Act 1977</i> particularly s. 57, s.119, s.139 and s.156. <i>EPBC Act 1999</i> s.15A, B & C 	
	<p>Planning Breaches Breaches of the Environmental Planning & Assessment Act (1979) EP&A Act, Protection of the Environment Operations Act (1977) POEO Act.</p>	<p>Works undertaken outside approved areas, without required approval, without environmental assessment.</p> <ul style="list-style-type: none"> ▪ EP&A Act particularly s.115W, and s.111 ▪ POEO Act particularly s.64
	<p>(also refer Category 2 exception)</p>	<p>Failure to comply with a Minor Works memo or safeguard / Part 5 determination / approval or permit/ environment protection licence condition.</p> <ul style="list-style-type: none"> ▪ EP&A Act particularly s.75D, s.76A, s.115 ; ▪ POEO Act s. 64
Category 2	<p>A procedural, administrative or technical breach that relates to the preparation or submission of documents, reports or other correspondence.</p>	
	<p>Failure to implement component of Environment Management Plan or work method statement that does not result in a Category 1 incident.</p>	
	<p>Spills that do not leave a site boundary and are cleaned up without environmental harm or residual environmental impact</p>	
	<p>A fire that is contained on site and does not cause or potentially cause adverse impact to the environment or community</p>	
Reportable Events	<p>Material travelling beyond a site boundary, and where it can be demonstrated that the erosion and sediment controls have been installed and maintained well, and the weather (rain, wind etc) event exceeds the design capacity of controls.</p>	
	<p>An unexpected archaeological and is being managed in accordance with the " Roads and Maritime Standard Management Procedure - Unexpected Archaeological Finds"</p>	
	<p>An expected threatened species find that has been discovered and not previously identified during previous environmental assessments and is being managed in accordance with the "Roads and Maritime Biodiversity Guidelines – unexpected threatened species finds procedure"</p>	
	<p>An unexpected find of contaminated soils, asbestos or other potentially hazardous substances.</p>	
	<p>A formal complaint or warning from a regulatory agency</p>	

2.2 Environmental Incident Response

Table 2 details the response to each incident category and Appendix 2 gives information in relation to who is responsible for the various management actions described below. The table provides information of the type of response and whether it is required to be undertaken by Roads and Maritime and/or the Roads and Maritime contractor. Regional Maintenance Delivery (RMD) shall manage environmental incidents in accordance with the RMD Environmental Incident Fact Sheet at this [link](#).

If in doubt, treat all incidents as Category 1 and in consultation with the PME0, a decision can be made to reclassify the category.

Table 2: Environmental Incident Response

Category 1 Incident Response	
1	<p>Stop work in relevant area (if necessary) and take immediate actions to prevent adverse impact to the environment or community.</p> <p>Note that the health and safety of workers is the primary concern, and no action should be taken if it is not safe to do so.</p>
2	<p>For NOTIFIABLE POLLUTION INCIDENTS refer to section 2.4 below.</p> <p>For all other Category 1 incidents immediately advise RMS Project Site Management and relevant RMS Regional Environment Manager who must immediately advise Principal Manager Environment Operations (PME0) by phone.</p>
3	<p>Complete the environmental incident report form 624 and submit to Regional Environment Manager and the Environment Operations mailbox within 3 days of the date of the incident. The RMS Project Manager must approve the incident report and submit to the RMS Regional Environment Manager who will signoff as concurrence of receipt and submit to PME0 and the Environment Operations mailbox by email on the same day of receipt.</p>
Category 2 Incident Response	
1	<p>Stop work in relevant area (if necessary) and take immediate actions to prevent adverse impact to the environment or community.</p> <p>Note that the health and safety of workers is the primary concern, and no action should be taken if it is not safe to do so.</p>
2	<p>Advise relevant RMS Regional Environment Manager (Roads and Maritime contractors to advise Roads and Maritime Project Site Management).</p>
3	<p>Complete the environmental incident report form 624 (and submit to RMS Regional Environment Manager and the Environment Operations mailbox within 3 days of the date of the incident. The Regional Environment Manager will signoff and submit to PME0 and the Environment Operations mailbox by email on the same day of receipt.</p>
Reportable Event Response	
1	<p>RMS Regional Environment Manager to advise Principal Manager Environment Operations by email with copy to the Environment Operations mailbox. Roads and Maritime contractors to advise Roads and Maritime Project Site Management</p>

2.3 Environmental Incident Reporting

It is important that there is consistency in the way that an environmental incident is reported. The incident report form and any subsequent reports must only include factual information. Speculation about the causes and outcomes are not to be included. The completed reports must be forwarded through regional Environment Managers or relevant Project Manager to the Principal Manager Environment Operations.

The following email conventions must be used when emailing and reporting on environmental incidents:

2.3.1 The Environment Incident Report Form

All environmental incidents must be reported by project staff and project managers through the Environmental Incident Report Form (refer Appendix 1, Form 624 available here or Form 400 for Regional Maintenance Delivery projects available here).

2.3.2 Environmental Incident Report Form Completion

All parts of the form must be completed

- The form must be signed off by:
 - the person making the report; and
 - the RMS Regional Environment Manager.
- It is the responsibility of the RMS Regional Environment Manager to complete the section regarding the notification of the incident to the EPA and other relevant authorities.

2.3.3 Environment Operations mailbox

The Environment Operations mailbox is envops@rms.nsw.gov.au

2.3.4 Email Subject Line

When emailing an Environmental Incident Report to the Environment Operations mailbox, the subject line must include the incident category level (1 or 2), the project name and date. This will ensure that any subsequent emails relating to the incident may be adequately captured and tracked by Environment Branch. For example, the email subject line convention would be written as "Category 1 – Raleigh Road Upgrade – 1/10/15".

2.3.5 Submitting the Form

All environmental incident report forms must follow the following signoff workflow:

1. preparation and signoff by the person preparing the report (RMS or contractor staff)



2. approval by the RMS Project Manager,



3. signoff concurrence by the relevant RMS Regional Environment Manager and forwarding to the Environment Operations mailbox.

The Regional Environment Manager may also request further information regarding the incident. The Regional Environment Manager should submit the form within timeframes and include DRAFT in the subject line while waiting for the information which must be provided and resubmitted within the timeframes requested.

2.4 Regulatory Agency Notification

There are specific statutory requirements relating to the notification of pollution or environmental incidents to relevant regulatory agencies. These are summarised in table 3 below

Table 3: Environmental Incident Notification Requirements

Legislation	Regulating Authority	Section
POEO Act 1997 (see Section 2.5)	EPA and relevant authorities	Section 148 – requirement to immediately notify pollution incidents occurring during an activity that cause or threaten material harm to the environment.
Heritage Act 1977	EPA	Section 146 – requirement to notify the Heritage Council of the location of the relic once a relic has been discovered or located.
National Parks and Wildlife Act 1974	EPA	Section 89A – requirement to notify the location of an Aboriginal object that is the property of the Crown.
Commonwealth Aboriginal and Torres Strait Islanders Heritage Protection Act, 1984	Department of Environment	Section 20 – requirement to notify the Minister of the discovery of Aboriginal remains.
Contaminated Land Management Act 1997	EPA	Section 60 – requirement to notify if Roads and Maritime activities have contaminated land or if Roads and Maritime owns land that has been contaminated.
Rural Fires Act 1997	NSW Fire Brigades	Section 64 – requirement to notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger.

Should an environmental incident have the potential to impact on a drinking water supply, the relevant water supply authority must also be advised.

It is the responsibility of Environment Managers to liaise with Environment Operations Section prior to notifying regulatory agencies of relevant environmental incidents.

2.5 POEO Act Notification of Material Harm

Under Part 5.7 of the POEO Act, there is a duty to notify each relevant authority (identified below) of a pollution incident, where material harm to the environment is caused or threatened. Material harm includes actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial or that results in actual or potential loss (refer definitions in s147 of POEO Act) or property damage of an amount over \$10,000.

The following notification procedure only relates to pollution incidents.

Conservation, heritage and planning breaches described in Section 2.1 are not included in the definition of a pollution incident with respect to Part 5.7 of the POEO Act.

Roads and Maritime is not responsible for notifying a pollution incident caused by a traffic or vehicle accident where notification has already occurred. Notification is required by the person carrying on the activity “immediately upon becoming aware” of the incident.

IMPORTANT NOTE

- The following procedure is to be followed by all Roads and Maritime staff and contractors.
- Any actual or potential material harm to a person’s health or well being or the environment as a result of a pollution incident must be reported immediately to Principal Manager Environment Operations on (02) 8588 5765.
- Contractors who hold an environment protection licence for their activities are responsible for implementing their compliant Pollution Incident Response Management Plan including notifying EPA and the other relevant authorities in accordance Part 5.7 of the POEO Act **and** any relevant Conditions of their EPL
- Contractors undertaking works without an EPL are responsible for notifying Roads and Maritime, EPA and the relevant authorities in accordance Part 5.7 of the POEO Act.

As soon as a Roads and Maritime employee becomes aware of a **Category 1 pollution incident**, all Roads and Maritime environment officers and project managers are to **immediately** notify Principal Manager Environment Operations on (02) 8588 5765 of all **Category 1 pollution incidents**. RMD staff are to notify according to RMD Environmental Incident Fact Sheet. PME0 will assist in making an assessment of the incident and determine whether or not to formally notify the incident to the EPA and other relevant authorities.

If for any reason that PME0 is not contactable, staff should contact their regional Roads and Maritime Environment Managers (or Regional Maintenance Delivery Environmental Manager for Regional Maintenance Delivery projects) to assist in assessing whether an incident triggers the notification requirement.

If no assistance can be obtained within a reasonable time, you are required to notify the relevant authorities in the order of notification outlined in the table below and provide each agency with the information required in section 2.5 of this procedure. Even if you do not have all the information, you must notify each agency with the information you have at hand and ensure that they are updated as soon as further relevant information becomes available.

In circumstances where there is doubt about the need to notify or the relevance of a particular agency, Roads and Maritime should always err on the side of notification.

When in doubt, communicate!

2.5.1 Relevant Authorities to Notify

Table 4 provides the contact details for the authorities that need to be notified in the event of a material harm pollution incident.

Table 4: Appropriate Authorities for Part 5.7 Incident Notification

Relevant Authority	Contact Number
Fire and Rescue NSW	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
EPA environment line	131 555
The Ministry of Health	Via the local Public Health Unit see Appendix 3
WorkCover Authority	131 050
The appropriate regulatory authority	Your Local Council or Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council)
Local Council	Please call Division of Local Government on 4428 4100 to find relevant local council contacts or visit their website on http://www.dlg.nsw.gov.au/

The appropriate contact for the relevant local council and Public Health Unit will vary. All necessary contact numbers should be found in advance and stored for immediate access should a pollution incident need to be notified.

Relevant authorities notification order

- **If the incident presents an immediate threat to human health or property, Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service should be contacted first for emergency assistance**
 - call Fire and Rescue NSW on 000 first then
 - EPA environment line
 - The Ministry of Health
 - WorkCover Authority
 - Local Authority (Council)

- **If there is not an immediate threat to human health or property:**
 - call EPA environment line first then
 - Local Authority (Council)
 - The Ministry of Health
 - WorkCover Authority
 - Fire and Rescue NSW on 1300 729 579

All of the above authorities (whether considered relevant or not) must be contacted for each material harm pollution incident to satisfy notification obligations

2.5.2 The relevant information to provide

Section 150 of the POEO Act provides the information that needs to be notified. It is important to avoid speculation on origin, causes or outcomes of a pollution incident in discussions with the authorities. While it is important not to speculate on the causes of an incident, s150 (1) (d) of the POEO Act requires notification of the circumstances in which the incident occurred (including the cause of the incident, if known) and there is an ongoing duty ensure that relevant information be notified after it becomes known.

Section 150 POEO Act - Relevant information to given

1. The relevant information about a pollution incident required under section 148 consists of the following:
 - a. the time, date, nature, duration and location of the incident,
 - b. the location of the place where pollution is occurring or is likely to occur, the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known,
 - c. the circumstances in which the incident occurred (including the cause of the incident, if known),
 - d. the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known,
 - e. other information prescribed by the regulations.

2. The information required by this section is the information known to the person notifying the incident when the notification is required to be given.

If the information required to be included in a notice of a pollution incident by subsection (1) (c), (d) or (e) is not known to that person when the initial notification is made but becomes known afterwards, that information must be notified in accordance with section 148 immediately after it becomes known.


Note: if a pollution incident occurs, the above information is to be initially communicated verbally to each relevant authority and is to be followed by written notification within 7 days of the date on which the incident occurred (Clause 101 POEO (Gen) Regs).

Complying with these notification requirements does not remove the need to comply with any other obligations for incident notification, for example, those that apply under other environment protection legislation such as an EPL condition or legislation administered by WorkCover.

Should Roads and Maritime receive a request from a regulatory authority for a written report regarding an environmental incident, the relevant Project Manager must immediately contact Environment Branch and Legal Branch for advice. Communications with Legal Branch, for the purpose of obtaining legal advice in relation to incidents, may be subject to legal professional privilege. Documents that may be the subject to legal privilege should be clearly identified and sent to Legal Branch prior to producing them to a regulatory agency. Such documents may not be required to be produced to the agencies under written notices to provide information. Environment Branch will provide advice and will co-ordinate a response with Legal Branch. Environment Branch and Legal Branch will assist in the investigation of incidents, prepare legal advice and assist with the preparation of reports to EPA, OEH and DP&I.

2.6 Appendix 1 Environmental Incident Report Form

Form 624 available [here](#) or Form 400 for Regional Maintenance Delivery projects available [here](#)

Environmental Incident Report – 624		 Transport Roads & Maritime Services
Complete this form for all environmental incidents that occur due to Roads and Maritime Services works or on Roads and Maritime worksites. The purpose of this form 624 is to alert Environment Branch to potential environmental incidents. It does not represent the Roads and Maritime final position for any incident reported on this form.		
Remember!	Complete all fields prior to submitting form. Be succinct, stick to the facts and do not make assumptions. Only record information you know to be correct.	
Project name:	Region:	
Contractor name:		
Incident details	Date	Time : am <input type="checkbox"/> pm <input type="checkbox"/> Duration hr: min
Description (provide a brief description of what happened during the incident)	SAMPLE	
EXACT location of the incident (include chainage, landmarks, features, nearest cross street, etc to make it easier to identify later) - provide a sketch if appropriate		
Quantity or volume of material escaped or causing incident (provide an estimate if quantity unknown)		
Estimated distance to nearest waterway (can include stormwater drains and dry watercourses)		
What activity was being undertaken when the incident occurred?		
How was the incident identified? (e.g. Roads and Maritime employee, Council, community, complaint)		
Potential Category 1 Incident: (may involve one or more of the following – tick category, fill in table over page)		
<input type="checkbox"/> Pollution, or potential pollution, of waters with sediment or chemicals/fuels/oils that travel beyond the site boundary causing or potentially causing adverse impact to the environment, including discharges or spills to waters from the Rozelle Maritime marina or Maritime operated vessels.	<input type="checkbox"/> Unauthorised harm or damage to native vegetation, threatened species, endangered populations, endangered ecological communities or critical habitat.	
<input type="checkbox"/> Discharge of waters from site not in accordance with any applicable Minor Works memo or safeguard / Part 5 determination / approval / licence condition.	<input type="checkbox"/> Material harm to the environment or persons as per Part 5.7 of POEO Act.	
<input type="checkbox"/> Works undertaken outside approved areas, without required approval or environmental assessment.	<input type="checkbox"/> Unauthorised harm or damage to threatened aquatic species and protected marine vegetation or unauthorised dredging or reclamation works within a watercourse.	
<input type="checkbox"/> Unauthorised harm to Aboriginal objects and Aboriginal places or damage to any State or locally significant relic or Heritage item.	<input type="checkbox"/> Unauthorised damage or destruction to any State or locally significant relic or Heritage item.	
<input type="checkbox"/> A spill or other incident that causes pollution to land or residual environmental impact.	<input type="checkbox"/> Emission of excessive levels of dust, or an offensive odour or noise that travel beyond the site boundary and might impact on nearby land users.	
<input type="checkbox"/> Breach of legislation, failure to comply with a Minor Works memo or safeguard / Part 5 determination / approval or permit/ environment protection licence condition.	<input type="checkbox"/> Unauthorised disposal or transport of waste.	
Potential Category 2 Incident: (may involve one or more of the following – tick category, fill in table over page)		
<input type="checkbox"/> A procedural, administrative or technical breach that relates to the preparation or submission of documents, reports or other correspondence.	<input type="checkbox"/> A fire that travels beyond the boundary causing or potentially causing adverse impact on the environment or community.	
<input type="checkbox"/> Failure to implement component of Environment Management Plan or work method statement that does not result in a Category 1 incident.	<input type="checkbox"/> A fire that is contained on site and does not cause or potentially cause adverse impact to the environment or community.	
<input type="checkbox"/> Spills that do not leave the site boundary and are cleaned up without material environmental harm or residual environmental impact.		
<input type="checkbox"/> A fire that is contained on site and does not cause or potentially cause adverse impact to the environment or community.		

Any other details of the incident (including any information which did not fit in spaces above, as well as any special circumstances of the day or the location):

.....
.....
.....

What immediate actions/control measures were taken to rectify or contain the incident?

.....
.....
.....

What corrective action has been taken to prevent similar incidents recurring?

<h1>SAMPLE</h1>

Sign off (officer making report)

Print name:	Sign:
Position:	Date:

Approval (Roads and Maritime Project Manager)

Sign:	Print name:	Date:
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Notification to EPA and other relevant authorities

To be completed by the relevant Roads and Maritime Regional Environment Manager	
Was EPA notified?	<input type="checkbox"/> Yes <input type="checkbox"/> No - If No, provide reasons for not notifying EPA
Who notified them? Name:	Position:
Notification method:	<input type="checkbox"/> Telephone <input type="checkbox"/> On site Date: Time: am <input type="checkbox"/> pm <input type="checkbox"/>
Has there been a EPA Environment Line Complaint?	<input type="checkbox"/> Yes <input type="checkbox"/> No EPA Complaint No.
Were any of the following authorities notified?	<input type="checkbox"/> NSW Fire & Rescue <input type="checkbox"/> Local Government <input type="checkbox"/> WorkCover <input type="checkbox"/> Ministry of Health
Were any other authorities notified and why (eg Department of Planning and Infrastructure, Department of Primary Industries (Fisheries), Sydney Catchment Authority, SES).	
Is there an Environment Protection Licence for the project?	<input type="checkbox"/> Yes <input type="checkbox"/> No
▶ If Yes – was the Pollution Incident Response Management Plan implemented	<input type="checkbox"/> Yes <input type="checkbox"/> No

Concurrence (Roads and Maritime Regional Environment Manager)

Print name:	Sign:	Date:
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Comments

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Please submit all completed forms to Environment Branch by email to envops@rms.nsw.gov.au

2.7 APPENDIX 2 ROADS AND MARITIME CONTACTS

Position	Location	Phone	Mobile
General Manager Environment	North Sydney	8588 5730	
Principal Manager Environment Operations	North Sydney	8588 5765	0428 608 758
Principal Manager Environment Policy, Planning and Assessment	North Sydney	8588 5740	0439 595 361
Maritime Division Emergency Planner Officer	Rozelle office	9563 8476	0428 740 520
Senior Environment Specialist – Biodiversity	North Sydney	8588 5756	0439 595 361
Senior Environment Specialist - Heritage	North Sydney	8588 5754	0400 474 405
Environment Manager Motorways	North Sydney	8588 4372	0408 989 693
Environment Manager Sydney	Parramatta	8849 2516	0411 148 513
Environment Manager Western	Parkes	6861 1628	0418 851 454
Environment Manager Southern	Wollongong	6492 9515	0447 443 957
Environment Manager Northern	Grafton	6640 1072	0411 406 519
Environment Manager South-West	Wagga Wagga	6937 1634	0418 496 325
Environment Manager Hunter	Newcastle	4924 0440	0413 483 539
Environment Manager Pacific Highway North	Grafton	6640 1375	0419 248 583
Environment Manager Pacific Highway South	Newcastle	4924 0281	0411 126 989
Environmental Manager Regional Maintenance Delivery	Rockdale	9598 7721	0418 113 942

2.8 APPENDIX 3 CONTACT DETAILS FOR PUBLIC HEALTH UNITS

Public Health Unit	Contact Details	After Hours Contact
Goulburn Office	Locked Bag 11, Goulburn, 2580 Ph: 02 4824 1840 Fax: 02 4824 1831 / 4822 5038 (s)	Ph: 02 6080 8900 (diverts to Albury Base Hospital) - ask for Public Health Officer on call,
Albury Office	PO Box 3095, Albury, 2640 Ph: 02 6080 8900 Fax: 02 6080 8999	Ph: 02 6080 8900 (diverts to Albury Base Hospital) - ask for Public Health Officer on call,
Broken Hill Office	PO Box 457, Broken Hill, 2880 Ph: 08 8080 1499 Fax: 08 8080 1683 / 1196 (s)	Ph: 08 8080 1333 (Broken Hill Base Hospital) - ask for Public Health Officer on call, if no answer: Mob: 0417 685 259
Dubbo Office	PO Box 739, Dubbo, 2830 Ph: 02 6841 5569 Fax: 02 6841 5571 (s)	Ph: 02 6885 8666 (Dubbo Base Hospital) - ask for Public Health Officer on call, if no answer: Mob: 0418 866 397 - ask for Public Health Officer on call
Bathurst Office	PO Box 143, Bathurst, 2795 Ph: 02 6339 5601 Fax: 02 6339 5173 (s)	Mob: 0428 400 526 - ask for Public Health Officer on call
Newcastle Office	Locked Bag 10, Wallsend, 2287 Ph: 02 4924 6477 Fax: 02 4924 6490 / 4922 3164 (s)	Ph: 02 4924 6477 (diverts to John Hunter Hospital) - ask for Public Health Officer on call
Tamworth Office	Locked Mail Bag 9783, NEMSC 2348 Ph: 02 6764 8000 Fax: 02 6766 3890 (s)	Ph: 02 6764 8000 (diverts to Public Health Officer on call)
Matrville Office	PO Box 150, Matrville 2036 Ph: 02 9311 270 Fax: 02 9700 3747 (s)	Ph: 02 9311 2707
Port Macquarie Office	PO Box 126, Port Macquarie 2444 Ph: 02 6588 2750 Fax: 02 6588 2837	Pager Service: 1300 555 555 Communicable Disease: 48073 Environmental Health: 149 3771f no answer phone: Mob 0417 244 966 or Mob 0407 904 280

Public Health Unit	Contact Details	After Hours Contact
Lismore Office	PO Box 498, Lismore 2480 Ph: 02 6620 7585 Fax: 02 6622 2151 / 6620 2552 (s)	Pager Service: 1300 555 555 Communicable Disease: 48073 Environmental Health: 149 3771f no answer phone: Mob 0417 244 966 or Mob 0407 904 280
Hornsby Office	Hornsby Hospital, Palmerston Rd, Hornsby 2077 Ph: 02 9477 9400 Fax: 02 9482 1650 / 1358 (s)	Ph: 02 9477 9123 (Hornsby Hospital) - ask for Public Health Officer on call
Gosford Office	PO Box 361, Gosford, 2250 Ph: 02 4349 4845 Fax: 02 4349 4850 (s)	Ph: 02 4320 2111 (Gosford Hospital) - ask for Public Health Nurse on call
Randwick Office	Locked Bag 88, Randwick 2031 Ph: 9382 8333 Fax: 02 9382 8334 / 8314 (s)	Ph: 02 9382 2222 (Prince of Wales Hospital) - ask for Public Health Nurse on call
Wollongong Office	Locked Bag 9, Wollongong 2500 Ph: 02 4221 6700 Fax: 02 4221 6759 (s)	Ph: 02 4222 5000 (Wollongong Hospital) - ask for Public Health Officer on call
Eastern Zone(Camperdown Office) For Liverpool Area, please dial the Camperdown office.	PO Box 374, Camperdown 2050 Ph: 02 9515 9420 Fax: 02 9515 9440 Fax: 02 9515 9467 (s)	Ph: 02 9515 6111 (Royal Prince Alfred Hospital) - ask Public Health Officer on call
Penrith Office	PO Box 63, Penrith 2751 Ph: 02 4734 2022 Fax: 02 4734 3300 / 3444 (s)	Ph: 02 9845 5555 (Westmead Hospital) - ask for Public Health Officer on call
Parramatta Office	Locked Bag 7118, Parramatta BC 2150 Ph: 02 9840 3603 Fax: 02 9840 3608 / 3591 (s)	Ph: 02 9845 5555 (Westmead Hospital) - ask for Public Health Officer on call

Appendix A8

Environmental Incident / Emergency Response Protocol

1. NH2U Emergency Contacts for Environmental Incidents/Emergencies

Organisation	Name	Position	Phone Number
Lend Lease	Jenny Butler	Environmental Manager	1800 800 612
	Nick Williams	Superintendent	1800 800 612
	Jason Moran	Project Director	1800 800 612
	Justine Voight	Community Relations Manager	1800 800 612
Roads and Maritime	Paul Leonard	Senior Project Manager	(02) 8874 6913
	Shayne Walker	Environmental Officer	(02) 6640 1092
EPA	Info Line	-	131 555
	Craig Dunk	Regional Operations Officer	(02) 6640 2514
OSEM	David Bone	Environmental Representative	0407 461 092
Hyder Consulting	James Stagg	Project Verifier	(02) 6692 2512
DPI (Fisheries)	James Sakker	Conservation Manager	(02) 6626 1200
Police, Fire, Ambulance	-	-	000
SES	-	-	132 500

2. Environmental Incident /Emergency Response Protocol

Step	Action	Responsibility
1	Incident Occurs – Contact the area Foreman or Superintendent immediately	All
2	If safe to do so, implement measures to contain incident or prevent any / further environmental harm	All / Foreman
3	Contact Environmental Manager	Foreman
4	Environmental Manager to verbally notify Roads and Maritime Representative, Environmental Representative and Project Verifier immediately	EM
5a	If the incident is of a <u>routine</u> nature such as a minor spill, follow spill response procedure detailed below OR	All / Foreman
5b	If the incident is <u>significant</u> (e.g. over clearing, large spills, waterway impact, EEC impact, heritage impact etc.) STOP WORKS and wait until Environmental Manager (EM) or other Senior Manager attends site	All / Foreman
6	Notify regulatory agencies if legally required.	Roads and Maritime / EM
7	Implement further containment or protection strategies as directed by the EM or Senior Manager	All / Foreman
8	Implement Roads and Maritime environmental incident classification and reporting procedure (Appendix A7 to CEMP)	EM
9	Implement any additional measures if directed by Roads and Maritime, ER or agencies	EM / Foremen
10	Undertake incident investigation and reporting as per process detailed in the CEMP	EM
11	Toolbox relevant personnel on incident to ensure similar incidents are prevented in future	EM / Foremen
12	Update CEMP, WMSs or relevant procedures if required	EM / Engineers

3. Protocol for Minor Spills

PRIOR TO ANY ACTION, IDENTIFY MATERIALS INVOLVED & OBTAIN PERSONAL PROTECTIVE EQUIPMENT

Step	Action	Responsibilities	Comments
1.	Make safe and stop further pollution	Person causing / finding leak	If leak from oil drum roll drum so that leak area is uppermost. If leak from pipe close valve.
2.	Inform Superintendent/Supervisor	Person causing / finding leak	Stop human & vehicular traffic & isolate area.
3.	Determine the source of the leak or issue	Supervisor	For major leaks notify Superintendent. If spill has escaped offsite/ into waterway contact Environmental Manager immediately.
4.	Form barrier around leak/ spill to contain leak/spill	Foreman / Superintendent	Use foam barrier material in kit. Use soil/ sand if kit not available.
5.	Stop the spreading of the leak.	Foreman / Superintendent	Transfer fuel/ oil from spill drum into another drum etc.
6.	Put barriers around drains/ outlets	Foreman / Superintendent	Seal drain grates by putting sand bags etc. around them.
7.	Obtain oil spill kit & apply oil absorbent on spill	Foreman / Superintendent	Use 'absorbent' or equivalent.
8.	Clean up/ remove absorbent material to bin	Foreman / Superintendent	Use 'Chem-Oil-A-Way' or equivalent for clean up of area. Use brush/ pan provided in kit.
9.	Clean up soft surface by excavating contaminated soil	Foreman / Superintendent	Stockpile contaminated material in designated area.
10	Inform Environmental Manager and complete incident log form	Foreman / Superintendent	Record incident and investigate.