Ancillary Facility Management Plan

The Northern Road Upgrade, between Mersey Road and Eaton Road

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Plan approved by:



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Revision history

Revision	Date	Description	Approval
F	12/10/18	Addressing DPE Comments	
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D	4/08/18	Update of C8 compound layout	
C	17/08/18	Update of consultation table	
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Glossary / Abbreviations

AFMP	Ancillary Facilities Management Plan
Ancillary Facility	A temporary facility for construction of the project including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory and material stockpile area Where an approved CEMP contains a stockpile management protocol, a material stockpile area located within the construction footprint is not considered to be an ancillary facility
CEMP	Construction Environmental Management Plan
CCS	Community Communication Strategy
CMS	Complaint Management System
Compliance audit	Verification of how implementation is proceeding with respect to a environmental management plan (EMP) (which incorporates the relevant approval conditions)
NSW CoA	Conditions of approval in the NSW Infrastructure Approval SSI 7127
DoEE	Commonwealth Department of the Environment and Energy
DP&E	NSW Department of Planning and Environment
DPI	NSW Department of Primary Industries
Ecologically 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).
EEC	Endangered Ecological Communities
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
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.
Environmental Representative (ER)	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	*Environmental Planning and Assessment Act 1979*
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence under the *Protection of the Environment Operations Act 1997*.
Federal CoA	Conditions of approval listed in Commonwealth approval EPBC 2016/7696
GEJV	Georgiou, Ertech Joint Venture
GMS	Georgiou Management System
Minister, the	Minister for Planning NSW
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
OACEMP	The Northern Road Upgrade – Mersey Road, Bringelly to Glenmore Parkway, Glenmore Park Overarching Construction Environmental Management Plan 2018
OEH	NSW Office of Environment and Heritage
OOH	Out of Hours (works outside standard work hours)

SPIR	Submissions Preferred Infrastructure Report
PoEO Act	*Protection of the Environment Operations Act 1997*
Project, the	The Northern Road Upgrade between Mersey Road and Eaton Road
SAP	Sensitive Area Plans
Secretary	Secretary of the Department of Planning and Environment
SSI	State Significant Infrastructure

1 INTRODUCTION

1.1 Background

The project involves the realignment of 5.5km of The Northern Road (TNR) around the Western Sydney Airport site with the construction of a four lane divided road and the adjustment of public utilities. The project is contractually known as between Mersey Road and Eaton Road of the Northern Road upgrade and one of three stages that has been assessed under the same planning approvals (NSW Infrastructure Approval SSI7127 and EPBC 2016/7696). The planning approvals cover a 16km section of The Northern Road Upgrade between Mersey Road, Bringelly and Glenmore Parkway, Glenmore Park.

A single Environmental Impact Statement (EIS) was prepared for the Project to satisfy the environmental assessment requirements of both Part 5.1 of the EP&A Act and Part 8 of the EPBC Act.

An Overarching Construction Environmental Management Plan (OACEMP) has been developed by Roads and Maritime to address the NSW and Federal conditions of approval and the management measures presented in the Final EIS and Submissions and Preferred Infrastructure Report (SPIR).

1.2 Context

This Ancillary Facilities Management Plan (AFMP) forms part of the Construction Environmental Management Plan (CEMP) for the Northern Road Upgrade, between Mersey Road and Eaton Road Project (the Project).

This Management plan has been prepared to address the requirements of the Minister's Conditions of Approval (CoA) A16, the Roads and Maritime OACEMP, the mitigation and management measures listed in the EIS and SPIR and all applicable legislation.

Ancillary facilities are defined in the Conditions of Approval (CoA) as:

"A temporary facility for construction of the project including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory and material stockpile area."

The definition in the Approval notes that: "Where an approved CEMP contains a stockpile management protocol, a material stockpile area located within the construction footprint is not considered to be an ancillary facility."

As a stockpile management protocol is a component of the TNR between Mersey Road and Eaton Road CEMP Appendix A1 - Soil and Water management sub plan, material stockpile areas are not included in the definition of Ancillary Facilities for the Project.

1.3 Environmental Management System Overview

The overall Environmental Management System (EMS) for the Project is described in the GEJV Construction Environmental Management Plan (CEMP).

Mitigation and management measures identified in this plan will be incorporated into site or activity specific Environmental Work Method Statements (EWMS). EWMS will be developed and signed off by environment and management representatives prior to associated works and construction personnel will be required to undertake works in accordance with the identified mitigation and management measures.

Used together, the CEMP, strategies, procedures and EWMS form a project management system that identifies the required environmental management actions for Georgiou/Ertech Joint Venture (GEJV) personnel and contractors.

1.4 Consultation

This AFMP has been developed in consultation with the EPA and local Council (Liverpool City Council).

In accordance with CoA A6 and A8, evidence of consultation during the preparation of this AFMP is provided in Appendix C. GEJV will carry out ongoing consultation with the EPA and Council regarding issues relevant to ancillary facilities throughout Construction of the Project.

All community consultation will occur in accordance with the Community Communication Strategy (CCS).

2 PURPOSE AND OBJECTIVES

2.1 Purpose

The general process for establishing new ancillary facilities in an active construction zone within the approved Project footprint is described in Section 2.3 of the Construction Environmental Management Plan (CEMP) and is shown in Figure 2-1 below.

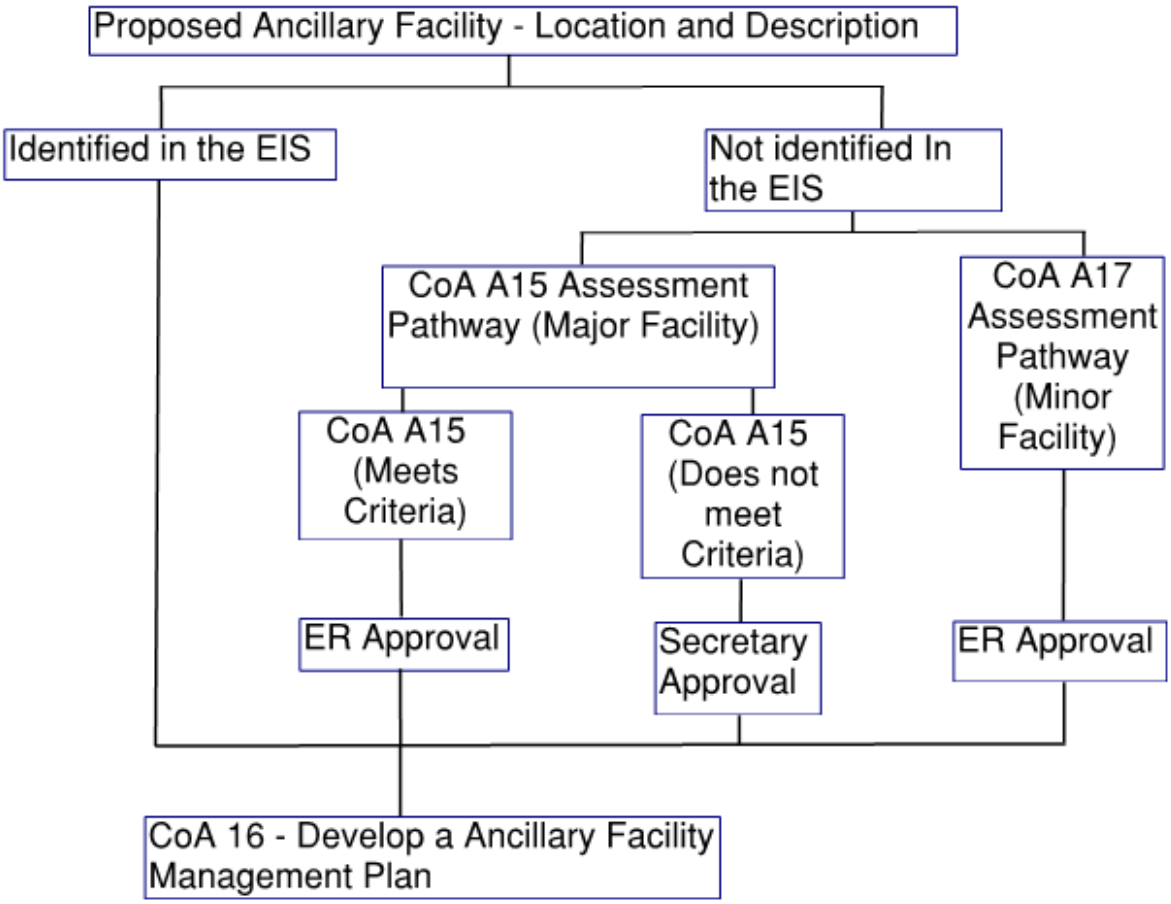

Figure 2-1 Ancillary facilities approval pathway

The Environmental Impact Statement (EIS) for the Project identified a number of compounds and ancillary facilities that would be required for the construction of the Project, including locations for hardstand areas, temporary building and offices, parking areas, material laydown and storage areas. GEJV only intends to use areas that have already been assessed by the EIS for ancillary facilities.

A description of the ancillary facilities assessed in the EIS is provided in Section 4. Section 5 outlines the aspects and impacts and section 6 the proposed environmental management measures for the assessed ancillary facilities.

Section 4 details the ancillary facility assessment for ancillary facilities that are not identified by description and location in the EIS.

2.2 Objectives and Targets

The key objective of the AFMP is to ensure that the potential impacts to the environment and community are minimised and within the scope permitted in the specifications and the NSW Infrastructure Approval. To achieve this objective, the following measures will be undertaken:

- Ensure appropriate controls and procedures are implemented during construction activities to avoid or minimise real and potential impacts to the environment and sensitive receivers along the Project corridor.
- Ensure appropriate measures are implemented to address the requirements specified by Roads and Maritime Services, the Environment Representative, NSW Department of Planning and Environment and other relevant NSW Agencies.
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 3.1 of this plan.

The following targets have been established for the management of impacts resulting from operation of the ancillary facility sites during the Project:

- Ensure compliance with the relevant legislative requirements, Ministerial Conditions of Approval and those contained in the EIS and Roads and Maritime' QA Specification G1, G2-C2, G36, G38 and the OACEMP.
- Minimise any impacts on the surrounding residents and businesses and other sensitive receivers.

3 ENVIRONMENTAL REQUIREMENTS

3.1 Relevant legislation and guidelines

Legislation relevant to the management of ancillary facilities includes:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- *Protection of the Environment Operations Act 1997* (POEO Act)
- Protection of the Environment Operations (General) Regulation 2009
- *Environmentally Hazardous Chemicals Act, 1985*
- *Pesticide Act 1999*
- *Contaminated Land Management Act 1997* (CLM Act)
- *Waste Management Waste Avoidance and Resource Recovery Act 2001* (WARR Act)
- *National Parks and Wildlife Act 1974* (NPW Act)
- *Biodiversity Conservation Act 2016* (BC Act).

The main guidelines, specifications and policy documents relevant to this Plan include:

- Roads and Maritime QA Specification G1 – General requirements.
- Roads and Maritime QA Specification G2-C2 – General requirements (major contracts).
- Roads and Maritime QA Specification G36 – Environmental Protection.
- Roads and Maritime QA Specification G38 – Soil and Water Management.
- Roads and Maritime QA Specification R44 – Earthworks
- Stockpile Site Management Guideline, Roads and Maritime 2015.
- The Northern Road Upgrade – Mersey Road, Bringelly to Glenmore Parkway, Glenmore Park OACEMP 2018
- Interim Construction Noise Guideline (DECC, 2009)
- Roads and Maritime Construction noise and vibration guidelines (CNVG) (Roads and Maritime, 2016)
- EPA Waste Classification Guidelines (EPA, 2014)
- Biodiversity Guidelines: Protecting and managing biodiversity on RTS Projects (Roads Traffic Authority, 2011)
- Managing Urban Stormwater: Soils and Construction (4th Edition) Volume 1 (Landcom, 2004) (the “Blue Book”)
- German Standard DIN 4150-3 4150-3 (1999-02) - Structural vibration - Effects of vibration on structures (Deutsches Institute fur Normung, 1999)
- British Standard BS 7385-2:1993 Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration.
- Assessing vibration: a technical Guideline (DEC, 2006)

The management of the ancillary facility must comply with the Northern Road Upgrade NSW CoA relevant for between Mersey Road and Eaton Road.

3.1.1 Minister's Conditions of Approval

The CoA relevant to this plan are listed in Table 3-1. A cross reference is also included to indicate where the condition is addressed in this assessment or other Project management documents.

Table 3-1 Conditions of Approval relevant to the AFMP

CoA No.	Condition Requirements	Compliance / Reference within this document
A15	*Ancillary facilities that are not identified by description and location in the documents listed in Condition A1 must meet the following criteria, unless otherwise approved by the Secretary:* *(a) the facility is development of a type that would, if it were not for the purpose of the CSSI, otherwise be exempt or complying development; or*	Yes. There are currently no proposed ancillary facilities for the project other than those assessed in the EIS. Refer section 4.7.
	(b) the facility is located as follows: *i. at least 50 metres from any waterway unless an erosion and sediment control plan is* *prepared and implemented so as not to adversely affect water quality in the waterway in accordance with Managing Urban Stormwater series;* *ii. within or adjacent to land upon which the CSSI is being carried out;* *iii. with ready access to a road network;* *iv. to prevent heavy vehicles travelling on local streets or through residential areas in order to access the facility, except as identified in the documents listed in Condition A1;* *v. so as to be in accordance with the Interim Construction Noise Guideline (DECC 2009) or as otherwise agreed in writing with affected landowners and occupiers;* *vi. so as not to require vegetation clearing beyond the extent of clearing approved under other terms of this approval except as approved by the ER as minor clearing;* *vii. so as not to have any impact on heritage items (including areas of archaeological sensitivity) beyond the impacts identified, assessed and approved under other terms of this approval;* *viii. so as not to unreasonably interfere with lawful uses of adjacent properties that are being carried out at the date upon which construction or establishment of the facility is to commence;* *ix. to enable operation of the ancillary facility during flood events and to avoid or minimise, to the greatest extent practicable, adverse flood impacts on the surrounding environment and other properties and infrastructure; and* *x. so as to have sufficient area for the storage of raw materials to minimise, to the greatest extent practicable, the number of deliveries required outside standard construction hours.*	Yes. There currently no proposed ancillary facilities for the project other than those assessed in the EIS. Refer section 4.7.
CoA A16	*Before establishment of any ancillary facility (other than minor ancillary facilities described in Condition A17), the Proponent must prepare an Ancillary Facilities Management Plan which details the management of the ancillary facilities. The Ancillary Facilities*	This AFMP

CoA No.	Condition Requirements	Compliance / Reference within this document
	Management Plan must be prepared in consultation with the EPA and the relevant council(s) and submitted to the Secretary for approval one month prior to installation of ancillary facilities. The Ancillary Facilities Management Plan must detail the management of the ancillary facilities and include:	
	(a) a description of activities to be undertaken during Construction (including scheduling of construction);	Section 4.3
	(b) a program for ongoing analysis of the key environmental risks arising from the activities described in subsection (a) of this condition, including an initial risk assessment undertaken prior to the commencement of Construction of the CSSI; and	Section 4.5 Section 7 OACEMP section 4.3.2
	(c) details of how the activities described in subsection (a) of this condition will be carried out to: *i. meet the performance outcomes stated in the documents listed in Condition A1; and* *ii. manage the risks identified in the risk analysis undertaken in subsection (b) of this condition.*	Section 6
CoA A17	*Minor ancillary facilities comprising lunch sheds, office sheds, and portable toilet facilities, that are not identified in the documents listed in Condition A1 and which do not satisfy the criteria set out in Condition A15 of this approval must satisfy the following criteria:*	Section 4.7
	(a) have no greater environmental and amenity impacts than those that can be managed through the implementation of environmental measures detailed in the CEMP required under Condition C1 of this approval; and	Section 4.7
	(b) have been assessed by the ER to have: *i. minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the ICNG, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts;* *ii. minimal environmental impact with respect to waste management and flooding; and* *iii. no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval.*	Section 4.7
CoA A18	*Boundary fencing must be erected around all ancillary facilities that are adjacent to sensitive receivers for the duration of Construction unless otherwise agreed with the affected receivers(s).*	Section 5.7
CoA A19	*Boundary fencing required under Condition A18 of this approval must minimise visual, noise and air quality impacts on adjacent sensitive receivers.*	Section 5.7
CoA E28	*Construction vehicles arriving at the project site and construction compounds outside the standard construction hours described in Condition E23 must not queue with idling engines.*	Section 4.5
CoA E31	*Temporary acoustic barriers (2.4 metres high) are to be installed as soon as site establishment works at the ancillary facility are completed and before undertaking any works which are required to be conducted at the facility. The schedule for installing and removing the acoustic barriers, and justification for not installing*	Section 5.7.1

CoA No.	Condition Requirements	Compliance / Reference within this document
	acoustic barriers in certain locations, must be described in the Ancillary Facilities Management Plan for the project prepared in accordance with Condition A16. Acoustic barriers must be inspected and maintained to remain effective throughout the use of the construction compound.	

4 ANCILLARY FACILITY DETAIL

4.1 EIS assessed ancillary facilities

The Environmental Impact Statement (EIS) for the Project identified a number of compounds and ancillary facilities that would be required for the construction of the Project, including locations for hardstand areas, temporary building and offices, parking areas, material laydown and storage areas. The location of the ancillary facilities assessed in the EIS is provided in Figure 4-1 and their key features shown in Table 4-1. Section 2 outlines the key features, aspects and impacts and proposed environmental management measures for the assessed ancillary facilities.

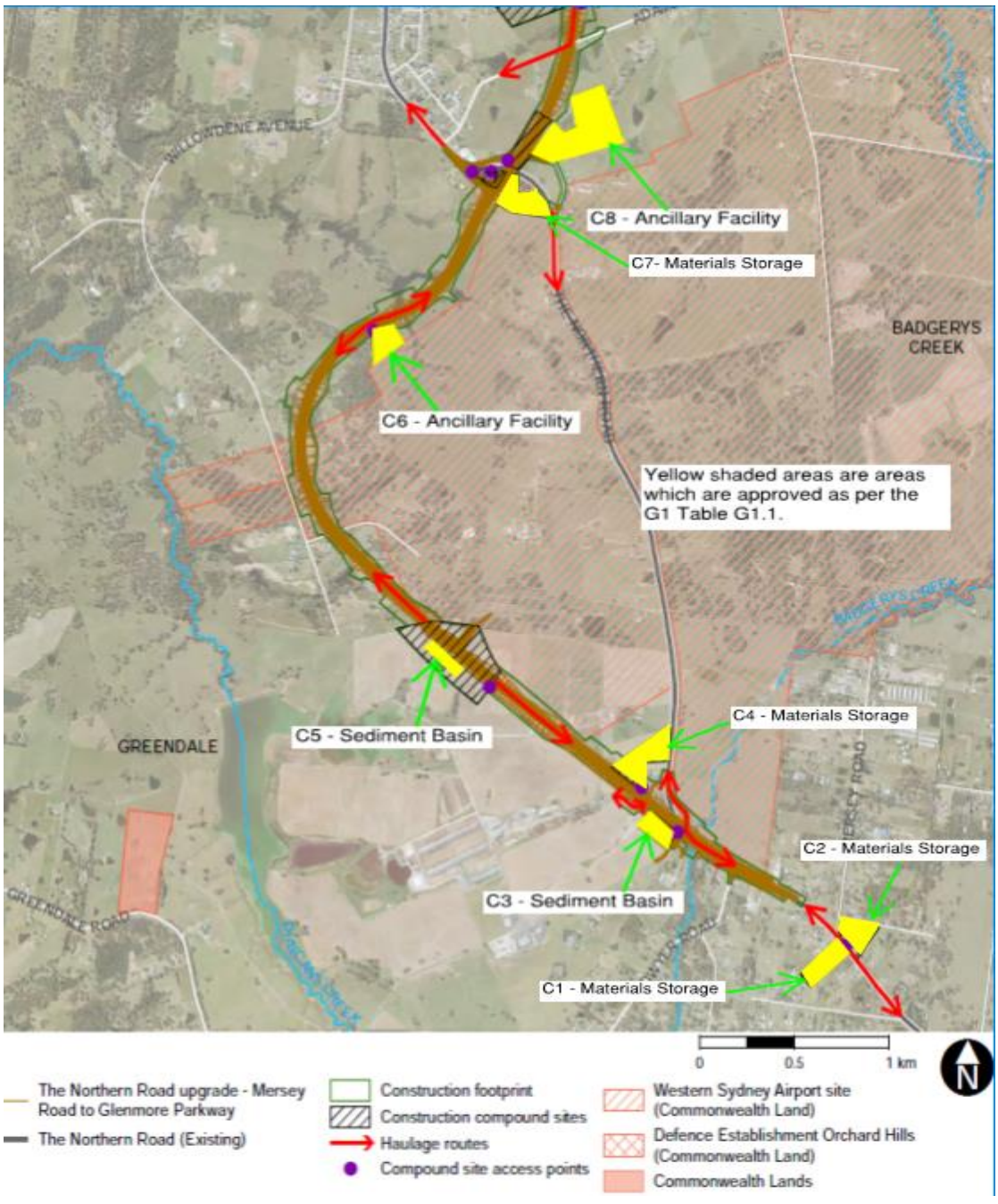

Figure 4-1 Locations of Ancillary Facilities assessed in the EIS and used for the project

Table 4-1 Proposed use of EIS approved ancillary facility areas

Location	Purpose	EIS proposed activities	GEJV proposed activities
C1	Materials storage	Storage of pits, pipes and culvert material. No stockpiling of earthworks.	This is currently used by TNR 2 and is not in TNR 4 project boundary. GEJV does not intend to use this area. C1 are subject to lease agreement
C2	Materials storage	Storage of pits, pipes and culvert material. No stockpiling of earthworks.	This is currently used by TNR 2 and is not in TNR 4 project boundary. GEJV does not intend to use this area. C2 are subject to lease agreement
C3	Sediment Basins		Stockpiling and laydown of materials only to occur here following approval of the CEMP stockpile management protocol and noise and vibration management plan. Possible minor ancillary facility to be approved during construction by the ER under CoA A17. C3 are subject to lease agreement
C4	Materials storage, stockpiling, Sediment Basins	The site would consist of a shed, lunch room, portable toilets and parking. Storage of items such as concrete pits, pipes and culverts. Could be used to stockpile topsoil, mulch and drainage backfill materials.	Stockpiling and laydown of materials only to occur here following approval of the CEMP stockpile management protocol and noise and vibration management plan. Possible minor ancillary facility to be approved during construction by the ER under CoA A17.
C5 Partially located on Commonwealth land associated with (leased by Roads and Maritime) the Western Sydney Airport.	Materials storage, stockpiling, Sediment Basins	Storage of concrete pits, pipes and culverts. Could be used to stockpile topsoil, mulch and drainage backfill materials.	Stockpiling and laydown of materials only to occur here following approval of the CEMP stockpile management protocol and noise and vibration management plan. Possible minor ancillary facility to be approved during construction by the ER under CoA A17.

Location	Purpose	EIS proposed activities	GEJV proposed activities
C6	Materials storage, stockpiling	Storage of concrete pits, pipes and culverts. Could be used to stockpile topsoil, mulch and drainage backfill materials.	Stockpiling and laydown of materials only to occur here following approval of the CEMP stockpile management protocol and noise and vibration management plan.
C7 Partially located on Commonwealth land associated with the Western Sydney Airport.	Materials storage, stockpiling	Storage of concrete pits, pipes and culverts. Could be used to stockpile topsoil, mulch and drainage backfill materials.	Stockpiling and laydown of materials only to occur here following approval of the CEMP stockpile management protocol and noise and vibration management plan. Possible minor ancillary facility to be approved during construction by the ER under CoA A17.
C8	Staff amenities, shed and parking Materials storage, stockpiling	Main compound. The site would consist of office facilities for the contractor and Roads and Maritime. It would include toilets, amenities, car parking, a shed and lunch room. Storage of concrete pits, pipes and culverts. Stockpile of topsoil and mulch and drainage backfill materials. .	Main Compound site for GEJV and Roads and Maritime. It would include toilets, amenities, car parking, a shed and lunch room. Storage of concrete pits, pipes and culverts. Stockpile of topsoil and mulch and drainage backfill materials.

4.2 Main Compound

Of all the ancillary areas assessed in the EIS for the project the area proposed for the main site compound is at C8. Other ancillary areas where leased by Roads and Maritime (see Appendix A) will be used for stockpiling of materials or minor ancillary facilities as detailed in Table 4-1.

The proposed location of the main compound is located adjacent to the new The Northern Road alignment at the Northern extent of between Mersey Road and Eaton Road, this area has been assessed in the EIS and has been leased by Roads and Maritime (see Appendix A). The leased land (Lot 1 DP250030) has been previously used for agricultural purposes and has been leased by Roads and Maritime for the duration of the Project construction.

The EIS included an indicative layout for the main ancillary facility and location, this is shown in Figure 4-2. GEJV has further refined the layout of the main ancillary facility and has reduced footprint required, this has in turn reduced impacts of the operation of the ancillary facility including increasing buffer distances to the nearest residential receivers, see Figure 4-3. The proposed main compound area (Lot 1 DP250030) will include:

- Office facilities

- Car park for light vehicles and heavy vehicles
- Ablution facilities
- Chemical storage
- Material stockpiles and storage
- Erosion and sediment controls
- Boundary fencing
- Temporary storage and stockpiling of earthworks and pavement material
- Plant and equipment will be refuelled with fuel truck coming to site on an as required basis.
- There will be no static mechanical workshop on site.

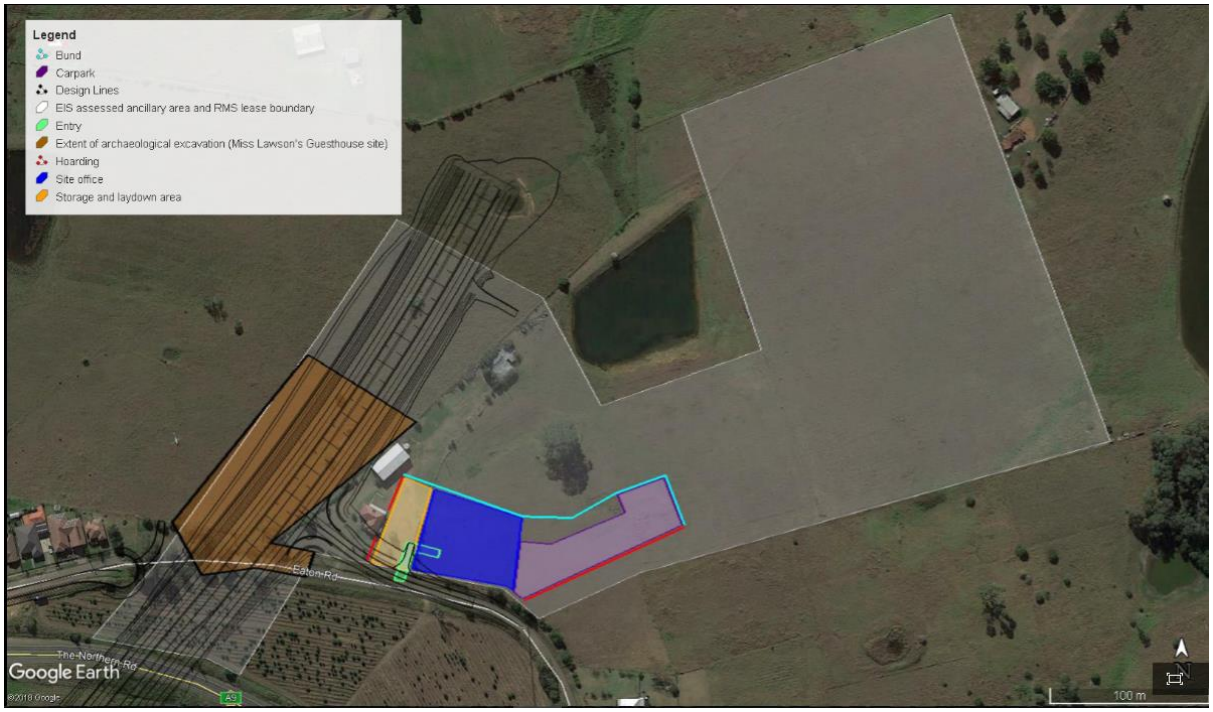

Figure 4-2 EIS map of location and layout of main compound at ancillary area C8

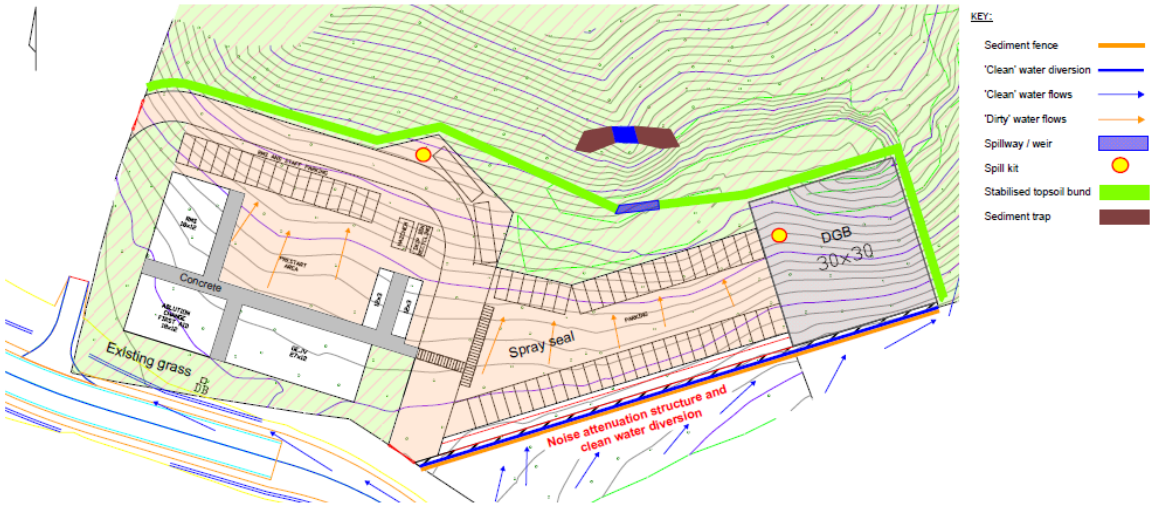

Figure 4-3 GEJV proposed refined main compound layout at ancillary area C8

4.3 Activities

Activities to be carried out at the main facility will generally include:

- Pre-start meetings/toolbox talks and site meetings
- Primary location for the removal of waste materials (Putrescible, recyclable (Paper & Cardboard) and septics)
- Emergency evacuation point
- Parking of heavy (for delivery only) and light vehicles
- Storage of fuels and chemicals
- Stockpiling of procured materials (Pipe, small precast products, fittings etc)

Materials

- Geofabric Rolls
- Pre cast concrete units (e.g. culverts)
- PVC and poly pipe
- Bedding sand

4.4 Plant and Equipment

Light vehicles will use the site on a daily basis. Heavy vehicles will deliver construction materials to the site and will sometimes be parked at the site. Small power tools will be used. Indicative plant, equipment and material to be stored at the ancillary site are listed below;

Plant

- Heavy vehicles (for deliveries only)
- Light vehicles

Plant (Ancillary Facility set up)

- Grader
- Dozer
- Excavator
- Water Cart
- Rollers
- Trucks
- Concrete trucks

Equipment

- Generator (until main power is connected, will not be operated outside normal work hours)
- Hand tools; plate compactors, drills, shovels, etc.
- Ablution blocks

All the above plant will be used for the site establishment only and equipment listed will be used during the operation of C8.

Storage of hazardous and dangerous goods

- 6m x 3m self bunded dangerous goods container, the bund capacity will be 120% of the largest stored container
- Concrete curing chemicals (any IBCs to be bunded with 110% capacity)
- Paints
- Adhesives
- Cleaning products
- There will be no fuel cell on site, refuelling will be completed with tankers on an as required basis. The fuels are in 20ltr jerry cans for small motors

Waste Storage

- Lidded skip bins for putrescible, recyclable and office waste to prevent pests and vermin.
- Open skip bins to store construction wastes.
- Sewage storage tanks at ablution facility – these will have high level alarms set at 80% capacity.
- Licenced waste transporters will be used to remove wastes from site to an appropriately licenced facility and all waste tipping dockets and tracking dockets will be retained on site.

  Waste bulk materials like excavated soils, demolition wastes will be temporarily stored at the stockpile area until they are classified under the NSW EPA waste classification guidelines and removed from site to licenced facility.

4.5 Timing and Duration

Ancillary areas and the main compound site will be established and commence operation once approval is granted by the ER, DPE and Roads and Maritime. There are pre-establishment activities that will occur prior to approval and these include; pre clearing ecology surveys, pre-construction land condition assessments, Aboriginal heritage and non-Aboriginal heritage salvage, stage 2 contamination assessments (completed by Roads and Maritime) and advance contamination assessment for topsoil stripping. All the activities associated with pre establishment, establishment and operation of the ancillary facilities will occur during the approved construction hours and conditions associated with noise as per CoA E23 – E31, as follows:

CoA E23 Standard construction hours

a) 7.00am to 6.00pm, Monday to Friday (C8 will adhere to these hours)
b) 8.00am to 1.00pm on Saturdays; and (C8 will adhere to these hours)
c) At no time on Sundays or public holidays. (C8 will adhere to these hours)

There are no OOHW expected to be required during the site establishment or operation of C8.

CoA E24 Highly noise intensive activities

Except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable noise management level at the same receiver must only be undertaken:

a) between the hours of 8:00 am to 6:00 pm Monday to Friday;
b) between the hours of 8:00 am to 1:00 pm Saturday; and

c) in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.

For the purposes of this condition, 'continuous' includes any period during which there is less than a one-hour respite between ceasing and recommencing any of the work the subject of this condition. There is no highly intensive noise activities expected to occur during the site establishment and/or operation of C8.

CoA E25 Community Consultation

The Proponent must identify and consult with receivers identified as being subject to levels that exceed the Highly Noise Affected criteria with the objective of determining appropriate hours of respite unless an agreement is reached with those receivers.

CoA E26 Out of hours work

Notwithstanding Condition E23 works associated with the CSSI may be undertaken outside the specified hours in the following circumstances:

a) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or
b) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or
c) where it causes LAeq (15 minute) noise levels:
    i. no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and
    ii. no more than the noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses, and
    iii. continuous or impulsive vibration values, measured at the most affected residence are no more than those for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), and
    iv. intermittent vibration values measured at the most affected residence are no more than those for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006); or
d) no more than 15 dB(A) above the night time rating background level at any residence during the night time period, when measured using the LAeq (1 minute) noise descriptor; or
e) where different hours are permitted or required under an EPL in force in respect of the works, in which case those hours must be complied with.

CoA E27 Emergency works notification

On becoming aware of the need for emergency works in accordance with Condition E26 the Proponent must notify the ER and the EPA (if an EPL applies) of the need for those works. The Proponent must also use its best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.

CoA E28 Queuing and Idling Construction Vehicles

Construction vehicles arriving at the project site and construction compounds outside the standard construction hours described in Condition E23 must not queue with idling engines.

CoA E29 Respite

The Proponent must consult with potentially affected community, religious, educational institutions and noise and vibration-sensitive businesses to identify periods during which they would be adversely affected by noise generating works, and must not schedule those works during those periods unless the Proponent and the potentially affected institution or business have made other arrangements (at no cost to the affected receiver), or the Secretary has otherwise approved the works.

CoA E30 Cumulative Construction Noise Impacts

The Proponent must ensure that all works for the delivery of the CSSI are coordinated with utility works, including those works undertaken by third parties, to minimise cumulative impacts of noise and vibration and to maximise respite for affected sensitive receivers.

CoA E31 Ancillary Facility Acoustic Barriers

Temporary acoustic barriers (2.4 metres high) are to be installed as soon as site establishment works at the ancillary facility are completed and before undertaking any works which are required to be conducted at the facility. The schedule for installing and removing the acoustic barriers, and justification for not installing acoustic barriers in certain locations, must be described in the Ancillary Facilities Management Plan for the project prepared in accordance with Condition A16. Acoustic barriers must be inspected and maintained to remain effective throughout the use of the construction compound.

4.6 Decommissioning and rehabilitation

Decommissioning and rehabilitation of the ancillary facility (main compound and all other ancillary areas) will be undertaken as part of the finishing works towards the end of the construction program in late 2020 and will include the following activities;

- Removal of all fencing, signage and temporary structures
- Site clean-up and disposal of all surplus materials
- Stabilisation and re-vegetation of the sites as per Urban Design and Landscape Plan.
- Reinstatement of all leased areas to the pre-existing condition unless otherwise agreed by the land holder.

After restoration of the areas to pre-existing condition or better, a post-construction land condition assessment will occur by an independent environmental consultant. This will assess the land against pre-existing contamination or waste issues identified in the pre-construction land condition assessment.

4.7 Ancillary Facilities not assessed in the EIS

GEJV does not intend to establish ancillary facilities in areas that have not been assessed in the EIS. Where ancillary areas are proposed in areas other than those detailed in Table 4-1, they must be assessed against and meet the criteria listed in the Ancillary facilities assessment criteria (Appendix B) and be included in this AFMP unless otherwise approved by the Secretary, in accordance with NSW-CoA A15. In the event of additional ancillary facilities being proposed that have not been assessed in the EIS/SPIR, these facilities would have to be assessed in accordance with conditions A15 or A17, depending on the nature of the ancillary facilities.

For minor ancillary facilities include offices, sheds and staff amenities that are not identified in the EIS they must also be assessed against and meet the criteria (Appendix B). In

accordance with the responsibilities of the ER set out in CoA A17, the ER can assess the impacts of minor ancillary facility. The ER will use Ancillary facilities assessment criteria (Appendix B) for facilities not assessed in the EIS.

Any future additional ancillary facilities will be detailed in an updated AFMP for assessment and approval purposes.

5 ENVIRONMENTAL ASSESSMENT

5.1 EIS assessment of ancillary facilities against CoA criteria

The ancillary facilities identified in the EIS & G1 were assessed in accordance with the location criteria included in the Critical SSI Standard Conditions of Approval.

These standard conditions have been developed to help infrastructure providers understand the types of conditions likely to be applied to State significant infrastructure projects if they are approved, including conditions related to locating ancillary facilities. The criteria used for the EIS assessment is generally the same as the criteria in the NSW Infrastructure Approval for the Project under NSW CoA A15 (b)(i-x). The only exception is criterion *(e) on level land* which is within the standard conditions of approval, but not within the final NSW Infrastructure Approval (SSI-7127).

In accordance with NSW COA A15, if any ancillary facilities not already identified in the EIS and SPIR are proposed, these facilities will be assessed against the criteria listed in NSW CoA A15 (b)(i-x) (Appendix B). The criteria used in the EIS assessment of ancillary facilities are as follows:

(a) At least 50 m from a waterway unless an erosion and sediment control plan is prepared and implemented so as not to affect water quality in the waterway in accordance with *Managing Urban Stormwater* series

(b) Within or adjacent to land where the critical state significant infrastructure is being carried out

(c) With ready access to a road network

(d) So as to avoid the need for heavy vehicles to travel on local streets or through residential areas in order to access the facility

(e) On level land

(f) So as to be in accordance with the Interim Construction Noise Guidelines (DECC, 2009) or as otherwise agreed in writing with affected landowners and occupiers

(g) So as not to require vegetation clearing beyond the extent of clearing approved under other terms of this approval except as approved by the ER as minor clearing

(h) So as not to have any impact on heritage items (including areas of archaeological sensitivity) beyond the impacts identified, assessed and approved under other terms of this approval

(i) So as not to affect lawful uses of adjacent properties that are being carried out at the date upon which construction or establishment of the facility is to commence

(j) To enable operation of the ancillary facility during flood events referred to in Section 8.1 and to avoid or minimise, to the greatest extent practicable, adverse flood impacts on the surrounding environment and other properties and infrastructure

(k) So as to have sufficient area for the storage of raw materials to minimise, to the greatest extent practicable, the number of deliveries required outside standard construction hours.

The results of the assessment of each proposed ancillary facility against the EIS assessment criteria above is summarised in Table 5-1.

Table 5-1 EIS assessment of proposed ancillary facilities against criteria in standard conditions of approval

Compound location	Ancillary facility site location criteria										
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
C1	Y	Y	Y	Y	Y	No	Y	Y	Y	Y	Y
C2	Y	Y	Y	Y	Y	No	Y	Y	Y	Y	Y
C3	Y	Y	Y	Y	Y	No	Y	Y	Y	Y	Y
C4	Y	Y	Y	Y	Y	No	Y	Y	Y	Y	Y
C5	Y	Y	No	Y	Y	Y*	Y	Y	Y	Y	Y
C6	Y	Y	No	Y	Y	Y	Y	Y	Y	Y	Y
C7	Y	Y	Y	Y	Y	No	Y	Y	Y	Y	Y
C8	Y	Y	Y	Y	Y	No*	Y	Y	Y	Y	Y

*Preferred locations for pug mill

Some of the proposed ancillary facilities for the Northern Road between Mersey Road and Eaton Road would not meet some of the specified criteria specifically criteria (c) and (f). Further assessment of these sites against these specific criteria is provided in Table 5-1, including proposed management measures and justification for proposing these sites.

Table 5-2 Proposed mitigation measures for criteria not met

Criteria	Proposed Management Measure
c) With ready access to a road network	**Applicable compound or laydown site(s)** C5, C6. **Additional assessment** There is no current road access to these sites. There would not be a dedicated haul/access road constructed for these sites. Access to C5 and C6 will be via the mainline construction access to a suitable access point on The Northern Road. By not constructing a dedicated haul/access road, potential impacts associated with clearing vegetation would be minimised. There

Criteria	Proposed Management Measure
	would also be fewer indirect impacts associated with dust and noise emissions outside of the proposed construction footprint.
f) So as to be in accordance with the Interim Construction Noise Guidelines (DECC, 2009) or as otherwise agreed in writing with affected landowners and occupiers	**Applicable compound or laydown site(s)** All sites with the exception of C5 and C6. **Additional assessment** There would be residential receivers located within 200 m of the proposed construction compound and laydown sites. However, due to the predominantly rural-residential nature of the project area, the site fencing as per CoA A-18 and the number of affected receivers would be relatively low. GEJV has reduced the footprint of the main ancillary facility at C8 and this has increased the distances to some of the residential receivers. There also was introductory consultation with the residents surrounding the facility. Predicted worst case construction noise levels from the ancillary facility C8 from daytime activities would comply with Noise Management Levels (NMLs) for most receivers within the study area. Where they do not comply, GEJV will install 2.4m acoustic barriers at the ancillary boundary adjacent to the potentially affected receiver (western boundary). Predicted worst case construction noise levels from out of-hours work would exceed night time NMLs at receivers within the study area at some time, including noise as a result of construction activity within ancillary facilities. Management measures to mitigate against any predicted NML exceedances for out of-hours work are detailed in section 5.7 All other Ancillary areas except for C8 (Main Compound) will be used for stockpiling and laydown and would not be established until after the CEMP is approved. The mitigation measures for these areas will be covered by the CEMP stockpile management protocol and the Construction Noise and Vibration Management Plan.

5.2 Environmental aspects and impacts

Establishment and operation of the ancillary facilities will result in a range of potential construction noise, air (dust), biodiversity, traffic and visual impacts, including those identified in Table 5-3 below.

Table 5-3 Environmental aspects and potential impacts

Environmental aspect	Potential impacts
Flora and fauna	There is no requirement for tree removal as part of the main compound (C8) ancillary facility. Unapproved vegetation clearing Disturbance or mortality of fauna during clearing works

	Habitat loss, degradation, or fragmentation
Traffic	Traffic impacts associated with heavy vehicle movements (e.g. deliveries, heavy plant mobilisation, spoil and material haulage) including potential conflicts with local traffic and increased congestion. The high number of light vehicle movements at the certain times of the day may also cause increased congestion.
Erosion and sedimentation	Mobilisation of sediment laden/contaminated runoff entering waterways and drainage lines Unauthorised offsite discharge.
Noise and vibration	Due to close proximity to neighbouring sensitive receivers during compound/ancillary facility establishment and operation there is a potential to impact with noise and vibration. Noise disturbance to sensitive receivers due to out of hours work Noise generated by operation of facility and construction traffic accessing facilities
Air quality	Generation of dust emissions and odours from access roads and transport of materials during facility establishment and operation. Nuisance to local residents
Heritage	Potential disturbance/destruction to identified heritage sites(Miss Lawson's Guesthouse) Impact to undiscovered or undocumented heritage sites Unauthorised access to Heritage areas
Storage of hazardous substances	Accidental spills and leaks, resulting in pollution of waterways and soils (hydrocarbons, curing agents, septic waste).
Waste and recycling	Generation of waste by site personnel using offices and staff amenities Generation of waste during establishment of ancillary facilities disposed of incorrectly, e.g. recyclable materials being sent to landfill and not meeting ISCA requirements.
Visual amenity	Potential for site hoardings or other exposed surfaces to be vandalised Potential for site lighting to affect the amenity of surrounding land uses Potential for waste to not be placed in appropriate bins and result in litter around the construction worksites
Contaminated land	Potential for encountering previously undocumented contaminated material (i.e. ACM)
Socio-economic	Direct land use impacts associated with the location of construction compounds, temporarily disrupting use and access to land including rural or vacant land, residential and commercial uses.

5.3 Flora and Fauna

Field surveys for the EIS identified vegetation within the assessed ancillary areas to provide poor quality fauna habitat as it is agricultural pastureland. The only exceptions are ancillary areas C2 and C8 as these areas contain Cumberland Plain Woodland (see Figure 5-2). As

detailed in table 4-1, area C2 is currently being used by TNR 2 and Georgiou does not intend to use this area for TNR 4.

Ancillary area C8 includes a small area of Cumberland Plain Woodland in the western corner and given that GEJV has reduced the footprint for this ancillary area it is not anticipated that establishment of ancillary facility C8 will result in any direct impacts to this EEC and subsequently any native flora or fauna. As this area of EEC falls directly under the design for the new road alignment it will need to be cleared for construction of the new road. Given the low habitat potential of the surrounding agricultural pastureland it is unlikely that noise, vibration or light associated with the operation of ancillary facilities will have an adverse impact on surrounding native flora and fauna.

The safeguards outlined in the Construction Flora and Fauna Management Sub Plan will apply for the establishment and operation of all ancillary areas. The safeguards include; pre clearing surveys, ongoing monitoring, erosion and sediment control, and rehabilitation will appropriately manage the risks to flora and fauna associated with the ancillary facilities. A summary of these mitigation measures are also detailed in Section 6 of this plan.

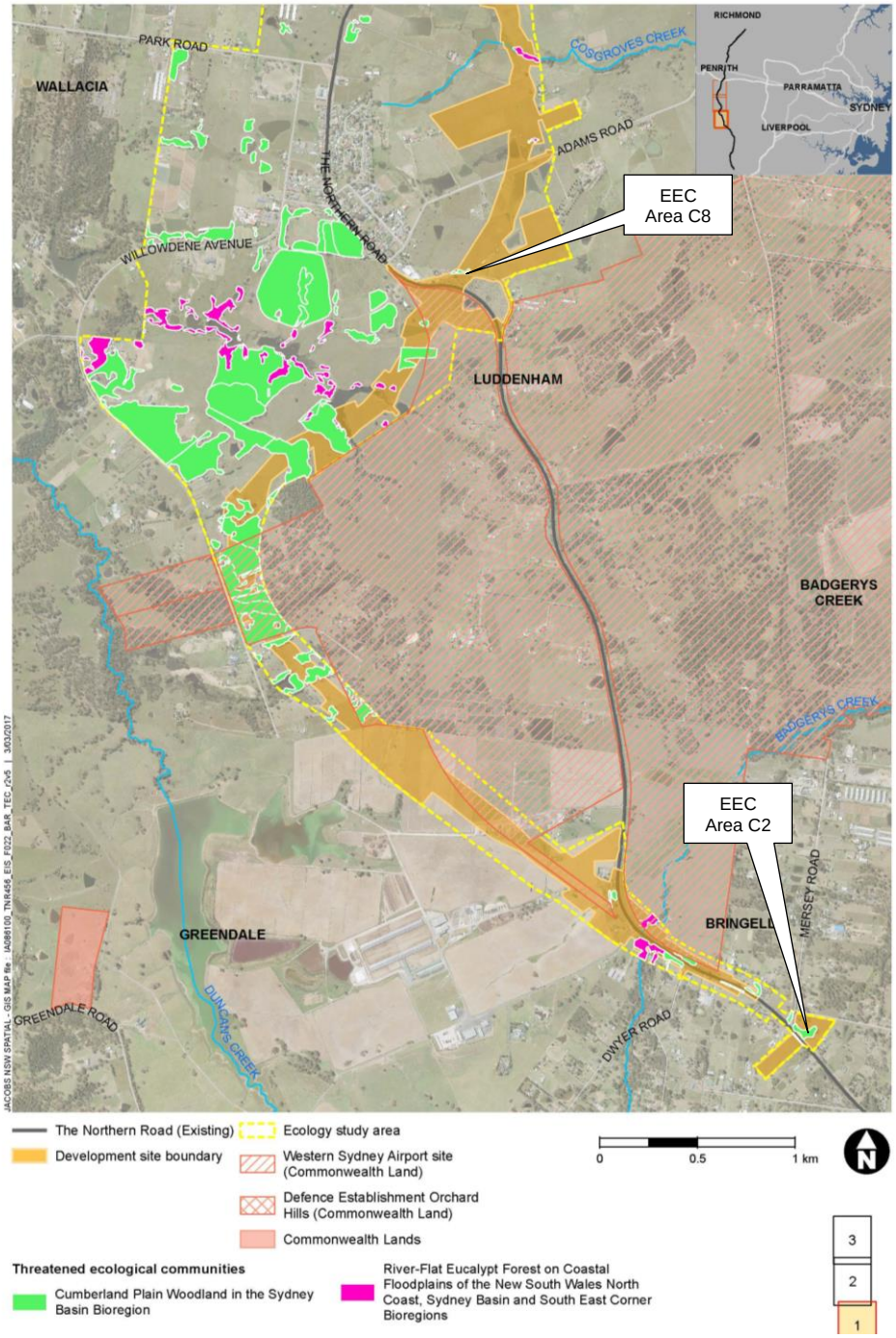

Figure 5-1 Threatened ecological communities

5.4 Soil and Water

The establishment and operation of the ancillary facility would result in clearing of grass and topsoil, stockpiling of soils, stockpiling of pavement materials, chemical storage, and general maintenance and refuelling of equipment and plant. The EIS did not identify any contaminates of concern in any of the locations of proposed for ancillary facilities.

The potential impacts associated with these activities may include;

- Exposure of soils during earthworks, creating the potential for offsite transport of eroded sediments and pollutants
- Exposure of unexpected contamination and asbestos during topsoil stripping and earthworks, creating the potential to mobilise contaminants and contaminate other areas.
- Increased turbidity of waterway due to exposure, erosion, runoff and dust propagation
- Contamination from site compounds, chemical storage areas and ablution facilities
- Fuel, chemicals, oils, grease and petroleum hydrocarbon spills from construction machinery polluting the river and soils.
- Disturbance of unidentified contaminated land and subsequent generation of contaminated runoff.
- Alteration of surface and subsurface flows that could cause disturbances to hydrology.

The Construction Soil and Water Management Sub – Plan and section 6 of this plan outline proposed mitigation measures to manage these risks which include;

- Training of all project personnel on sound erosion and sediment control practices
- Development and implementation of erosion and sediment control plans
- Correct stockpile management
- Correct storage and handling of chemicals and hydrocarbons
- Spill response materials and procedures
- Controls and management for ablution facilities
- Contaminated Lands Unexpected Finds Procedure (Appendix D)

5.5 Flooding

In the Project EIS, a technical working paper (Appendix K) was prepared to assess the flooding impacts associated with the construction and operation of the approved Project. The proposed route of the project crosses a number of existing drainage lines along which a series of both small and large dams are located. The EIS flood models show that high hazard flooding is generally confined to the farm dams and the incised reaches of the drainage system which are typically located downstream of the project corridor for events up to 100 year ARI. All the ancillary facilities including the main compound area will maintain a 50m buffer distance to any of the existing dams

5.6 Heritage

The potential impacts on Aboriginal heritage associated with the construction and operation of the approved Project were assessed in the Project EIS. As detailed in section 5.1 and table 5.1, the ancillary areas have been assessed for impact on heritage items (including areas of archaeological sensitivity).

The Ancillary facility C8 assessed within the EIS is within an area with a known Aboriginal Heritage and non-Aboriginal Heritage site. The Aboriginal heritage site is TNR AFT 22 (Figure 5-3) and the non-Aboriginal Heritage site is Miss Lawson's Guesthouse Site (Figure 5-4). However, as GEJV has reduced the footprint for the ancillary area C8 it is not anticipated that establishment of ancillary facility will result in any direct impacts to these known heritage items. These known heritage sites will be fenced off and salvaged prior to construction occurring in these areas. Both heritage sites are under the proposed new road alignment and can be fenced off and avoided during establishment of the main compound area.

A clearance from the Project Archaeologist would be given stating that salvage has finished in these areas prior to any disturbance occurring in these areas. All salvage areas are considered to be exclusion zones until clearance has been provided.

Mitigation and management measures for heritage are detailed in the Construction Heritage Management Plan and summarised in section 6. These include to follow Roads and Maritimes unexpected finds procedure (Appendix E) should an item of cultural heritage be identified.

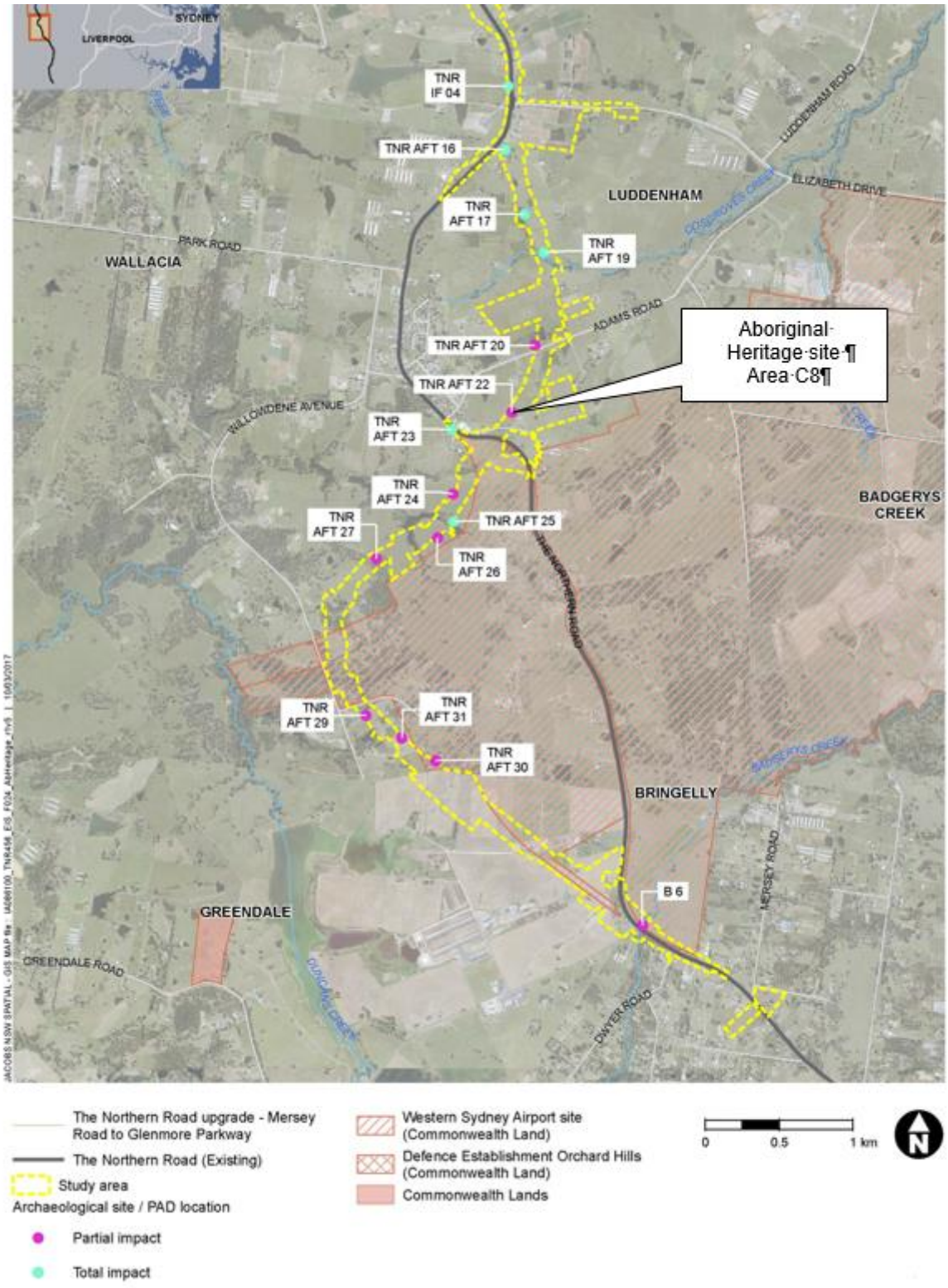

Figure 5-2 Location of identified Aboriginal heritage sites within the Project area

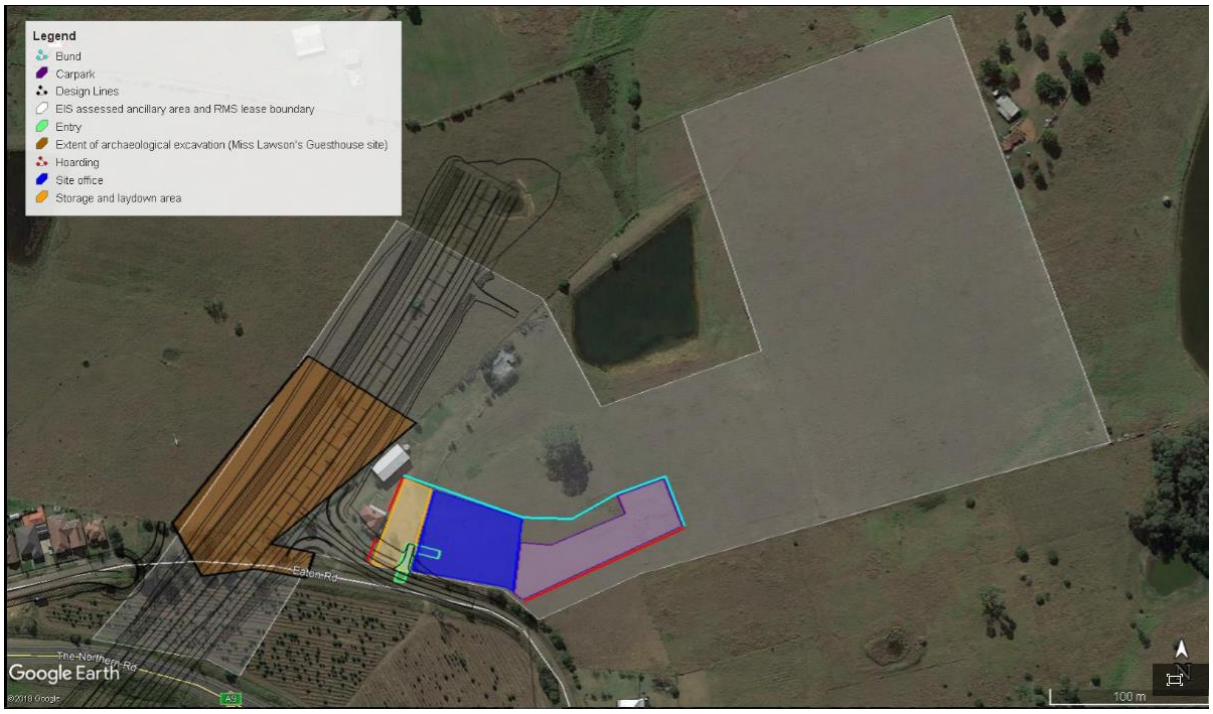

Figure 5-3 Location of Miss Lawson's Guesthouse Site

5.7 Noise

The nearest sensitive receivers to the proposed main compound area are Properties in semi-rural surrounds of Luddenham (identified as noise catchments 4 and 5 in the EIS). Existing background noise to these receivers results from traffic on The Northern Road. Other ancillary facilities south of along the proposed new road alignment are generally semi-rural properties located adjacent to new section of the project with minimal exposure to traffic noise on The Northern Road (identified as noise catchments 6, 7 and 8 in the EIS). Figure 5-4 below is from the EIS Appendix H – Technical working paper: Noise & Vibration shows the relevant noise catchments for the ancillary facilities.

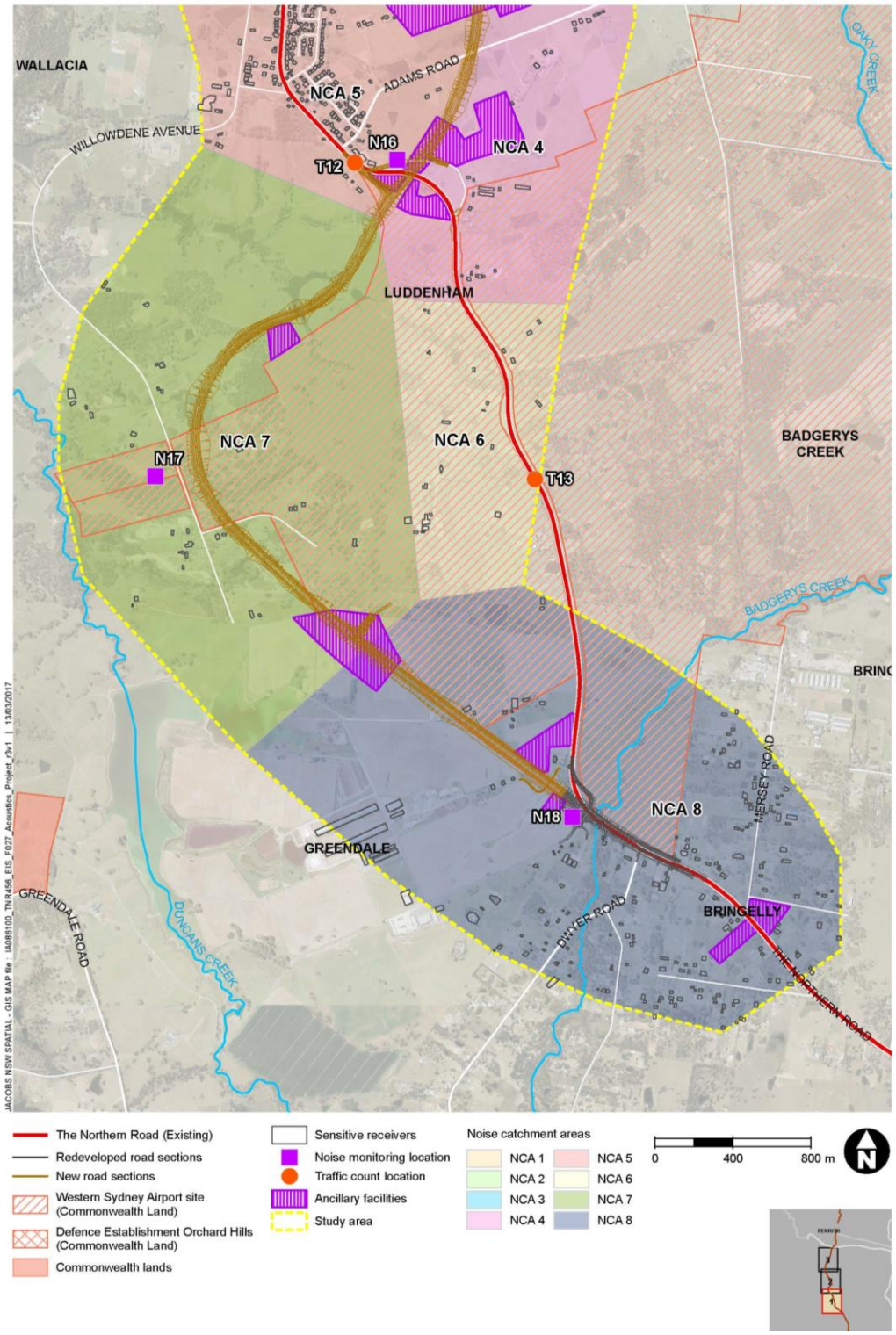

Figure 5-4 Noise Catchments relevant to Ancillary Facilities

Based on measured noise levels described in Section 10.9 of Appendix H – Technical working paper: Noise & Vibration, the project-specific construction noise management levels for the noise catchment areas have been determined and are presented in Table 5-4.

Table 5-4 Project Noise Management Levels

NCA	Monitored or determined RBL dB(A)				Noise Management Level (NML) LAeq(15 minute) dB(A)				
					STD Hrs (RBL +10dB)	Out Of Hours (OOH) (RBL+5dB)			Sleep disturbance screening criterion LAmax dB(A) (RBL+15dB)
	STD HRS RBL	OOH Day RBL	OOH Evening RBL	OOH Night RBL	Day NML	Day NML	Evening NML	Night NML	
4	37	38	38	37	47	43	43	42	52
5	42	44	43	34	52	49	48	39	49
6	42	44	43	34	52	49	48	39	49
7	37	38	38	37	47	43	43	42	52
8	48	53	47	42	58	58	52	47	57

The sound power level adopted for each item of plant and equipment in the EIS modelling of construction noise for the ancillary facilities is indicated below in table 5-5.

Table 5-5 Plant sound power levels for ancillary facilities

Concurrently operating Ancillary Facilities		
Area	Typical plant and equipment	Sound Power Level dB(A) LAeq(15min)
Ancillary Facilities excluding C6 & C8	Front end loader Excavator Road truck Compressor Welding equipment Light vehicles Generator	112 109 108 109 105 88 101
Ancillary Facilities C6 & C8	Front end loader Excavator Road truck Compressor Welding equipment Light vehicles Generator	112 109 108 109 105 88 101

* Note: sound power level includes a 5dB (A) penalty for annoying noise characteristics

The predicted construction noise impacts from activities during the establishment and operation of the ancillary facilities during standard construction hours to the affected residents

in the noise catchments has been undertaken in the EIS noise assessment and summarised below in Table 5-6. This table indicates the worst case construction noise levels predicted for the least and most affected residences.

Table 5-6 Predicted Noise impacts from Ancillary Facilities during Standard Hours

NCA	NML	Predicted noise levels		Number of affected residents
4	47	Range of predicted noise levels (dB(A))		46-60
		Number of Residence	complying	1
			0-10 dBA above NML	14
			10-20 dBA above NML	1
			20+ dBA above NML	None
		Highly noise affected	≥75 dBA	None
5	52	Range of predicted noise levels (dB(A))		38-69
		Number of Residence	Complying	211
			0-10 dBA above NML	12
			10-20 dBA above NML	1
			20+ dBA above NML	None
		Highly noise affected	≥75 dBA	None
6	52	Range of predicted noise levels (dB(A))		39-47
		Number of Residence	Complying	14
			0-10 dBA above NML	None
			10-20 dBA above NML	None
			20+ dBA above NML	None
		Highly noise affected	≥75 dBA	None
7	47	Range of predicted noise levels (dB(A))		40-49
		Number of Residence	Complying	17
			0-10 dBA above NML	2
			10-20 dBA above NML	None
			20+ dBA above NML	None
		Highly noise affected	≥75 dBA	None
8	58	Range of predicted noise levels (dB(A))		41-66
		Number of Residence	Complying	93
			0-10 dBA above NML	12

			10-20 dBA above NML	None
			20+ dBA above NML	None
		Highly noise affected	≥75 dBA	None

It is anticipated that establishment and operation of all ancillary facilities will generally be carried out during standard construction working hours in accordance with the CoA E23, and Interim Construction Noise Guideline (DECC, 2009);

- 7.00am to 6.00pm, Monday to Friday
- 8.00am to 1.00pm on Saturdays; and
- At no time on Sundays or public holidays.

The delivery of oversized plant/equipment under road guidelines may be required to occur outside of normal hours in accordance with CoA E26(a) however they will arrive to site and engine shut off until after 7am where they will be unloaded within standard work hours.

From the EIS noise assessment it is evident that during standard construction hours within most NCAs, it is expected that noise from the nearest ancillary facility (in isolation of noise from any other mainline works) will comply with the NML. It may exceed the NML by up to 10 dB (A) at a small number of receivers (up to 12 receivers within NCA 5) when that facility is operating at peak capacity. Additionally, one receiver in each of NCA 4 and NCA 5 may be exposed to noise levels up to 20 dB(A) above the NML during times of peak operations.

As shown in Figure 5-3 GEJVs refinement of the ancillary area layout will increase buffer distances to the nearest residential receivers. Considerations of these factors will reduce the predicted noise levels and potential noise impacts determined in the EIS. Further detail on the actual noise impacts with consideration to these measures are detailed in Section 5.7.1.

The only out of hours works that would occur at the main compound facility at C8 would be office administrative related activities and these activities will not impact sensitive noise receivers. It is not expected that loading or unloading of materials, processing of materials or operation of plant will be required outside of standard hours at any of the ancillary areas. In the unlikely event that out of hours works are required, they will be undertaken in accordance with the EPL and the through the out-of-hours work procedure in the Construction Noise and Vibration Management Plan.

The Construction Noise and Vibration Management Plan has been developed to detail noise mitigation measures consistent with the EPL, Roads and Maritime' CNVG, the EIS and the OACEMP. The relevant noise mitigation measures associated with the ancillary facilities have been summarised in section 6.

5.7.1 Temporary acoustic barriers

NSW CoA E31 requires that temporary acoustic barriers (2.4 metres high) are to be installed prior to commencement of work and inspected and maintained throughout the use of the ancillary sites, unless a justification for not installing acoustic barriers in certain locations, has

been described in this plan. The temporary acoustic barriers will be installed in accordance with Figure 5-4.

The EIS assessed potential noise impacts from the main compound area which falls within the noise catchment 4 (NCA 4). The nearest property is at the north east corner of the compound site (105-106 Adams Road) is directly adjacent and within 50m from the site compound. As detailed in Table 5-5 for NCA 4 the nearest residence (105-106 Adams Road) will experience noise levels from the compound area 10-20 dBA above NML.

GEJV has further reduced the footprint of disturbance for the main ancillary facility at C8 as shown in Figure 5-3 and 5-7.

A desktop assessment, using Roads and Maritime Services Noise Estimator Tool, was undertaken to determine the potential impacts during operation of the facility to the nearest receivers. This assessment has been used to determine required noise mitigation measures including noise attenuation structures like hoarding. The recommended noise mitigation measures derived from Noise Estimator Tool are aligned with recommendations in the Roads and Maritime Construction Noise and Vibration Guideline 2016 and the Interim Construction Noise Guideline (DECC, 2009). The results are summarised in Table 5-6 below. The noise management levels (NML's) have been adopted from the Project EIS working paper on Noise and Vibration.

Table 5-2 Noise assessment for proposed main ancillary facility operation

Nearest Sensitive Receiver	Distance to GEJV ancillary facility (m)	Nearest Ancillary Activity (Figure 5-6)	Predicted Noise level (dBA)	Noise Management Level /dB(A)	Recommended noise mitigation measures
105-115 Adams Road	**305m from carpark**	**Carpark activities** **Parking of light vehicles for compound office area**	45	47	Predicted noise levels are within the NMLs. Standard noise mitigation measures to be applied as per table 6-1.
	305m from carpark	**OOHW Compound activities** **Possible office administrative work**	45	43 (evening) 42 (Night)	Out of Hours works only to occur if compliant with CoA in accordance with the CoA E23, the EPL and the Interim Construction Noise Guideline (DECC, 2009).
45 Adams Road	**280m from storage and laydown area**	**Laydown and storage activities** Delivery of materials with road trucks	47	48	Predicted noise levels are within the NMLs. Standard noise mitigation measures to be applied as per table 6-1.

		Stockpiling of materials using excavators and truck and dogs Parking of heavy vehicles (excavators, trucks, etc)			
	280m from storage and laydown area	**OOHW Storage and laydown activities** Possible oversize deliveries	47	43 (evening) 42 (Night)	Out of Hours works only to occur if compliant with CoA in accordance with the CoA E23, the EPL and the Interim Construction Noise Guideline (DECC, 2009).
18 Eaton Road	**170m from storage and laydown area**	**Laydown and storage activities** Delivery of materials with road trucks Stockpiling of materials using excavators and truck and dogs Parking of heavy vehicles (excavators, trucks, etc)	53	48	Currently the vacated house(40 Eaton Road) adjacent to the proposed facility is offering attenuation to nearest resident this will be in conjunction with the acoustic dampening .e.g. construct a 2.4m high topsoil noise mound or use 2.4m high acoustic hoarding to reduce potential noise impacts by 10dBA.
	170m from storage and laydown area	**OOHW Storage and laydown activities** Possible oversize deliveries	53	43 (evening) 42 (Night)	Out of Hours works only to occur if compliant with CoA in accordance with the CoA E23, the EPL and the Interim Construction Noise Guideline (DECC, 2009).
2074 The Northern Road	**80m from carpark**	**Carpark activities** Parking of light vehicles for compound office area	60	48	Build a 2.4m high topsoil noise mound or use 2.4m high acoustic hoarding along the southern boundary of the carpark to reduce potential noise impacts at the nearest residential receiver by 10dBA.
	80m from carpark	**OOHW Carpark activities**	60	43 (evening) 42 (Night)	Out of Hours works only to occur if compliant with CoA in accordance with

		Possible oversize deliveries			the CoA E23, the EPL and the Interim Construction Noise Guideline (DECC, 2009).
70 Eaton Road	**80m from carpark**	**Carpark activities** Parking of light vehicles for compound office area	60	48	Build a 2.4m high topsoil noise mound or use 2.4m high acoustic hoarding along the southern boundary of the carpark to reduce potential noise impacts at the nearest residential receiver by 10dBA.
	80m from carpark	**OOHW Carpark activities** Possible oversize deliveries	60	43 (evening) 42 (Night)	Out of Hours works only to occur if compliant with CoA in accordance with the CoA E23, the EPL and the Interim Construction Noise Guideline (DECC, 2009).

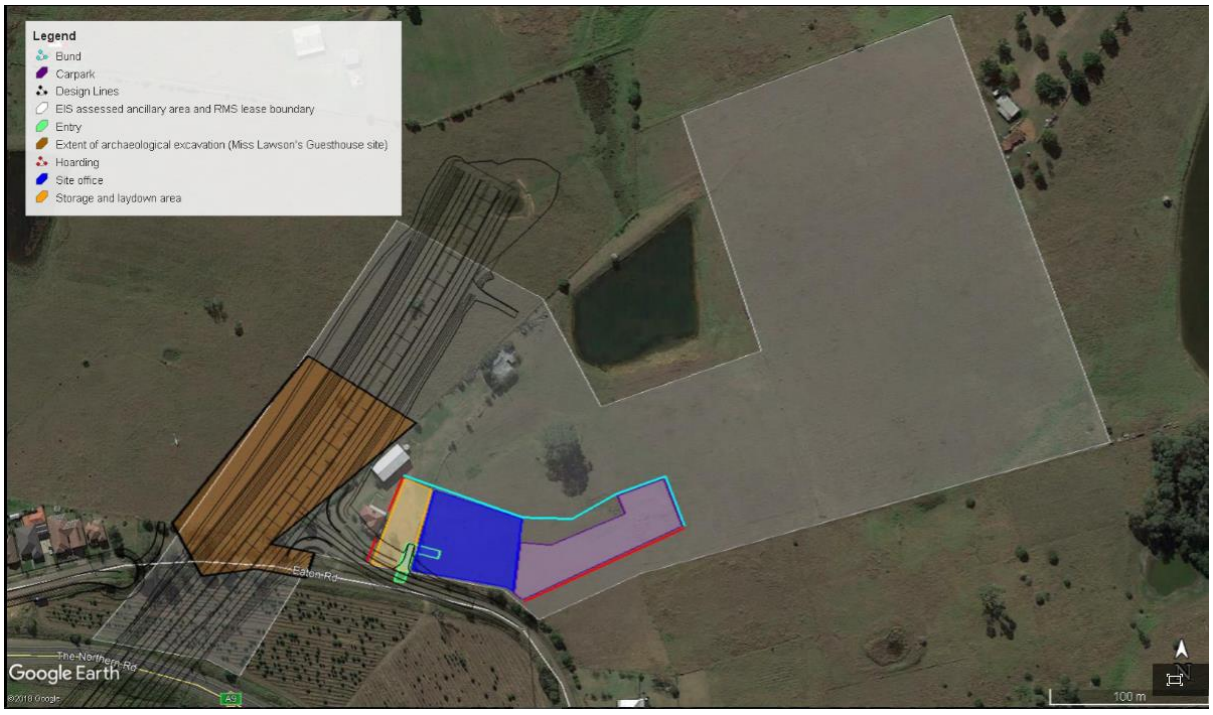

Figure 5-5 Noise attenuation for main compound

5.8 Vibration

The nearest buildings to the ancillary facilities are equal or greater than 50m away and a vibratory roller (<300Kn, typically 7-12 tonnes) is likely to be the most vibration intensive

equipment to be used during construction of the ancillary facility. The safe working distance for a vibratory roller of this size is approximately 15m for cosmetic damage (British Standard BS 7385) and approximately 100m for human comfort (DECCW). The vibratory roller will be used for site establishment activities for the main compound for approximately one week.

As the safe working distances will not be exceeded, structural damage from vibration is unlikely at any adjacent residential buildings. It is possible that human discomfort vibration criteria will be exceeded and all nearby residents will be notified of the timing and duration of the works.

For structural damage to heritage structures, the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration – Part 3 Effects of vibration on structures However, none of the houses within 100m of the ancillary facility are heritage listed buildings and the heritage site 'Miss Lawson's Guesthouse' is an archaeological site which will be salvaged prior to site establishment in this area.

As detailed in Section 6, pre and post construction property condition surveys will be undertaken on buildings within 100m of vibrating compaction activities to identify any impacts associated with the establishment and operation of the ancillary facility.

5.9 Traffic and Access

With the exception of ancillary facilities C5 and C6, designated access and haulage routes for light vehicles entering and exiting temporary ancillary facilities will be along The Northern Road and surrounding local road network. However continual access to local roads and properties will be provided as per NSW CoA E41 and G36 clause 4.20 (e). Access to ancillary facility C5 and C6 will be via the mainline construction access to a suitable access point on The Northern Road. The use of local roads to access ancillary facilities will be limited to Eaton Road for access to the main compound at ancillary area C8 as light vehicles will access the ancillary facility as per Figure 5-5. This will provide continual movement of local traffic on the northern road section and minimal impact on Eaton road. Figure 5-5 will not as part of the ancillary works but as stage 1 works. However this demonstrates plans to keep construction traffic (light vehicles) away from local residents to mitigate against nuisance noise etc. A condition survey will be completed on Eaton road pre construction in accordance with CoA E-55. There will be an estimate of 200 light vehicle movements throughout the 10 hour working day.

In accordance with CoA E26, construction vehicles arriving at ancillary facilities outside the standard hours of work will not queue with idling engines. Site personnel will be provided with specific training on mitigation of noise emissions from construction vehicles.

Vehicle Management Plans will be developed in accordance with the Traffic Management Plan to ensure safe vehicle movements in and out of the ancillary facility sites and provide specific mitigation measures including those detailed in Section 6.

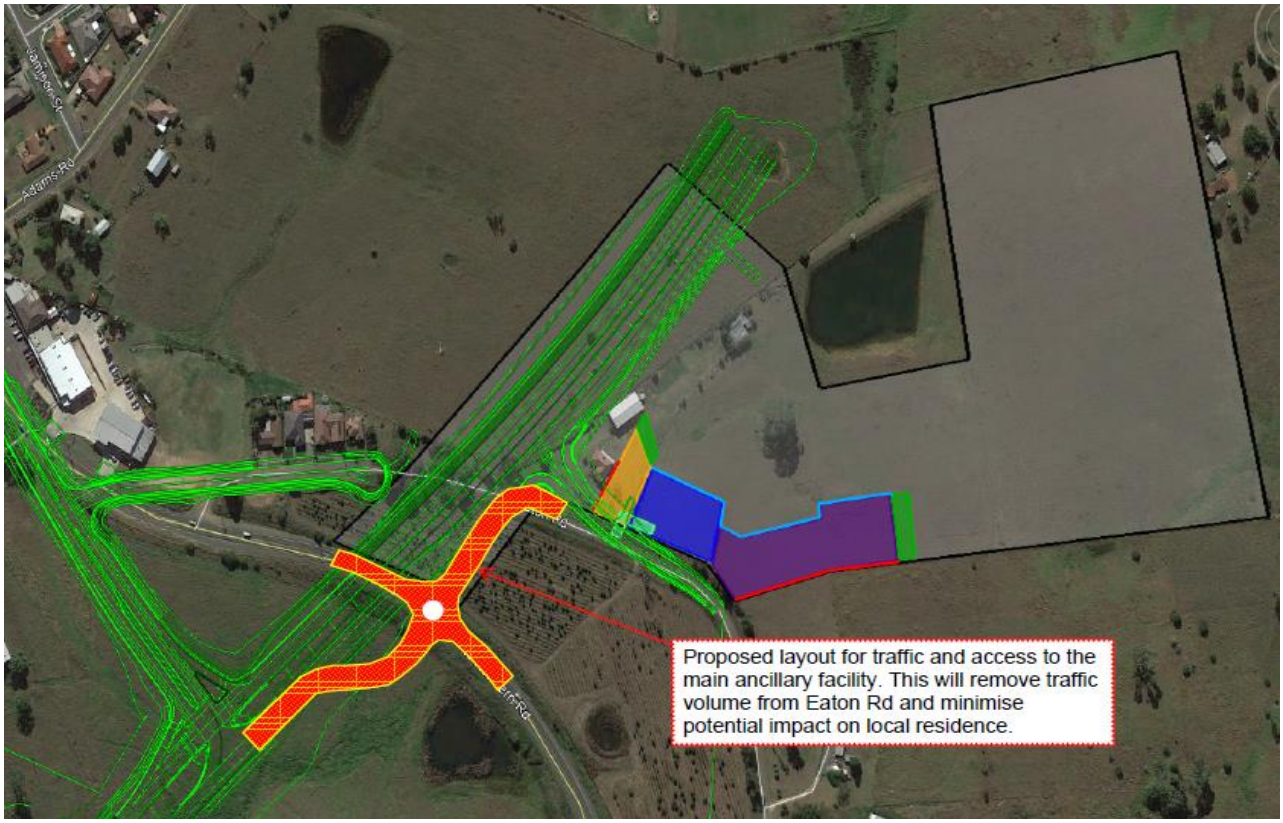

Figure 5-6 - Proposed road layout as noise & traffic mitigation measure

5.10 Visual

The ancillary facilities will result in a temporary increase in the visual extent of the construction site and activities. The proposed location for the main compound is farmland, located 500m south east from the town of Luddenham. The main compound will therefore result in a temporary visual change, it will have 2m high security fencing with shade cloth installed and will not have tall structures. Any obstruction of views from existing residential receivers adjacent to the main compound will be minimal.

The compound site would have some security lighting which has the potential to cause light spill during the evening and night time period. The security lighting at the main office would most likely be mains power connected and would be directed away from adjacent residential properties to ensure any light spill impact minimised. In the event that a generator is required it will be short term until the facility is connected to the mains supply and only operated inside standard work hours and will be switched off overnight.

The visual and light spill impacts associated with the ancillary facilities will be temporary in nature as the ancillary facilities including the main compound will only be in place for 2 years during the construction of between Mersey Road and Eaton Road of The Northern Road. All ancillary facility areas will be stabilised and re-vegetated as per the Landscape Plan developed for the Project.

5.11 Air Quality

Establishment of the ancillary facility will result in the disturbance of the ground surface. Primary sources of dust emissions associated with the establishment and operation of the ancillary facility are;

- Clearing of grasses and topsoil removal.
- Movement of soil and fill.
- Wind erosion from unsealed surfaces and stockpiles.
- Vehicles travelling over unsealed areas.

The effects of construction activities on airborne particulate matter would be temporary and the mitigation measures detailed in the Construction Air Quality Management Plan and Section 6 of this plan include;

- The carpark, Eaton Road and access tracks will be stabilised to minimise dust impacts from movement of plant within the ancillary area. Eaton road has a bitumen surface, however if there is a build of dust or mud it will be cleaned as per the Air quality management plan.
- A water cart will be utilised when performing earthworks during establishment works and during stockpiling.
- Stabilising stockpiles that will be in place for more than 20 days and keeping stockpiles less than 3m in height. This will be completed in accordance with Roads and Maritime stockpile management guideline and the protocol included in the CEMP.
- Covering of all materials transported to and from the construction site.
- Visual monitoring of air quality to verify the effectiveness of controls and enable early intervention.
- The installation and monitoring of depositional dust gauges to quantify dust levels and determine whether control measures are adequate or whether further actions are required. A depositional dust gauge will be installed directly adjacent to the nearest residence at the main compound at ancillary area C8.

5.12 Community Consultation

Consultation regarding the Project was undertaken during the EIS exhibition period. This assessment confirms and further informs the findings of the previous assessments undertaken in relation to construction activities located in this area of the Project.

Roads and Maritime has consulted with owners of the land where ancillary facilities are proposed. Lease agreements have been acquired with the relevant land owners and Roads and Maritime and the leased areas are shown in Appendix A.

Property condition surveys will be completed before the establishment of the facility. Targeted consultation with residents and businesses located near the project area will be undertaken via notifications and/or doorknocking in accordance with the Community Communication Strategy (CCS) for the project and GEJV's Construction Community Liaison Management Plan which is stage specific and aligned to meet the processes within the CCS. The consultation will provide the surrounding community with details of the proposed activities for each stage of use (i.e. establishment, operational and decommissioning/rehabilitation).

Roads and Maritime and GEJV will continue to carry out ongoing consultation activities with neighbouring residents and business to inform them of potential amenity impacts (including noise and vibration, traffic and access, dust and odour, and visual impacts) and explain the appropriate mitigation measures that will be implemented.

6 ENVIRONMENTAL MITIGATION MEASURES

This section details the environmental mitigation measures specific to the ancillary facilities that will be implemented to minimise the environmental impacts associated with the establishment and operation of the ancillary facilities.

A range of environmental mitigation measures are identified in the various assessment and approval documents for the project, including the EIS, the Submissions and Preferred Infrastructure Report, NSW and Federal Conditions of Approval, OACEMP and Roads and Maritime standard documents. Site specific mitigation measures have been adapted from these documents as relevant to the establishment; operation, decommissioning and rehabilitation of the ancillary facility, as outlined in Table 6-1.

Table 6-1 Environmental Mitigation Measures

ID	Measure/Requirement	When to Implement	Responsibility	Reference
General				
GEN1	Prior to establishing the ancillary facility a pre-construction land condition assessment will be undertaken by an independent environmental consultant. This will assess the land for any pre-existing contamination or waste issues prior to taking possession.	Prior to site establishment	ESR, Independent Consultant	G36, Cl4.15.2 OACEMP Ap A4, Section 2.3.1
GEN2	When the areas of land used for the site facilities are no longer required, and after restoration of the areas to pre-existing condition or better, a post-construction land condition assessment by an independent environmental consultant is required.	Post - construction	ESR Independent Consultant	G36, Cl4.15.2 OACEMP Ap A4, Section 2.3.1
GEN3	The approval holder must undertake the action, including those parts of the action that occur on Commonwealth Land, in accordance with all conditions in the NSW Infrastructure Approval.	Prior to site establishment	ESR Independent Consultant	G36, CCHMP and Federal-CoA 1
GEN4	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement all management plans required by this approval, and make them available upon request to the DoEE. Such records may be subject to audit by the DoEE or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the DoEE's website. The results of audits may also be publicised through the general media.	Construction	ESR Independent Consultant	G36, CCHMP and Federal-CoA 11
Flora and Fauna				
FF1	A Construction Flora and Fauna Management Plan (CFFMP) would be developed for the project. The plan would include procedures for pre- clearance surveys that are consistent with the Roads and Maritime Biodiversity Guidelines (RTA, 2011). All work to be in accordance with the CFFMP.	Pre - construction	ESR	G36 Section 4.8 OACEMP Ap A4, Table 2-3,
FF2	Contain construction activities within the construction works zone boundary and occupy the minimum area practicable for limiting impacts on adjoining areas, including the extent of native vegetation clearing.	Prior to site establishment construction	Project Manager Superintendent ESR	OACEMP Ap A4, Table 2-3
FF3	Clear boundaries will be applied for construction and exclusion zones for equipment, machinery and traffic to prevent unnecessary damage to native vegetation and fauna habitats.	Prior to site establishment	Project Manager Superintendent ESR	G36 Section 4.8 OACEMP Ap A4, Table 2-3
FF4	Clearing limits will be accurately and clearly marked. Existing trees within construction area and compounds that do not need to be	Prior to site establishment	Project Manager Superintendent ESR	G36 Section 4.8 OACEMP Ap A4, Table 2-3

ID	Measure/Requirement	When to Implement	Responsibility	Reference
	removed will be identified, protected and maintained throughout the construction period.			
FF5	Once clearing limits have been surveyed and marked, a suitably qualified and experienced fauna ecologist will undertake a pre-clearing survey to identify any concerns to specific species.	Prior to site establishment	Ecologist ESR	G36 Section 4.8
FF6	During vegetation clearing, timber and root balls must be retained where practicable for reuse in habitat enhancement and rehabilitation work. The retained timber and root balls may be used on or off the CSSI site. Prior to the commencement of vegetation clearing, the Proponent must consult with community groups, the Mulgoa Valley Landcare Group and relevant government agencies to determine if retained timber and root balls could be used for environmental rehabilitation projects, before pursuing other disposal options.	Site establishment Construction	Superintendent ESR	CoA E5
FF7	Clearing boundary demarcation and tree protection zones will be inspected during the weekly environmental inspection and recorded in the Georgiou One App Environmental inspection template. Inspection findings will be reported in the environmental monthly report.	Construction	ESR	G40 / good practice
FF8	Native vegetation would be re-established in accordance with Guide 3: Re-establishment of native vegetation of the Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects	Rehabilitation and landscaping	ESR	CoA B5
Soil and water				
SW1	A Construction Soil and Water Management Plan (CSWMP) would be developed in accordance with the Roads and Maritime specification G38 – Soil and Water Management and the Blue Book – Soils and Construction – Managing Urban Stormwater Volume 1 (Landcom, 2004) and Volume 2D (DEC, 2008a). All work to be in accordance with the SWMP.	Pre - construction	ESR	G38 OACEMP Ap A4, Table 2-3,
SW2	Training will be provided to all project personnel, including relevant subcontractors on sound erosion and sediment control practices and the requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction Construction	Superintendent ESR	G38/G36, Good practice

ID	Measure/Requirement	When to Implement	Responsibility	Reference
SW3	An erosion and sediment control plan will be developed in accordance with Managing Urban Stormwater – Soils and Construction Volume 1 (Landcom, 2004) and Volume 2D (DECC, 2008). This plan will incorporate erosion control measure to limit the movement of soil from disturbed areas, and sediment control measures to remove any sediment from runoff.	Prior to site establishment	Superintendent ESR	ESCPs G38 Blue Book (Landcom, 2004), NSW-CoA E8
SW4	All soils to be transported offsite, will be identified and classified in accordance with the *Protection of the Environment Operations Act 1997* (POEO Act) and Waste Classification Guidelines	Construction	Superintendent ESR	G36 Clause 4.11
SW5	All topsoil will be surveyed for contamination prior to stripping and monitored during topsoil stripping. An Unexpected Discovery of Contaminated Land Procedure (Appendix D) will be implemented if potentially contaminated land, spoil or fill is encountered. Works in the vicinity will be stopped or modified and will not recommence until the material has been analysed and management measures implemented.	Pre-construction Construction	Superintendent ESR	G36 Clause 4.2.3, R44 cl 2.3
SW6	A spill management procedure will developed as part of the Pollution Incident Response Plan (PIRMP) and personnel will be inducted on its procedures in the event of a spill. All fuels and chemicals will be stored and used in accordance with the appropriate guidelines and standards	Pre-construction Construction	ESR	PIRMP for EPL holders under the POEO Act 1997
SW7	All erosion and sediment controls will be inspected weekly and post rainfall events >10mm. Soil conservation inspection will occur on a monthly frequency. Required maintenance and improvements will be recorded in the Georgiou One App Environmental inspection template. Inspection findings will be reported in the environmental monthly report.	Construction	ESR	G36 Clause 3.3.1
SW8	Where available and practicable, captured stormwater, recycled water or other water sources shall be used in preference to potable water for construction, including dust control and assist compaction..	Construction	Superintendent ESR	G36, CoA E71
Stockpile Management				
SP1	Stockpiling of material will not occur within 5m of vegetation protection areas and tree protection zones. Delineation will be in accordance with AS 4970.	Pre-construction Construction	Project Manager ESR	G38 Clause 3.2

ID	Measure/Requirement	When to Implement	Responsibility	Reference
SP2	Stockpiles will be located at least 5m from concentrated water flows and 50m from the top of bank of any watercourse or drainage line	Pre-construction Construction	Project Manager ESR	G38 Clause 3.2
SP3	Cover, or otherwise protect from erosion, stockpiles that will be in place for more than 4 weeks as well as any stockpiles that are susceptible to wind or water erosion, within 10 days of forming each stockpile in accordance with the blue book.	Pre-construction Construction	Project Manager ESR	G38 Clause 3.2
SP4	Clean topsoil to be retained for rehabilitation purposes, weed contaminated topsoil to be separated from clean topsoil.	Pre-construction Construction	Project Manager, ESR	G38 Clause 3.2
SP5	Weed mitigation measures including early establishment of a sterile cover crop on topsoil stockpiles will be implemented to prevent and minimise the growth of weeds.	Construction	Project Manager ESR	G38 Clause 3.2
SP6	There would be no stockpiling of soil or construction materials within utility easement corridors	Pre-construction Construction	Project Manager ESR	OACEMP Ap A4, table 2-3
SP7	Controls will be placed around stockpiles and immediately downslope of excavated areas to minimise siltation and sedimentation.	Pre-construction Construction	Superintendent	G38 Clause 3.2
SP8	The ESCP must detail the measures that will be implemented to protect stockpiles from erosion by wind and water erosion.	Pre-construction Construction	ESR	G38 Clause 3.2
SP9	Stockpile areas will be included in the weekly and post rainfall environmental inspections and recorded in the Georgiou One App Environmental inspection template. Inspection findings will be reported in the environmental monthly report.	Site establishment Construction	ESR	G38 Clause 3.2
Material Storage and Management				
CH1	A project-specific Construction Waste and Energy Management sub-plan (CWEMP) would be prepared before construction. The plan would adopt the Resources Management Hierarchy principles of the WARR Act. All work to be in accordance with the CWEMP.	Pre - construction	ESR	G38 OACEMP Ap A4, Table 2-3
CH2	All fuels, chemicals, and liquids would be stored at least 50 m away from the existing stormwater drainage system and would be stored in an impervious bunded area within the compound site.	Construction	Site Supervisor Foreman	G36 Cl 4.3 OACEMP Ap A4, Table 2-3
CH3	Storage, handling and use of dangerous goods and hazardous substances would be in accordance with the Work Health and Safety	Site establishment Construction	Site Supervisor Foreman	OACEMP Ap A4, Table 2-3

ID	Measure/Requirement	When to Implement	Responsibility	Reference
	Act 2011 and the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005).			
CH4	Inspect all plant and equipment daily for leakages of fuel, oil or hydraulic fluid. Repair any defective or deteriorated equipment that may result in leaks or leaks before using plant or equipment. Maintain records of plant inspections	Site establishment Construction	Operators	G36 Cl 4.3
CH5	Keep adequate quantities of suitable material to counteract spillage readily available. Clean up all chemical spills immediately.	Site establishment Construction	Superintendent\ Foreman	G36 Clause 4.3
CH6	Emergency spill kits for the management of wet and dry chemical spills must be available at all compound areas	Site establishment Construction	Superintendent\ Foreman	G36 Cl 4.3
CH7	Vehicle wash downs and/or concrete truck washouts would be undertaken within a designated bunded area of an impervious surface or undertaken off-site	Site establishment Construction	ESR, Superintendent Foreman	G36 Cl 4.11 OACEMP Ap A4, Table 2-3
CH8	Waste oil, oily rags, oil filters and oily waters will be disposed of by an appropriately licensed contractor to a waste facility where the materials are lawfully accepted.	Construction	ESR, Superintendent Foreman	G36 Cl 4.11
CH9	Storage of dangerous goods and hazardous materials would occur in accordance with suppliers' instructions and relevant Australian Standards and may include bulk storage tanks, chemical storage cabinets / containers or impervious bunds	Construction	Superintendent Foreman	OACEMP Ap A4, Table 2-3
CH10	Provide security for buildings, materials, construction plant and machinery. Take all necessary precautions to make the area safe to the public	Site establishment Construction	ESR Superintendent Foreman	Best practice
CH11	Ensure that adequate rubbish receptacles are provided to enable & promote waste segregation from putrescible waste and recyclable waste. Service these receptacles regularly and to the satisfaction of the Principal to ensure that the construction area remains tidy.	Site establishment Construction	ESR Superintendent Foreman	Best practice
CH12	Waste management measures will be based upon the philosophy of reduce, reuse, recycle and appropriate disposal. Refer to Construction Waste & Energy Management Plan and Sustainability Management Plan.	Construction	Superintendent ESR	G36 Clause 4.11

ID	Measure/Requirement	When to Implement	Responsibility	Reference
CH13	All wastes, including contaminated wastes, would be identified and classified in accordance with the Waste Classification Guidelines: Part 1 Classifying Waste	Construction	Superintendent ESR	OACEMP Ap A4, Table 2-3
CH14	Disposal of any non-recyclable waste would be in accordance with the POEO Act and Waste Classification Guidelines: Part 1 Classifying Waste	Construction	Superintendent ESR	OACEMP Ap A4, Table 2-3
CH15	Concrete pumping or concreting activities will be undertaken in accordance with Environmental Best Management Practice Guideline for Concreting Contractors 2002 to prevent and/or minimise spillages.	Construction	Superintendent ESR	Good Practice
CH16	The refuelling of plant and maintenance machinery would be undertaken at least 50m from waterways with appropriate spill containment mechanisms in place such as impervious bunding and the provision of spill kits nearby.	Construction	Superintendent ESR	Good Practice OACEMP Ap A4, Table 2-3
CH17	Hydrocarbon, chemical and waste storage areas will be included in the weekly and post rainfall environmental inspections and recorded in the Georgiou One App Environmental inspection template. Inspection findings will be reported in the environmental monthly report.	Construction	ESR	Good Practice
Heritage				
HER1	A Construction Cultural Heritage Management Plan (CCHMP) would be prepared as part of the CEMP prior to construction providing protocols and procedures to be implemented during construction to ensure the protection of items of heritage significance. Works must be in accordance with the CCHMP and known heritage items (both Aboriginal & non-Aboriginal) will have an demarcation fence and signed exclusion zone, this will be communicated in the project induction and toolboxes.	Pre - construction	ESR	G38 OACEMP Ap A4, Table 2-3 NSW -CoA E9, NSW-CoA E11
HER2	Prior to commencing work all construction personnel will undergo a induction which would contain information on heritage values and items in the area and on environmental management measures to minimise potential heritage impacts. This induction will identify procedures for unexpected heritage finds. Works must be in accordance with the CCHMP	Pre - construction	ESR	G36 Section 5, NSW-CoA C5

ID	Measure/Requirement	When to Implement	Responsibility	Reference
HER3	The Roads and Maritime's unexpected finds protocol will be implemented for the works in relation to unexpected heritage finds and in the event of uncovering possible human skeletal remains This includes cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified and experienced archaeologist in consultation with the Department, OEH and registered Aboriginal stakeholders. Works must be in accordance with the CCHMP	Site establishment Construction	Project Manager Superintendent ESR	Roads and Maritime Roads and Maritime Unexpected Heritage Items Procedure – Annexure B, NSW CoA E16, E17, E21, E22
HER4	Miss Lawson's Guesthouse will be demarcated with signage erected and communicated as area is a No GO Zone for the duration of construction.	Site establishment Construction	Project Manager Superintendent ESR	NSW-CoA E11
Noise and Vibration				
NV1	A Construction Noise and Vibration Management Plan (CNVMP) would be prepared in accordance with the requirements in the ICNG and Roads and Maritime CNVG. All work to be in accordance with the CNVMP.	Pre - construction	ESR	G38 OACEMP Ap A4, Table 2-3
NV2	Implement all reasonable and feasible mitigation measures to ensure the works comply with the relevant Noise Management Levels. This shall include; • Works will be undertaken in accordance within the standard working hours unless in compliance with the Project EPL or CoA E26. • All construction plant and equipment used on the site will be: - Fitted with properly maintained noise suppression devices in accordance with the manufacturer's specifications. - Maintained in an efficient condition. - Operated in a proper and efficient manner • All noise and vibration complaints will be managed in accordance with the Complaints Management System. • loading and unloading will be carried out away from sensitive receivers, where practicable • Ensure all deliveries occur during standard construction hours where reasonable and feasible.	Prior to site establishment Site establishment Construction	Superintendent ESR	G36, Cl4.16 OACEMP Ap A4, Table 2-3 NSW CoA E23- E25 and E28

ID	Measure/Requirement	When to Implement	Responsibility	Reference
	• Loading and unloading should be carried out away from sensitive receivers, as far as practicable. • Avoiding noisy plant from working simultaneously in close proximity adjacent to sensitive receivers will result in reduced noise emissions and exposure. • Equipment which is used intermittently is to be shut down when not in use. • Where possible, equipment with directional noise emissions should be oriented away from sensitive receivers. • Reversing of equipment should be minimised so as to prevent nuisance caused by reversing alarms. • schedule a respite period of one hour for every three hours of continuous high noise generating construction activity, or scheduling high noise generating works to the less sensitive times of 9:00 am to 12:00 pm or 2:00 pm to 5:00 pm. • Noise intensive works to be completed in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block. • GEJV must identify and consult with receivers identified as being subject to levels that exceed the Highly Noise Affected criteria with the objective of determining appropriate hours of respite unless an agreement is reached with those receivers. • Locate topsoil as noise mounds along the perimeter of compound site adjacent to residential receivers as per the Ersed Plan for main site compound. • Construction vehicles arriving at the project site and construction compounds outside the standard construction hours described in Condition E23 must not queue with idling engines.			
NV3	Pre and post construction property condition surveys will be undertaken at houses within 100m of the ancillary areas to identify any impacts associated with the establishment and operation of the ancillary facility. Property condition reports are to be provided to landowners and Councils (where agreed by landowner) within 3 weeks and no later than one month prior to commencement of works.	Prior to site establishment Construction	Project Manager ESR	G36, Cl4.15.2 OACEMP Ap A4, Section 2.3.1, E36, E42 & E44

ID	Measure/Requirement	When to Implement	Responsibility	Reference
	When working within 5m of a sensitive receptor the “no vibe” function will be used on the roller. If compaction is required within 5m of Mrs Lawson’s Guesthouse or other heritage structures, a vibration setting will be turned off. GEJV may conduct vibration testing before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and monitoring shows that the preferred values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, implement additional mitigation measures.			
NV 4	The CSSI must be constructed with the aim of achieving the following construction vibration goals: (a) for structural damage to heritage structures, the vibration limits set out in the German Standard *DIN 4150-3: Structural Vibration – Part 3 Effects of vibration on structures*; (b) for damage to other buildings and/or structures, the vibration limits set out in the British Standard *BS 7385-1:1990 – Evaluation and measurement of vibration in buildings—Guide for measurement of vibration and evaluation of their effects on buildings* (and referenced in Australian Standard 2187.2 – 2006 *Explosives – Storage and use – Use of explosives*); and for human exposure, the acceptable vibration values set out in *Assessing Vibration: A Technical Guideline* (Department of Environment and Conservation, 2006).	Site establishment Construction	Project Manager ESR	G36, Cl4.15.2 OACEMP Ap A4, Section 2.3.1,
NV5	GEJV to ensure that vibration from construction activities does not exceed the vibration limits set out in the British Standard BS 7385-2:1993 *Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration.*	Site establishment Construction	Project Manager ESR	G36, Cl4.15.2 OACEMP Ap A4, Section 2.3.1,
NV6	Attended noise monitoring will occur monthly at the nearest residential receiver against the NMLs. Attended noise monitoring will also occur if a complaint is received or during any OOHW.	Site establishment Construction	ESR	Good practice.
NV7	Temporary acoustic barriers (2.4 metres high) are to be installed as soon as site establishment works at the ancillary facility are completed and before undertaking any works which are required to be conducted at the facility. unless a justification for not installing acoustic barriers in certain locations, has been described in this plan. Acoustic barriers must be inspected and maintained to remain effective throughout the use of the construction compound.	Site establishment Construction	Project Manager ESR	CoA E31
Effluent Management				

ID	Measure/Requirement	When to Implement	Responsibility	Reference
EM1	Toilet blocks will be fitted with a 4000L waste holding tank. Pumping out of waste is to be conducted by a licensed waste contractor and disposed of at a suitably licensed waste facility in accordance with the Construction Waste Management sub-plan and EPA requirements	Site establishment Construction	Project Manager ESR	Good practice.
EM2	Push taps will be installed within the toilet blocks to prevent taps being left on accidentally.	Site establishment Construction	Project Manager ESR	Good practice.
EM3	A high sensor auto shut off valve (80%) will be installed on the waste system to prevent the tank from overflowing. The system will be checked weekly as part of environmental inspections.	Site establishment Construction	Project Manager ESR	Good practice.
Traffic and access				
TR1	A Construction Traffic Management Plan (CTMP) would be developed, approved, implemented and monitored as part of the project. The TMP would ensure the use of local roads by heavy vehicles to access temporary ancillary facilities would be limited as far as is reasonably practicable. All work to be in accordance with the CTMP.	Pre-construction Construction	Project Manager	G36 Clause 3.1 OACEMP Ap A4, table 2-3
TR2	Wherever practical all removal and delivery of materials and plant will be timed to occur outside of the peak traffic periods to minimise delay in the area however within standard construction hours.	Site establishment Construction	Superintendent	Good practice
TR3	Construction vehicles arriving at the project site and Construction compounds outside the standard Construction hours must not queue with idling engines.	Site establishment Construction	Superintendent	CoA E28
TR4	Unencumbered access to private property must be maintained during Construction unless otherwise agreed with the landowner in advance. A landowner's access that is physically affected be reinstated to at least an equivalent standard, in consultation with the landowner.	Site establishment Construction	Superintendent	CoA E41
TR5	Vehicles used in the delivery of the project must not use local roads unless no suitable alternatives are available. Where the use of local roads is proposed, these must be identified in a Traffic Management plan.	Site establishment Construction	Superintendent	CoA E54

ID	Measure/Requirement	When to Implement	Responsibility	Reference
TR6	A Road Dilapidation Report must be prepared by a suitably qualified person for local roads (and associated infrastructure) proposed to be used by Construction vehicles for works associated with the project before the commencement of use by such vehicles. Copies of the Road Dilapidation Report must be provided to the relevant Council within three (3) weeks of completing the surveys and no later than one (1) month before the use of local roads by project vehicles.	pre-construction	Project Engineer Superintendent	CoA E55
TR7	If damage to roads occurs as a result of Construction, the Proponent must rectify the damage so as to restore the road to at least the condition it was in pre-works, unless otherwise agreed by the relevant Councils.	Post construction	Project Engineer Superintendent	CoA E56
TR8	During construction, measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Alternative pedestrian access, vehicular access, and parking arrangements, and signage to direct customers to these businesses and affected properties, must be developed in consultation with affected businesses.	Construction	Project Engineer Superintendent	CoA E57
TR9	Signage and directions to businesses must be provided before, and for the duration of, any disruption during Construction.	Pre-construction Construction	Project Engineer Superintendent	CoA E58
Visual				
VIS1	The visual impact of ancillary facilities on adjacent residential areas will be minimised through the careful planning and positioning of temporary offices, other plant and material laydown areas, and specific management of lighting and potential for light spill within the identified ancillary facility.	Pre-construction Construction	Superintendent ESR	Good practice
VIS2	Undertake property adjustments and relocation of infrastructure (for example, fencing, dams, property access) in consultation with the property owner.	Construction	Superintendent ESR	OACEMP Ap A4, Table 2-3
VIS3	Areas affected by construction would be reinstated and restored in accordance with the urban design and landscape strategy.	Prior to completion of project	Superintendent Foreman	OACEMP Ap A4, Table 2-3
VIS4	Any areas temporarily disturbed during construction will be rehabilitated as soon as feasible and reasonable following the completion of construction/operation of the ancillary facilities.	Prior to completion of project	Superintendent Foreman	G36, Cl4
VIS5	The design of temporary lighting must avoid unnecessary light spill on adjacent residents or sensitive receivers and be designed in accordance with AS 1158.1-1986.	Construction	Superintendent ESR	OACEMP Ap A4, Table 2-3

ID	Measure/Requirement	When to Implement	Responsibility	Reference
VIS6	Consider the provision of barriers to screen views from visually sensitive nearby areas such as rural dwellings, residential and recreational areas.	Construction	Superintendent ESR	OACEMP Ap A4, Table 2-3
VIS7	Contain construction activities within the construction works zone boundary and occupy the minimum area practicable for limiting impacts on adjoining areas, including the extent of native vegetation clearing.	Construction	Superintendent ESR	OACEMP Ap A4, Table 2-3
Air Quality				
AIR1	Dust and emissions generation at compounds would be managed by: • installation of perimeter screening around compound sites • impose low speeds limits around compound sites to limit the generation of dust from vehicle movements • apply wheel-wash or rumble grid facilities at access points to limit the tracking of materials beyond the site boundary • ensure that compound area surfaces are well compacted or sealed to limit the potential for dust generation • regularly water stockpiles and limit the amount of materials stockpiled around the site • Limit stockpiling activities during conditions where winds are blowing strongly in the direction(s) from the stockpiling location to nearby receivers. • position stockpiling areas as far as possible from surrounding receivers Where available and practicable, and of appropriate chemical and biological quality, stormwater, recycled water or other water sources may be used in preference to potable water for the delivery of the CSSI, including dust control.	Pre-construction Construction	Superintendent Foreman	G36, Cl4.4 OACEMP Ap A4, Table 2-3, NSW-CoA E71, NSW-CoA E72
AIR2	Dust generation will be visually inspected daily by the supervisors during all works to ensure excess dust is not generated and is not leaving site. Air quality and dust management will be formally inspected weekly and recorded in the Georgiou One App Environmental inspection template. Inspection findings will be reported in the environmental monthly report.	Construction	Supervisors, ESR	G36 Clause 4.4.1 OACEMP Ap A4, Table 2-3, NSW CoA E71
AIR3	Install depositional dust gauges in accordance with the Construction Air Quality Management Sub Plan to quantify dust levels and determine whether control measures are adequate or whether further actions are required. A depositional dust gauge will be	Construction	Supervisors, ESR	OACEMP Ap A4, Table 2-3

ID	Measure/Requirement	When to Implement	Responsibility	Reference
	installed directly adjacent to the nearest residence at the main compound at ancillary area C8.			
Waste				
WE1	Waste generated in the delivery of the Project must be dealt with in accordance with the waste minimisation hierarchy principles of avoid/reduce/reuse/ recycle/dispose with the following priorities: i. waste generation is to be avoided and where avoidance is not reasonably practicable, waste generation is to be reduced; ii. where avoiding or reducing waste is not possible, waste is to be re-used, recycled, or recovered; and iii. where re-using, recycling or recovering waste is not possible, waste is to be treated or disposed of at a waste management facility or premises lawfully permitted to accept the materials.	Construction	ESR, Superintendent	G36 Cl. 4.11.1 NSW CoA E68 – E70
WE2	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence or waste exemption under the POEO Act, if such a licence is required in relation to that waste.	Construction	ESR, Superintendent	EIS Table 8-45, WR-1 NSW CoA E68
WE3	All waste materials removed from the CSSI site must only be directed to a waste management facility or premise lawfully permitted to accept the materials or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	Construction	ESR, Superintendent	NSW CoA E69
WE4	All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes	Construction	ESR, Superintendent	CoA E70
Community Consultation				
CON1	Affected residents and local business owners will be consulted prior to establishing the ancillary facility to identify appropriate measures to manage potential impacts which will be in accordance with the Community Communication Strategy (CCS)	Pre - construction	Community Liaison Officer ESR	G36 Clause 3.7.2 OACEMP Ap A4, Table 2-3
CON2	On-going consultation in accordance with the CCS to local business owners, including owners of agricultural businesses, located close to	Pre – construction Construction	Community Liaison Officer	G36 Clause 3.7.2 OACEMP

ID	Measure/Requirement	When to Implement	Responsibility	Reference
	construction works about the timing, duration and likely impact of construction activities on their business operations would be carried out.		ESR	Ap A4, Table 2-3

7 COMPLIANCE MANAGEMENT

7.1 Roles and responsibilities

The Project Team's organisational structure and overall roles and responsibilities are outlined in Section 5.1.7 - 5.1.14 of the OACEMP. Specific responsibilities for the implementation of environmental controls are detailed in Section 7 of this Plan.

7.2 Training

All employees, contractors and utility staff working on site will undergo site induction training relating to the development and operation of ancillary facilities. The induction training will address elements related to facility operations including:

- Existence and requirements of this AFMP.
- Relevant legislation.
- Community expectations.
- Traffic and access.
- Soil and water management.
- Dust management.
- Flood warning and evacuation.
- recognition and awareness of site hazards
- Contingency and emergency response planning.
- Spill management.
- Handling and disposal of hazardous goods and materials.
- Construction vehicle noise minimisation measures.
- Vegetation clearing.
- Sensitive areas and exclusion zones.

Further details regarding staff induction and training are outlined in Chapter 6.7.1 of the OACEMP.

7.3 Monitoring and inspections

As detailed in Section 6.1 of the OACEMP, weekly inspections of the site, including ancillary facilities, will occur for the duration of the project. The Environmental Site Representative will undertake these inspections. In addition regular inspections (fortnightly or monthly as required) by the Independent Environmental Representative will occur and an ER Inspection Report will be provided to Roads and Maritime and the GEJV. Additional requirements and responsibilities in relation to monitoring and inspections are documented in Section 6.1 of the OACEMP.

7.4 Auditing

Audits will be undertaken to assess the effectiveness of environmental controls, compliance with this plan, CoA and other relevant approvals, licenses and guidelines. Audit requirements are detailed in Section 6.4 of the OACEMP.

An audit schedule will be developed as per Section 6 of the OACEMP by GEJV's Environmental Manager and will include all external and internal audits.

7.5 Incident Management

An Incident Reporting Procedure (section 6.5 of the OACEMP) covers incidents management and the reporting requirements. A Pollution Incident Response Management Plan (CEMP - Appendix A2) has been developed to minimise the impact of spills including details on the requirements for managing, cleaning up and reporting.

7.6 Complaints Management

Complaints will be recorded in accordance with the approved Community Communication Strategy and Complaints Management System. Information will be recorded as per the requirements of the Complaints Register for the project. All resident complaints will be managed as per the timelines identified in the Complaints Management System and reported to Roads and Maritime for inclusion in complaints reporting.

7.7 Reporting

Reporting requirements and responsibilities are documented in Section 6.5 of the OACEMP.

7.8 Ongoing risk analysis

GEJV Environmental Representatives are responsible for ensuring Project environmental risks are identified and included in the risk register and appropriate mitigation measures implemented throughout the construction of the Project.

Review and, if necessary, update of the Project risk register will be an ongoing process which will occur, as a minimum:

- when a risk has been identified
- where there is a change in work systems, materials, equipment, practices or procedures on site
- in response to incidents
- where new information about an environmental risk becomes available or where personnel raise concerns about an environmental risk
- at regularly scheduled times (monthly), including during reviews of the Project risk register at GEJV Project meetings and the quarterly management review meetings (**Error! Reference source not found.** of the OACEMP.

The requirement for the regular review and update of the aspects and impacts register as part of continuous improvement is included in **Error! Reference source not found.** of the OACEMP.

Where new risks are identified, these will be included in the risk register, assessed and control measures put in place to eliminate or minimise the level of risk. Monitoring and review of the effectiveness of control measures will be carried out during weekly environmental inspections and may include consultation with site personnel involved in managing the identified risks.

8 REVIEW AND IMPROVEMENT

8.1 Continuous improvement

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance.
- Determine the cause or causes of non-conformances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets.

8.2 AFMP update and amendment

The processes described in section 1.6 of the OACEMP will be used to update or revise this Plan. This will occur as needed throughout the project life.

A copy of the updated plan and changes will be distributed as required to all relevant stakeholders such as DPE & EPA Council in accordance with the approved document control procedure – refer to Section 1.6 of the OACEMP. In the event that the AFMP requires amendment, the ER can approve comments that are deemed to be minor however in the event that suggested amendments are deemed to be significant then the amended plan will be resubmitted back to the DPE for approval and additional consultation where required.

In the case of ancillary facilities that come under condition A15, the AFMP would be updated to reflect any additional ancillary facilities and the assessment as per condition A15.

Any future additional ancillary facilities will be detailed in an updated AFMP for assessment and approval purposes.

Appendix A
Roads and Maritime Leased Areas

The AFMP demonstrates how the site is set up in conjunction with EIS and G1 specifications.

Table 8-21 - Location of the Ancillary locations to be considered under the approval of this AFMP.

Proposed Location	Lot & DP Reference	Status of lease	RMS Approved	Purpose
C1	Not referenced in G1 Specification	To be agreed	Not approved to date	Sediment Basin
C2	Not referenced in G1 Specification	To be agreed	Not approved to date	Ancillary Facility
C3	Lot 92 DP27550	To be agreed	Yes	Sediment Basin
C4	Lot 102 DP812653	Approved	Yes	Sediment Basin
C5	Lot 11 DP 1092165	Approved	Yes	Sediment Basin
C6	Lot 2 DP 851626	Approved	Yes	Ancillary Facility
C7	Lot 20 DP258	Not approved to date	Not approved to date	Sediment Basin
C8	DP250030	Approved	Yes	Ancillary Facility

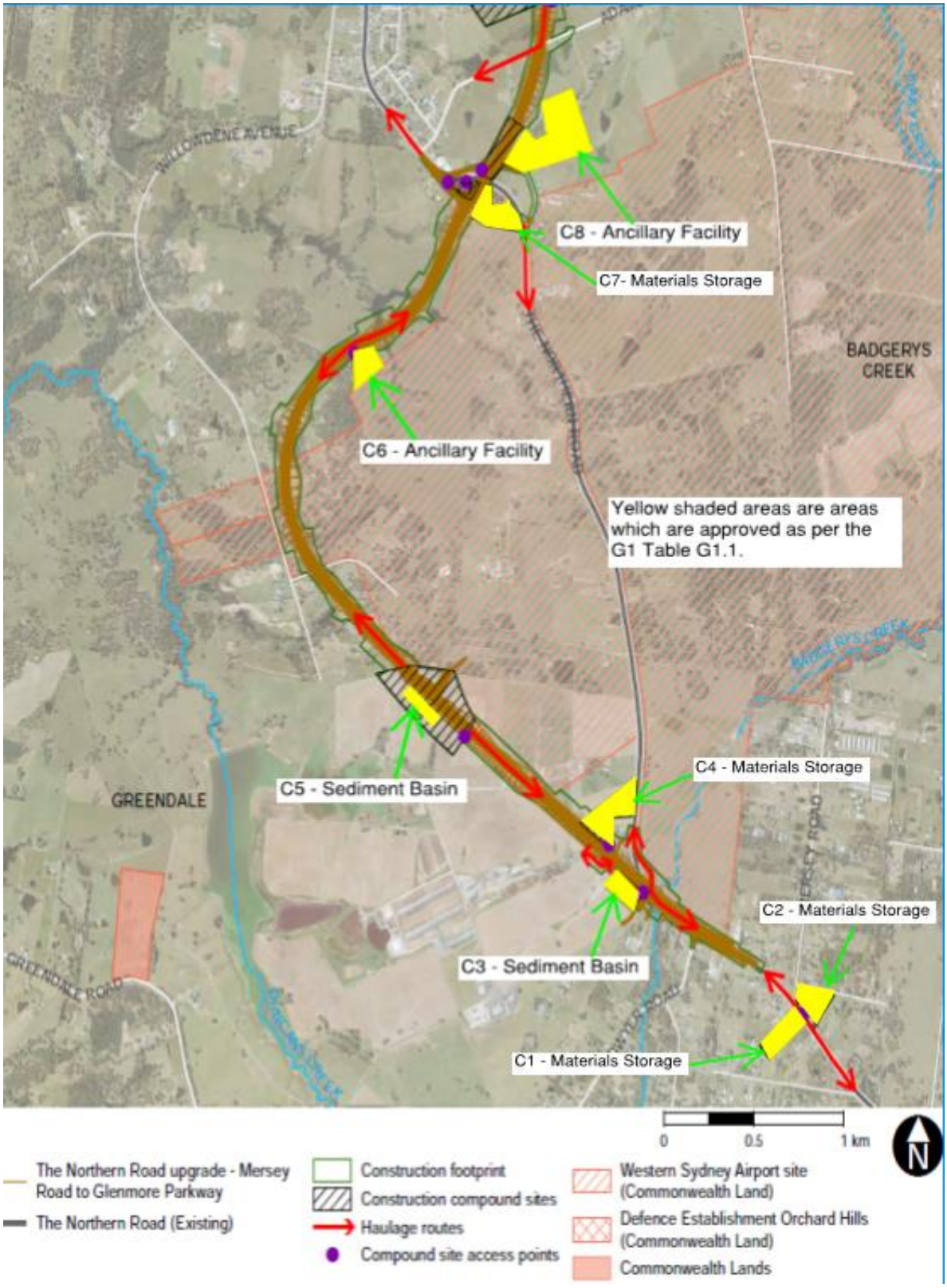

Figure 5-7 – Location of the proposed of Ancillary locations

Appendix B

Ancillary facilities assessment criteria (NSW-CoA A17) for facilities not assessed in the EIS

Ancillary facilities assessment criteria (NSW-CoA A17) for facilities not assessed in the EIS

	Criteria	Yes/No	Evidence	Comments
	Location			
	Purpose			
	Is the facility a minor facility (eg office, shed or staff amenities)?			
	Criteria			
1.	Minor ancillary facilities comprising lunch sheds, office sheds, and portable toilet facilities, that are not identified in the documents listed in Condition A1 and which do not satisfy the criteria set out in Condition A15 of this approval must satisfy the following criteria:			
2.	have no greater environmental and amenity impacts than those that can be managed through the implementation of environmental measures detailed in the OACEMP required under Condition C1 of this approval; and			
3.	have been assessed by the ER to have: i. minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the ICNG, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts; ii. minimal environmental impact with respect to waste management and flooding; and iii. No impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval.			
	Approval of minor ancillary facility			
	Are criteria above met?			
	Date of approval by ER			

Appendix C
Evidence of consultation

Form	Agency	Date Received	Review Comment	Roads and Maritime / Contractor response
Email	EPA	16/08/18	Email received on the 16/08/18 from the EPA advising that it is not their policy to review management plans. The EPA's expectations will be specified in the project's environmental protection licence when it is issued.	Noted by GEJV
Phone Call	Liverpool Council	13/08/18	Georgiou Environmental Manager received a phone call from the Liverpool Council delegate on the 13/08/18. The Liverpool council delegate had no issues with the Ancillary Facility Management Plan as all areas had been previously assessed in the EIS. The Delegate asked for further detail on the traffic staging and traffic controls to be implemented on the project.	GEJV sent an email response to the Liverpool Council delegate on the 15/08/18 with further detail on the traffic management proposed for the project including an offer to provide traffic staging plans and vehicle management plans for information when they have been completed the GEJV traffic consultant.

Appendix D

Unexpected Discovery of Contaminated Land Procedure

Purpose
The purpose of this management procedure is to effectively manage any unexpected finds of contaminated material on the Northern Road Upgrade, .between Mersey Road and Eaton Road

Scope
There is potential for previously unidentified contaminants to be uncovered during the works. This might be by observation of any unusual physical/sensory characteristics of the impacted soil, such as changes in colour, changes in texture, visual evidence, or odour. Unexpected finds may include unexpected discovery of hazardous building materials, such as asbestos containing materials, or unexpected discovery of contaminants in addition to the type already identified on-site, such as surface or buried material with visual or olfactory evidence of contamination.

Induction/Training
All GEJV personnel are to be inducted on the identification of potential land contamination including asbestos contaminated material and coal tar in existing asphalt. They will be trained in the relevant actions associated with this procedure during the project site induction and regular toolbox talks.

Procedure
Follow the procedure listed below in the case of unexpected contamination finds;

1. Works should cease in the area and the supervisor should be notified immediately
2. The area should be cordoned off to prevent access by other workers and public
3. A suitably qualified environmental consultant will be engaged to provide interim advice based on visual inspection on construction health and safety, material storage and material disposal to allow construction to proceed as soon as practical.
4. The suitably qualified environmental consultant will prepare a Remediation Action Plan in accordance with EPA guidelines on contaminated land management and this will be provided to Roads and Maritime under G36 hold point cl 4.2.3.
5. Unexpected potentially contaminated material will be excavated and separately stockpiled in a secure location on strong impermeable plastic sheeting and covered top and sides with securely fitted plastic sheeting.
6. The stockpile will be protected by adequate sediment controls to collect runoff and prevent overland stormwater flow from affecting the base of the stockpile.
7. Potentially contaminated materials from different parts of the construction area will be segregated into separate stockpiles. The separate stockpiles should be signposted and the source location of the materials on site recorded.
8. When the potentially contaminated material has been removed, the area from which this material was excavated will also be isolated. Further excavation or other construction work will not occur in that area until advice from a suitably qualified environmental consultant is provided confirming that any contaminated material has been removed and that the area is suitable for further excavation or construction activity.
9. The location from which potentially contaminated materials is excavated and the location of the stockpile of excavated material will be recorded on a site plan. Records will include

an outline of the area and depth of the potentially contaminated materials and the volume of material excavated.

10. A suitably qualified environmental consultant will assess the potentially contaminated material and prepare a report advising whether the material is contaminated at levels exceeding the NSW EPA endorsed guidelines for reuse on-site and/or whether the material needs to be disposed of off-site as waste, and the classification of that waste.
11. Where contaminated material is assessed as being unsuitable for reuse on site, the area where the material was excavated will require validation.

For asbestos

Unexpected asbestos / ACM find procedure

In the event that a person on site identifies or disturbs asbestos / ACM that is not already identified in the Asbestos Register, GEJV will follow all reporting and notification requirements in OACEMP Appendix A7 Roads and Maritime Environmental Incident Classification and Reporting Procedure, including notifying the ER. GEJV will also undertake the following actions:

- Stop work in the area potentially impacted by ACM as soon as it is safe to do so and move to the upwind side of the area, or away from the area.
- Assess the potential immediate risk to human health posed by the unexpected find and assess if evacuation is necessary.
- Delineate an exclusion zone around the affected area using fencing and/or appropriate barriers and signage. Keeping soil damp will minimise the release of fibres to air.
- Contact the Environmental Scientist / Engineer for advice and request a site visit to undertake a risk assessment of the unexpected find and determine what further assessment and/or remediation works are required.
- Implement advice and validate outcomes are assessed by the Environmental Scientist / Engineer to be satisfactory. Document outcome, presenting recommendations to the Roads and Maritime Project Manager.
- The Roads and Maritime Project Manager to confirm that works may resume in the affected area, in consultation with the ER.

Note: Where a NSW EPA Accredited Site Auditor has been engaged, Roads and Maritime in consultation with the specialist Contaminated Land Consultant, will inform the Site Auditor of the unexpected find and proposed measures to remediate/manage risks from ACM. These measures should be endorsed by the Site Auditor before implementation.

The unexpected asbestos management procedure during Construction is summarised in the flow chart (below)
Where small fragments of ACM or suspected ACM are found, and provided that:

- The total number of fragments is < 20, or
- The total surface area of the fragment/piece is < 1 m2, or
- The fragments are spread over an area of < 10 m2, and
- The fragments are non-friable and located on ground surface or within the topsoil layer then the Contractor Environmental Scientist / Engineer will collect any fragments and place it in a 200 mm polythene bag for later disposal at an appropriate waste facility. A detailed visual inspection of the area will be carried out by the Contractor Environmental Scientist /
- Engineer, which will involve wet raking of the areas to a depth of 10 cm for any further fragments. If no further fragments are identified, works can continue.

If, during the visual inspection, the Contractor Environmental Scientist / Engineer determines that the criteria described above are exceeded, or if suspected asbestos / ACM continues to be identified during excavation works and/or if it is thought that any uncovered material might be considered asbestos containing and friable, works will cease and the Environmental Scientist / Engineer will assess the situation and determine an appropriate course of action in accordance with Section 4.

I f required the GEJV will engage an Environmental Scientist / Engineer will remove samples of the material for testing at a NATA-accredited laboratory and will monitor airborne dust levels. Following testing, the Environmental Scientist / Engineer will determine and report:

- if the asbestos is non-friable or friable
- the extent of the contamination
- options for the appropriate remediation of the area (Section 4)
- the requirement for a licenced asbestos removalist (Section 4)
- The requirement for health screening of workers on site.

Asbestos Management Procedure during Construction

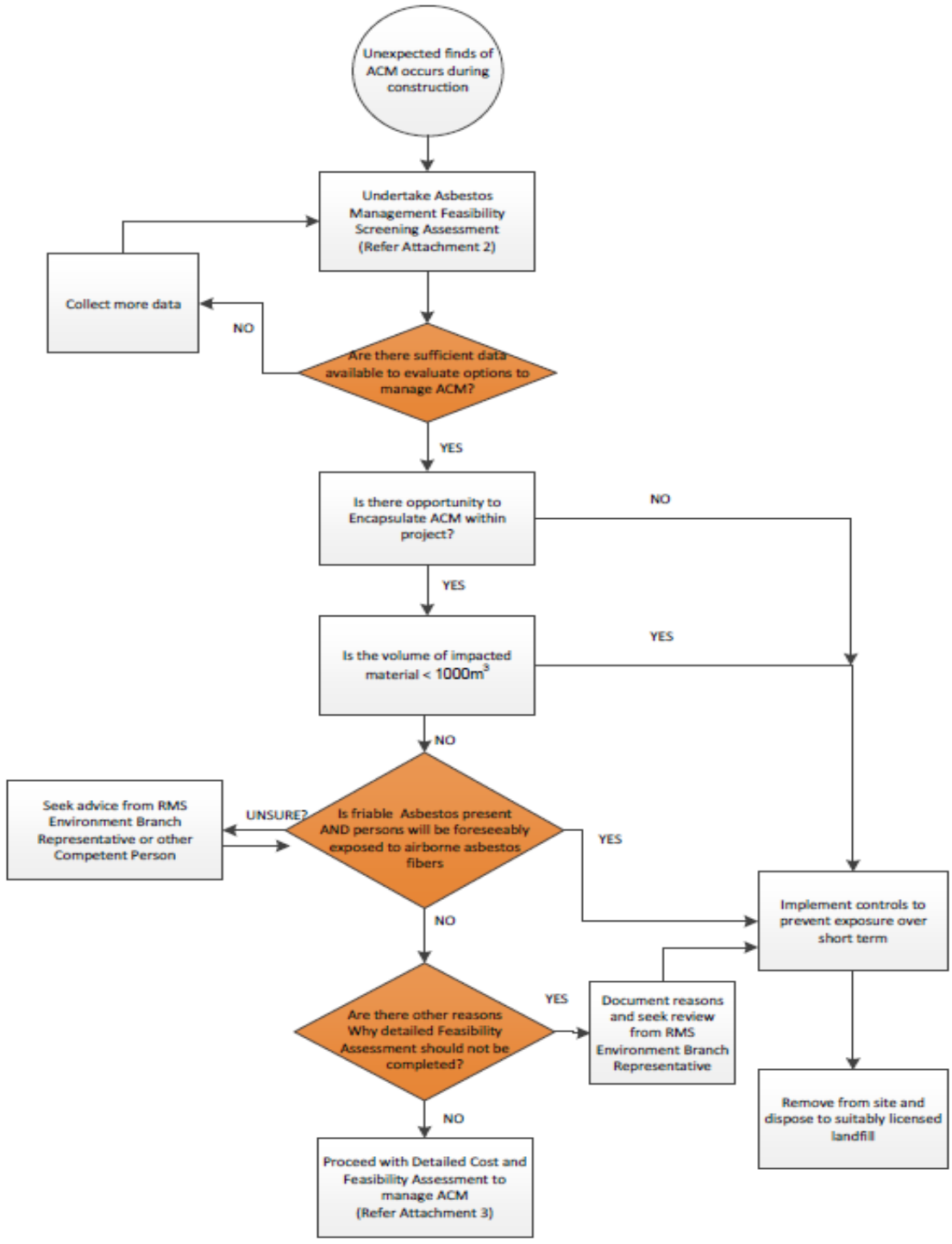

Figure 5-8

Appendix E

Roads and Maritime Unexpected Heritage Items Procedure

In the event that an item is discovered, Figure 5-9 shall be followed and the Project ESR will be contacted.

The following actions will directly comply with the Roads and Maritime Unexpected Heritage Items Procedure as per Annexure B in Appendix B5 - Construction Cultural Heritage Management Plan.

Unexpected Heritage Items Procedure

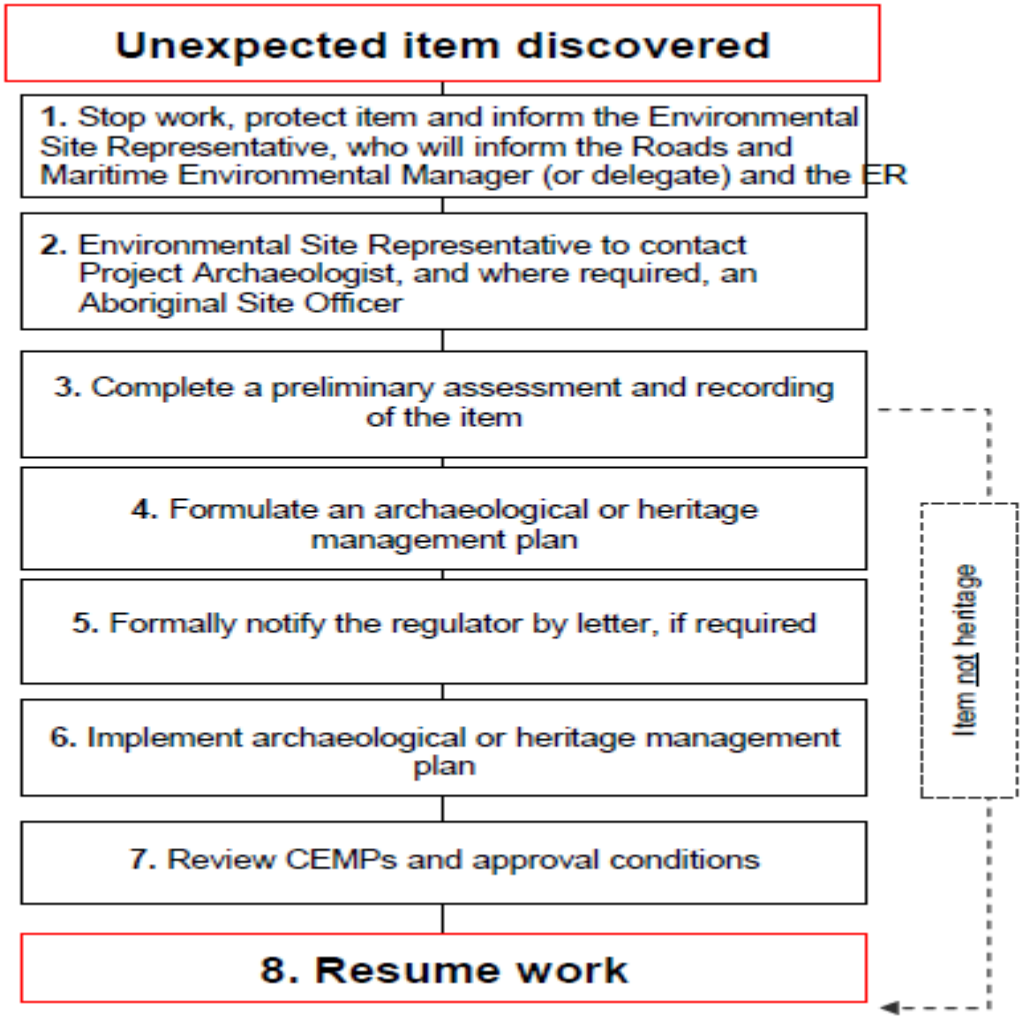

Figure 5-9