

Environmental Management Strategy

Liddell Future Land Use and
Enabling Works



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May 2025	01	T Brown	Amended following DPHI review
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Glossary and Terms

Term	Description
ACHMP	Aboriginal Cultural Heritage Management Plan
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACM	Asbestos Containing Material
AECOM	AECOM Australia Pty Ltd
AGL	AGL Energy Ltd
AGLM	AGL Macquarie
AHIMS	Aboriginal Heritage Information Management System
AS	Australian Standard
ASIR	Aboriginal Site Impact Recording
BPS	Bayswater Power Station
CCC	Community Consultative Committee
CPHR	Conservation Programs, Heritage and Regulation Group
Council	Muswellbrook Council
Consent	SSD 24937520
DA	Development Approval
DEMP	Demolition Environmental Management Plan
Department	Department of Planning, Housing and Infrastructure (DHPI)
Development	Liddell Future Land Use and Enabling Works
DMP	Dust Management Plan
DPE	Department of Planning and Environment (now DPHI)
DPHI	Department of Planning, Housing and Infrastructure
Environmental Assessments	Environmental Impact Statement, Response to Submissions and Amendment Report

Term	Description
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPI	Environmental Planning Instruments
EPL	Environment Protection Licence
ERA	Environmental Risk Assessment
ESCP	Erosion and Sediment Control Plan
GHD	GHD Consultant Australia
GVDA	Ground and Vegetation Disturbance Approval
FTE	Full Time Equivalent
HAZMAT	Hazardous Materials
HSEMF	Health, Safety and Environment Management Framework
HSEMS	Health, Safety and Environment Management System
HVGT	Hunter Valley Gas Turbine
IEA	Independent Environmental Audit
IMCO	Inter-governmental Maritime Consultative Organisation
LAD	Liddell Ash Dam
LEP	Local Environmental Plans
LGA	Local Government Area
LPS	Liddell Power Station
MyHSE	AGLM incident reporting and management system
NEPM	National Environment Protection Measure

Term	Description
NHVR	National Heavy Vehicle Law and Regulation
NPW Act	National Parks and Wildlife Act 1972
NSW	New South Wales
OSOM	Over Sized Over Mass
PFAS	Per-fluoro Alkyl Substances
PIRMP	Pollution Incident Response Management Plan
PoEO Act	Protection of the Environment Operation Act 1997
RAP	Reconciliation Action Plan
RL	Reduced Level
RtS	Response to Submissions
SEPP	State Environmental Planning Policy
SMF	Synthetic Material Fibre
SoC	Statement of Commitments
SSD	State Significant Development
SW	Surface Water
SWMS	Safe Work Method Statement
TARP	Trigger Action Response Plan
T&I	Transport and Infrastructure
TCP	Traffic Control Plan
TIA	Traffic Impact Assessment
TMP	Traffic Management Plan

1. Introduction

1.1. Background

The Liddell Power Station (LPS) was commissioned in 1971 and prior to closure operated as part of an integrated power generation complex located near Muswellbrook, NSW. Refer to **Figure 1** for site locality.

The complex also incorporates the Bayswater Power Station (BPS) which was commissioned in 1985, Hunter Valley Gas Turbines (HVGTS) and a range of supporting water supply, water management, coal ash management, coal supply, power supply and control system infrastructure. AGL Energy Ltd (AGL) acquired these assets from the NSW Government in September 2014 and in doing so formed the subsidiary AGL Macquarie Pty Limited (AGLM).

LPS, including the HVGTS, ceased power generation operation on 28th April 2023 as part of AGL's transition towards a low-carbon future and commitment to the closure of its coal fired power stations at the end of their operating life.

1.2. Purpose

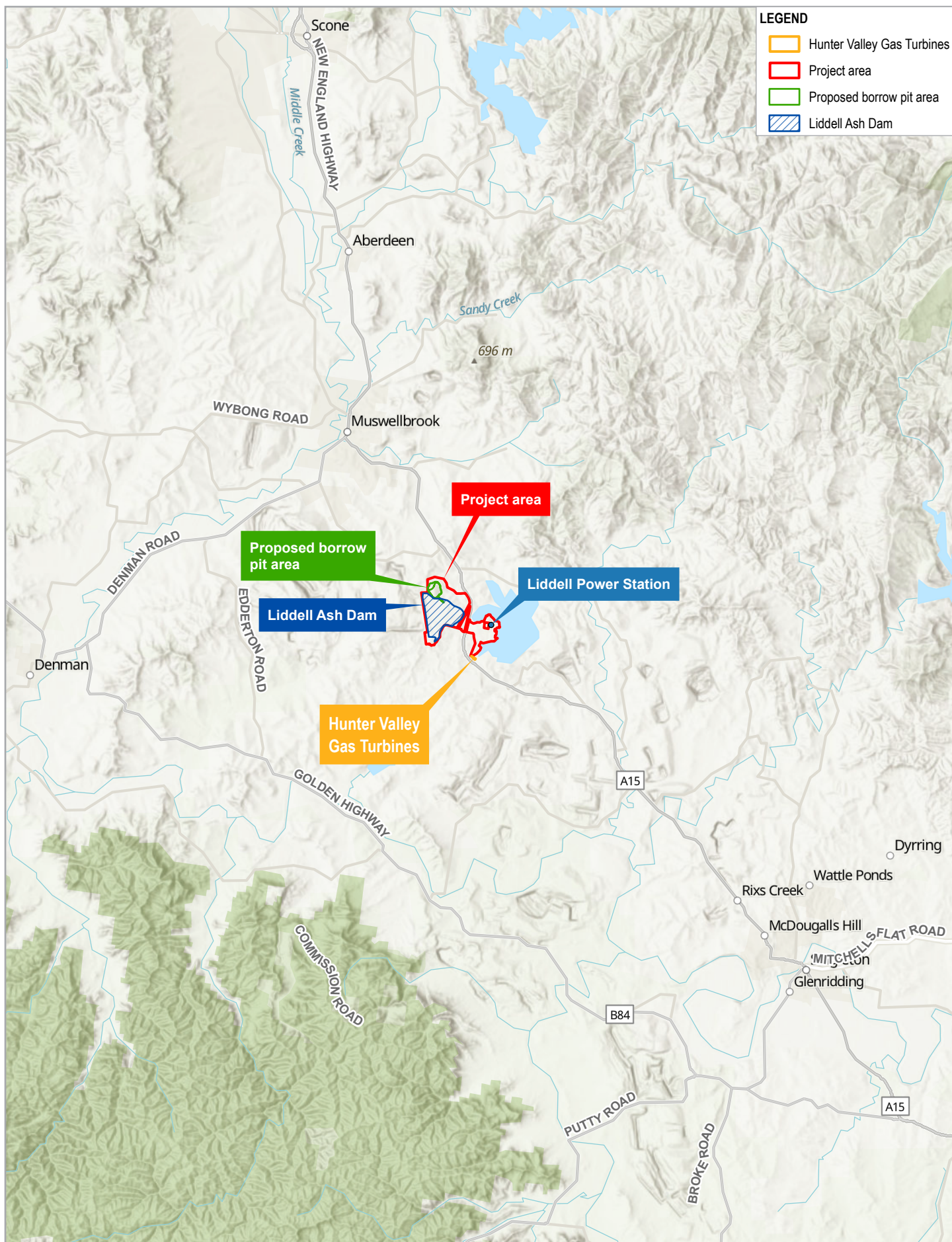
As part of the demolition of the LPS (the development), AGLM has developed this Environmental Management Strategy (EMS) and associated plans and strategies to support the works and meet the requirements of associated environmental approvals and legislation.

The development has been declared a State Significant Development (SSD) in accordance with Section 4.36(2) of the Environmental Planning and Assessment Act 1979 (EP&A Act) and clause 2.5; 2.19 and 23(5) of Schedule 1 of State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP). It is permissible with development consent.

An Environmental Impact Statement (EIS) was prepared and submitted to the Department of Planning, Housing, and Infrastructure (DPHI), which was exhibited 4 May to 31 May 2023. A Response to Submissions (RtS) Report (GHD, 2024a) was prepared 19 February 2024 to address submissions received during exhibition. An Amendment Report (GHD, 2024b) was subsequently submitted 11 June 2024 addressing minor changes to the development including a reduction in the disturbance footprint to reduce biodiversity and cultural heritage impacts. The EIS, RtS and Amendment Report will be collectively referred to in this EMS as the 'environmental assessments'.

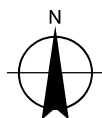
The development was approved by DPHI on 31 January 2025, with Development Consent SSD 24937520 (the Consent) issued.

This EMS has been prepared to address the requirements of Schedule 2, Part B Condition B1 of the Consent, and provides the strategic context for AGLM's approach to environmental management of the development.



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Kilometres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56



AGL Macquarie Pty Limited
Liddell Future Land Use and Enabling Works
SSD2 Environmental Management Strategy

Project No. 12562257
Revision No. 0
Date 19/02/2025

Site locality

Figure 1: Site Locality

1.3. Scope

This EMS is the overarching strategy for management of environmental aspects and impacts associated with the development.

For the management of specific demolition related environmental aspects and impacts, refer also to the Demolition Environmental Management Plan (DEMP) prepared by the Principal Contractor.

1.4. Objectives

The objectives of this EMS are to:

- Provide the overall framework for environmental management of the development at the LPS in accordance with international standard *ISO 14001:2015 – Environmental management systems – Requirements with guidance for use* (ISO14001).
- Maintain compliance with:
 - Development Consent SSD 24937520
 - Environment Protection Licence (EPL) 2122
 - Applicable LPS environmental permits and licences
 - Commitments contained in environmental assessments, AGLM policies and procedures, and other relevant legal requirements.

This EMS sets out the procedures for periodic review, auditing and revision so that it is maintained to reflect the current status of the development to the satisfaction of the DPHI.

1.5. Supplementary Documentation

The key components of the environmental management framework utilised by AGLM for the development are shown in **Figure 2**.



Figure 2 AGLM's environmental management document framework

This EMS, and associated management plans required under the Consent or environmental assessments as outlined in **Table 1**, will be implemented to manage and mitigate the environmental impacts of all stages of the development (as described in **Section 2.1**).

Table 1 EMS, associated management plans and other requirements, required under the Consent and Statement of Commitments

Related Consent Condition	Management Plan
Part B Condition B1	Environmental Management Strategy (EMS) (this document)
Part B Condition B16	Water Management Plan
Part B Condition B32	Biodiversity Management Plan
Part B Condition B38	Rehabilitation Management Plan
Part C Condition C16	DEMP
Part C Condition C19	Asbestos Management Sub-Plan
Part C Condition C20	Blast Management Sub-Plan
Part C Condition C21	Soil and Water Management Sub-Plan
Part C Condition C22	Dust Management Sub-Plan
Part C Condition C24	Containment Cell Final Design
Part C Condition C25	Construction Quality Assurance Plan
SoC NV1 and NV2	Noise and Vibration Management Plan
SoC TT1	Traffic Management Plan

2. Development description

2.1. Overview

Works associated with the development include the following stages. The areas associated with each stage are depicted in **Figure 2**.

2.1.1. Stage 1

- Demolition of LPS and redundant associated infrastructure
- Demolition of the HVGTs and any associated transmission infrastructure
- Construction and use of asbestos disposal facility containment cells, including access road.
- Construction and use of a borrow pit for the extraction of up to 1.5 million m³ including establishment of the access road and associated water management controls.
- Rock crushing associated with Liddell Ash Dam capping works
- Rerouting of the existing dual water supply pipeline from the Tinkers Creek area along the existing ash pipeline corridor to the Liddell Ash Dam (LAD) to supply water for dust suppression and rehabilitation works.

2.1.2. Stage 2

- LAD ancillary works to manage surface water including works on the Skimmer Dam.

2.1.3. Stage 3

- Remediation (as required), recontouring and final landform works.

LPS: Following completion of the demolition works the site will be prepared for ongoing industrial use.

Borrow pit area and asbestos disposal facility: The borrow pit area and asbestos disposal facility will be rehabilitated to a safe, stable and non-polluting landform.

- Additional works associated with extraction from the Borrow Pit (up to a total of 13.5 million m³).
- Works associated with the LAD to maintain the structural integrity of the ash retaining structures

The preparation of management plans including this EMS will be staged in line with the staging of the development, as per the Consent Part A, Conditions A19, A20 and A21.

The key development elements for Stage 1 are provided in **Table 2**.

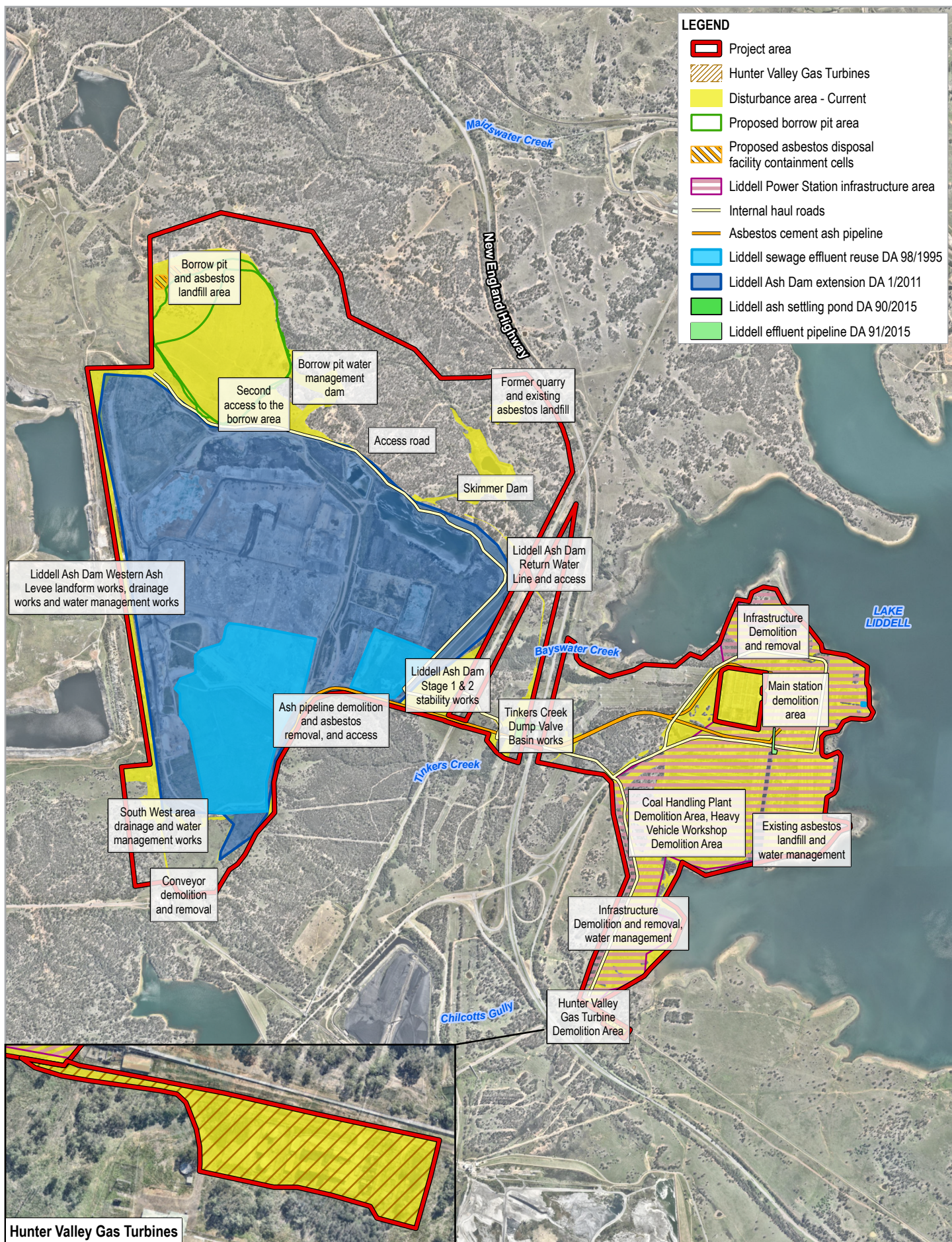
Table 2 Key Development Elements for Stage 1

Development element	Summary of the development	
Footprint of development across all stages.	Lot 2 DP774681 Lot 11 DP247944 Lot 19 DP247944 Lot 18 DP247944 Lot 19 DP752468 Lot 18 DP752468 Lot 2 DP966589 Lot 2 DP1022827	Lot 163 DP752486 Lot 601 DP1019325 Lot 2 DP1095515 Lot 1 DP1095515 Lot 4 DP1193430 Lot 29 DP247944 Lot 116 DP752486 Lot 162 DP752486
Surrounding land use	• North: Agricultural land, remnant vegetation, heavy rail, Lake Liddell • South: Bayswater Power Station • East: Lake Liddell and open cut coal mining (south-east) • West: Open cut and underground coal mining • The New England Highway runs through the development area and will provide access to the various development components by means of a dedicated internal road network designed to service AGLM facilities. • The closest residential receiver is an isolated residence approximately 1.8 km to the north of the borrow pit area. • All development components are located within the catchment of Lake Liddell, located within the Hunter River catchment.	
Key elements for stage 1	• Construction and use of a 'borrow pit' area as a source of material for capping and civil works for recontouring of areas of the site. • Construction and use of a landfill for the disposal of asbestos contaminated soil, ACM and SMF and small amounts of other suitable material associated with the asbestos material. • Demolition of the LPS including the 50MW HVGTs and any associated transmission lines and infrastructure. • Surrender, consolidation and modernisation of existing relevant consents. • Rock crushing associated with Liddell Ash Dam capping works • Rerouting of the existing dual water supply pipeline from the Tinkers Creek area along the existing ash pipeline corridor to the LAD to supply water for dust suppression and rehabilitation works.	
Access	Access and parking will remain consistent with existing internal arrangements. External access to the site will be via the New England Highway via the existing designated intersection.	
Ancillary construction (demolition) facilities	The external plant workshop and other existing facilities will be utilised where possible to minimise the need to import ancillary facilities. Ancillary facilities such as demountable offices and a portable sewerage treatment system will be imported to site and be located in disturbed areas within the development footprint. In addition, temporary demolition material storage areas will be established within disturbed	

Development element	Summary of the development
	areas within the development footprint to enable demolition materials and wastes to be sorted and temporarily stored pending recycling, disposal to appropriately licenced waste facilities or in the new purpose built onsite asbestos disposal facility.
Liddell Power Station infrastructure	The LPS is located in the eastern portion of the development area between the New England Highway and Lake Liddell. Existing infrastructure at the LPS which is to be demolished includes the following: – Turbine house – Boiler house and Auxiliary bay – Fabric filters – Chimney stacks – Asbestos disposal facility – Minor support infrastructure – Coal handling infrastructure – Ash and dust lines – CW (circulating water) pumping station – HVGTs and any associated transmission lines and infrastructure The existing Transgrid owned switchyard at Liddell will be retained. Some infrastructure may be retained and modified where a suitable use is identified e.g. for water management.
Borrow pit area	The borrow pit area is located immediately north of the LAD. The area will allow for the total extraction of up to 13.5 million m³ of material, with approximately 1.5 million m³ being extracted in stage 1. The borrow pit has been designed to be extracted in a top-down approach, reducing the likelihood of slope stability issues. The material extracted from the borrow pit will be used for capping and civil works associated with the LAD, if required and civil and recontouring projects associated with other AGLM infrastructure such as BPS (although works at BPS are not part of this development and are either approved separately or subject to future approvals). Approval is granted to increase allowable crushing from 30,000 tonnes per annum approved under Development Approval 1/2011 as modified to 200,000. This will also allow for crushing of oversize material at the LAD. Commencement of rock crushing associated with the LAD capping works will occur in Stage 1.
Asbestos disposal facility	The purpose built onsite asbestos disposal facility will be constructed to serve as a safe disposal of asbestos contaminated soil, ACM, and SMF and small amounts of other material deemed suitable associated with the asbestos material where it is not practical to separate. It is estimated that there will be up to approximately 30,000 m³ of asbestos waste including SMF over the life of the development. The asbestos disposal facility will also be utilised for the future disposal of asbestos from BPS at the end of its operational life (although the demolition of BPS will be the subject of a separate development application in the

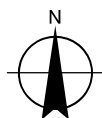
Development element	Summary of the development
	future and does not form part of this development). The containment cells will be created for asbestos contaminated soils, ACM and SMF. It is noted that it may not be possible to separate all the asbestos and SMF completely from other materials and as a result, small amounts of other suitable materials may be disposed of in the asbestos disposal facility. Pending the construction of the new asbestos disposal facility, a secure temporary asbestos storage area will be established to enable hazmat removal and construction of the onsite disposal facility to progress concurrently. The location of the containment cells is in the northwestern aspect of the Borrow Pit area.
Demolition activities	The LPS and related infrastructure will be demolished as part of the development. Demolition in Stage 1 will generally include: – Site establishment and preliminary works. – Asbestos removal. – Mechanical and explosive demolition of above ground infrastructure. – Removal of infrastructure to the bottom of slab and foundations to the equivalent level. – Cleaning of pits as required, and punching of pits to allow drainage then filled with crushed concrete. – The TransGrid switchyard to the west of the LPS will not be demolished and will therefore remain in operation for continuing and future operations. Some infrastructure may be retained and modified where a suitable use is identified e.g. for water management.
Waste	• Demolition of the LPS and gas turbines will generate a variety of waste streams, including: • Concrete • Metals • Liquid waste • Spoil • AGLM will reuse and recycle as much material as possible for the development. • Hazardous waste will be generated during the demolition of the LPS.
Workforce	Approximately 50 - 75 full time equivalent (FTE) personnel.
Work hours	Where practical, and subject to the final conditions of consent, development activities will be carried out during the following construction hours: • Monday to Friday: 7.00 am to 6.00 pm. • Saturday: 8.00 am to 6.00 pm. • At no time on Sundays or public holidays. Blasting will be carried out: • Monday to Saturday: 7.00 am to 5.00 pm. • At no time on public holidays.

Development element	Summary of the development
	Some activities may be required to be done outside of standard hours, including: • Emergency work. • Delivery of oversized plant or structures. • Works for which it can be demonstrated that there is a need to operate outside the recommended standard hours.
Expected duration for Stage 1 works	Estimated at 36 months, commencing approximately May 2025.
Expected duration of whole project	Approximately 10 years, with ongoing borrow pit and asbestos disposal facility associated works and maintenance works for 10+ years after. In addition, some ongoing monitoring and maintenance works are likely to continue following the completion of active works.



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Kilometres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
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Figure 3: Key Development Areas

Key development elements

2.2. Site Context

The AGLM landholding is located approximately 15 kilometres (km) southeast of Muswellbrook, 25 km northwest of Singleton, and approximately 165 km northwest of Sydney NSW. The total area of the AGLM landholding is approximately 10,000 ha, including the BPS operation area and LPS area including the LAD, the Ravensworth rehabilitation area, Lake Liddell and surrounding buffer lands.

Surrounding the AGLM landholding is predominantly land uses heavily influenced by industrial activity. The local area is dominated by large-scale infrastructure associated with Bayswater and Liddell power stations and open cut mining activities. Agricultural clearing for the purposes of grazing is also present within and surrounding the AGLM landholding. The majority of the AGLM landholding has been previously disturbed during the construction and operation of Liddell and BPS and historic agricultural activity.

The development area covers approximately 960 ha and encompasses three main components as discussed in the following sub-sections.

2.2.1. Liddell Power Station and associated infrastructure

The LPS and associated infrastructure is located within the eastern portion of the development area between the New England Highway to the west and Lake Liddell to the east. Land to the west and south of the LPS comprises, electricity infrastructure associated with former power generation/ distribution including the gas turbines, water supply/management and coal storage and associated transportation infrastructure. Ash lines run west out of the LPS towards the LAD where ash was deposited during operations. There are also several internal roads that are used for travelling between LPS, LAD and BPS.

2.2.2. Liddell Ash Dam

A range of AGLM and third-party infrastructure exists in the area west of the New England Highway. The LAD is situated west of the New England Highway and LPS, directly north of BPS and east of Maxwell Infrastructure (formerly Drayton Coal Mine).

The LAD is currently being capped and rehabilitated. The LAD has been modified several times since its original construction, most notable in the Stage 3 augmentation involving raising the eastern and western walls to an elevation of Reduced Level (RL) 201 m. The eastern wall was constructed progressively using mine overburden material placed on top of the deposited ash. Prior to closure progressive rehabilitation of the LAD has been undertaken in the southern portion of the LAD, totalling approximately 47.9 hectares, and the north-west cell, totalling 23 hectares.

Other infrastructure to the west of the New England Highway includes ash line infrastructure that transported ash from the LPS to the LAD during operations, drainage and water management works around the LAD, dump valve basin, skimmer dam, LAD return water line and an existing asbestos disposal facility.

2.2.3. Borrow pit area and asbestos disposal facility

The borrow pit area and asbestos disposal facility is located immediately north of the LAD and constitutes an existing mine overburden material emplacement on AGLM land approximately 30 years

ago by the former Drayton coal mine operations. The overburden material emplacement was rehabilitated with grasses and a stand of larger, planted vegetation. The topography is that of a mound with multiple terraced levels, ranging from RL 190 to RL 255. Contour banks are laid in around 100m intervals with approximate slope of 28 degrees.

2.2.4. Sensitive receivers

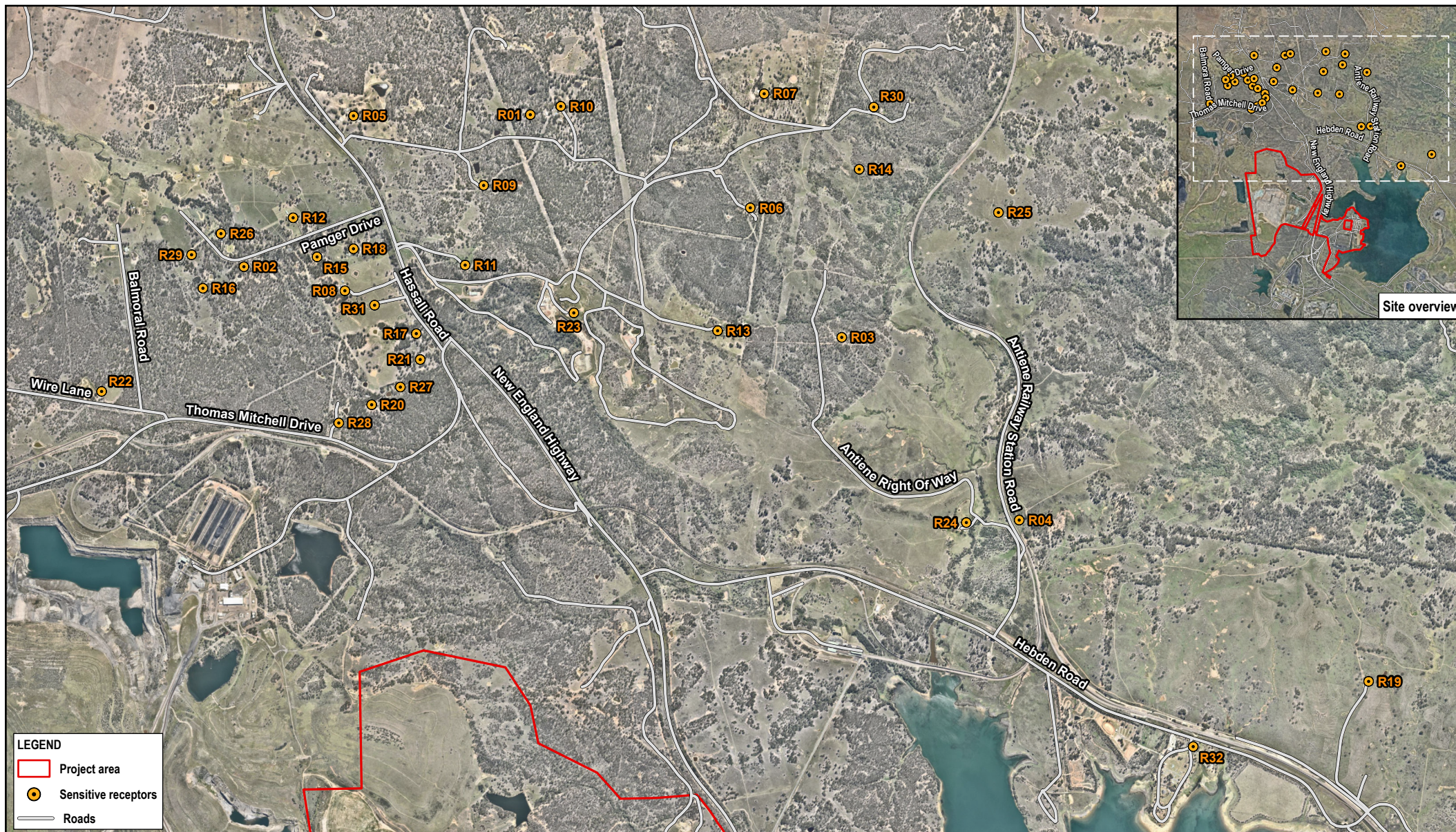
During the EIS phase, sensitive receivers assessed include both existing and proposed. Sensitive receivers can include:

- Residences
- Educational institutions
- Hospitals and medical facilities
- Places of worship
- Commercial and industrial premises
- Passive recreational areas
- Active recreational facilities.

Within the vicinity of the disturbance area, 32 residential receptors were identified which represent all sensitive receptors within the wider community.

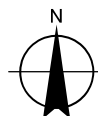
These sensitive receptors are shown in **Figure 4**.

Environmental monitoring locations are shown in **Figure 5**. The noise and air quality locations are indicative, and the location may be amended pending the location of works being completed and meteorological forecasts.



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Kilometres

Map Projection: Transverse Mercator
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Figure 4: Sensitive Receiver Location

Sensitive receivers

Data source: LPI: DTDB, 2019. AGL: Project data, 2020. LPI: DTDB, 2019. Nearmap WMS Server: Imagery (Date extracted: 19/02/2025).
Created by: Imorton



Figure 5 Environmental monitoring locations

3. Strategic Framework

This section provides an overview of the strategic framework of the development in relation to:

- Corporate requirements
- State, regional and local strategic context
- Current statutory requirements at both a Commonwealth and State level.

3.1. Corporate Requirements

All development related management plans, strategies and programs must consider and incorporate the objectives and targets set in the AGL Site Transition Centre of Excellence Health, Safety and Environment Management Framework (HSEMF).

3.1.1. Health, Safety and Environment Policy

AGL's corporate Health, Safety and Environment Policy applies to all AGLM employees, contractors, products, services, and joint ventures under AGLM's operational control. The HSEMF aligns with the Policy, and the AGL Enterprise Health Safety Environment Management System (HSEMS).

The purpose of the AGL Enterprise HSEMS is to ensure that works are planned and performed so that the adverse effects on the environment are either avoided or eliminated through engineering controls or are minimized. These works will be carried out in accordance with regulatory requirements throughout the development life cycle.

3.1.2. Contractor Environmental Management Requirements

AGLM will engage a Contractor(s) to undertake development works and will require the Contractor to plan and deliver all works in accordance with this EMS. The Contractor will be required to have a corporate Environmental Management System in place or may operate under the AGL Enterprise HSEMS. If the Contractor chooses to adopt their own Environmental Management System, it must meet or exceed the minimum requirements set out in the HSEMF.

3.2. State, regional and local strategic context

The development is located within the Muswellbrook Government Area (LGA) and is zoned SP2 Infrastructure: Power Station. Under chapter 2, clause 36 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed rural, industrial, or special use zone. Land which is zoned SP2 and RU1 are prescribed zones for the purposes of chapter 2, clause 36 of T&I SEPP. Accordingly, the development is permissible with development consent.

3.3. Statutory requirements and approvals

AGLM is responsible for obtaining the approvals in **Table 3**, and the Contractor is responsible for applying for and obtaining all other licences, permits and approvals relevant to each stage of the development prior to beginning works. A copy of all licences, approvals, and permits are to be made available on-site at all times.

Table 3 Approvals and licenses

Legislation	Applicability	Approval or Licence
<i>Environmental Planning and Assessment Act 1979</i> (EP&A Act)	Development consent granted pursuant to Division 4.7 the EP&A Act	SSD24937520
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Approval of the proposed action under section 133 of the EPBC Act	EPBC 2022/09330
<i>State Environmental Planning Policy (Transport & Infrastructure) 2021</i> (T&I SEPP)	Clause 2.121 of the T&I SEPP provides that developments that are listed in Schedule 3 to the T&I SEPP and are of the 'relevant size or capacity', are defined as 'traffic-generating developments' and are required to be referred to Transport for NSW (TfNSW). Waste or resource management facilities of any size or capacity are listed in Schedule 3, therefore the components of the project that are related to the landfill have been defined as a traffic-generating development under the T&I SEPP and referral to TfNSW was required.	SSD24937520
<i>Protection of the Environment Operations Act 1997</i> (POEO Act)	The POEO Act provides for an integrated system of licensing and contains a core list of activities in Schedule 1 which require an EPL. LPS is operated under EPL 2122. A variation of this licence is required to incorporate any new or discontinued scheduled activities at the site.	EPL2122

3.3.1. Environmental Planning and Assessment Regulation 2000

The EP&A Act and Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) establish the planning and approvals process in NSW. They provide for the making of Environmental Planning Instruments (EPIs) including Local Environmental Plans (LEPs) and SEPPs, which set out requirements for particular localities and/or particular types of development. The applicable EPIs and the EP&A Regulations determine the relevant planning approval pathway and the associated environmental assessment requirements for proposed development activities.

3.3.2. Environmental Planning and Assessment Act 1979

The development has been declared a SSD in accordance with Section 4.36(2) of the EP&A Act and clause 2.5; 2.19 and 23(5) of Schedule 1 of SEPP (Planning Systems) 2021 (Planning Systems SEPP). It is permissible with development consent.

The applicable Consent condition related to the EMS, as well as applicable conditions of the Consent which are not addressed in other management plans, and the Statement of Commitments (SoC) from the environmental assessments, are located in Table 4 and Table 5 respectively.

Table 4 EMS related Consent Conditions

Condition Reference	Requirement	EMS Reference
Part B Condition B1	Environmental management strategy	This document
	B1. An environmental management strategy must be prepared for the development. The strategy must:	Appendix 1 – DPHI approval for staging of plans
	(a) be submitted for approval to the Planning Secretary prior to the commencement of construction;	Appendix 2
	(b) describe the environmental management context and outline the scope of the strategy, including:	Section 3
	(i) the relationship of the strategy to other environmental management documents;	Table 1
	(ii) relevant statutory criteria, performance measures or operational requirements including conditions of consent and other legislative or regulatory licences, guidelines, policies or standards;	Table 5
	(iii) sensitive receivers;	Section 4
	(iv) consideration of the consultation outcomes from the documents listed in condition A2(c) where relevant or other environmental management documents required by this consent; and	Table 10
	(v) detailed plans of the development location and development, sensitive receivers and environmental monitoring locations;	Individual management plans
	(c) list the role and responsibility of all key personnel and contractors involved in the environmental management of the development;	Section 4.1
	(d) include an environmental risk assessment of the development activities and specific risk management controls and mitigations to:	Section 4.2

Condition Reference	Requirement	EMS Reference
	(i) comply with statutory requirements, limits or performance measures and criteria; and (ii) manage the predicted impacts identified in the documents listed in condition A2 (c); and (iii) manage any other environmental risk or impact <i>Note: Environmental risk assessment cannot be used to identify and assess physical changes to the development or an increase in impacts that are not described and assessed in the approved EIS. These may require a new planning approval and may need to be referred to the Department.</i>	
	(e) include processes to review the environmental risk assessment annually and determine whether the measures implemented to manage the risks are effective.	Section 4.4
	(f) include an adaptive management process to be implemented if the review of the risk assessment indicates that any measure that has been implemented is not effective in managing the identified risk(s) and a process to update the measure.	Section 7.5
	h) include processes to report and review environmental performance that: (i) provides for an annual review of the environmental risk assessment with consideration of the evaluation findings; (ii) respond to any non-compliance an/or incident; (iii) addresses the findings of any audit undertaken for the development; (iv) provide for adaptive management mechanisms that enable continuous improvement; and (v) keep the local community and relevant agencies informed about the operation and environmental performance of the development.	Section 4.4 Section 7.2 Section 7.3 Section 7.5 Section 4.8
	i) include procedures to: (i) receive record, handle and respond to complaints; (ii) resolve any disputes that may arise during the course of the development; and (iii) respond to emergencies.	Section 7.2

Condition Reference	Requirement	EMS Reference
Part B Condition B2	B2. Construction must not commence until the environmental management strategy is approved by the Planning Secretary.	Section 5.2 Appendix 1 – DPHI approval for staging of plans Appendix 2
Part B Condition B3	B3. The environmental management strategy, as approved by the Planning Secretary, must be implemented for the development.	Section 5.3

Table 5 Relevant Consent Conditions not addressed in other management plans

Condition Reference	Requirement	EMS Reference
Part A Condition A5	Limits of consent A5. Development activities may be carried out within the approved development area, until 31 December 2044.	Table 2 Section 5.1
Part A Condition A6	Asbestos disposal facility A6. A maximum of 30,000 cubic metres of asbestos waste, asbestos containing material and synthetic mineral fibre may be disposed of at the asbestos disposal facility, unless otherwise agreed by the Planning Secretary.	Table 2 Section 5.4
Part A Condition A7	Borrow pit A7. A maximum of 13.5 million cubic metres of material may be extracted from the Borrow Pit Area identified on Figure 1 in Appendix 1.	Table 2 Section 5.5
Part A Condition A8	Rock crushing A8. A maximum of 200,000 tonnes of material from the Borrow Pit Area and Liddell Ash Dam may be crushed per annum, for a maximum total of 10 years from the commencement of extraction, unless otherwise agreed by the Planning Secretary.	Table 2 Section 5.6
Part A Condition A9	Hours of operation A9. The development may only be undertaken during the hours set out in Table 1.	Section 5.7

Condition Reference	Requirement	EMS Reference
Part A Condition A12	Surrender of existing consents and approvals A12. Within 12 months of the date of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the following Council development consents must be surrendered in accordance with the EP&A Regulation: (a) DA1/2011; (b) DA98/1995; (c) DA90/2015; (d) DA91/2015; and (e) DA51/86. <i>NSW Government 12 Liddell Future Land Use and Enabling Works Department of Planning, Housing and Infrastructure (SSD-24937520)</i> <i>Note: Condition A12 does not extend to the surrender of construction and occupation certificates for existing and proposed building works under the former Part 4A of the EP&A Act or Part 6 of the EP&A Act as applies from 1 September 2018. The surrender should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.</i>	Noted
Part A Condition A13	Surrender of existing consents and approvals A13. Upon the commencement of development under this consent, and before the surrender of existing development consents or project approvals required under condition A12, the conditions of this consent prevail to the extent of any inconsistency with the conditions of those consents or approvals.	Noted
Part A Condition A16	Evidence of consultation A16. Prior to submitting any environmental management document required by this consent to the Planning Secretary, any consultation with an identified party must be completed. Documentary evidence and a tabulated summary of the consultation must be submitted with the subject document via the Major Projects Website, including: (a) dates of the consultation with the identified party, copies of the identified party's response, and a summary of the issues raised;	Section 4.5 Refer to individual management plans.
	(b) the outcome of that consultation, including how the issues have been addressed in the subject document; and	Section 4.5
	(c) details of any disagreement remaining between the party consulted and the Applicant, and how the Applicant has addressed the matters not resolved.	Section 4.5

Condition Reference	Requirement	EMS Reference
Part A Condition A19	Staging, combining and updating environmental management documents A19. With the approval of the Planning Secretary, any environmental management document required by this consent may be staged, combined or updated.	Noted – refer to individual management plans and Appendix 1
Part B Condition B4	Aboriginal heritage Protection of Aboriginal Objects B4. The Applicant must not directly or indirectly harm the Aboriginal objects AHIMS 37-2-6560 and 37-2-6559, or any Aboriginal objects located outside the approved development area.	Table 6 Section 4.3 Section 5.8.8
Part B Condition B5	Protection of Aboriginal Objects B5. Prior to carrying out any development that could directly or indirectly harm the Aboriginal objects AHIMS 37-2-6561 and 37-2-6284, the Applicant must salvage the Aboriginal objects via surface collection and relocate the items that would be impacted to a suitable alternative location, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010), or its latest version.	Table 6 Section 4.3 Section 5.8.8
Part B Condition B6	Air quality and Greenhouse Gas B6. All reasonable and feasible avoidance and mitigation measures must be implemented to prevent the generation of dust from the development.	Table 6 Section 4.3 Section 5.8.10 Section 5.8.5
Part B Condition B7	Air quality and Greenhouse Gas B7. All reasonable and feasible avoidance and mitigation measures must be implemented to minimise greenhouse gas emissions from the development.	Table 6 Section 4.3 Section 5.8.10
Part B Condition B8	Noise B8. The operational noise generated by the development must not exceed 40 dB LAeq(15min) during daytime hours at residential receivers R21 and R28 shown on Figure 3 in Appendix 3.	Table 6 Section 4.3 Section 5.8.11 Appendix 4

Condition Reference	Requirement	EMS Reference
Part B Condition B9	Noise B9. The noise limit set out in condition B8 apply under the meteorological conditions defined in Table 2.	Table 6 Section 4.3 Section 5.8.11 Appendix 4
Part B Condition B10	Noise B10. For all other meteorological conditions, operational noise from the development during the day period must not exceed the criteria in Condition B8 plus 5 dB. The meteorological conditions are to be determined from meteorological data obtained from the meteorological weather station identified as Bureau of Meteorology AWS at Scone Airport (Station ID: 061363) or another suitable meteorological station consistent with condition B22.	Table 6 Section 4.3 Section 5.8.11 Section 5.8.14 Appendix 4
Part B Condition B11	Noise B11. The development may only occur outside of the hours listed in Table 1 if: (a) noise levels are no more than 5 dB LAeq(15min) above the rating background level at any residence and no more than the noise management levels in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) for sensitive receivers other than residences; or	Table 6 Section 4.3 Section 5.8.11 Appendix 4
	(b) works are implemented in accordance with an out-of-hours work protocol detailed in condition B13 and as approved by the Planning Secretary.	Table 6 Section 4.3 Section 5.8.11 Appendix 4
Part B Condition B12	Noise B12. An out-of-hours work protocol must be submitted to the satisfaction of the Planning Secretary prior to the commencement of any out-of-hours construction work (other than the exceptions listed in conditions B12(a) and B12(b). The protocol must: (a) include noise modelling of proposed activities including consideration of noise enhancing meteorological conditions, annoying noise characteristics and implementation of reasonable and feasible noise mitigation measures	Table 6 Section 4.3 Section 5.8.11 Appendix 4

Condition Reference	Requirement	EMS Reference
	(b) identify a process for the consideration and management of construction which is outside the hours defined in Table 1;	Table 6 Section 4.3 Section 5.8.11 Appendix 4
	(c) be consistent with the requirements of the <i>Interim Construction Noise Guideline</i> (DECC, 2009) (or its latest or final version);	Table 6 Section 4.3 Section 5.8.11 Appendix 4
	(d) justify why the construction needs to be undertaken as out-of-hours construction, including consideration of consultation undertaken as part of the documents listed in condition A2(c);	Table 6 Section 4.3 Section 5.8.11 Appendix 4
	(e) identify low, medium and high-risk out-of-hours work, proposed mitigation and management measures; and	Table 6 Section 4.3 Section 5.8.11 Appendix 4
	(f) include written notification arrangements for affected residences for approved out-of-hours work.	Table 6 Section 4.3 Section 5.8.11 Appendix 4
Part B Condition B18	Dangerous Goods B18. The quantities of dangerous goods stored and handled by the development must be below the threshold quantities listed in the Department's <i>Hazardous and Offensive Development Application Guidelines – Applying SEPP 33</i> at all times.	Table 6 Section 4.3 Section 5.8.12
Part B Condition B19	Dangerous Goods B19. Dangerous goods must be stored and handled strictly in accordance with: (a) All relevant Australian Standards;	Table 6 Section 4.3 Section 5.8.12

Condition Reference	Requirement	EMS Reference
Part B Condition B19	(b) For liquids, the NSW EPA Storing and Handling of Liquids; Environmental Protection Participants Manual. In the event of inconsistency between the requirements of condition B19(a) and B19(b), the most stringent requirement must prevail to the extent of the inconsistency.	Table 6 Section 4.3 Section 5.8.12
Part B Condition B20	Transport B20. All heavy vehicle travel and transport used by the development must be undertaken in accordance with a Driver's Code of Conduct, prepared in consideration of registered industry codes of practice published by the National Heavy Vehicle Regulator.	Table 6 Section 4.3 Section 5.8.13 Appendix 5
Part B Condition B21	Transport B21. All mine overburden material excavated from the Borrow Pit must be transported using private haul roads.	Table 6 Section 4.3 Section 5.8.13 Appendix 5
Part B Condition B22	Meteorological monitoring B22. Prior to the commencement of development activities and for the life of the development, a suitable meteorological station must operate in the vicinity of the development that: (a) complies with the requirements in the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales (DEC, 2007);	Table 6 Section 4.3 Section 5.8.14 Appendix 4
	(b) is capable of measuring meteorological conditions in accordance with the NSW Industrial Noise Policy (EPA, 2000) or NSW Noise Policy for Industry (EPA, 2017); and	Table 6 Section 4.3 Section 5.8.14 Appendix 4
	(c) unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.	Table 6 Section 4.3 Section 5.8.14 Appendix 4

Condition Reference	Requirement	EMS Reference
Part B Condition B23	Waste B23. All waste generated by the development must be classified in accordance with the Waste Classification Guidelines (EPA, 2014) and disposed of at appropriately licensed waster facilities unless subject to condition B28;	Table 6 Section 4.3 Section 5.8.15
Part B Condition B24	Waste B24. No waste from outside of the approved development area must be received, stored, treated, processed, re-processed or disposed of within the approved development area except as expressly permitted by an applicable EPL, specific resource recovery order or exemption under the Protection of the Environment Operations (Waste) Regulation 2014.	Table 6 Section 4.3 Section 5.8.15
Part B Condition 25	Waste B25. Waste generated by the development must be secured and maintained within designated waste processing or storage areas at all times prior to disposal, re-use or recycling.	Table 6 Section 4.3 Section 5.8.15
Part B Condition B26	Waste B26. Any concrete confirmed to be impacted with PCB above acceptable levels determined by the Site auditor must be disposed of at a licensed waste facility.	Table 6 Section 4.3 Section 5.8.15
Part B Condition B27	Waste B27. Asbestos waste, asbestos containing materials and synthetic mineral fibre must be disposed of at the asbestos disposal facility constructed within the Borrow Pit Area identified on Figure 1 in Appendix 1	Table 6 Section 4.3 Section 5.8.15
Part C Condition C1	Site audit process C1. A multi-stage site audit must be undertaken for the development. The audit must: (a) be undertaken by a Site auditor; (b) be undertaken in accordance with the Contaminated Land Guidelines; (c) include the provision of interim audit advice by the Site auditor in relation to (as applicable): (i) sampling analysis and quality plans; (ii) detailed site investigation reports; (iii) human health and ecological risk assessment reports; (iv) remediation action plan; (v) site validation reports; and (vi) long-term environmental management plans;	Section 5.8.2 Section 5.8.7

Condition Reference	Requirement	EMS Reference
	(d) conclude with the Site auditor issuing either a Section A1 or Section A2 audit statement for the development.	
Part C Condition C2	Sampling analysis and quality planning C2. Sampling analysis and quality plans must be prepared for all further contamination investigations proposed within the approved development area. The plans must: (a) be prepared, or reviewed and approved, by consultants certified under either the CEnvP(SC) or the CPSS CSAM scheme; (b) be prepared: (i) in accordance with the Contaminated Land Guidelines; (ii) before sampling for contamination investigations is conducted; (c) address additional investigations identified by the Stage 2 detailed site investigation, for the proposed Stage 3 investigations and any unexpected finds; (d) be accompanied by interim audit advice from the Site auditor; and (e) be provided to the Planning Secretary and the NSW EPA for information prior to the commencement of the detailed site investigation/s required under condition C4.	Section 5.8.2 Section 5.8.7
Part C Condition C3	A sampling analysis and quality plan must be prepared for the PCB contaminated material for the testing and reuse of concrete and/or any other recycled/re-used material during the development. The plan must: (a) be prepared, or reviewed and approved, by consultants certified under either the CEnvP(SC) or the CPSS CSAM scheme; (b) be prepared: (i) in accordance with the Contaminated Land Guidelines; and (ii) prior to the re-use, recycling or burying of PCB contaminated materials within the approved development area; (c) be accompanied by interim audit advice from the Site auditor.	Section 5.8.2 Section 5.8.7
Part C Condition C4	Detailed site investigations C4. A detailed site investigation must be undertaken for the development. The investigation report must:	Section 5.8.2 Section 5.8.7

Condition Reference	Requirement	EMS Reference
	(a) be prepared, or reviewed and approved, by consultants certified under either the CEnvP(SC) or CPSS CSAM scheme; (b) be prepared in accordance with the relevant Contaminated Land Guidelines; (c) be accompanied by interim audit advice from the Site auditor confirming the investigation report is satisfactory; (d) include, but not limited to, the following: (i) all works outlined by Stage 3 detailed investigation scope included in the EIS; (ii) a discussion on the characterisation of groundwater across the development and the ongoing groundwater monitoring of PFAS required under the existing PFAS Management Plan for the Liddell Power Station; (iii) assessment of the background concentrations of metals and other contaminants so that the contamination associated with the former Liddell Power Station (including but not limited to the ash dam) can be distinguished from other sources and addressed in the remediation works; (iv) assessment of the extent of PFAS in soils and groundwater in Key Areas 1 and 3 as mapped by Figure 2 in Appendix 1, noting that high concentrations have been detected in onsite groundwater so that the feasibility and benefits of PFAS treatments can be addressed in the remedial action plan/s; (v) assessment of off-site migration of contaminants in accordance with the Guidelines for the NSW Site Auditor Scheme; (vi) (an updated conceptual site model and a discussion on contamination migration offsite and impacts to both onsite and offsite receptors; and (vii) any other matter raised by the Site auditor; (e) include the EPL premises on all relevant plans; and (f) be provided to the Planning Secretary and NSW EPA for information. Note: The detailed site investigation is required to assess areas that were inaccessible prior to the determination of the application.	

Condition Reference	Requirement	EMS Reference
Part C Condition C5	The detailed site investigation must commence within 12 months after the completion of demolition provided that the Site auditor has issued interim audit advice for the preceding sampling analysis and quality plan and be completed within 18 months of the completion of demolition, unless otherwise agreed by the Planning Secretary.	Section 5.8.2 Section 5.8.7
Part C Condition C6	If required by the Site auditor, a human health and ecological risk assessment must be prepared for the development. The assessment must: (a) be prepared, or reviewed and approved, by consultants certified under either the CEnvP(SC) or CPSS CSAM scheme; (b) be prepared in accordance with the Contaminated Land Guidelines; (c) be accompanied by interim audit advice from the Site auditor confirming the assessment is satisfactory; (d) address the contamination assessment findings detailed in the EIS; (e) assess the onsite and offsite environmental and human health risks associated with chemical contamination; (f) detail any mitigations required to manage the identified risks; (g) include a strategy detailing the actions to be taken based on the findings of the assessment; and (h) be provided to the Planning Secretary and NSW EPA for information. Note: The human health and ecological risk assessment is required consider areas that were inaccessible prior to the determination of the application.	Section 5.8.2 Section 5.8.7
Part C Condition C7	The human health and ecological risk assessment must be completed following the completion of demolition and prior to the site validation report required by condition C10, unless otherwise agreed by the Planning Secretary.	Section 5.8.2 Section 5.8.7
Part C Condition C10	Site Validation Report C10. A site validation report detailing the outcome of any remediation must be prepared at the completion of remediation works undertaken in accordance with a remedial action plan and prior to the issue of a Section A1 or A2 site audit statement. The report must: (a) be prepared, or reviewed and approved, by consultants certified under either CEnvP(SC) or CPSS CSAM scheme; (b) be prepared in accordance with the Contaminated Land Guidelines;	Section 5.8.2 Section 5.8.7

Condition Reference	Requirement	EMS Reference
	(c) be accompanied by interim audit advice from the Site auditor confirming the report is satisfactory; (d) include the validation of the former UST pits in Key Area 3 and the former UST in Key Area 5; and (e) be provided to the Planning Secretary and NSW EPA for information.	
Part C Condition C13	Site audit statements C13. A Section A1 or Section A2 Site Audit Statement (accompanied by an Environmental Management Plan) and its accompanying Site Audit Report must be obtained for the development. The site audit statement(s) must: (a) certify that the site is suitable for an intended land use; and (b) be submitted to the Planning Secretary within 12 months of completing remediation and no later than one month prior to any post-remediation land use within the approved development area subject to the site audit statement. Note: Contaminated land must not be used for the purpose approved under the terms of this SSD until a Section A1 or Section A2 Site Audit Statement is obtained which states that the land is suitable for that purpose	Section 5.8.2 Section 5.8.7
Part C Condition C23	Asbestos disposal facility C23. The asbestos disposal facility must be designed and constructed in accordance with the relevant requirements of the <i>NSW EPA Environmental Guidelines Solid Waste Landfills (2016)</i>, unless otherwise agreed by the Site auditor and the Planning Secretary.	Section 5.8.5
Part C Condition C24	C24. A final design for the asbestos disposal facility must be prepared for the development. The design must: (a) be accompanied by interim audit advice from the Site auditor; (b) be prepared in consultation with the NSW EPA; (c) be submitted to the Planning Secretary for approval prior to the commencement of (d) construction of the asbestos disposal facility; and (e) be implemented, as approved, by the Planning Secretary.	Section 5.8.5

Condition Reference	Requirement	EMS Reference
Part C Condition C25	C25. A construction quality assurance plan must be prepared for the asbestos disposal facility. The plan must: (a) be provided to the NSW EPA for review prior to the commencement of the construction of the asbestos disposal facility; and (b) be prepared in accordance with the relevant requirements of the NSW EPA Environmental Guidelines Solid Waste Landfills (2016).	Section 5.8.2 Section 5.8.7
Part C Condition C26	C26. A construction quality assurance report must be prepared for the asbestos disposal facility. The report must: (a) be provided to the NSW EPA for review prior to the commencement of the operation of the asbestos disposal facility; and (b) be prepared in accordance with <i>NSW EPA Environmental Guidelines Solid Waste Landfills (2016)</i>. <i>Note: Under the POEO Act, all new landfills or landfill cells require the approval of the NSW EPA, in addition to obtaining development consent under the EP&A Act.</i>	Section 5.8.2 Section 5.8.7
Part C Condition C27	Existing asbestos landfills C27. A verification of the existing asbestos landfills identified in the EIS must be undertaken for the development. The assessment must: (a) be prepared: (i) by a suitably qualified and experienced person/s; and (ii) within 2 years of the date of commencement of development under this consent, unless otherwise agreed by the Planning Secretary; (b) determine the suitability of the existing capping to achieve final closure requirements identified by the NSW EPA; (c) be accompanied by interim advice from the Site auditor; and (d) include any recommendations to supplement the existing capping in required by the Site auditor and an implementation plan for the recommendations.	Section 5.8.2 Section 5.8.7

Condition Reference	Requirement	EMS Reference
Part C Condition C28	C28. The recommendations required by the Site auditor must be implemented as outlined in the assessment required by condition C27.	Section 5.8.2 Section 5.8.7
Part D Condition D1	Auditing D1. Independent Environmental Audits of the development must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020) or its latest version published on the Department's website.	Section 7.3
Part D Condition D2	Compliance reporting D2. By the end of March each year, after the date of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must submit a Compliance Report to the Planning Secretary reviewing the environmental performance of the development.	Section 6.2
Part D Condition D3	Compliance reporting D3. Compliance Reports must be prepared in accordance with the Compliance Reporting Post Approval Requirements (Department, 2020) or its latest version published on the Department's website and must also: (a) identify any trends in the monitoring data over the life of the development; (b) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and (c) describe what measures will be implemented over the next year to improve the environmental performance of the development.	Section 6.2
Part D Condition D4	Non-compliance notification D4. Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must: (a) be in writing; (b) submitted via the NSW planning portal (Major Projects); (c) identify the development (including the development application number and name); (d) set out the condition of this consent that the development is non-compliant with; (e) why it does not comply; (f) the reasons for the non-compliance (if known); and (g) what actions have been undertaken, or will be undertaken; and when, to address the non-compliance.	Section 7.1

Condition Reference	Requirement	EMS Reference
	Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	
Part D Condition D5	Incident notification D5. The Applicant must notify the Department within 24 hours of becoming aware of an incident. The notification must be made via the NSW planning portal (Major Projects) and address details of the incident including: ((a) date, time and location; (b) a brief description of what occurred and why it has been classified as an incident; (c) a description of what immediate steps were taken in relation to the incident; and NSW Government 34 Liddell Future Land Use and Enabling Works Department of Planning, Housing and Infrastructure (SSD-24937520) (d) identifying a contact person for further communication regarding the incident.	Section 7.1
Part D Condition D6	Incident notification D6. The Applicant must provide the Department with a subsequent incident report in accordance with Appendix 5 (Incident Notification and Reporting Requirements).	Section 7.1
Part D Condition D7	Revision of environmental management documents D7. Within three months of the following events: (a) the submission of an incident report under conditions D5 or D6; (a) the submission of a compliance report under condition D3; (b) the submission of an Independent Environmental Audit under condition D1; (c) the approval of any modification of the conditions of this consent (unless the conditions require otherwise) or (d) notification of a change in the development phase under condition A10; The suitability of the existing environmental management documents required under this consent must be reviewed. If the review concludes an update to an environmental management document is required, or to comply with a directive, the relevant environmental management document must be revised and submitted to the Planning Secretary for approval within three months of the review. Note: This is to ensure environmental management documents are updated regularly and to incorporate any recommended	Section 7.10

Condition Reference	Requirement	EMS Reference
	measures to improve the environmental performance of the development.	
Part D Condition D8	Access to information D8. Within 12 months of the commencement of development under this consent until the completion of all rehabilitation required under this consent, the following information and documents must be publicly available on the development website as they are obtained, approved or as otherwise stipulated within the conditions of this consent: (a) the documents listed in condition A2(c) of this consent; (b) all current statutory approvals for the development; (c) all approved environmental management documents required under the conditions of this consent; (d) the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged; (e) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any environmental management documents approved under the conditions of this consent; (f) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved environmental management documents; (g) a summary of the current phase and progress of the development; (h) (h) contact details to enquire about the development or to make a complaint; (i) a complaints register, updated monthly; (j) the Compliance Reporting of the development in accordance with the Compliance Reporting Post Approval Requirements (May 2020); (k) audit reports prepared as part of any Independent Environmental Audit of the (l) development and the Applicant's response to the recommendations in any audit report; (m) any other matter required by the Planning Secretary; and (n) kept such information up to date.	Section 7.7

Table 6 Environmental Assessment Statement of Commitments

SoC Reference	Requirement	EMS Reference
Soil and Contamination		
SC10	An unexpected finds protocol will be prepared and included in the PEMS for the project. The contamination management plan will detail the requirements for management of potentially contaminated materials demolition activities. Management of any waste material to be disposed of offsite will be managed in accordance with a separate waste management plan.	Section 5.8.2 Section 5.9
Aboriginal Heritage		
AH1	An Aboriginal Cultural Heritage Management Plan (ACHMP) will be prepared prior to work commencing. The ACHMP will detail the location of the existing sites, formal management of avoid impacts to these sites and an Unexpected Finds Procedure. The Unexpected Finds Protocol will be site specific and prepared in consultation with RAPs. A template for the Unexpected Finds Protocol is provided in Appendix D of the ACHAR.	Section 5.8.8
AH2	The individual or persons responsible for the management of onsite works will ensure that all site personnel are made aware of the statutory legislation under the NPW Act regarding protection of sites and places of significance.	Section 5.8.8
AH3	Should any Aboriginal objects be uncovered during works, activities should halt in that location and the Environmental Line contacted on 131 555 to report the discovery.	Section 5.8.8
Non-Aboriginal Heritage		
HH1	In the unlikely event that unexpected historical (non Aboriginal) archaeological remains are discovered during works they will be managed with reference to the standard protocols and procedures of Section 146 of the Heritage Act 1977. An unexpected archaeological finds procedure should be included in relevant project documentation such as the Construction/Demolition Environmental Management Plan.	Section 5.8.5 Section 5.8.9
HH2	Undertake archival recording of: – The fence posts west of the skimmer dam will be recorded. – The structures and associated demolition. To be recorded in full extent including photographs and documentary recording.	Section 5.8.5 Section 5.8.9
Demolition		
DM4	– Confirm monitoring well locations and regulatory requirements impacted by the project will be decommissioned by a suitably qualified consultant. – Following decommissioning, the consultant will provide AGLM with a decommissioning report	Section 5.8.5
DM11	– Develop and implement fire management and emergency response plan – Implement Hot works permitting and control.	Section 5.8.5

SoC Reference	Requirement	EMS Reference
Rehabilitation		
RH1	AGLM will prepare a Rehabilitation Management Plan for relevant areas of the site to detail the Rehabilitation objectives, methods to be implemented, indicative schedule, adaptive management measures and quality assurance measures, monitoring program and completion criteria.	Section 5.8.4
RH2	Post closure maintenance activities will be undertaken in response to monitoring outcomes and recommendations, to ensure the establishment of stable landforms development of self-sustaining vegetation. These activities will include the following: – Maintenance of water management structures – Maintenance of landform including erosion management and capping (in selected areas) – Repair of uneven settlement – Maintenance and calibration of instruments and equipment – Additional/ supplementary seeding and planting – Assessment of species composition and health in revegetated areas – Invasive species control (weeds and pest animals)	Section 5.8.1 Section 5.8.4 Section 5.8.3
Air Quality		
AQ1	Prior to demolition commencing, a Dust Management Plan (DMP) will be prepared which would include details of: – Frequency of onsite and offsite inspections to monitor compliance with the air quality management strategy. – The name and contact details of the person(s) accountable for air quality and dust issues. – Procedure for receipt of complaints. – Regular pre-wetting and watering requirements. – When to adjust works (including site inspections and watering) due to increased emission risk (e.g. during dry windy conditions). – Designated vehicle entries and exits, haulage routes and parking areas. – Other vehicle requirements including minimising idling of vehicles on site and covering loads on trucks transporting materials. – Maintenance and cleaning of equipment used on site. – Stabilisation of stockpiles when not in use and completed areas. – Removal of accumulation of dust before commencing work. – Trigger Action Response Plan.	Section 5.8.5 Section 5.8.10

SoC Reference	Requirement	EMS Reference
	– Monitoring Program.	
AQ2	Preparation of a Blast Management Plan and Asbestos Control Plan, which would including specific measures for minimising impacts during blasting and handling of ACM, including: – Soft-strip inside buildings before demolition – Pre-watering – Forecasting – Sprinklers Due to the potentially high emissions of dust during blasting events, a monitoring plan is recommended. This would include boundary and receptor monitoring. A report after each blasting event summarising the results of the air quality monitoring during and after the event would be prepared.	Section 5.8.5 Section 5.8.10
Noise and Vibration		
NV1	Notification should be a minimum of 7 calendar days prior to the start of works and should include information such as total building time, what works are expected to be noisy, their duration, what is being done to minimise noise and when respite periods will occur. As it is proposed that works will be undertaken outside of standard hours on Saturday, it is recommended to inform the closest residents and other sensitive land use occupants within 14 days of commencement of any out of hours works. Provide information to neighbours before and during construction (Particularly for blast activities) through media such as letterbox drops, meetings or individual contact. A website will also be established for the project to provide information. Ensure site managers periodically check the site and nearby residences and other sensitive land uses for noise problems so that solutions can be quickly applied. Maintain good communication between the community and project staff. Consider a regular newsletter with site news, significant project events and timing of different activities. Facilitate contact with people to ensure that everyone can see that the site manager understands potential issues, that a planned approach is in place and that there is an ongoing commitment to minimise noise.	Section 5.8.11 Appendix 4
NV2	A PEMS should be prepared post approval, after the contractor has been engaged and prepared its construction methodology. The PEMS should include a review of the construction noise predictions during the environmental impact assessment phase based on the construction contractor's methodology and revise it accordingly to include a detailed examination of feasible and reasonable work practices and noise mitigation measures to	Section 5.8.11 Appendix 4

SoC Reference	Requirement	EMS Reference
	manage sensitive receptors that are predicted to be 'noise affected'. PEMS should also include: – Details of the construction methodology – Feasible and reasonable mitigation measures to be implemented – Updated noise predictions at sensitive receptors if required – A noise monitoring procedure for the duration of works – A community consultation plan to liaise with the noise affected receptors The PEMS must be updated as necessary to account for changes in noise and vibration management issues and strategies. Provide a readily accessible contact point, e.g. through a 24 hour toll-free information and complaints line. Document and maintain a complaints register detailing the following: – Date and time – Complainants details – Person receiving complaint and person referred to – Description of complaint Provide quick response to complaints, with complaint handling staff having both a good knowledge of the works and ready to access information. All employees, contractors and subcontractors are to receive an induction. The induction must at least include: – All project specific environmental mitigation measures – Relevant licence and approval conditions – Permissible hours of work – Any limitations on high noise generating activities – Location of nearest sensitive receptors – Construction employee parking areas – Designated loading/unloading areas and procedures – Site opening/closing times (including deliveries) – Environmental incident procedures An out of hours works procedure should be developed as part of the PEMS for the project, if these works are required. This should include a detailed construction noise and vibration assessment for the potential construction activities proposed to occur out of hours. An out of hours works application form for any works outside of the approved working hours for the project will be required. A description of the works, justification and management measures will also be included as part of the application. It is expected that strong justification and negotiation with the community will be	

SoC Reference	Requirement	EMS Reference
	required if these works are to be undertaken during any out of hours periods. Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work. Consider the use of ambient sensitive alarms that adjust output relative to the ambient noise level. Use quieter and less vibration emitting construction methods where feasible and reasonable. Regularly inspect and maintain equipment to ensure it is in good working order. Also check the condition of mufflers. Equipment must not be operated until it is maintained or repaired, where maintenance or repair will address the character of noise identified. Compliance monitoring should be undertaken to investigate complaints.	
Traffic		
TT1	A Traffic Management Plan (TMP) will be prepared for the project prior to construction commencing. The TMP will address traffic movements associated with the decommission phase of the project, in particular the impact of OSOM vehicles required for the project. The TMP and associated Traffic Control Plans (TCPs) will be prepared by suitably qualified persons and in accordance with the TfNSW Traffic Control at Work Sites Manual. The TMP will consider impacts related to the height of the Liddell overpass bridge as strike risks may be a safety issue for heavy vehicle operators which could also compromise structural integrity. Where road safety concerns are identified at a specific location along the proposed haulage routes, the TIA will be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with the Austroads Guidelines.	Section 5.8.13 Appendix 5
TT2	All loading and unloading of materials will be limited to specific loading areas within the site. No loading or unloading will occur on public roads. Loading vehicles are generally expected to only use internal road network.	Section 5.8.13 Appendix 5
TT3	Any public roads deemed to have been damaged by the project will be repaired to an acceptable standard, with all costs borne by AGLM or their appointed contractor.	Section 5.8.13 Appendix 5
TT4	Truck deliveries to and from the site will be scheduled outside peak hours where possible.	Section 5.8.13 Appendix 5
TT5	To increase awareness of the increased truck volumes and the presence of OSOM vehicles, truck warning signage will be installed where required to notify other road users. Traffic	Section 5.8.13 Appendix 5

SoC Reference	Requirement	EMS Reference
	management, warning, and regulatory signs will be installed where appropriate.	
TT6	Throughout the project, AGLM will ensure the internal access road providing access to the LPS, the ash dam and the borrow pit area is maintained.	Section 5.8.13 Appendix 5
TT7	All parking will occur within the site boundaries, in dedicated parking areas. All staff and drivers will be instructed not to park on public roads.	Section 5.8.13 Appendix 5
TT8	All staff and contractors will be informed that animals often cross the New England Highway and to take necessary precautions when driving.	Section 5.8.13 Appendix 5
TT9	Traffic controllers should be present where OSOM are required to make right-turning movements along the haulage route to the project site.	Section 5.8.13 Appendix 5
TT10	The OSOM vehicle contractor is expected to undertake a pre-route assessment of the proposed routes, to assess the route for any obstructions which they deem necessary to be removed.	Section 5.8.13 Appendix 5
TT11	A permit from the NHVR will be required prior to the undertaking of any OSOM haulage trips. All trips will need to be undertaken in accordance with the permit conditions.	Section 5.8.13 Appendix 5
Landscape and Visual		
LC1	Existing large trees and vegetation will be maintained and protected wherever possible.	Section 5.8.3
LC2	Revegetation will be undertaken in accordance with the Rehabilitation Management Plan.	Section 5.8.4
LC5	Any lighting during night time activities will be of short duration, will not be directed or spill into any adjoining landholding or dwelling and will be provided in accordance with AS 4282 – Control of the obtrusive effects of outdoor lighting. Projects post this one will be subject to their own assessment and mitigation measures	Section 5.8.3
Merge and Economic		
SE1	A Community and Stakeholder Engagement Strategy will be developed. The strategy will provide a method for: – Maintaining ongoing, regular and transparent communication with key stakeholders and the community – Managing project perceptions – Provide updates on ongoing industrial uses and other beneficial uses to be located at the LPS	Section 5.8.16

SoC Reference	Requirement	EMS Reference
SE2	A communication management plan will be developed in accordance with the Community and Stakeholder Engagement Strategy and implemented to define the specific requirements for engagement during delivery of the project with the following objectives: – To ensure that residents and stakeholders are notified in a timely manner about works activities and potential for impacts – Ensure accurate information is accessible, and enquiries and complaints are managed in a timely manner – To define the requirements for the complaints management system to be implemented	Section 5.8.16
SE3	Aligned with AGL's Reconciliation Action Plan (AGL, 2021) AGL has committed to prioritising opportunities for Aboriginal workers and procurement in its projects. This includes local and Aboriginal participation commitment in its tender documents which outline the sub-contracting, employment, training, Aboriginal and community contributions that contractors will need to deliver. Continuing engagement of local Aboriginal organisations through the Community Dialogue Group, this has been a successful approach in updating group members about the future of LPS.	Section 5.8.16
SE4	AGLM will continue to explore opportunities to deliver local community benefits, including exploring opportunities to memorialise the LPS through interpretation opportunities and photographic documentation of the LPS closure process. These opportunities will support local community values, identity, and pride.	Section 5.8.16
Waste Management		
WM1	A waste management plan for the project will be prepared prior to works commencing. The waste management plan will detail: – Statutory requirements for waste in NSW – Systems to sort and track the actual types and quantities of waste generated – Measures for waste segregation and minimising cross contamination of waste streams including the use of coded bins – Options for offsite reuse, reprocessing, recycling and energy recovery	Section 5.8.15
WM2	Awareness of waste minimisation practices will be included in the project induction.	Section 5.8.15
WM3	Waste will be classified, managed and disposed of in accordance with the Waste Classification Guidelines (EPA, 2014).	Section 5.8.15
WM4	Waste streams will continue to be managed in accordance with EPL 2122.	Section 5.8.15

SoC Reference	Requirement	EMS Reference
WM5	Recycling and resource recovery activities will continue to be managed by a licenced service provider.	Section 5.8.15
Greenhouse Gas		
GG1	Sustainable procurement practices will be adopted where feasible.	Section 5.8.10
GG2	The project will maximise the reuse of materials won onsite for the backfilling of voids and ground levelling. Any raw materials required would be sourced locally where possible	Section 5.8.10
GG3	Investigate the use of biodiesel for trucks and equipment, where suitable	Section 5.8.10
GG4	All plant and equipment used during the project shall be regularly maintained to reduce emissions and comply with the relevant exhaust emissions guidelines	Section 5.8.10
GG5	Plant and equipment will be switched off when not in constant use and not left idling	Section 5.8.10
GG6	The project will be planned to ensure minimal movement of plant and equipment where practical.	Section 5.8.10
GG7	Maximise the beneficial reuse of the carbon removed in vegetation, such as mulching and composting, will be included in management plans, where feasible	Section 5.8.10
GG8	Maximise the reuse/recycling of demolition waste materials will be investigated and included in demolition management plans, where feasible.	Section 5.8.10
Hazard and Risk		
HR8	The existing Bushfire Management Plan will be reviewed for adequacy and amended if required to ensure it includes measures to manage onsite fire risks associated with: – Hot works resulting in ignition of surrounding vegetation. – Equipment or vehicles being used in long grass. – Construction workers smoking or rubbish left at the site. – Storage of combustible materials and liquids on site. – The Bushfire Management Plan will also include measures to manage the potential risk that fire originating offsite pose to the projects.	Section 5.8.7
Cumulative		
CI1	The PEMS will include a process to review and update management measures if any other development commences in proximity to the project.	Section 7.4

3.3.3. Protection of the Environment Operations Act 1997

The principal legislation regulating pollution and waste management in NSW is the *Protection of the Environment Operations Act 1997* (POEO Act). All scheduled activities as listed in Schedule 1 of the POEO Act require an Environment Protection Licence (EPL).

LPS is operated under EPL 2122 which is held by AGLM and issued by the Environment Protection Authority (EPA) under the POEO Act. The existing EPL 2122 will be maintained for the duration of the development and will be amended as required to reflect the different stages of the project.

4. Planning

The success of the EMS requires detailed understanding of the regulatory requirements, corporate obligations and community expectations, and requires planning to identify measures that will achieve the EMS objectives.

4.1. Roles and responsibilities

The following sections outline the overarching management arrangements for Stage 1 works, including roles and responsibilities, reporting, records, training, incident management and complaints.

4.1.1. AGLM roles and responsibilities

The responsibilities of key AGLM roles involved in the development are outlined in **Table 7**.

Table 7 Roles and responsibilities of key AGLM personnel

Role	Responsibility
Program Director – AGL Closure Programs	– Managerial authority and responsibility for all environmental matters within LPS demolition and rehabilitation works. – Management of Liddell Transition Team – Regular review of environmental management programs including the establishment of environmental objectives and targets. – Monitoring and improving environmental performance. – Timely renewal of operating licences. – Compliance with all licence conditions and regulatory reporting requirements – Manage maintenance of plant and equipment
Site Manager Liddell Transition	– Provide adequate resources for the implementation of this EMS – Ensure all appropriate approvals have been obtained – Ensuring that all staff and contractors under their control are aware of environmental compliance issues and environmental controls listed in the EMS – Oversee project implementation – Order stop-work for any activity that may cause environmental harm – Management of site based Liddell Transition Team – Manage demolition and rehabilitation works – Manage maintenance of plant and equipment
Manager Environment and Approvals – Liddell Transition	– Manage environmental approvals process – Ensure this EMS is established, implemented, and maintained – Report to the Site Manager – Liddell Transition on the performance of the EMS and recommendations for improvement. – Planning for and responding to emerging environmental trends. – Initiating the external independent environmental audit program. – Liaising with Management in the setting of environmental objectives and targets, defining the context of the organisation and maintaining

Role	Responsibility
	the interested parties register and all associated actions for the project. – Communicating environmental performance. – Assisting in the management and investigation, and reporting of major environmental incidents. –
AGL Corporate Affairs	– Co-ordinate, in the context of standing emergency plans and procedures, a public relations/communication strategy to deal with environmental incidents – Communicate with the public and/or Interested Parties on environmental issues and initiatives.
Liddell Transition Environment Team	– Assist the Manager Environment and Approvals in carrying out their environmental management responsibilities, by • Provide necessary technical input for environmental decision making • Co-ordinate environmental compliance. • Assist in developing environmental objectives and targets and environmental management programs. • Liaise with and provide information to the Independent Environmental Auditor
AGLM personnel working on the Development	AGLM personnel working on the development have a role in achieving a standard of environmental performance consistent with the documentation referenced in this EMS, including: – Comply with EMS, including all relevant procedures, sub-plans, processes, operating standards. – Complete environmental inductions and required training

4.1.2. Contractor roles and responsibilities

The responsibilities of key contractor roles involved in the development is outlined in **Table 8**.

Table 8 Roles and responsibilities of Contractors

Role	Responsibility
Project HSEQ Manager	– Provide advice and assistance on environmental matters to the Project Manager, Project Site Manager and employees – Identify key environmental risks and opportunities to ensure high environmental performance – Attendance at on-site meetings to ensure environment related issues are raised for review – Monitoring the effectiveness of environmental management measures – Manage and advise on training needs – Plan for and respond to emerging environmental trends. – Support external independent environmental audits.

Role	Responsibility
	– Assisting in the management and investigation of major environmental incidents. – Manage the contractor's environmental management responsibilities, including the following • Provide necessary technical input • Co-ordinate environmental compliance. • Assist in developing and updating environmental objectives and targets and environmental management programs. • Provide information to the Independent Environmental Auditor • Conduct investigations into incidents and non-conformance events • Lead by example to promote environmentally sound practices • Assist in developing Safe Work Method Statements (SWMS) for all tasks and ensuring the required environmental measures are included and the work is monitored throughout
Project Manager	– Ensure effective internal and external communication programs are in place – Ensure the DEMP meets AGLM and DPHI requirements for the project – Responsible to ensure the DEMP is implemented and maintained – Engage competent and licensed sub-contractors, as required by legislation, to undertake works – Organisation of on-site personnel with regard to their responsibilities within the HSEMS – Accountable for the effectiveness, suitability, and adequacy of the contractor Environmental Management System – Promote continual improvement and provide support as required – Ensure the Environmental Management System achieves its intended outcomes – Ensure resources are available to support the Environmental Management System – Ensure employees are equipped with sufficient skills to comply with the EMS throughout the delivery of the project – Responsible for resourcing employee activities and ensuring plant is operated and maintained in a manner that minimises risk to the environment – Input into regular reviews of HSEMS elements including the establishment and review of environmental objectives and targets. – Monitoring and improving environmental performance at a project level. – Compliance with all environmental and regulatory requirements and other reporting requirements. – Lead by example to promote environmentally sound practices
Project Site Manager	– Assist in the implementation of the DEMP and this EMS – Ensure all project staff have adequate training and experience to manage the risks associated with their roles

Role	Responsibility
	– Assist in developing Safe Work Method Statements (SWMS) for all tasks and ensuring the required environmental measures are included and the work is monitored throughout – Ensure site inductions are conducted for all workers and sub-contractors, – Undertake environmental related duties as directed by the Project Manager. – Lead by example to promote environmentally sound practices
Area Supervisors	– Assist in the implementation of the DEMP and this EMS, – Other Environmental related duties as directed by the Project Site Manager. – Lead by example to promote environmentally sound practices
Project Engineers	– Comply with the DEMP and this EMS – Other Environmental related duties as directed by the Project Manager. – Lead by example to promote environmentally sound practices
All Workers	– Comply with the DEMP and this EMS – Raise environmental issues or hazards – Report all environmental incidents, hazards, non-compliances and near misses in a timely manner.
Subcontractors	– Comply with the DEMP and this EMS – Raise environmental issues or hazards – Report all environmental incidents, hazards, non-compliances and near misses in a timely manner.

4.2. Risk Management

Risk management is undertaken as per the AGLM Risk Management Standard (AGL-HSE-STD-004.1). AGLM utilise the Fully Integrated Risk Management (FIRM) matrix for assessment of risks, as per **Error! Reference source not found.****Error! Reference source not found.****Error! Reference source not found.****Figure 6.**

An Environmental Risk Assessment (ERA) is required to identify aspects and impacts and assess the risk of development activities with the potential to cause environmental impact and harm.

The process for undertaking the ERA includes:

1. Identifying and describing risks, including the source of the risk.
2. Understanding the risk rating by evaluating the likelihood and consequence of the risk.
3. Review the current controls, residual risk post implementation of such controls, and determining if further controls are required to adequately manage the risk.
4. Evaluation of risk – determine an action plan; a strategy of management and monitoring commitments.

5. Update management strategies, programs, plans and procedures, where applicable, with risk mitigation treatments to eliminate or reduce the risk to as low as reasonably practicable.
6. Review residual risks and appropriateness of mitigation measures annually.

4.2.1. Risk Identification and Assessment

The purpose of the ERA is to identify environmental aspects and impacts that could eventuate during the development, as well as existing and proposed mitigation and management measures for such aspects and impacts.

Risks identified are related to environmental aspects as outlined in the environmental assessments listed in condition A2(c) of the consent, as addressed in the SOC's as per Table 6, for Stage 1.

Risks were assessed using the AGLM FIRM risk matrix, as per Figure 6.

Likelihood ratings were classified between rare (1) and almost certain (5), with consequence categorised between Level 1 (lowest) to Level 5 (highest).

Almost Certain (5)	7 Moderate	13 High	19 Very High	23 Extreme	25 Extreme
Likely (4)	6 Moderate	10 Moderate	15 High	21 Very High	24 Extreme
Possible (3)	3 Low	9 Moderate	14 High	20 Very High	22 Very High
Unlikely (2)	2 Low	8 Moderate	11 Moderate	16 High	18 High
Rare (1)	1 Low	4 Low	5 Low	12 Moderate	17 High
	Level 1	Level 2	Level 3	Level 4	Level 5

Figure 6AGLM Risk Matrix

4.2.2. Risk Control

The risk control measures were updated in line with the commitments made as part of the EIS for the Consent, as well as the controls adopted in the various management plans, strategies, procedures and programs for the development.

As per the Consent, Part B, Condition B1(d), a review of the existing ERA was undertaken on 04 March 2025 on the development activities and specific risk management controls and mitigations to:

- i) Comply with statutory requirements, limits or performance measures and criteria; and
- ii) Manage the predicted impacts identified in the documents listed in Part A, Condition A(c).

The risk assessment is included as Appendix 3 of this EMS.

The risk assessment was reviewed and approved by the Transition Site Manager, including the documented control measures that will be applied to manage risks to as low as reasonably practicable (ALARP). The current mitigation measures for all risks identified for Stage 1 works are outlined in Appendix 3. No further measures have been identified, and those aspects which have been assessed, and likelihood remain at 'possible' with a consequence of 'Level 3' therefore remain with an overall residual score and rating of 'high level' are as per **Table 9**.

Table 9 High risk environmental aspects

Aspect	Likelihood	Consequence	Residual Score	Rating
Unauthorised discharge to surface water	Possible	Level 3	14	High
Emissions to air (dust and air quality)	Possible	Level 3	14	High
Unauthorised works completed on non-AGL land	Possible	Level 3	14	High
Impacts caused by increased traffic	Possible	Level 3	14	High

4.2.3. Risk Review and Evaluation

As per the Consent, Part B, Condition B1(e), the ERA will be reviewed and evaluated for effectiveness on an annual basis as part of the annual planning process as per Section 4.4, and as part of the Adaptive Management and Continual Improvement Process, as per Section 7.5

4.3. Objectives and Targets

AGLM will operate in a manner that minimises harm to the environment and the community. To achieve this, AGLM has defined a set of objectives and performance criteria, based on the requirements

of statutory obligations, internal commitments and community expectations. Those objectives and performance criteria are outlined in **Table 10**.

Table 10 Objectives and performance criteria

Aspect	Objective	Performance Criteria
Compliance	Maintain compliance with all regulatory requirements	Nil non compliances
Water	Comply with the requirements of Table 3 of the Consent, and EPL 2122.	No adverse impacts or environmental consequences to groundwater, surface water and aquatic ecosystems as a result of the development outside those predicted in the environmental assessment documents listed in condition A2(c) of the consent. No complaints related to water quality. Refer to the Water Management Plan for specific performance criteria against the objectives.
Noise and Vibration	Comply with the requirements of Consent Part B Conditions B9-B11.	No exceedance of operational noise generated by the development at R21 and R28. Development undertaken generally in accordance with the predictions specified in the environmental assessment documents listed in condition A2(c) of the consent
Air Quality	Comply with the requirements of the Consent Part B Conditions B6 and B7, and EPL 2122.	Development undertaken generally in accordance with the predictions specified in the environmental assessment documents listed in condition A2(c) of the consent.
Biodiversity	Comply with the requirements of the Consent Part B Conditions B28 to B32.	Credits retired as specified. No incidents, non-compliances or complaints related to biodiversity. Refer to the Biodiversity Management Plan for specific performance criteria against the objectives.

Aspect	Objective	Performance Criteria
Heritage	Comply with the requirements of the Consent Part B Conditions B4 and B5.	No incidents, non-compliances or complaints related to Aboriginal heritage and non-Aboriginal (Historic) Heritage.
Rehabilitation	Comply with the requirements of Table 7 of the Consent.	Development undertaken generally in accordance with the predictions specified in the environmental assessment documents listed in condition A2(c) of the consent. Refer to the Rehabilitation Management Plan for specific performance criteria against the objectives.
Waste, hazardous materials or asbestos.	Comply with the requirements of the Consent Part B Conditions B23 to B27.	No incidents, non-compliances or complaints related to waste, hazardous materials or asbestos. Also refer to the DEMP for additional performance criteria against the objectives.
Community	Comply with the requirements of SoC SE1 to SE4.	Nil complaints received by community Nil adverse impact to surrounding private properties

4.4. AGLM Revision Process

AGLM undertakes an annual review of environment related issues and performance. The review considers:

- Outcomes of risk assessment treatments (Section 4) and mitigation measures, monitoring and review (Section 5) activities
- Inspections, assessments and audits (Section 7)
- HSE incident reports and investigation findings (Section 7)
- Inputs and views from external stakeholders (Section 5)
- Status of corrective and preventative actions (Section 7)
- Outcomes from management reviews (Section 4)
- Government policies and regulations (Section 3)
- Human factors that may contribute to risk (Section 4)
- Receiving environments that may be impacted (Section 5).

Following the review, strategies, plans, processes, objectives and targets are updated as part of the planning process as part of the adaptive management and continual improvement process (Section 7.5).

4.5. Management plan consultation requirements

The Consent outlines specific management plans that required consultation prior to being approved, those plans are summarised in **Table 11**.

Part A Condition A16 of the Consent states that if consultation is required:

- Consultation with the relevant party must occur prior to submitting the document to the Planning Secretary for Approval; and
- Provide details of the consultation that took place, including the outcome, matters resolved or unresolved, and details of remaining disagreements and how the AGLM or the Contractor will address those matters.

Where Consultation is required, the relevant management plan as per **Table 11** will clearly outline the consultation requirements and provide details of communication with the relevant party, the outcomes, and where they are addressed in that document.

Table 11 Stakeholder consultation requirements

Consent Management Plan	Stakeholder
Biodiversity Management Plan	CPHR
Water Management Plan (Erosion Sediment Control Plan)	NSW EPA DCCEEW Water
Rehabilitation Management Plan	Site Auditor DPHI Council CPHR NSW EPA
Demolition Environmental Management Plan (DEMP)	SafeWork NSW Site auditor
Liddell Ash Dam Closure and Rehabilitation Management Plan	Site auditor NSW EPA DS NSW Council

4.6. Inductions and training

To ensure that this EMS is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of and competent in meeting their

responsibilities and requirements under the AGL Health, Safety and Environment Policy, this EMS and relevant elements of the HSEMF.

4.6.1. Inductions

All personnel (including contractors, sub-contractors and visitors to the site) are required to complete compulsory site and environmental awareness induction prior to undertaking any work on the development. Requirements of the AGL Health, Safety and Environmental Policy, this EMS and the HSEMF will be communicated through the induction process and made available to all personnel.

4.6.2. Environmental training and awareness

AGLM have established a development specific environmental training and induction program for all personnel who perform tasks with the potential to cause environmental harm. The Environment Training document AGLM-HSE-PRO-008.05 outlines the process to providing training and awareness to all personnel, contractors, sub-contractors operating for or on behalf of AGLM at the LPS.

Training is available to all personnel, and the Manager Environment and Approvals is responsible for developing and updating modules related to environment aspects and impacts, as well as changes in legislation, policy or the HSEMF.

Environmental awareness and training information will also be included in daily prestart meetings and toolbox talks to support the elimination or minimisation of environmental risks.

Contractors and sub-contractors are responsible for ensuring all required training is conducted by their staff prior to work. A record of all Contractor training is to be kept in the Environment Training Needs Analysis (TNA).

Training Needs Analysis

Training needs are determined for all personnel, contractors, sub-contractors and visitors to the development site, to ensure that all are aware of and competent in avoiding or minimising the environmental risks relevant to their role.

AGLM identifies the required relevant training and competency of personnel required prior to works commencing. Contractors are required to work with the Manager Environment and Approvals, to determine the environmental competency and training required for their staff and sub-contractors.

All training and associated competencies will be captured on the TNA.

Review of specific training requirements is reviewed in response to changes in site risks, trends in environment incidents or hazards, and in line with HSEMF reviews.

4.7. Baseline Environmental Studies

Baseline environmental studies were undertaken for the Development during the preparation of the environmental assessments prior to the approval of the Consent. Additional baseline studies were conducted for the development of the DEMP Soil and Water Management sub plan.

The major studies are listed in **Table 12**.

Table 12 Baseline Environmental Studies

Assessment	Reference
Environmental Impact Statement	GHD, 2023
Response to Submissions	GHD, 2024
Amendment Report	GHD, 2024
Supplementary Water Assessment	Ramboll, 2025

The preparation of the baseline studies as outlined above facilitate the preparation of the development of management plans as required under the Consent, EPL and EPBC approvals.

For any deviation from the original plan that are still generally in accordance with approvals, due diligence surveys will be undertaken to prevent harm. If significant changes to the development which will lead to work not being generally in accordance with approvals, new assessments will be undertaken to support modifications to approvals and licences.

4.8. Communication

Consultation and communication will be undertaken in line with the AGLM Community and Stakeholder Engagement Strategy. Note that this Strategy is not a requirement of the Consent.

4.8.1. Internal Communications

AGLM recognises that effective communication of environmental aspects is necessary for the implementation of specific environmental management measures. Communication methods are outlined in the AGLM Community and Stakeholder Engagement Strategy and can include, but are not limited to:

- Prestart meetings
- Managers meetings
- Communication sessions.

4.8.2. External Communications

AGLM will tailor consultation and engagement on relevant environmental aspects and ensure that the relevant key stakeholder considerations are addressed.

The AGL website contains information available to the public ([AGL Macquarie | About AGL](#)). Included on the website are contact details to lodge enquiries or complaints.

AGLM maintains a stakeholder consultation standard which it applies across the development of new projects, expansions of existing infrastructure, and ongoing operations.

Refer to **Section 4.5** for external consultation required during the development of management plans.

Notifications regarding the Development, will be undertaken as per the Community and Stakeholder Engagement Strategy. The Community and Stakeholder Engagement Strategy outlines various methods of communication to inform the community about the Development, including environmental performance, via the website, letterbox drops, face to face community information events, newspaper articles and social media.

4.8.3. Community Consultative Committee

AGLM maintains a community reference group known as the AGLM Community Consultative Committee (CCC) which meets quarterly. Membership of this group includes representatives from the surrounding community interest groups, Muswellbrook Shire Council (MSW), Singleton Council and Upper Hunter Shire Council, local business chambers and local Indigenous stakeholder groups. The development was initially presented to the CCC at a meeting on 28 July 2020, and no concerns have been raised during subsequent engagements.

Quarterly meetings will continue to be held with the CCC. During the CCC meeting, the community will be informed about the Development, including environmental performance. All concerns and complaints will be addressed at the meeting. Minutes of the CCC are included on the AGLM website.

5. Implementation

5.1. Limit of Consent

As per Part A, Condition A5 of the Consent, activities associated with the Development may be carried out until 31 December 2044.

5.2. Commencement of Construction

As per Part B, Condition B2 of the Consent, construction will not commence until this EMS is approved by the Planning Secretary.

5.3. Implementation of the EMS

As per Part B, Condition B3 of the Consent, this EMS, as approved by the Planning Secretary, will be implemented for the Development.

5.4. Asbestos Disposal Facility

As per Part A, Condition A6 of the Consent, a maximum of 30,000 cubic metres of asbestos waste, asbestos containing material, synthetic mineral fibre and other associated wastes authorised by the Site auditor, may be disposed of at the asbestos disposal facility, unless otherwise agreed by the Planning Secretary. Commencement of disposal will occur in Stage 1.

Refer to the DEMP for additional information regarding the Asbestos Disposal Facility.

5.5. Borrow Pit

As per Part A, Condition A7 of the Consent, a maximum of 13.5 million cubic metres of material may be extracted from the Borrow Pit Area, unless otherwise agreed by the Planning Secretary. During stage 1 it is anticipated that up to 1.5 million m³ will be extracted.

5.6. Rock Crushing

As per Part A, Condition A5 of the Consent, a maximum of 200,000 tonnes of material from the Borrow Pit Area and Liddell Ash Dam may be crushed per annum, for a maximum total of 10 years from the commencement of extraction, unless otherwise agreed by the Planning Secretary. Commencement of rock crushing for the purpose of capping the LAD will commence in Stage 1.

5.7. Hours of Operations

As per Part A, Condition A9 of the Consent, the development may be undertaken as per **Table 13**.

Table 13 Operating Hours

Activity	Permissible Hours
Development activities – other than as identified separately in this table	7am – 6pm Monday to Friday 8am to 6pm Saturday At no time on Sundays or Public Holidays
Blasting	9am to 5pm Monday to Saturday No blasting on Sunday or Public Holidays
Maintenance, security, office work, cleaning, etc	May be conducted at any time
Delivery or dispatch of materials as requested by Police or other public authorities Emergency work to avoid the loss of lives, property or to prevent environmental harm Delivery of oversized plant or structures	At any time, only after notifying the Department

5.8. Measurement, Monitoring and Evaluation

Environmental management; measurement, monitoring and evaluation, for the development, will be implemented through this EMS and associated plans developed to meet the requirements of the Consent and SoC, as per the sub sections 5.8.1 to 5.8.16.

5.8.1. Water and hydrology

Water and hydrology, including the SoC requirements WQ1 to WQ15, is managed as per the:

- Water Management Plan required under Consent Part B, Condition B15.
- Soil and Water Management Sub Plan required under Consent Part C, Condition C21.
- EPL2122.

Surface water monitoring locations are included on **Figure 5**.

5.8.2. Soil and Contamination

Soil and contamination, including the SoC requirements SC1 to SC11 is managed as per the:

- Water Management Plan required under Consent Part B, Condition B15.
- Rehabilitation Management Plan required under Consent Part B, Condition B38.
- and associated sub plans including:
 - Asbestos Management required under Consent Part C, Condition C19
 - Blast Management required under Consent Part C, Condition C20
 - Soil and Water Management required under Consent Part C, Condition C21
- Dust Management required under Consent Part C, Condition C22 Containment Cell Construction Quality Assurance Plan and Quality Assurance Report required under Consent Part C, Conditions C25 and C26

- EPL2122.

As per Section 5.8.1, a Soil and Water Management Plan required under SoC SC1, forms a sub plan of the DEMP.

Further to the above, a Spill Management Plan, required under SoC SC8, is located in the AGLM PIRMP and DEMP.

The Contamination Management Plan, required under SoC SC10, is addressed under Part C of the Consent.

5.8.3. Biodiversity

Biodiversity, including the requirements within SoC BIO1 to BIO10, is managed as per the:

- Biodiversity Management Plan required under Consent Part B, Condition B32.
- Rehabilitation Management Plan required under Consent Part B, Condition B38.
- Water Management Plan required under Consent Part B, Condition B15.
- Traffic Management Plan, located in Appendix 5.
- EPBC 2022/09330

5.8.4. Rehabilitation

Rehabilitation, including the SoC requirements RH1 and RH2, and LC2 to LC4, is managed as per the:

- Rehabilitation Management Plan required under Consent Part B, Condition B38.
- Biodiversity Management Plan required under Consent Part B, Condition B32.
- EPBC 2022/09330.

5.8.5. Demolition

Demolition, including the requirements of SoC DM1 to DM11, is managed as per the:

- DEMP required under Consent Part C, Condition C16 and associated sub plans including:
 - Asbestos Management required under Consent Part C, Condition C19
 - Blast Management required under Consent Part C, Condition C20
 - Soil and Water Management required under Consent Part C, Condition C21
 - Dust Management required under Consent Part C, Condition C22
- EPL2122.

The Asbestos Management Sub Plan, and Fire Management and Emergency Response Plan, required under SoC DM1 and DM11 respectively, form part of the DEMP, and:

- AGLM Bushfire Risk Management Plan (AGLM, 2025).

The Hazardous Material Removal and Handling Plan required under SoC DM11 has been prepared by the Principal Contractor. Note that this plan is not a requirement of the Consent.

As per SoC DM4, AGLM have confirmed monitoring well locations and those that are impacted by the development have been decommissioned by a suitably qualified consultant.

As per SoC DM11, AGLM have developed a Bushfire Risk Management Plan, and both AGLM and the Principal Contractor have prepared an Emergency Response Management Plan. Hot works are to be undertaken in a location designated for such works and no hot works will be completed on Total Fire Ban Days.

5.8.6. Landscape and Visual

Landscape and visual, including the requirements of the SoC LC1 to LC5, is managed as per the:

- DEMP required under Consent Part C, Condition C16 and associated sub plans including:
 - Asbestos Management required under Consent Part C, Condition C19
 - Blast Management required under Consent Part C, Condition C20
 - Soil and Water Management required under Consent Part C, Condition C21
 - Dust Management required under Consent Part C, Condition C22
- Biodiversity Management Plan required under Consent Part B, Condition B32.
- Rehabilitation Management Plan required under Consent Part B, Condition B38.

In addition to the above, as per SoC LC1, existing large trees and vegetation will be maintained and protected wherever possible. This will be achieved through the implementation of the AGLM Ground and Vegetation Disturbance Approval (GVDA).

In accordance with SoC LC2, revegetation will be undertaken in accordance with the Rehabilitation Management Plan.

As per the requirements of SoC LC3, any lighting during night time activities will be of short duration, where appropriate, will not be directed or spill into any adjoining landholding or dwelling and will be provided in accordance with AS 4282 – *Control of the obtrusive effects of outdoor lighting*.

5.8.7. Hazard and Risk

Hazard and risk, including the requirements of SoC HR1 to HR9, will be managed as per the:

- DEMP required under Consent Part C, Condition C16 and associated sub plans including:
 - Asbestos Management required under Consent Part C, Condition C19
 - Blast Management required under Consent Part C, Condition C20
 - Soil and Water Management required under Consent Part C, Condition C21
 - Dust Management required under Consent Part C, Condition C22
- Containment Cell Construction Quality Assurance Plan and Quality Assurance Report required under Consent Part C, Conditions C25 and C26
- AGLM Bushfire Risk Management Plan.
- Section 4.2 of this EMS.

The Asbestos Management Sub Plan, required under HR6 forms part of the DEMP. As per SoC HR7, Asbestos Removal Control Plans will be prepared on an as needs basis by the Principal Contractor.

The Consent Part C, Conditions C1 to C13 also cover hazard, risk and remediation.

5.8.8. Aboriginal Heritage

Aboriginal heritage management will be undertaken as per the requirements of Consent Part B, Conditions B4 and B5, and SoC AH1 to AH3, as per **Table 14**

Aboriginal Heritage locations are included on **Figure 5**.

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Table 14 Aboriginal Cultural Heritage Management

Condition / SoC	Requirement	Management measures	Timing	Responsibility
Part B Condition B4	The Applicant must not directly or indirectly harm the Aboriginal objects AHIMS 37-2-6560 and 37-2-6559, or any Aboriginal objects located outside the approved development area.	The sites will be protected with temporary stock-proof fencing and appropriate signage during construction. Site fencing will be erected under the direction of a qualified archaeologist or a person familiar with the contents and extent of the sites.	Prior to construction for the relevant Stage of works.	AGLM.
Part B Condition B5	Prior to carrying out any development that could directly or indirectly harm the Aboriginal objects AHIMS 37-2-6561 and 37-2-6284, the Applicant must salvage the Aboriginal objects via surface collection and relocate the items that would be impacted to a suitable alternative location, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010), or its latest version.	Artefacts will be salvaged by surface collection and relocated to a suitable alternative location onsite prior to impacts. The relocation will be undertaken in accordance with the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW, 2010). Following collection, an Aboriginal Site Impact Recording (ASIR) will be submitted to the Aboriginal Heritage Information Management System (AHIMS) register.	Prior to disturbance.	AGLM.
AH1	An Aboriginal Cultural Heritage Management Plan (ACHMP) will be prepared prior to work commencing. The ACHMP will detail the location of the existing sites, formal management of avoid impacts to these sites and an Unexpected Finds Procedure. The Unexpected Finds Protocol will be site specific and prepared in consultation with RAPs. A template for the Unexpected Finds Protocol is provided in Appendix D of the ACHAR.	ACHMP, prepared by AECOM (2025). The ACHMP is not a requirement of the Consent.	Prior to construction.	AGLM.
AH2	The individual or persons responsible for the management of onsite works will ensure that all site personnel are made aware of the statutory legislation	Inductions and training packages Section 4.6. ACHMP.	Prior to commencing works.	AGLM.

	under the NPW Act regarding protection of sites and places of significance.			
AH3	Should any Aboriginal objects be uncovered during works, activities should halt in that location and the Environmental Line contacted on 131 555 to report the discovery	ACHMP.	During works.	AGLM.

5.8.9. Historical (non-Aboriginal) Heritage

Historical (non-Aboriginal) heritage SoC HH1 and HH2 will be managed as per **Table 15**.

Heritage locations are included on **Figure 5**.

Table 15 Historical Heritage Management

SoC	Requirement	Management measures	Timing	Responsibility
HH1	In the unlikely event that unexpected historical (non-Aboriginal) archaeological remains are discovered during works they will be managed with reference to the standard protocols and procedures of Section 146 of the Heritage Act 1977. An unexpected archaeological finds procedure should be included in relevant project documentation such as the Construction/Demolition Environmental Management Plan.	DEMP. This EMS - Unexpected finds protocol Section 5.9.	During works.	Principal Contractor. AGLM
HH2	Undertake archival recording of: – The fence posts west of the skimmer dam will be recorded. – The structures and associated demolition. To be recorded in full extent including photographs and documentary recording.	Noted. AGLM to action as per SoC requirement.	Prior to commencement.	AGLM.

5.8.10. Air Quality and Greenhouse Gas

Management of air quality during demolition, including the requirement of a Dust Management Plan, Blast Management Plan and Asbestos Control Plan, required under Consent Part C, Conditions C19, C20 and C22 respectively, some components of SoC AQ1 and all components of SoC AQ2, is outlined in the:

- DEMP required under Consent Part C, Condition C16 and associated sub plans including:
 - Asbestos Management required under Consent Part C, Condition C19
 - Blast Management required under Consent Part C, Condition C20
 - Dust Management required under Consent Part C, Condition C22
- EPL2122.

Management of air quality and greenhouse gas, including components of the requirements of SoC AQ1, and GG1 to GG8, and the requirements of the Consent Part B Conditions B6 and B7 respectively, is outlined in:

- Table 16.
- Table 17.

- EPL2122.
- DEMP required under Consent Part C, Condition C16.

Indicative air quality monitoring locations are included on **Figure 5**.

Table 16 Air quality and greenhouse gas management

Condition or SoC	Requirement	Management measures	Timing	Responsibility
Part B Condition B6	Air quality and Greenhouse Gas B6. All reasonable and feasible avoidance and mitigation measures must be implemented to prevent the generation of dust from the development.	Project wide: Conduct daily inspections to verify that air quality management measures are being implemented. Water carts to be utilised on unsealed roads, or roads which are being impacted by dust. Minimise the extent of exposed areas through progressive rehabilitation or stabilisation. Cover or stabilise stockpiles when not in use and completed areas Limit the drop height of materials that can lead to dust generation. Monitor for adverse weather conditions and alter works where required (i.e. windy conditions). Implement the TARP located in Table 17. Site entry / exit, haul routes / parking areas: Reduce on-site speed limits to limit the generation of dust from vehicle movements.	During works. During works. During works. During works. During works. During works. During works. During works. During works. During works	Principal contractor. Principal contractor. Principal contractor. Principal contractor. Principal contractor. Principal contractor. All personnel. All personnel. All personnel.

	Limit traffic movements to designated areas, and wherever possible, along sealed surfaces.	During works	Principal contractor.
	Ensure that all heavy vehicles and plant are inspected prior to leaving site to ensure that all vehicles are free of any debris and loose materials, as well as that loads are covered where required and practical.	During works.	Principal contractor.
	Ensure stabilised site entry and exit where required in unsealed areas	During works.	Principal contractor.
	Borrow pit:		
	Progressively extract materials in a staged manner from the borrow pit. Stabilise areas that remain exposed for an extended period.	During works.	Principal contractor.
	Wet down the area to be crushed, excavated, and during loading and placement of materials where necessary.	During works.	Principal contractor.
	Asbestos disposal facility:		
	Minimise exposed areas to limit the potential for dust generation.	During works.	All personnel.
	Apply a ground cover to areas which are exposed for an extended period (e.g. polymer).		

		At the end of each day of emplacement apply a suitable cover to limit the potential for dust generation. Adhere to the legislative requirements during handling, transportation and disposal activities.		
Part B Condition B7	Air quality and Greenhouse Gas B7. All reasonable and feasible avoidance and mitigation measures must be implemented to minimise greenhouse gas emissions from the development.	Refer to SoCs GG1 to GG8.	-	-
AQ1	Prior to demolition commencing, a Dust Management Plan (DMP) will be prepared which would include details of: – Frequency of onsite and offsite inspections to monitor compliance with the air quality management strategy. – The name and contact details of the person(s) accountable for air quality and dust issues. – Procedure for receipt of complaints. – Regular pre-wetting and watering requirements. – When to adjust works (including site inspections and watering) due to increased emission risk (e.g. during dry windy conditions). – Designated vehicle entries and exits, haulage routes and parking areas.	DEMP	Prior to demolition.	Principal Contractor.

	– Other vehicle requirements including minimising idling of vehicles on site and covering loads on trucks transporting materials. – Maintenance and cleaning of equipment used on site. – Stabilisation of stockpiles when not in use and completed areas. – Removal of accumulation of dust before commencing work. – Trigger Action Response Plan. – Monitoring Program.			
AQ2	Preparation of a Blast Management Plan and Asbestos Control Plan, which would including specific measures for minimising impacts during blasting and handling of ACM, including: – Soft-strip inside buildings before demolition – Pre-watering – Forecasting – Sprinklers Due to the potentially high emissions of dust during blasting events, a monitoring plan is recommended. This would include boundary and receptor monitoring. A report after each blasting event summarising the results of the air quality monitoring during and after the event would be prepared.	DEMP.	Prior to demolition.	Principal Contractor.
GG1	Sustainable procurement practices will be adopted where feasible.	AGLM and principal contractor procurement process.	During works.	AGLM.

		DEMP.		Principal contractor.
GG2	The project will maximise the reuse of materials won onsite for the backfilling of voids and ground levelling. Any raw materials required would be sourced locally where possible	Noted. This EMS Section 5.8.4. DEMP.	Following demolition	Principal contractor.
GG3	Investigate the use of biodiesel for trucks and equipment, where suitable.	Noted. CMA contract.	During works.	Principal contractor.
GG4	All plant and equipment used during the project shall be regularly maintained to reduce emissions and comply with the relevant exhaust emissions guidelines	Principal contractor introduction to site process and site vehicle checklist Ensure all plant and equipment are inspected regularly, cleaned, maintained and operated in a proper and efficient manner to minimise improper operations leading to increased exhaust emissions.	During works.	Principal contractor.
GG5	Plant and equipment will be switched off when not in constant use and not left idling	Switch off vehicles when not in-use i.e., minimising idling of vehicles.	During works.	Principal contractor.
GG6	The project will be planned to ensure minimal movement of plant and equipment where practical.	Noted. DEMP.	During works.	Principal contractor.
GG7	Maximise the beneficial reuse of the carbon removed in vegetation, such as mulching and composting, will be included in management plans, where feasible	This EMS Section 5.8.3 and Section 5.8.4.	During works.	Principal contractor.
GG8	Maximise the reuse/recycling of demolition waste materials will be investigated and	This EMS Section 5.8.15.	During works.	Principal contractor.

	included in demolition management plans, where feasible.			
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Table 17 Air quality trigger action response plan

TARP Level	Normal	Level 1	Level 2
Indicator			
Complaint	No dust complaint.	Dust complaint (unclear if it is related to site)	Dust complaint (related to site)
Visual observations	Dust not mobilised (visual inspection).	Dust has mobilised but is local and not travelling off the site boundary.	Dust has mobilised and is visibly travelling off the site boundary.
Measured and forecast meteorological conditions	Principal Contractor to review wind speed forecast at Daily Pre-Start Meeting: - Wind speed less than 18km/hr - Observed wind speeds less than 18km/hr at AGLM08	Principal Contractor to review wind speed forecast at Daily Pre-Start Meeting: - Wind speed greater than 18km/hr - Observed wind speeds greater than 18km/hr at AGLM08	Principal Contractor to review wind speed forecast at Daily Pre-Start Meeting: - Wind speed greater than 36km/hr OR - Wind speed greater than 18km/hr AND wind direction from the SE Observed wind speeds to be reviewed against these triggers throughout the day.
Air quality monitoring	'Boundary' BAM hourly PM₁₀ below 150 µg/m³ and 'Off-site receptor' BAM hourly PM₁₀ below 40 µg/m³	'Boundary' BAM hourly PM₁₀ between 150 and 200 µg/m³ trigger limit or 'Off-site receptor' BAM hourly PM₁₀ between 40 and 50 µg/m³	'Boundary' BAM hourly PM₁₀ above 200 µg/m³ trigger limit or 'Off-site receptor' BAM hourly PM₁₀ above 50 µg/m³
Trigger Actions Responses			
Activities	Normal activities.	Continue activities and evaluate additional standard controls to suppress dust.	Review activities and evaluate additional controls to suppress dust, and modify/suspend relevant activities as required.
Responsibilities			
Actions	Principal Contractor to: - Maintain standard dust suppression activities. - Monitor operation.	Principal Contractor to: - Evaluate effectiveness of controls through activity. - Plan and execute remedial actions as required. - Additional watering. - Relocation of activities.	Principal Contractor to: - Maintain and evaluate effectiveness of controls throughout activity. - Plan and execute remedial actions as required: - Additional watering - Relocation of activities

TARP Level	Normal	Level 1	Level 2
		• Conduct visual inspection to identify dust and/or air emission generating activities. • Investigate complaint, taking into consideration activity, meteorological conditions, and visual observation of impact to validate complaint. • Provide verbal response to complaint • Record in complaints register.	- Reduced activities • Conduct visual inspection to identify dust and/or air emission generating activities • Investigate complaint, taking into consideration activity, meteorological conditions, and visual observation of impact to validate complaint • Provide verbal response to complaint • Record in complaints register • Communicate lessons learnt to project personnel

5.8.11. Noise and Vibration

Noise and vibration, including the requirements of SoC NV1 and NV2, is managed as per the requirements of the Consent Part B Conditions B8 to B12 and EPL2122.

Furthermore, management of noise and vibration, including the development of a monitoring plan required under SoC DM7, is outlined in the:

- Noise and Vibration Management Plan located in Appendix 4.
- DEMP required under Consent Part C, Condition C16.

Indicative noise monitoring locations are included on **Figure 5**.

5.8.12. Dangerous Goods

Dangerous goods are managed as per the requirements of the Consent Part B as per **Table 18**.

Table 18 Dangerous goods management

Condition or SoC	Requirement	Management measures	Timing	Responsibility
Part B Condition B18	The quantities of dangerous goods stored and handled by the development must be below the threshold quantities listed in the Department's Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.	DEMP	During works.	Principal Contractor.
Part B Condition B19	Dangerous goods must be stored and handled strictly in accordance with: (a) all relevant Australian Standards; and (b) for liquids, the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Manual. In the event of inconsistency between the requirements of condition B19(a) and B19(b), the most stringent requirement must prevail to the extent of the inconsistency.	DEMP	During works.	Principal Contractor.

5.8.13. Traffic and Transport

Heavy vehicle travel and transport, including the requirements of TT1 to TT11, is managed as per the requirements of the Consent Part B Conditions B20 and B21.

Traffic and transport management is outlined in the:

- Traffic Management Plan, located in Appendix 5.
- DEMP required under Consent Part C, Condition C16.

5.8.14. Meteorological Monitoring

Meteorological monitoring is undertaken at LPS as per the Consent Part B Condition B22 and Condition P1.1 and M5 of EPL2122, and is outlined in [Section 5.8.10](#) and the:

- DEMP (Dust Management sub plan) required under Consent Part C, Condition C16.

This meteorological station complies with the requirements of the Approved Methods for Sampling and Analysis of Air Pollutants in NSW (DEC, 2007).

The station is capable of measuring meteorological conditions in accordance with NSW Industrial Noise Policy (EPA, 2000) or NSW Noise Policy for Industry (EPA, 2017).

The meteorological monitoring location is included on [Figure 5.](#)

5.8.15. Waste Management

Waste, including the requirements of SoC 'WM1' to 'WM5', will be managed in accordance with Consent Part B Conditions B23 to B27, and the requirements of EPL2122, as outlined in [Table 19](#).

Waste management for the demolition component of the Development is also outlined in the:

- DEMP required under Consent Part C, Condition C16.

As per the Consent Condition B23 and SoC 'WM3', all waste generated throughout the Development will be classified for disposal in accordance with the NSW EPA Waste Classification Guidelines Part 1: Classifying waste November 2014 and disposed of at and appropriately licenced facility. As per SoCs 'WM4' and 'WM5', waste streams will be managed in accordance with EPL 2122. Recycling and resource recovery activities will be managed by a licenced service provider.

In accordance with Consent Condition B24, no waste from outside of the approved development area will be received, stored, treated, processed, re-processed or disposed of within the approved development area.

Storage

As per the Consent Condition B25, waste generated by the Development will be secured and maintained within designated waste processing or storage areas at all times prior to disposal, re-use or recycling.

Tracking

As per SoC 'WM1', all waste shall be tracked in accordance with the PoEO (Waste) Regulation 2014.

A waste tracking system will be implemented for all waste leaving the site so as to track the waste from the site to the licenced disposal facility including the type and quantity of waste.

The waste tracking system will consist of the use of a site waste register to record each load of waste leaving the site to verify that each load of waste was disposed of at a licenced disposal facility.

The waste register will record the type of waste, the transport company, the truck registration, the disposal facility, and quantity of the waste.

Disposal, Reuse and Recycling

Prior to commencing, all waste types shall be identified including materials that can be recycled or salvaged for reuse.

Where practical, items that can be salvaged for reuse are removed from the structure either prior to or during the Development works.

During the course of the Development, waste will be segregated into streams to minimise contamination, maximise recycling and minimise materials going to landfill.

Metals will be taken offsite for recycling at a licenced facility, segregated as far as practical into like metals (e.g. ferrous, copper, brass, aluminium, etc). Clean concrete and brick will be crushed for reuse onsite. Asbestos contaminated materials will be disposed of in the onsite asbestos containment cell. All other waste will be taken offsite and disposed of at a licenced disposal facility.

In accordance with Consent Condition B26, any concrete confirmed to be impacted with PCB above acceptable levels as determined by the Site auditor will be disposed of at a licensed waste facility.

As per the Consent Condition B27, asbestos waste, asbestos containing materials and synthetic mineral fibre shall be disposed of at the onsite asbestos containment cell in accordance with the Asbestos Management sub Plan of the DEMP.

Waste related training and awareness

As per SoC 'WM2' all workers will undergo training to provide awareness of waste minimisation practices to be employed on the project which shall include:

- Waste to be segregated into like waste streams to minimise contamination and maximise recycling and minimise materials going to landfill.
- Metals shall be taken offsite for recycling at a licenced facility, segregated as far as practical into like materials (e.g. ferrous, copper, brass, aluminium, etc).
- Clean concrete and brick shall be crushed for reuse onsite.
- Where practical, materials / plant shall be recycled for reuse.

Table 19 Waste management measures

Condition or SoC	Requirement	Management measures	Timing	Responsibility
B23	All waste generated by the development must be classified in accordance with the Waste Classification Guidelines (EPA, 2014) and disposed of at appropriately licensed waste facilities unless subject to condition B27 unless otherwise permitted by an EPL.	This EMS. EPL2122. DEMP.	During works.	AGLM. Principal contractor.
B24	No waste from outside the approved development area must be received, stored, treated, processed, re-processed or disposed of within the approved development area except as expressly permitted by an applicable EPL, specific resource recovery order or exemption under the Protection of the Environment Operations (Waste) Regulation 2014.	Noted. EPL2122. DEMP.	During works.	AGLM Principal Contractor.
B25	Waste generated by the development must be secured and maintained within designated waste processing or storage areas at all times prior to disposal, re-use or recycling.	This EMS. DEMP.	During works.	AGLM Principal Contractor.
B26	Any concrete confirmed to be impacted with PCB above acceptable levels determined by the Site auditor must be disposed of at a licensed waste facility.	This EMS. DEMP.	During works.	AGLM Principal Contractor.
B27	Asbestos soils requiring disposal, asbestos containing materials, synthetic mineral fibre and other associated wastes authorised by the Site auditor must be disposed of at the asbestos disposal facility constructed within the Borrow Pit Area.	DEMP; Asbestos Management sub plan.	During works.	Principal Contractor.
WM1	A waste management plan for the project will be prepared prior to works commencing. The waste management plan will detail: – Statutory requirements for waste in NSW	This EMS. DEMP.	During works.	AGLM Principal Contractor.

	– Systems to sort and track the actual types and quantities of waste generated – Measures for waste segregation and minimising cross contamination of waste streams including the use of coded bins – Options for offsite reuse, reprocessing, recycling and energy recovery			
WM2	Awareness of waste minimisation practices will be included in the project induction.	This EMS and Section 4.6.2. DEMP.	During works.	AGLM Principal Contractor.
WM3	Waste will be classified, managed and disposed of in accordance with the Waste Classification Guidelines (EPA, 2014).	B23. This EMS. DEMP.	During works.	AGLM Principal Contractor.
WM4	Waste streams will continue to be managed in accordance with EPL 2122.	This EMS. EPL2122. DEMP.	During works.	AGLM Principal Contractor.
WM5	Recycling and resource recovery activities will continue to be managed by a licenced service provider.	B23, B24, B25. This EMS. DEMP.	During works.	AGLM Principal Contractor.

5.8.16. Social and Economic

Social and economic aspects, including the requirements of SoC SE1 to SE4, will be managed in accordance with [Table 20](#).

Table 20 Social and economic management measures

Condition or SoC	Requirement	Management measures	Timing	Responsibility
SE1	A Community and Stakeholder Engagement Strategy will be developed. The strategy will provide a method for: – Maintaining ongoing, regular and transparent communication with key stakeholders and the community – Managing project perceptions – Provide updates on ongoing industrial uses and other beneficial uses to be located at the LPS	Community and Stakeholder Engagement Strategy (AGLM, 2025). Note that this document is not a requirement of the Consent.	Prior to commencement.	AGLM.
SE2	A communication management plan will be developed in accordance with the Community and Stakeholder Engagement Strategy and implemented to define the specific requirements for engagement during delivery of the project with the following objectives: – To ensure that residents and stakeholders are notified in a timely manner about works activities and potential for impacts – Ensure accurate information is accessible, and enquiries and complaints are managed in a timely manner – To define the requirements for the complaints management system to be implemented	Community and Stakeholder Engagement Strategy	Prior to commencement.	AGLM.
SE3	Aligned with AGL's Reconciliation Action Plan (AGL, 2021) AGL has committed to prioritising opportunities for Aboriginal workers and procurement in its projects. This includes local and Aboriginal participation commitment in its tender documents which outline the sub-contracting, employment, training, Aboriginal and community contributions that contractors will need to deliver. Continuing engagement of local Aboriginal organisations through the Community Dialogue	Community and Stakeholder Engagement Strategy	During works.	AGLM.

	Group, this has been a successful approach in updating group members about the future of LPS.			
SE4	AGLM will continue to explore opportunities to deliver local community benefits, including exploring opportunities to memorialise the LPS through interpretation opportunities and photographic documentation of the LPS closure process. These opportunities will support local community values, identity, and pride.	Community and Stakeholder Engagement Strategy	During works.	AGLM.

5.9. Unexpected Finds Protocol

Where unanticipated contamination or unexpected finds may be uncovered on site, including, but not limited to:

- Underground storage tanks / pits,
- Asbestos lined infrastructure,
- Soil that is odorous, stained, discoloured, contains tar or contains asbestos,
- Buried waste,
- Potential human remains, and
- Heritage / Archaeological structures and/or artefacts,

work is to cease in the area of impact and the Site Supervisor must be notified. The Site Supervisor will then make the area safe until advice is sought from a suitably qualified person and/or the client. In the event potential human remains are found report to AGLM representative who will liaise with the relevant governing body and advise on actions.

5.10. Emergency Preparedness and Response

An emergency within AGLM can be defined as an unexpected or sudden event that poses a threat to the safety of people, the environment, and property within the facility. Emergencies can take many forms, such as fires, explosions, chemical spills, natural disasters, security breaches, and medical emergencies.

The key hazards identified at the development site are those documented in the development ERA risk register, including (but not limited to) spills, leaks, and emissions resulting in air, water, or land contamination, as well as unplanned water discharge from dam failure.

Pending the location of the emergency, construction or demolition, response will be conducted in line the Principal Contractor Emergency Response Management Plan (EPR) .

5.10.1. Activation of an Emergency

As per the Principal Contractors ERP, all air, land and water pollution incidents will be managed in line with the PIRMP, as per Section 5.10.2.

Non environmental related emergencies will be activated and managed as per Sections 9 and 10 of the ERP. Examples include but are not limited to:

- Fire and Explosion (Section 10.1 of the ERP)
- Fall from height (Section 10.7) and
- Confined Space Rescue (Section 10.10).

5.10.2. Pollution Incident Response Management Plan

A PIRMP has been prepared under the POEO Act, which addresses the environmental, human, and life safety aspects of pollution incidents within EPL 2122. The PIRMP applies to all AGLM employees, contractors, sub-contractors and visitors to the site and is required under the POEO Act.

The POEO Act requires that the PIRMP be activated immediately in the event of any actual or potential material harm to the environment.

For a pollution incident causing or threatening material harm to the environment, the person observing a pollution event is to contact the Environment and Approvals Manager - Transition.

If the pollution incident is determined to require the assistance of external emergency services (Hazmat, Fire and Rescue NSW) then the AGLM Communications Officer will contact such emergency services.

Pollution incidents causing or threatening material harm to the environment are to be notified immediately to the EPA, and other relevant authorities, as outlined in the PIRMP, as are determined to be necessary. Note that 'immediately' means promptly and without delay. The Environment and Approvals Manager, or delegate will notify external authorities and the Manager, Corporate Affairs (Transition) will notify the public of a pollution incident event at AGL Macquarie.

Communicating with neighbours and the local community is an important element in managing the response to a pollution incident, especially in cases where the incident may have any perception of impacting them.

In the event of a pollution incident which causes or threatens material harm to the environment, a scene assessment will be conducted by the Environment and Approvals Manager, or delegate and the potentially affected community will be determined and early warning issued accordingly. The Manager, Corporate Affairs (Transition) will contact the community via the following communication means: local radio broadcast, phone calls or by directly approaching neighbours if required. The community contact list is maintained by the Manager, Corporate Affairs (Transition).

6. Reporting

6.1. Internal Reporting

The Principal Contractor will provide regular reports to AGLM.

Full internal reporting requirements will be determined on a contract-by-contract basis. Reporting level of detail will be determined by the environmental risk and scale of the works proposed under the contract. Should the works scope change, the level of reporting required may also change.

6.2. External Reporting

As per Part D, Conditions D2 and D3 of the Consent, AGLM are required to report on compliance for the development. Compliance Reports for the development must be carried out in accordance with the Compliance Reporting Requirements outlined in the *Compliance Reporting Post Approval Requirements* (2020). They must be submitted to the DPHI by at intervals no greater than 52 weeks from the date of commencement of operation.

As per Condition R1 of EPL2122, AGLM must also submit an Annual Return to the EPA.

Table 21 Compliance reporting

Compliance Report	Timing	Minimum Frequency
Compliance Report	Reporting required for the duration of operation or as otherwise agreed by the Secretary.	Annually
Annual Return	Reporting required for the duration of the development.	Annually
Post-Decommissioning Compliance Report	Report to be submitted to the Planning Secretary within 12 weeks of completion of decommissioning	Single report only

7. Review and Improvement

7.1. Hazards, Near Misses, Non-Conformances, Incidents, and Non-Compliances

All environmental hazards, near misses, incidents, non-conformances and non-compliances will be entered into the AGLM incident management system 'MyHSE' and be reported in accordance with the applicable Development Consent and EPL conditions, and in line with the Incident, Near Miss and Hazard Management Procedure AGL-HSE-PRO-011.1.1.

Corrective or preventative actions are to be managed by the Corrective and Preventive Action Procedure AGLM-HSE-PRO-008.9.

7.1.1. Hazards and Near Misses

A hazard is defined as being something of a danger or risk, and a near miss is an unintentional event that could have caused a pollution incident, damage, injury or death, but was narrowly avoided.

Hazards and near misses are to be reported and documented, and appropriate mitigation and management measures determined for both, as awareness can prevent a more serious event from occurring in the future.

7.1.2. Non-Conformances

A non-conformance is a failure to conform to the commitments as AGLM requirements outlined in policies, procedures, plans and permits.

Non-conformances are to be reported and documented, and appropriate mitigation and management measures determined for both, as awareness can prevent a more serious event from occurring in the future.

7.1.3. Incidents and Non-Compliances

An incident is an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance.

A non-compliance is an occurrence, set of circumstances or development that is a breach of the conditions of an approval, such as the Consent, EPL and EPBC.

Where incidents result in pollution, they must be reported to the EPA and DPHI in accordance with the requirements of Part D Condition D5 of the Consent, EPL No. 2122 Condition R2, and Section 148 of the POEO Act.

Incidents determined to represent a potential non-compliance will be documented in a written report and submitted to DPHI and the EPA within seven days of the incident notification.

As per Part D, Condition D4 of the Consent, within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must:

- (a) be in writing;
- (b) submitted via the NSW planning portal (Major Projects);
- (c) identify the development (including the development application number and name);
- (d) set out the condition of this consent that the development is non-compliant with;
- (e) why it does not comply;
- (f) the reasons for the non-compliance (if known); and
- (g) what actions have been undertaken, or will be undertaken; and when, to address the non-compliance.

As per Part D, Conditions D5 and D6 of the Consent, The Applicant must notify the Department within 24 hours of becoming aware of an incident. The notification must be made via the NSW planning portal (Major Projects) and address details of the incident including:

- (a) date, time and location;
- (b) a brief description of what occurred and why it has been classified as an incident;
- (c) a description of what immediate steps were taken in relation to the incident; and
- (d) identifying a contact person for further communication regarding the incident.

A non-compliance which has been notified to the Department as an incident does not need to also be notified as a non-compliance.

Incidents are to be reported as per Conditions R2 of EPL2122. Condition R2 requires notification to all relevant authorities of incidents causing, or threatening to cause material harm to the environment, immediately after becoming aware of the incident, by phoning 131555. A written report must then be provided to the EPA within 7 days of the date on becoming aware of the incident.

7.2. Enquiry, Complaint and Dispute Management

An enquiry is a request of information on a matter whilst a complaint is a statement that something is unsatisfactory or unacceptable. A dispute is a disagreement between two or more parties.

Complaints are to be recorded as per Condition M7 of EPL 2122. The record must include details of the following:

- (a) the date and time of the complaint;
- (b) the method by which the complaint was made;
- (c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- (d) the nature of the complaint;
- (e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- (f) if no action was taken by the licensee, the reasons why no action was taken.

The record must be retained for a period of at least 4 years.

AGLM is committed to effectively manage complaints and resolve disputes for all existing and planned developments.

Community complaints can be made through the following:

- AGL Complaints and Enquiries Hotline: 1800 039 600
- AGL website: [AGL Macquarie | About AGL](#)
- Mail: AGL Community Complaints and Enquiries
 - Locked Bag 14120 MCMC
 - Melbourne, Vic 8001

If a complaint is received, or feedback is received onsite, or directly to a Contractor, the Contractor's environmental representative will not respond to the public or other stakeholders but will immediately forward details of complaints onto the AGLM Manager Environment and Approvals, who will assign a Case Manager from the Government and Community Relations Team. The Case Manager will contact the complainant or enquirer and make a preliminary assessment (level of feedback required) of the type of feedback needed to resolve the issue. AGLM target feedback to the complainant or enquirer within five days for standard feedback, and thirty days for complex feedback.

Where the complainant or enquirer does not consider their feedback resolved, AGLM will escalate the issue to the Senior Manager of Government & Community Relations, who will act as the Case Manager and will respond to urgent, standard, and complex feedback. Where required, the Case Manager may consult with and bring in an independent third-party (e.g. technical expert, mediator) to assist with the investigation or resolution. If this does not lead to resolution, the complainant or enquirer may refer the matter to an independent external body (e.g. NSW Land and Water Commissioner, State Planning Departments, Tribunals and Courts), and AGLM will cooperate with the requirements and processes dictated by the external body.

The Principal Contractor will support AGLM in investigating and addressing complaints. Contractors must include a complaint and enquiry management procedure within their management plans or strategies, which should outline actions to be taken when a complaint or enquiry is received, and the roles and responsibilities of the core team requirement to implement the procedure.

7.3. Inspections and Auditing

7.3.1. Environmental Inspections

Environmental inspections are driven by the environment risk in each area, with higher risk areas receiving more regular oversight.

The Environmental Team is responsible for reviewing the risks and inspection frequency for the development and updating the Environment Inspection Checklist. Non-conformances and corrective actions from the Environment Inspection Checklist are recorded and entered into myHSE as an incident or hazard. A Corrective or Preventative Action for all non-conformances and non-compliances is to be implemented as soon as practicable in accordance with the Corrective and Preventative Actions Procedure AGLM-HSE-PRO-008.9.

7.3.2. External Environmental Audits

As per Part D Condition D1 of the Consent, Independent Environmental Audits (IEAs) of the development must be conducted and carried out in accordance with the *Independent Audit Post Approval Requirements* (2020) or its latest version published on the Department's website or as agreed by the Planning Secretary.

The Manager Environment and Approvals is responsible for assisting in providing access to key personnel, site areas, and documentation as required. All actions and non-compliances are to be recorded and reviewed to ensure action is taken, and responses must be submitted to the Planning Secretary.

The frequency of independent audits will follow the requirements of the Independent Audit Post Approval Requirements listed in **Table 22**.

Table 22 Independent audit frequency

Development phase	Initial independent audit	Ongoing independent audit intervals
Construction	Within 12 weeks of commencement	At intervals no greater than 26 weeks from initial audit (or as agreed to by Secretary)
Operation	Within 26 weeks of commencement	At intervals no greater than 3 years (or as agreed to by Secretary)
Closure/Rehabilitation	Within 52 weeks from notifying of suspension/ceasing of operations	At intervals no greater than 1 year (or as agreed to by Secretary)

7.4. Cumulative impacts

Currently there are no cumulative related impacts associated with the development. As per the SoC CI1, management measures will be reviewed and amended, where required, if other developments commence in proximity to the demolition.

7.5. Adaptive management and continual improvement

Adaptive management and continual improvement will be approached as an iterative process of:

‘Plan, Do, Check, Act’

‘Planning’ and ‘doing’ will be achieved through the implementation of this EMS during the development on a day-to-day basis.

‘Checking’ will be done systematically via the AGLM internal and external audit program, Management Reviews and through formal and informal inspections.

'Acting' will be guided by the outcomes of checks and addressing the corresponding recommendations and opportunities for improvement.

In the development's day-to-day activities, improvements will be made frequently. In relation to this EMS, adaptive management and improvement will be formalised by returning to the start of the Plan, Do, Check, Act improvement cycle - setting or adjusting objectives and planning to meet them.

The outcomes of monitoring, inspections, compliance management and risk treatment activities will be reviewed to identify opportunities for improvement of the EMS and associated subplans.

The continuous improvement process will include:

- Identifying opportunities to improve environmental management measures and performance.
- Identify the causes of any non-compliances with the relevant criteria.
- Develop an effective plan to address any identified non-compliances.
- Determine the effectiveness of applied mitigation measures, and whether additional and alternative approaches may be required.
- Document any changes to work procedures undertaken to control non-compliances and/or improve efficiencies.
- Compare work process results with the relevant objectives and targets

Refer to Sections 4.2.3 and 4.4 for risk evaluation and the AGLM revision process.

7.6. Change management

Changes are subject to the AGLM change management process. The Site Manager is responsible for reviewing any change management forms submitted and ensuring that the adaptive management and continual improvement process outlined above is applied.

7.7. Publishing of Data

As per Part D Condition D8 of the Consent, within 12 months of the commencement of development the following information and documents must be publicly available on the development website as they are obtained, approved or as otherwise stipulated within the conditions of this consent:

- (a) the documents listed in condition A2(c) of this consent;
- (b) this consent and the EPL;
- (c) all approved environmental management documents required under the conditions of this consent;
- (d) the proposed staging plans for the development if the development is to be staged;
- (e) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any environmental management documents approved under the conditions of this consent;
- (f) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved environmental management documents;
- (g) a summary of the current phase and progress of the development;

- (h) contact details to enquire about the development or to make a complaint;
- (i) a complaints register, updated monthly;
- (j) the Compliance Reporting of the development in accordance with the Compliance Reporting Post Approval Requirements (May 2020);
- (k) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report;
- (l) any other matter required by the Planning Secretary; and
- (m) kept such information up to date.

7.8. Record Keeping

In accordance with Condition M1.2 of EPL779 all records required to be kept by this licence must be:

- (a) in a legible form, or in a form that can readily be reduced to a legible form;
- (b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- (c) produced in a legible form to any authorised officer of the EPA who asks to see them.

7.9. Compliance management

A register or table of environmental compliance requirements will be prepared to assist with monitoring and recording compliance with requirements. The register will:

1. Provide an identification number for each compliance requirement.
2. Identify the requirements in all Development Consent conditions, EPL conditions and any other conditions or requirements that must be complied with during the planning and delivery of works.
3. Detail the compliance monitoring methods to be used to assess compliance with each compliance requirement.
4. Detail the type of data or evidence that is to be collected to assess whether compliance has been achieved.

7.10. Strategy, Management Plan and Sub-Plan Revision

In accordance with the requirements of Part D, Condition D7 of the Consent, AGLM will review and, if necessary, revise this EMS and associated sub plans within three months of the following circumstances:

- (a) the submission of an incident report under Conditions D5 or D6
- (b) the submission of a compliance report under Condition D3
- (c) the submission of an Independent Audit Report under Condition D1
- (d) the approval of any modification to the conditions of this consent (unless the conditions require otherwise), or
- (e) notification of a change in the development phase under Condition A10.

The suitability of the existing environmental management documents required under this consent must be reviewed. If the review concludes an update to an environmental management document is required, or to comply with a directive, the relevant environmental management document must be revised and submitted to the Planning Secretary for approval within three months of the review.

8. References

- AECOM 2025, Liddell Future Land Use and Enabling Works Aboriginal Cultural Heritage Management Plan
- AECOM 2025, Liddell Future Land Use and Enabling Works Stage 1 Water Management Plan
- AGL, 2023, HSE Policy
- AGLM, 2025, Liddell Future Land Use and Enabling Works Liddell Ash Dam Bushfire Management Plan
- AGLM, 2025, Liddell Future Land Use and Enabling Works Community and Stakeholder Engagement Strategy
- AGLM, 2022, Corrective and Preventative Actions Procedure (AGLM-HSE-PRO-008.09)
- AGLM, 2022, Environment Communications Procedure (AGLM-HSE-PRO-008.06)
- AGLM, 2022, Environment Training (AGLM-HSE-FRM-008-05)
- AGLM, 2024, Incident, Near Miss and Hazard Management Procedure (AGL-HSE-PRO-011.1.1)
- AGLM, 2019, Environmental Audits and Inspections (AGLM-HSE-FRM-008.08.3)
- AGLM, 2025 Stakeholder and Communications Management Plan
- CMA, 2025, Liddell Future Land Use and Enabling Works Asbestos Management Sub Plan
- CMA, 2025, Liddell Future Land Use and Enabling Works Stage 1 Demolition Environmental Management Plan
- CMA, 2024, Liddell Future Land Use and Enabling Works Emergency Response Management Plan
- CMA, 2025, Liddell Future Land Use and Enabling Works Onsite Traffic Management Plan (Traffic Control Plan)
- GHD, 2023a, Liddell Future Land Use and Enabling Works – Environmental Impact Statement
- GHD, 2024, Liddell Future Land Use and Enabling Works Response to Submissions
- GHD, 2024, Liddell Future Land Use and Enabling Works Amendment Report
- Jacobs, 2025, Liddell Future Land Use and Enabling Works Dust Management Sub Plan
- Jacobs, 2025, Liddell Future Land Use and Enabling Works Noise and Vibration Management Plan
- Jacobs, 2025, Liddell Future Land Use and Enabling Works Traffic Management Plan
- Kleinfelder, 2025, Liddell Future Land Use and Enabling Works Biodiversity Management Plan
- Ramboll, 2025, Liddell Future Land Use and Enabling Works Soil and Water Management Sub Plan

Appendix 1 – DPHI approval for staging of plans

Matthew Parkinson
Manager Environment and Approvals
AGL Macquarie PTY Limited

03/04/2025

Liddell Future Landuse Project – Approval to Stage Management Plans

Dear Mr. Parkinson

I refer to your letter dated 27 March 2025, seeking approval for the staging of management plans in accordance with Conditions A19, A20, and A21, Schedule 2 of the consent for the Liddell Future Land Use (SSD-24937520).

The Department also notes that AGL Macquarie PTY Limited has agreed with the NSW Environment Protection Authority (EPA) that water management measures, following the completion of demolition, may require revisions prior to commencing works for Stage 2 and Stage 3. These revisions will depend on the findings from the additional assessments required by Conditions C1 to C8, Schedule 2.

Further to your request, I understand that the site requires preparation for blast events involved in demolition. In accordance with Part A, Condition A21(b); and the staging of the Blast Management sub-plan is also requested.

Accordingly, as nominee of the Planning Secretary, I approve the staging of the management plans as outlined in your request letter.

If you wish to discuss the matter further, please contact Charissa Pillay on 02 99955944.

Yours sincerely



Stephen O'Donoghue
Director
Resource Assessments
As nominee of the Planning Secretary

Appendix 2 – EMS Consultation and DPHI Approval

Our ref:

SSD-24937520-PA-7

Matthew Parkinson
Manager Environment and Approvals
AGL Macquarie Pty Limited
New England Highway
Muswellbrook, NSW, 2333

09/05/2025

Liddell Future Landuse Project - Environment Management Strategy

Dear Mr. Parkinson

Reference is made to your post approval matter, SSD-24937520-PA-7, Environment Management Strategy, submitted as required by Schedule 2, Condition B of SSD-24937520-PA-7 as modified (the consent) to the NSW Department of Planning, Housing and Infrastructure (NSW Planning).

NSW Planning has reviewed the Environmental Management Strategy and considers more information is required to satisfy the condition of consent.

Under the provisions of Schedule 2, Condition A3 of the consent, I, as nominee of the Planning Secretary, request that an amended Environment Management Strategy be submitted as a response to this request for information (RFI-83701456) addressing the comments attached in the Review Table by 29 May 2025 (or as otherwise agreed by the Planning Secretary).

Should you wish to discuss the matter further, please contact Charissa Pillay, (Senior Planning Officer) on 02 99955944 or email charissa.pillay@planning.nsw.gov.au

Yours sincerely



Wayne Jones
Team Leader - Post Approval
Resource Assessments

As nominee of the Planning Secretary

Documents: Environmental Management Strategy"

Revision: Rev 01 April 2025

Reviewed: Charissa Pillay May 2025

Schedule

Schedule	Sufficient (Yes/No/ Partial)	Document reference and comment	Action Required	Company Response	DPHI Response
Schedule 2					
Environmental management strategy					
B1. An environmental management strategy must be prepared for the development. The strategy must:					
(a) be submitted for approval to the Planning Secretary prior to the commencement of construction;	-	-	-	-	
(b) describe the environmental management context and outline the scope of the strategy, including:	No	There is no Table of contents in the EMS.	Tabulate the strategy detail into content.	A Table of Contents, with appropriate hyperlinks, exists in the document, and starts from the second page – no action.	
(i) the relationship of the strategy to other environmental management documents;	Yes	Section 1 addresses the requirement.	-	-	
(ii) relevant statutory criteria, performance measures or operational requirements including conditions of consent and other legislative or regulatory licences, guidelines, policies or standards;	Yes	Section 3 addresses the requirement.	-	-	
(iii) sensitive receivers;					
(iv) consideration of the consultation outcomes from the documents listed in condition A2(c) where relevant or other environmental management documents required by this consent; and	Yes	Section 4.5 addresses the requirement.	-	-	
(v) detailed plans of the development location and development, sensitive receivers and environmental monitoring locations;	No	The EMS does not include the environmental monitoring locations.	Revise the EMS to include all environmental monitoring locations undertaken by the project.	Monitoring locations added to Figure 5 (new figure). The relevant monitoring sections have been updated to	

Documents: Environmental Management Strategy"

Revision: Rev 01 April 2025

Reviewed: Charissa Pillay May 2025

Schedule

				include the cross link to Figure 5.	
(c) list the role and responsibility of all key personnel and contractors involved in the environmental management of the development;	Yes	Section 4 addresses the requirement.	-		
(d) include an environmental risk assessment of the development activities and specific risk management controls and mitigations to:					
(i) comply with statutory requirements, limits or performance measures and criteria;	No	Appendix 3 does not include what are the statutory requirements, limits or performance measures and criteria relevant for each risk.	Discuss the statutory requirements, limits or performance measures and criteria relevant for each risk.	Appendix 3 has been updated.	
(ii) manage the predicted impacts identified in the documents listed in condition A2(c); and	No	It is unclear if Appendix 3 contains all the risk identified in the EIS	Provide detail to confirm that risks discussed in Appendix 3 are abstracted from the EIS	Table 6 is the SoC from the EIS – for which the risk assessment is based on for the Stage 1 works. Additional risk assessment context added in to Section 4.2.	
(iii) manage any other environmental risk or impact that has been subsequently identified after the documents in condition A2(c) were submitted;	No	Appendix 3 identifies the risk with mitigations however the risk remains high after the controls are implemented...why? What is level 3, there are no details on the risk levels	Discuss how the risk level was calculated. Include mitigations that will reduce/manage the risk	Additional risk assessment context added in to Section 4.2. Aspects remaining with high level risks are in Table 9. Those risks have been approved by the AGL	

				representative with the appropriate delegation and have no further treatment options.	
(e) include processes to review the environmental risk assessment annually and determine whether the measures implemented to manage the risks are effective;	Yes	Section 4.2.3 addresses the requirement.	-		
(f) include an adaptive management process to be implemented if the review of the risk assessment indicates that any measure that has been implemented is not effective in managing the identified risk(s) and a process to update the measure;	No	Section 7.5 discusses an adaptive process for the EMS and not the review of the risk assessment.	Provide an adaptive management process to be implemented if the review of the risk assessment indicates that any measure that has been implemented is not effective in managing the identified risk(s) and a process to update the measure	All required sections exist in the EMS, however they have now been cross referenced to each other: sections 4.2.3 (risk review and evaluation), 4.4 (AGLM revision process) and 7.5 (adaptive management). Additional context has been added.	
(g) include a clear plan depicting all the monitoring to be carried out under the conditions of this consent;	No	There is no plan to illustrate all monitoring carried out.	Illustrate on a map a clear plan depicting all the monitoring to be carried out under the conditions of this consent	Monitoring locations added to Figure 5 (new figure). The relevant monitoring sections have been updated to include the cross link to Figure 5.	

(h) include processes to report and review environmental performance that:	Yes	Section 4.4 addresses the requirements.	-		
(i) provides for an annual review of the environmental risk assessment with consideration of the evaluation findings;	Yes	Section 4 addresses the requirement.	-		
(ii) respond to any non-compliance and/or incident;	Yes	Section 7.2 addresses the requirement.	-		
(iii) address the findings of any audit undertaken for the development;	Yes	Section 7.3 addresses the requirement.			
(iv) provide for adaptive management mechanisms that enable continuous improvement; and	Yes	Section 7.5 addresses the requirement.	-		
(v) keep the local community and relevant agencies informed about the operation and environmental performance of the development;	Partial	Table 6 refers to section 0 to address the condition. Section 4.8 refers to the strategy and Community Consultative Committee. It is unclear if these forums will keep the local community informed about the operation and environmental performance of the development.	Revise the section to clearly discuss how the project will keep the local community informed about the operation and environmental performance of the development	4.8.2 discusses external communications, including the AGLM Community and Stakeholder Engagement Strategy. Text has been updated to include appropriate means of communications. Reference of 0 removed and references corrected in Table 6.	
(i) include procedures to:					
(i) receive record, handle and respond to complaints;	Yes	Section 7.2 addresses the requirement	-		

(ii) resolve any disputes that may arise during the course of the development; and	Yes	Section 7.2 addresses the requirement	-		
(iii) respond to emergencies.	No	It is unclear That are the response actions to address emergencies	Discuss the procedure to respond to emergencies.	Section 5.10 states that the site Emergency Response Plan and Pollution Incident Response Management Plan are to be followed. Additional details have been included in this section from both documents.	
B2. Construction must not commence until the environmental management strategy is approved by the Planning Secretary.	No	There is no commitment to address the requirement.	Include a commitment to not commence until the environmental management strategy is approved by the Planning Secretary.	Added a new Section 5.2.	
B3. The environmental management strategy, as approved by the Planning Secretary, must be implemented for the development.	No	There is no commitment to address the requirement.	Include a commitment that the environmental management strategy, as approved by the Planning Secretary, will be implemented for the development	Added a new Section 5.3.	
Schedule 5	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response	
Aboriginal heritage Protection of Aboriginal Objects					

Documents: Environmental Management Strategy"

Revision: Rev 01 April 2025

Reviewed: Charissa Pillay May 2025

Schedule

B4. The Applicant must not directly or indirectly harm the Aboriginal objects AHIMS 37-2-6560 and 37-2-6559, or any Aboriginal objects located outside the approved development area.	Yes	Table 13 addresses the requirement.	-		
B5. Prior to carrying out any development that could directly or indirectly harm the Aboriginal objects AHIMS 37-2-6561 and 37-2-6284, the Applicant must salvage the Aboriginal objects via surface collection and relocate the items that would be impacted to a suitable alternative location, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010), or its latest version.	Yes	Table 13 addresses the requirement.	-		
Part D					
Compliance Non-compliance notification D4. Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must: (a) be in writing; (b) submitted via the NSW planning portal (Major Projects); (c) identify the development (including the development application number and name); (d) set out the condition of this consent that the development is non-compliant with; (e) why it does not comply; (f) the reasons for the non-compliance (if known); and (g) what actions have been undertaken, or will be undertaken; and when, to address the non-compliance.	Yes	The plan includes the requirement.	-		
Incident notification D5. The Applicant must notify the Department within 24 hours of becoming aware of an incident. The	Yes	The plan includes the requirement.	-	-	

Documents: Environmental Management Strategy"

Revision: Rev 01 April 2025

Reviewed: Charissa Pillay May 2025

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notification must be made via the NSW planning portal (Major Projects) and address details of the incident including: (a) date, time and location; (b) a brief description of what occurred and why it has been classified as an incident; (c) a description of what immediate steps were taken in relation to the incident; and (d) identifying a contact person for further communication regarding the incident.					
D6. The Applicant must provide the Department with a subsequent incident report in accordance with Appendix 6 (Incident Notification and Reporting Requirements).	Yes	The plan includes the requirement.	-	-	
Revision of environmental management documents					
D7. Within three months of the following events: (a) the submission of an incident report under conditions D5 or D6; (b) the submission of a compliance report under condition D3; (c) the submission of an Independent Environmental Audit under condition D1; (d) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or (e) notification of a change in the development phase under condition A10; The suitability of the existing environmental management documents required under this consent must be reviewed. If the review concludes an update to an environmental management document is required, or to comply with a directive, the relevant environmental management document must be revised and submitted to the Planning Secretary for approval within three months of the review.	Yes	Section 7 addresses the requirement.	-		
Access to information D8. Within 12 months of the commencement of development under this consent until the completion	Yes	Section 7.7 addresses the requirement.	-		

Documents: Environmental Management Strategy"

Revision: Rev 01 April 2025

Reviewed: Charissa Pillay May 2025

Schedule

of all rehabilitation required under this consent, the following information and documents must be publicly available on the development website as they are obtained, approved or as otherwise stipulated within the conditions of this consent: (a) the documents listed in condition A2(c) of this consent; (b) all current statutory approvals for the development; (c) all approved environmental management documents required under the conditions of this consent; (d) the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged; (e) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any environmental management documents approved under the conditions of this consent; (f) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved environmental management documents; (g) a summary of the current phase and progress of the development; (h) contact details to enquire about the development or to make a complaint; (i) complaints register, updated monthly; (j) the Compliance Reporting of the development in accordance with the Compliance Reporting Post Approval Requirements (May 2020); (k) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report; (l) any other matter required by the Planning Secretary; and (m) kept such information up to date.					
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Documents: Environmental Management Strategy”

Revision: Rev 01 April 2025

Reviewed: Charissa Pillay May 2025

Schedule

Post Approval Review
Liddell Future Land Use
(SSD-24937520-PA-)

General Comments	Action Required	Company Response	Company Response (XX/XX/XX)	
Other Agency Comments	Action Required	Company Response	Company Response (XX/XX/XX)	

Appendix 3 – Environmental Risk Assessment

FY 25 Liddell Stage 1 Environmental Risk Assessment

Risk Event	Statutory Requirements	Performance Criteria / Limits / Criteria	Risk Owner	Cause(s)	Consequence(s)	Controls	Residual Risk Rating	Residual Consequence	Residual Likelihood	Residual Score	Relevant Management Plan
Unauthorised discharge to surface water	SSD24937520: Conditions B13, B14, B15 EPL2122: Conditions L1.1, L3.4, M2, O1,	SSD24937520 Table 3 - Performance Measures. EPL2122: L3 - Limit Conditions, M2 - Requirement to monitor concentration of pollution discharged. Table 10 of the Environmental Management Strategy (EMS): No adverse impacts or environmental consequences to groundwater, surface water and aquatic ecosystems as a result of the development outside those predicted in the environmental assessment documents listed in condition A2(c) of the consent. No complaints related to water quality. Refer to the Water Management Plan, and Demolition Environmental Management Plan (DEMP) for specific performance criteria aainst the objectives. SSD24937520 Table 3 - Performance Measures.	AGLM	Overflow of sediment basin or containment area - less than adequate (LTA) basin sizing, LTA pumping, sediment build up, extreme weather event. Potential hydrocarbon or chemical spill. Overflow/seepage of ash dam. Chemical and hydrocarbon bunding/storage doesn't meet the requirements. LTA inspections and maintenance. LTA spill response.	Environmental incident from spill, overflow or seepage. Regulatory non-compliance (including penalty infringement notice (PIN)).	Removing unnecessary chemicals and hydrocarbons from site (to de-risk); secondary control basins (ie Oil and Grit Trap) to capture spill material before release to environment; Ash Dam seepage - pollution reduction study on the licence reducing requirement for regulatory involvement; EPL 2122 - authorised discharges in line with approved EPL criteria. Appropriate sizing, inspections and maintenance of sediment basins. Appropriate storage and bunding of chemicals and hydrocarbons in accordance with substance SDS Management plans and procedures (e.g. Erosion and sediment control plans).	High	Level 3	Possible	14	EMS, Water Management Plan (WMP), DEMP (Soil&Water MsP), Erosion & Sediment Control Plan (ESCP).
Unauthorised discharge to ground water	SSD24937520: Conditions B13, B14, B15 EPL2122: Conditions L1.1, L3.4, M2, O1,	SSD24937520 Table 3 - Performance Measures. EPL2122: L3 - Limit Conditions, M2 - Requirement to monitor concentration of pollution discharged. Table 10 of the Environmental Management Strategy (EMS): No adverse impacts or environmental consequences to groundwater, surface water and aquatic ecosystems as a result of the development outside those predicted in the environmental assessment documents listed in condition A2(c) of the consent. No complaints related to water quality. Refer to the Water Management Plan, and Demolition Environmental Management Plan (DEMP) for specific performance criteria against the objectives. SSD24937520 Table 3 - Performance Measures.	AGLM	Overflow of sediment basin or containment area - less than adequate (LTA) basin sizing, LTA pumping, sediment build up, extreme weather event. Potential hydrocarbon or chemical spill. Overflow/seepage of ash dam. Chemical and hydrocarbon bunding/storage doesn't meet the requirements. LTA inspections and maintenance. LTA spill response.	Environmental incident from spill, overflow or seepage. Regulatory non-compliance (PIN).	Removing unnecessary chemicals and hydrocarbons from site (to de-risk); secondary control basins (ie Oil and Grit Trap) to capture spill material before release to environment; Ash Dam seepage - pollution reduction study on the licence reducing requirement for regulatory involvement; EPL 2122 - authorised discharges in line with approved EPL criteria. Appropriate sizing, inspections and maintenance of sediment basins. Appropriate storage and bunding of chemicals and hydrocarbons in accordance with substance SDS Management plans and procedures (e.g. Erosion and sediment control plans). GDVA process.	Moderate	Level 3	Unlikely	11	EMS, WMP, DEMP (S&W MsP), ESCP.
Authorised discharges exceed discharge criteria (technical non-conformance)	SSD24937520: Conditions B13, B14, B15 EPL2122: Conditions L1.1, L3.4, M2, O1	SSD24937520 Table 3 - Performance Measures. EPL2122: L3 - Limit Conditions, M2 - Requirement to monitor concentration of pollution discharged. Table 10 of the Environmental Management Strategy (EMS): No adverse impacts or environmental consequences to groundwater, surface water and aquatic ecosystems as a result of the development outside those predicted in the environmental assessment documents listed in condition A2(c) of the consent. No complaints related to water quality. Refer to the Water Management Plan, and Demolition Environmental Management Plan (DEMP) for specific performance criteria against the objectives.	AGLM	Analytes (e.g pH, electrical conductivity etc.) less than or greater than approval criteria limits.	Regulatory non-compliance (PIN). Impact on localised/operation environmental area.	Chemical/hydrocarbon storage will be compliant with the requirements of the site and product SDS; removing unnecessary chemicals and hydrocarbons from site (to de-risk). Approvals with discharge limits and criteria. Monitoring and reporting.	Moderate	Level 3	Unlikely	11	EMS, WMP, DEMP (S&W MsP), ESCP.
Emissions to the air (dust & air quality)	SSD24937520: Conditions B6, B7, B22 EPL2122: Conditions L2.2, L5, O1, O3	EPL2122: L5.1 - Potentially offensive odour Table 10 of the EMS: Development undertaken generally in accordance with the predictions specified in the environmental assessment documents listed in condition A2(c) of the consent.	AGLM	Fugitive dust from surfaces, e.g. dust generation from vehicle/plant movements. Emissions from combustion engines (eg. diesel fumes, etc). LTA air quality and dust controls when crushing rock in borrow pit, or when mechanical and blast felling.	Regulatory non compliance (PIN). Human health & ecological risk. Reputation damage to AGL as community stakeholder or around technical expertise. Directors/officers found individually liable for regulatory breaches.	Site entry and exit controls including wheel washes and rumble grids as required; water carts and manual sprays in place to dampen and minimise dust generation on roadways and surfaces; operating of machinery and equipment in a proper and efficient manner; carrying out routine maintenance on plant and vehicles; reduce and/or cease operations in adverse weather; weather forecasting tool (4 day lookahead) to prepare for adverse weather/dust events; real time dust monitoring and early warning alarm system. Adequate assessment of goods and services under AGL Procurement policies and procedures. Pre use inspections. Daily inspections. SWMS for	High	Level 3	Possible	14	EMS, DEMP (Dust Management sub plan (DMP)).
Unauthorised acceptance of waste, and/or disposal or storage of waste on site	SSD24937520: Conditions B23, B24, B25, B26, B27 EPL2122: Conditions L4, O1, O4, O6, O7	EPL2122: L4.1 - Waste, L4.3 -Waste Table 10 of the EMS: No incidents, non-compliances or complaints related to waste, hazardous materials or asbestos. Also refer to the DEMP for additional performance criteria against the objectives.	AGLM	Material/waste brought to site by contractors, organics for rehab contain unauthorised material/waste. Other materials brought to site. Unauthorised/illegal dumping on site. Absence of consent and/or EPL approval to accept material/waste.	Regulatory action (PIN). Harm to the environment. Contamination of site.	Stringent procurement processes to award reputable and licensed contractors & include relevant contract clauses; project waste tracking; Site security protocols, including cameras and physical barriers (fences, gates); Site induction and training regarding expectations and obligations regarding waste (and enviro generally); Development consent and EPL	Moderate	Level 3	Unlikely	11	EMS, DEMP.
Unauthorised removal of waste from site (classification/disposal method)	SSD24937520: Conditions B23, B24, B25, B26, B27 EPL2122: Conditions L4, O1, O4, O6, O7	EPL2122: L4.1 - Waste, L4.3 -Waste Table 10 of the EMS: No incidents, non-compliances or complaints related to waste, hazardous materials or asbestos. Also refer to the DEMP for additional performance criteria against the objectives.	AGLM	Lack of ID of waste. Lack of tracking of waste. Lack of appropriate licences to remove waste from site / accept waste at the correct disposal facility.	Regulatory action (PIN). Harm to the environment. Human health impacts (eg. exposure to hazardous materials).	Stringent procurement processes to award reputable and licensed contractors & include relevant contract clauses; project waste tracking; Site induction and training regarding expectations and obligations regarding waste (and enviro generally); Hazardous materials audit; EPL approval to remove specified waste from site, where and how.	Moderate	Level 3	Unlikely	11	EMS, DEMP.
Unauthorised impact to biodiversity (BCD & EPBC) - non-approved disturbance or impact, or, disturbance and impacts to areas approved for disturbance without appropriate controls.	SSD24937520: Conditions B28, B29, B30, B31, B32, B33, B34 EPBC 2022/09330	Table 10 of the EMS: Credits retired as specified. No incidents, non-compliances or complaints related to biodiversity. Refer to the Biodiversity Management Plan for specific performance criteria against the objectives.	AGLM	Unauthorised clearing of vegetation. Lack of appropriate clearing. Failure to delineate limits of clearing. Direct and indirect project impacts. Deliberate/negligent non-approved disturbance and/or impact. Failure to conduct or poorly conducted pre clearance surveys.	Regulatory action (PIN). Harm to the environment.	Obtaining consent to disturb impact vegetation and/or fauna; Survey and delineate limits of clearing for each project; Site induction and training regarding Enviro & Reg expectations and obligations; Relevant policies and site-specific procedures; Site mapping regarding biodiversity classification; Engaging suitably qualified experts to undertake due diligence assessments; Ground and vegetation disturbance approval (GVDA) permitting process; Communications plan to formalise and	Moderate	Level 3	Unlikely	11	Biodiversity MP (BioMP) including Microbat Management Plan (MMP) and Habitat Relocation Plan (HRP). EMS inc Traffic Management Plan (TMP). DEMP.
Unauthorised impact to cultural heritage Aboriginal objects AHIMS 37-2-6560 and 37-2-6559 or AHIMS 37-2-6561 and 37-2-6284.	SSD24937520: Conditions B4, B5	Table 10 of the EMS: No incidents, non-compliances or complaints related to Aboriginal heritage and Non-Aboriginal (Historic) Heritage.	AGLM	Unauthorised disturbance of indigenous heritage items. Failure to delineate limits of disturbance. Surveys fail to identify artifacts and cultural sites. Deliberate/negligent non-approved disturbance and/or impact. Direct and indirect project impacts. Significant incident on site (e.g. dam failure, uncontrolled fire).	Regulatory action (PIN). Reputation impact (damage to local indigenous relationships).	Site induction and training regarding Enviro & Reg expectations and obligations; Cultural heritage assessments and surveys; Consultation with Registered Aboriginal Parties (RAPs) for each project (undertaken in the EIS phase and ACHMP preparation); Conduct works in accordance with the Cultural Heritage Code of Practice; Appointment of suitably qualified consultant to conduct due diligence assessments; Demarcation of approved disturbance areas; Cultural Heritage Management Plan approved for development. Demarcation of areas with known Aboriginal objects AHIMS 37-2-6560 and 37-2-6559. Unexpected finds protocols. Prior to disturbance, salvage AHIMS 37-2-6561 and 37-2-6284.	Moderate	Level 3	Unlikely	11	EMS, Aboriginal Cultural Heritage MP (ACHMP).
Non-compliance with Biosecurity Act (feral pests, noxious weeds, veg management)	SSD24937520: Conditions B28, B29, B30, B31, B32, B33, B34 EPBC 2022/09330	Table 10 of the EMS: No incidents, non-compliances or complaints related to biodiversity. Refer to the Biodiversity Management Plan for specific performance criteria against the objectives.	AGLM	Inherited areas with priority weed infestations. Infestation with lack of access to manage priority weeds. Failure to manage priority weed infestations. Business concerns with potential health & safety impacts from glyphosate use. Limited approved methods for management of priority weed infestations. Non-compliance with development consent requiring management of weed spread. Inadequate pest control. Lack of adequate maintenance of rehab areas. Failure to meet rehab closure criteria. Importing a pest species during project works (e.g. in material). Personnel interaction with feral	Regulatory action under applicable legislation (PIN). Health & safety impacts. Reworks to damaged rehab areas.	Current rehab and veg management plans; Site induction and training regarding Enviro & Reg expectations and obligations; Pampas grass and general weeds management plan; contractor engaged to manually remove pampas grass and weeds in general; Pest management contractors; Rehab monitoring and surveys (identifies weeds and pests); Application assessment report to identify potential pests in organic materials.	Moderate	Level 3	Unlikely	11	EMS, BioMP, Vegetation Management Strategy (VMS).

Changes to legislation & regulations (Coal Ash/DSNSW/CLM Regs/EPL/etc) that in turn will impact personnel understanding and fulfilment of obligations relating to current project works.	SSD24937520: Conditions (All) EPL2122: Conditions (All) EPBC 2022/09330: Conditions (All)	Table 10 if the EMS: Nil non compliances.	AGLM	Missing a change in conditions. Lack of assurance to determine if works remain compliant. Project scope increases significantly to adapt to changes. Carry out works not in accordance to changed legislation or failure in communication chain (staff turnover or changes to roles).	Regulatory action (PIN). Reputational damage. Financial/commercial impact.	Subscriptions to regulatory communications (Sai Global, etc); Corporate teams (legal) providing enterprise wide comms; Environmental compliance uplift; regulatory engagement. Communication of changes to team members and contractors during meetings and other forums.	Moderate	Level 3	Unlikely	11	EMS.
Failure to comply with licence, consent and permit conditions	SSD24937520: Conditions (All) EPL2122: Conditions (All) EPBC 2022/09330: Conditions (All)	Table 10 if the EMS: Nil non compliances.	AGLM	Operating in a non efficient manner as per EPL / SSD requirement. LTA understanding of licence, consent and permit requirements. Inadequate storage and/or handling of chemicals, hazardous materials and dangerous goods. Spills/release of oils, fuels, etc from plant/storage during operations.	Reputation damage. HSE Event. Environmental impact. Regulatory action (PIN).	Removal of non-essential chemicals and hydrocarbons from site (to de-risk); Site induction and training regarding Enviro & Reg expectations and obligations; Work method statements and risk assessments; Management plans developed and implemented; Monitoring programs implemented and ongoing; Procurement process in line with contract requirements; Relevant environmental management plans. Audits, inspections, monitoring and reporting. GVDA.	Moderate	Level 3	Unlikely	11	EMS.
Unauthorised works completed on non-AGL land (roads, easements, agreements, consents, licences), or off site approval boundaries.	SSD24937520: Condition A23	Table 10 if the EMS: Nil non compliances.	AGLM	Failure to identify non-AGL owned parcels of land during project. Failure to communicate acquisition or inaccurate mapping of AGL owned or acquired land. Deliberate or negligent action. Failure to obtain agreements to access non-AGL owned land.	Reputation damage. HSE Event. Environmental impact. Regulatory action (PIN).	Current mapping of AGL owned land and approval boundaries and non AGL owned land - geospatial database; Agreement with TfNSW covering AGL assets on TfNSW land; Ongoing consultation with Maxwell and other stakeholders. Land access agreements. Notifications. Site survey for SSD project area and boundary delineation. GVDA.	High	Level 3	Possible	14	Community and Stakeholder Engagement Strategy (CSES), EMS.
Failure to meet community expectations	SSD24937520: Conditions A9, B1 EPL2122: Conditions M6, M7	Table 10 of the EMS: Nil complaints received by community Nil adverse impact to surrounding private properties	AGLM	Inadequate stakeholder consult, exceedance of criteria (AQ, N&V), nuisance but within criteria AQ and N&V).	Reputation damage. Increase in complaints.	CCC/working groups, community newsletters, adequate enquiries/complaint management, regular internal communication (AGL monthly updates, bi-weekly SIMOPs meetings), regular regulatory engagement, website, monitoring, approvals (criteria).	Moderate	Level 2	Possible	9	CSES, EMS.
Noise and vibration exceed limits.	SSD24937520: Conditions B8, B9, B10, B11, B12 EPL2122: Condition M9	SSD24937520 Condition B8: 40dB, at meteorological conditions as per B9. SSD24937520 Condition B10: 40dB + 5dB at other meteorological conditions not outlined in B9. SSD24937520 Condition B11: outside of hours noise levels; 5dB above the rating background level. EPL2122: M9 - Noise monitoring. Table 10 of the EMS: No exceedance of operational noise generated by the development at R21 and R28, Development undertaken generally in accordance with the predictions specified in the environmental assessment documents listed in condition A2(c) of the consent	AGLM	Failure to monitor / meet criteria conditions, including notification requirements; inadequate modelling; inadequate methodology or timing of crushing of rock/concrete; blast felling of stacks non-compliant with the limitations and criteria outlined.	Reputation damage. Regulatory action (PIN). HSE Event.	Engineering studies; monitoring; sound power level testing; following notification protocols; blast design; 3rd party engineering review; exclusion zones; SWMS for crushing activities. Out of Hours work Protocol	Moderate	Level 2	Possible	9	EMS - Noise and Vibration Management Plan (NVMP), DEMP.
Impact to non indigenous heritage (fence posts outside disturbance area to the north of the site).	SSD24937520: Condition C16	Table 10 of the EMS: No incidents, non-compliances or complaints related to Aboriginal heritage and non-Aboriginal (Historic) Heritage.	AGLM	Failure to identify, demark and protect non indigenous heritage.	Reputation damage. Regulatory action (PIN). HSE Event.	GVDA. Clearly identifying, demarking and where necessary protecting items in the field. Area outside disturbance area. Mapping and archival photography, unexpected finds protocol.	Low	Level 2	Rare	4	EMS, DEMP.
Impacts caused by increase in traffic.	SSD24937520: Conditions B20, B21	Table 10 if the EMS: Nil non compliances.	AGLM	Increase in light and heavy vehicle movement for demolition and construction activities: site vehicle	Reputation damage. Regulatory action (NSW police). HSE Event.	Traffic Management Plan; Site Access protocols; VOC/Training for vehicle operators: Site induction and training	High	Level 3	Possible	14	EMS - TTMP, DEMP - Onsite TMP, Bio MP.
Impact or damage to public infrastructure.	SSD24937520: Condition A23	Table 10 if the EMS: Nil non compliances.	AGLM	Less than adequate engineering, design, modelling. Failure to monitor.	Reputation damage. Regulatory action (PIN). HSE Event.	Engineering designs, monitoring and reporting, SWMS, competent contractors, stakeholder engagement.	Moderate	Level 3	Unlikely	11	EMS, DEMP.
Increased use and impact to local amenities (e.g. accommodation).	SSD24937520: Conditions B1 EPL2122: Conditions M6, M7	Table 10 of the EMS: Nil complaints received by community	AGLM	Significant increase in workers for project activities or major demolition or construction events.	Reputation damage.	Utilise local workforce/personnel where possible; Additional workforce not anticipated to be large. The use or hire of temporary site services to minimise impact.	Low	Level 1	Unlikely	2	CSES.

Appendix 4 – Noise and Vibration Management Plan



Challenging today.
Reinventing tomorrow.

Liddell Future Land Use and Enabling Works – Noise and Vibration Management Plan

AGL Macquarie Limited

SSD Post Approval Documentation

27 March 2025



Liddell Future Land Use and Enabling Works – Noise and Vibration Management Plan

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Acronyms and abbreviations

Term	Definition
ACMs	Asbestos Containing Materials
AGLM	AGL Macquarie Pty Limited
BMP	Blasting Management Plan
BPS	Bayswater Power Station
CDC	Complying Development Certificate
dB (A)	A-weighted decibels
DECC	Department of Environment and Climate Change NSW
Development	Liddell Future Land Use and Enabling Works
DIN	German Deutsches Institut für Normung or German Institute for Standardization
DPHI	Department of Planning, Housing, and Infrastructure
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	Environment Protection Authority
EPL	Environment Protection Licence
HVGT	Hunter Valley Gas Turbines
ICNG	<i>Interim Construction Noise Guideline 2009</i>
LAD	Liddell Ash Dam
LPS	Liddell Power Station
NCA	Noise Catchment Area
NML	Noise Management Level
NPfi	Noise Policy for Industry
NVMP	Noise and Vibration Management Plan
OoHW	Out of Hours Work
OoHWP	Out of Hours Work Protocol
PANL	Project Amenity Noise Level
PINL	Project Intrusiveness Noise Level
PNTL	Project Noise Trigger Level
PPV	Peak Particle Velocity
RBL	Rating Background noise Levels
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
SEPP SRD	State Environmental Planning Policy (State and Regional Development) 2011

SMF	Synthetic Mineral Fibre
SSD	State Significant Development
VDV	Vibration dose value

1. Introduction

1.1. Overview

Jacobs Australia Pty Limited (Jacobs) were commissioned by AGL Macquarie Pty Limited (AGLM) to prepare a Noise and Vibration Management Plan (NVMP) for the Liddell Future Land Use and Enabling Works (the development). The development involves demolition of Liddell Power Station (LPS) and associated infrastructure including the Hunter Valley Gas Turbines (HVGT); ancillary works to the approved Liddell Ash Dam (LAD); construction and use of a borrow pit and asbestos disposal facility; Recontouring and revegetation of the site landform; and administrative updates to existing consent arrangements. A description of the development as relevant to this plan is provided in **Section 2**.

The development was classified as a State Significant Development (SSD) under the *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP SRD) being subject to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and required an Environmental Impact Statement (EIS) to be prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs).

An EIS was prepared and submitted, which was exhibited 4 May to 31 May 2023. A Response to Submissions (RtS) Report (GHD, 2024a) was prepared 19 February 2024 to address submissions received during exhibition. An Amendment Report (GHD, 2024b) was subsequently submitted 11 June 2024 addressing minor changes to the development. The development was approved by the Department of Planning, Housing, and Infrastructure's (DHPI's) Executive Director Energy, Resource and Industry Assessments on 31st of January 2025, and Development Consent SSD-24937520 was issued.

1.2. Purpose

Development Consent SSD-24937520 does not contain any specific requirement for a NVMP, however there are specific conditions related to noise (Part B Conditions B8, B9, B10, B11 and B12) that relate to how noise and vibration is to be managed during the development. As such the purpose of this NVMP is to describe how potential noise and vibration impacts would be minimised and effectively managed through the development so that these requirements are addressed.

1.3. Scope

The scope of this NVMP is to identify potential noise and vibration impacts during the development's activities and describe how these would be minimised and effectively managed through delivery.

1.4. Objectives

As well as achieving the purpose of meeting all requirements of the Development consent SSD-24937520, this NVMP was also prepared so that that all relevant statement of commitments (SoCs) in the EIS, RtS and Amendment Report, relevant conditions Environment Protection Licence (EPL No. 2122), and applicable AGLM corporate environmental requirements are also met. Through this, the NVMP establishes the following goals and targets to guide the management of noise and vibration impacts during the construction and decommissioning phases of the development:

- Compliance with relevant Development Consent SSD-24937520 requirements.
- Compliance to relevant EPL No.2122 requirements.
- Application of relevant SoCs detailed in the EIS, RtS and Amendment Report so that that noise and vibration related impacts generated by the development are consistent with predictions.

1.5. Related plans

The following documents are related and shall be read in conjunction with this NVMP:

- Environmental Management Strategy (EMS). The EMS provides the overall environmental management strategy for the development. This NVMP forms part of the EMS.
- Demolition Environmental Management Plan (DEMP). The DEMP details how all environmental aspects would be managed during development demolition activities.

2. Development description

2.1. Site locality

The development is located in the Upper Hunter Valley to the east of the New England Highway, set amongst land uses dominated by power generation, coal mining, livestock grazing and rural housing. Lake Liddell, the Main North Railway Line and a mix of remnant vegetation and grazing land are located to the east. Land to the north of the development is generally used for agricultural grazing, as well as being occupied by remnant vegetation. The Bayswater Power Station (BPS) is located to the south of the development, on the Western side of the New England Highway. Open cut coal mining is the dominant landscape feature to the south-east and west of the development. The locality around the development is displayed below in **Figure 2-1**.

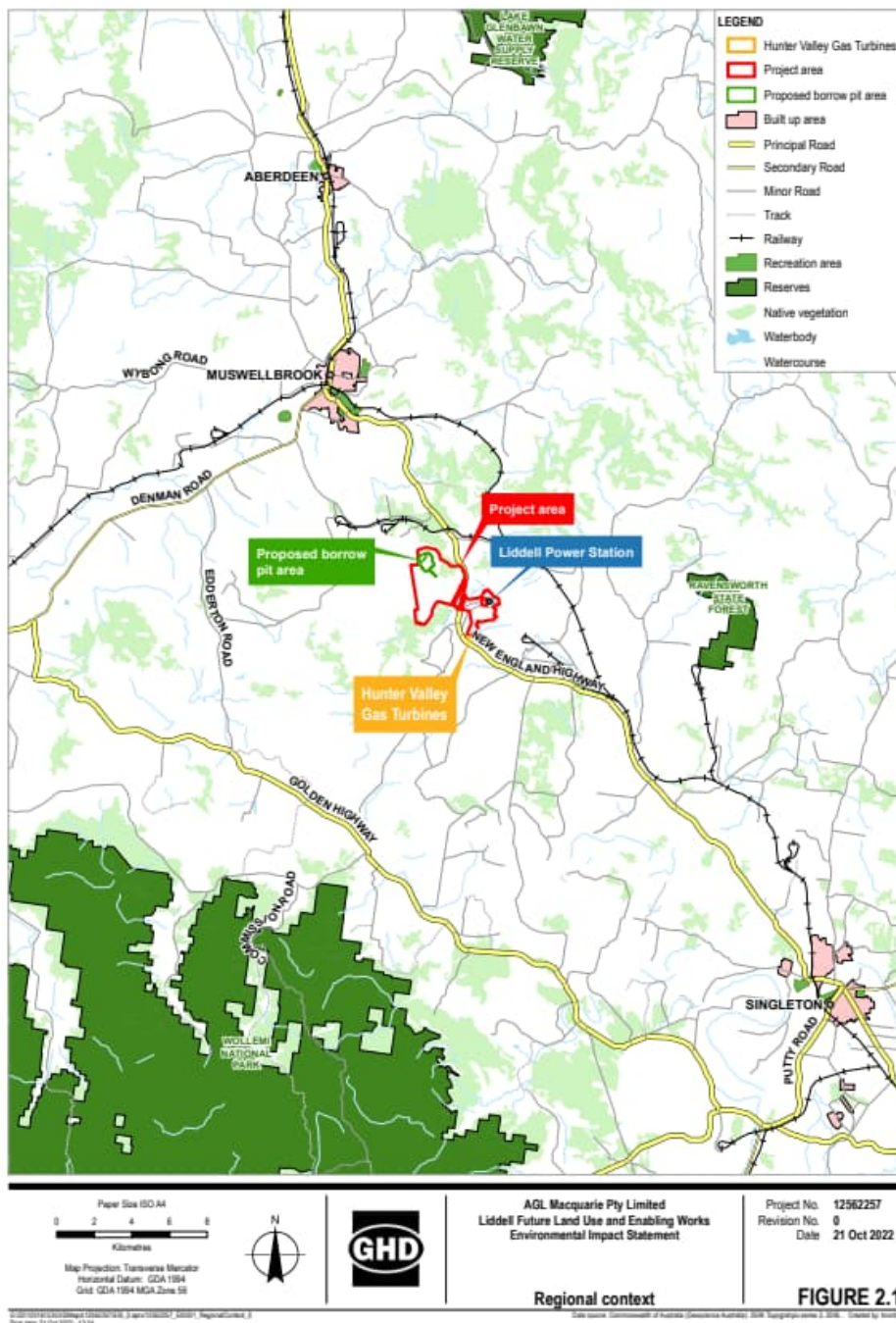


Figure 2-1. Development area (GHD,2023)

2.2. Development overview

Refer to the body of the EMS for the development overview.

2.3. Staging

The development will be delivered in three stages, refer to the body of the EMS for further detail.

2.4. Development as relevant to NVMP

Key details of the development as relevant to the NVMP for Stage 1 works are detailed below in **Table 2-1**.

Table 2-1. Details of the development as relevant to NVMP

Component	Activities	Details	Potential issues
LPS Demolition including HVGTs	Site establishment	Installation of environmental controls, fencing, erosion and sediment controls, vegetation clearing and grubbing, site surveys and access points	Noise and vibration from plant and equipment
	Demolition and material removal	- Demolition (including blasting and mechanical) of key structures - Deconstruction (including cutting, crushing and screening) and removal (including loading and transport) of associated materials to asbestos disposal facility or otherwise for on-site re-use or off-site disposal to a suitably licenced materials processing facility	Noise and vibration from plant and equipment, including traffic noise from haulage Blasting impacts
	Demobilisation	Removal of demolition equipment, site fencing and construction compounds	Noise and vibration from plant and equipment
LAD activities	Re-routing of existing dual water supply pipeline	- Relocation of existing high-density polyethylene pipeline - Remediation and revegetation of former pipeline area	Noise and vibration from plant and equipment
Borrow pit area	Site establishment	Installation of environmental controls, fencing, erosion and sediment controls, site surveys and access points	Noise and vibration from plant and equipment
	Extraction and crushing of materials	- Extraction of up to 1.5 million m³ of materials for capping and civil works associated with the LAD, recontouring works associated with site preparation for ongoing land use at LPS, if required and civil and recontouring projects associated with other AGLM infrastructure - Crushing of up to 200,000 tonnes per annum of materials	Noise and vibration from plant and equipment, including traffic noise from haulage

Component	Activities	Details	Potential issues
		▪ Handling and transport of up to materials to LAD	
	Stabilisation and rehabilitation of final landform	▪ Earthworks to stabilise final landform ▪ Removal of construction equipment, site fencing and construction compounds ▪ Landscaping and revegetation	Noise and vibration from plant and equipment
Asbestos disposal facility	Construction and use of temporary asbestos management area	▪ Transport, unloading and storage of materials to facility ▪ Transfer of materials to Asbestos disposal facility once constructed	Noise and vibration from plant and equipment
	Construction, use and capping of asbestos management facility	▪ Transport, unloading and disposal of materials to facility ▪ Progressive capping of landfilled materials	Noise and vibration from plant and equipment, including traffic noise from haulage
	Final landform contouring and revegetation of asbestos management facility	▪ Earthworks and re-grading where required ▪ Revegetation of final landform	Noise and vibration from plant and equipment

2.5. Standard hours

Consistent with condition A9 of Development Consent SSD-24937520, development activities would generally be completed during the following standard hours:

- Monday to Friday: 7:00am to 6:00pm
- Saturday: 8:00am to 6:00pm
- At no time on Sundays and Public Holidays.

Condition A9 also lists the following development hours for particular activities:

- Blasting:
 - Monday to Friday: 9:00am to 5:00pm
 - No blasting on Public Holidays
- Maintenance, security, office work, and cleaning:
 - May be conducted at any time, provided that these activities are not audible at any residence on privately-owned land
- Delivery or dispatch of materials as requested by Police or other public authorities; emergency work to avoid the loss of lives, property or to prevent environmental harm; or Delivery of oversized plant or structures
 - At any time, only after notifying the DPHI.

3. Environmental management framework

3.1. Overview

This Section outlines the relevant requirements and how they are incorporated in the document. These include the relevant conditions of Development Consent SSD-24937520, from EPL No. 2122, and the SoCs from the assessment documents.

3.2. Development Consent SSD-24937520

Conditions of Development Consent SSD-24937520 relevant to the NVMP include those as listed below in Table 3-1. This table also includes where they are addressed in the document.

Table 3-1. Noise and Vibration – Development Consent SSD-24937520 conditions and where they are addressed in the NVMP

Consent requirement	Section/reference where addressed in the NVMP										
A9. The development may only be undertaken during the hours set out in Table 1: Table 1 – Operating hours <table> <tr> <th>Activity</th><th>Permissible Hours</th></tr> <tr> <td>Development activities- other than as identified separately in this table.</td><td> 7 am to 6 pm Monday to Friday 8 am to 6 pm Saturday - At no time on Sundays or public holidays </td></tr> <tr> <td>Blasting</td><td> 9 am to 5 pm Monday to Saturday - No blasting on public holidays </td></tr> <tr> <td>Maintenance, security, office work, cleaning, etc</td><td>May be conducted at any time, provided that these activities are not audible at any residence on privately-owned land</td></tr> <tr> <td>Delivery or dispatch of materials as requested by Police or other public authorities Emergency work to avoid the loss of lives, property or to prevent environmental harm Delivery of oversized plant or structures</td><td>At any time, only after notifying the Department</td></tr> </table>	Activity	Permissible Hours	Development activities- other than as identified separately in this table.	7 am to 6 pm Monday to Friday 8 am to 6 pm Saturday - At no time on Sundays or public holidays	Blasting	9 am to 5 pm Monday to Saturday - No blasting on public holidays	Maintenance, security, office work, cleaning, etc	May be conducted at any time, provided that these activities are not audible at any residence on privately-owned land	Delivery or dispatch of materials as requested by Police or other public authorities Emergency work to avoid the loss of lives, property or to prevent environmental harm Delivery of oversized plant or structures	At any time, only after notifying the Department	Section 2.5
Activity	Permissible Hours										
Development activities- other than as identified separately in this table.	7 am to 6 pm Monday to Friday 8 am to 6 pm Saturday - At no time on Sundays or public holidays										
Blasting	9 am to 5 pm Monday to Saturday - No blasting on public holidays										
Maintenance, security, office work, cleaning, etc	May be conducted at any time, provided that these activities are not audible at any residence on privately-owned land										
Delivery or dispatch of materials as requested by Police or other public authorities Emergency work to avoid the loss of lives, property or to prevent environmental harm Delivery of oversized plant or structures	At any time, only after notifying the Department										
B8. The operational noise generated by the development must not exceed 40 dB _{L_{Aeq}(15min)} during daytime hours at residential receivers R21 and R28 shown on Figure 3 in Appendix 3.	Section 6.1										
B9. The noise limit set out in condition B9 apply under the meteorological conditions defined in Table 2 [i.e., of Development Consent SSD-24937520].	Section 6.1										
B10. For all other meteorological conditions, operational noise from the development during the day period must not exceed the criteria in condition B8 plus 5 dB. The meteorological conditions are to be determined by monitoring at the meteorological station required under condition B22.	Section 6.1										
B11. The development may only occur outside of the hours listed in Table 1 [i.e., those reproduced in Section 2.5] if: (a) noise levels are no more than 5 dB_{L_{Aeq}(15min)} above the rating background level at any residence and no more than the noise management levels in Table 3 of the <i>Interim Construction Noise Guideline</i> (DECC, 2009) for sensitive receivers other than residences; or	Section 6.2										

Consent requirement	Section/reference where addressed in the NVMP
(b) works are implemented in accordance with an out-of-hours work protocol detailed in condition B12 and as approved by the Planning Secretary.	
B12. An out-of-hours work protocol must be submitted to the satisfaction of the Planning Secretary prior to the commencement of any out-of-hours construction work (other than the exceptions listed in conditions B11(a) and B11(b)). The protocol must: (a) include noise modelling of proposed activities including consideration of noise enhancing meteorological conditions, annoying noise characteristics and implementation of reasonable and feasible noise mitigation measures (b) identify a process for the consideration and management of construction which is outside the hours defined in Table 1; (c) be consistent with the requirements of the <i>Interim Construction Noise Guideline</i> (DECC, 2009) (or its latest or final version); (d) justify why the construction needs to be undertaken as out-of-hours construction, including consideration of consultation undertaken as part of the documents listed in condition A2(c); (e) identify low, medium and high-risk out-of-hours work, proposed mitigation and management measures; and (f) include written notification arrangements for affected residences for approved out- of-hours work	To be prepared by the Principal Contractor and approved by DPHI prior to commencement of any out of hours work (except those covered by the exemptions listed in conditions B11(a) and B11(b)).
B22. Prior to the commencement of development activities and for the life of the development, a suitable meteorological station must operate in the vicinity of the site that: (a) complies with the requirements in the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales (DEC, 2007); (b) is capable of measuring meteorological conditions in accordance with the NSW Industrial Noise Policy (EPA, 2000) or NSW Noise Policy for Industry (EPA, 2017); and (c) unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.	Refer to Dust Management Sub Plan, required under the Demolition Environment Management Plan (DEMP).

3.3. Environment Protection Licence No. 2122

EPL No. 2122 contains one specific requirement relating to noise monitoring. This requirement is reproduced below in **Table 3-2**, including details of where it is considered in the NMVP.

Table 3-2. EPL No. 2122 requirements and where addressed in the NVMP

Relevant requirement	Where addressed in the NVMP
M9.1 Noise monitoring – The licensee, following the receipt of a noise related complaint and if required by the EPA, must undertake noise monitoring as required in writing by the EPA.	Section 7.1.1

3.4. Statement of Commitments

Recommendations written into the SoCs must also be adhered to. Two noise management requirements were recommended in the SoCs. These are detailed in **Table 3-3**, including where they have been incorporated into this NVMP.

Table 3-3. Noise management requirements and where addressed in the NVMP

Reference	Management measure	Timing	Where addressed in the NVMP
NV1	Notification should be a minimum of 7 calendar days prior to the start works and should include information such as total building time, what works are expected to be noisy, their duration, what is being done to minimise noise and when respite periods will occur. As it is proposed that works will be undertaken outside of standard hours on Saturday, it is recommended to inform the closest residents and other sensitive land use occupants within 14 days of commencement. Provide information to neighbours before and during construction through media such as letterbox drops, meetings or individual contact. In some areas, the proponent will need to provide notification in languages other than English. A website will also be established for the project to provide information. Ensure site managers periodically check the site and nearby residences and other sensitive land uses for noise problems so that solutions can be quickly applied. Maintain good communication between the community and project staff. Consider a regular newsletter with site news, significant project events and timing of different activities. Facilitate contact with people to ensure that everyone can see that the site manager understands potential issues, that a planned approach is in place and that there is an ongoing commitment to minimise noise.	Prior to works commencing	Section 7

NV2	A PEMS should be prepared post approval, after the contractor has been engaged and prepared its construction methodology. The PEMS should include a review of the construction noise predictions during the environmental impact assessment phase based on the construction contractor's methodology and revise it accordingly to include a detailed examination of feasible and reasonable work practices and noise mitigation measures to manage sensitive receptors that are predicted to be 'noise affected'. PEMS should also include: - Details of the construction methodology - Feasible and reasonable mitigation measures to be implemented - Updated noise predictions at sensitive receptors if required - A noise monitoring procedure for the duration of works - A community consultation plan to liaise with the noise affected receptors The PEMS must be updated as necessary to account for changes in noise and vibration management issues and strategies. Provide a readily accessible contact point, e.g. through a 24-hour toll-free information and complaints line. Document and maintain a complaints register detailing the following: - Date and time - Complainants details - Person receiving complaint and person referred to - Description of complaint Provide quick response to complaints, with complaint handling staff having both a good knowledge of the works and ready to access information. All employees, contractors and subcontractors are to receive an induction. The induction must at least include: - All project specific environmental mitigation measures - Relevant licence and approval conditions - Permissible hours of work - Any limitations on high noise generating activities - Location of nearest sensitive receptors - Construction employee parking areas - Designated loading/unloading areas and procedures - Site opening/closing times (including deliveries)	Prior to works commencing	Section 6, Section 7.1.4 and Section 8 DEMP
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	- Environmental incident procedures An out of hours works procedure should be developed as part of the PEMS for the project if these works are required. This should include a detailed construction noise and vibration assessment for the potential construction activities proposed to occur out of hours. - An out of hours works application form for any works outside of the approved working hours for the project will be required. A description of the works, justification and management measures would also be included as part of the application. It is expected that strong justification and negotiation with the community would be required if these works are to be undertaken during any out of hours periods. - Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work. Consider the use of ambient sensitive alarms that adjust output relative to the ambient noise level. - Use quieter and less vibration emitting construction methods where feasible and reasonable. Regularly inspect and maintain equipment to ensure it is in good working order. Also check the condition of mufflers. - Equipment must not be operated until it is maintained or repaired, where maintenance or repair would address the annoying character of noise identified. Compliance monitoring should be undertaken to investigate complaints.		
BIO6	Noise minimisation practices in accordance with DPE recommendations.	During works	Section 7 Biodiversity Management Plans
DM7	Identify any critical infrastructure that may be damaged by vibration and develop monitoring plan to be included in the PEMS.	During works	Section 7 DEMP

4. Existing environment

4.1. Sensitive receivers

The EIS (GHD,2023) identified 34 noise-sensitive receivers within the vicinity of the development. No additional receivers were identified in the RtS (GHD, 2024a) or Amendment Report (GHD, 2024b). Recent aerial imagery from Jacobs MetroMap was reviewed which confirmed no new nearby sensitive receivers since these assessments.

These receivers were separated into two noise catchment areas (NCAs) based on their proximity to the development

- NCA 1 – Receivers to the northeast of the development, with the closest proximity to the LPS site.
- NCA 2 – Receivers to the north and north-northeast of the development, with the closest proximity to the borrow pit site.

NCA2 contains 28 of the 34 nearby identified sensitive receivers. The remaining six receivers are located in NCA1. 32 receivers are 'residential' with two non-residential receivers, an active recreation area ('AR01') and a holiday accommodation ('HA01') also nearby. The two NCAs and surrounding receivers are displayed in **Figure 4-1**, with full details of each receiver provided in **Appendix A**.

Figure 4-1 identifies receivers R21 and R28 that are referred to in condition B9 (both being located in NCA 2).

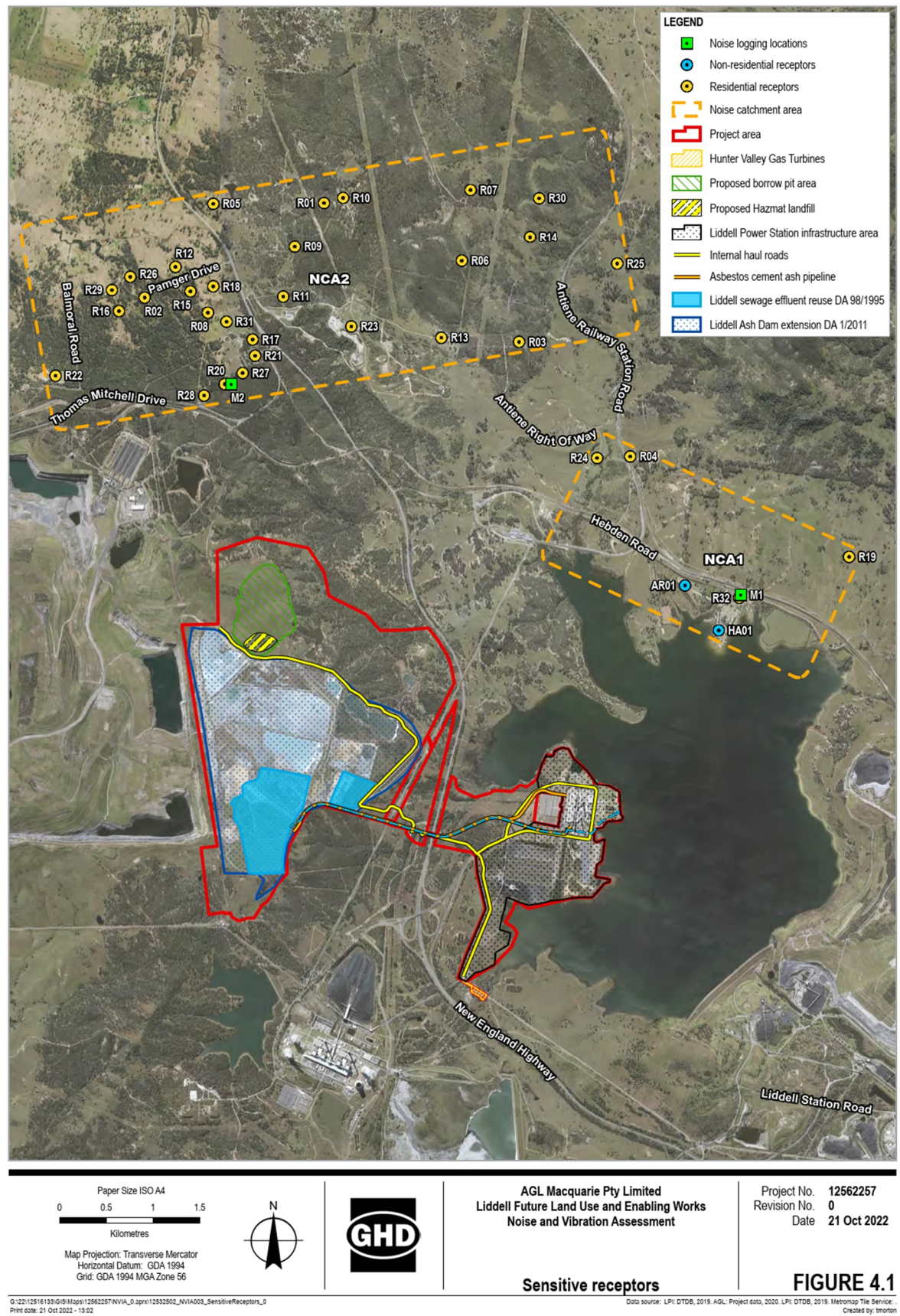


Figure 4-1. Surrounding noise sensitive receivers (GHD, 2023)

4.2. Background noise levels

During the preparation of the EIS, long-term unattended background noise monitoring was completed. Two monitoring locations were selected to represent the two NCAs within the study area – M1, located at R32 and representing NCA 1, and M2, located at R20 and representing NCA 2. Using data collected from this monitoring the following day, evening, and night Rating Background Levels (RBLs) were established as listed below.

Table 4-1. Representative background and ambient noise levels in the study area (GHD, 2023)

Logger ID	Noise catchment area (NCA)	RBL, $L_{A90,day}^1$ – dB(A)	RBL, $L_{A90,evening}^1$ – dB(A)	RBL, $L_{A90,night}^1$ – dB(A)
M1	NCA 1 (R04, R19, R24 and R32)	37	37	36
M2	NCA 2 (other residential receivers displayed in Figure 4-1)	36	36 ²	32

Note 1: Time of day, in line with the NPI, is defined as follows:

- day – the period from 7 am to 6 pm Monday to Saturday or 8 am to 6 pm on Sundays and public holidays
- evening – the period from 6 pm to 10 pm
- night – the remaining periods.

Note 2: The RBL during evening exceeded the day time RBL, as such was lowered to day time RBL in accordance with the advice in the Noise Policy for Industry (NPfI) (EPA, 2017).

For the purpose of conditions B10 and B11, the RBLs are considered to be those listed above in

Table 4-1. Figure 4-1 above identifies receivers corresponding to both NCAs.

5. Performance criteria

5.1. Noise limits for operations during daytime hours

As per condition B8 of the Development Consent, noise generated from the operation of the development must not exceed 40 dB(A) $L_{Aeq\ 15\text{-minute}}$ during daytime hours as measured at receivers R21 and R28 (see **Figure 4-1**). The 'operation' refers to the "carrying out of the asbestos disposal facility and borrow pit authorised ... upon completion of the associated construction works".

These limits apply under the following meteorological conditions defined in condition B9:

- Day time hours:
 - Stability Categories A, B, C and D with wind speeds up to and including 3 m/s at 10m above ground level from the ESE wind direction.
 - Stability Categories A, B, C and D with wind speeds up to and including 0.5 m/s at 10m above ground level from all other wind directions.

For all other meteorological conditions, condition B10 limits noise arising from operational noise during the daytime period to not exceeding "the criteria in condition B8 plus 5 dB(A)" (i.e., a limit of 45 dB(A) $L_{Aeq\ 15\text{-minute}}$).

5.2. Noise limits for works outside daytime hours

Condition B11 permits development activities outside the hours from condition A9 (reproduced above in **Section 2.5**) if:

- **For residential receivers:** Noise levels are no more than 5 dB(A) $L_{Aeq\ 15\text{-minute}}$ above RBLs. RBLs relevant to each time period for receivers in both NCAs are defined above in **Table 4-1**. In these circumstances, the limits below in **Table 5-1** would apply.
- **For non-residential receivers:** Noise levels are no more than the limits noise management levels (NMLs) defined in the 'Interim Construction Noise Guideline', (DECC, 2009) (reproduced below in **Table 5-1**).

Table 5-1. Noise limits for works outside approved hours

Sensitive receptor type	Noise limit ($L_{eq\ 15\ min\ dB(A)}$)		
	Day (non-standard hours)	Evening	Night
Residential – NCA1	42	42	41
Residential – NCA2	41	41	37
Active recreation (AR01 in Figure 4-1)	65 (external) – when in use		
Holiday accommodation ¹ (HA01 in Figure 4-1)	60 (external) – when in use		

Where these limits are not able to be achieved, works would need to be undertaken in accordance an Out of Hours Works Protocol (OoHWP) approved by DPHI (refer to **Section 8.5**).

5.3. Vibration targets

5.3.1. Human comfort

Applicable guidance values for evaluating vibration impact are drawn from 'Assessing Vibration: A Technical Guideline', (DEC, 2006), which draws from British Standard BS 6472-1:2008. This was applied in the assessments completed for the assessment documents. Whilst the assessment of response to vibration in BS 6472-1:2008 is based on vibration dose value (VDV) and weighted acceleration, for construction or demolition related vibration it is considered more appropriate to provide guidance in terms of a peak particle velocity (PPV), since this parameter is likely to be more routinely measured based on the more usual concern over potential building damage. Guidance values are displayed in **Table 5-2**.

Table 5-2. Acceptable PPV Guidance Values for Human Comfort (BS 6472-1:2008)

Receptor	Period	Continuous vibration guide goals		Impulsive vibration guide goals	
		Preferred value mm/s	Maximum value mm/s	Preferred value mm/s	Maximum value mm/s
Residential	Day	0.28	0.56	8.6	17.0

BS 5228-2:2009 provides guidance on the perception of vibration humans can feel at certain levels. These are displayed in **Table 5-3**.

Table 5-3. Guidance on effect of vibration levels for human comfort (BS 5228.2-2009)

Vibration level	Effect
0.14 mm/s	Vibration might be just perceptible in the most sensitive situations for most vibration frequencies associated with construction.
0.3 mm/s	Vibration might be just perceptible in residential environments.
1.0 mm/s	It is likely that vibration at this level in residential environments will cause complaints but can be tolerated if prior warning and explanation has been given to residents.
10 mm/s	Vibration is likely to be intolerable for any more than a very brief exposure.

5.3.2. Structural damage

The applicable guidance value for assessing cosmetic damage to structures has been based on the guidance within German Standard DIN 4150-3:2016. These levels represent the vibration impact where, if complied with, damage that reduces the serviceability of the building will not occur. The guideline values for preventing damage at surrounding industrial premises, domestic premises, and heritage structures are displayed in **Table 5-4**.

Table 5-4. DIN 4150-3:2016 guideline values for short term vibration velocity

Type of building	Guideline values for velocity (mm/s) ¹		
	Vibration at the foundation at a frequency of		
	1 Hz to 10 Hz ²	10 Hz to 50 Hz	50 Hz to 100 Hz ³
Offices and industrial premises	20	20 – 40	40 – 50
Domestic houses and similar construction	5	5 – 15	15 – 20
Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2	3	3 – 8	8 – 10

and are of great intrinsic value (e.g., listed buildings under preservation order)

Note 1: Values referred to are at the base of the building.

Note 2: At frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) should not be exceeded.

Note 3: At frequencies above 100 Hz the values given in this column may be used as minimum values.

5.3.3. Utilities damage

BS 5228-2:2009 (for underground services) and DIN 4150-3:2016 (for piping) presents relevant guidance considered applicable to avoid these potential impacts to utilities. This guidance has been reproduced below in **Table 5-5** and **Table 5-6**, and would be applicable for any underground services being retained

Table 5-5. Vibration guide values for underground services – BS 5228-2: 2009

Type of utilities	Guideline maximum values for velocity measured on the pipe (mm/s)	
	Intermittent or transient vibrations	Continuous vibrations
Underground services	30	15

Table 5-6. Guideline values for vibration on buried pipework – DIN 4150-3

Type of utility	Guideline values for velocity measured on the pipe (mm/s)
Steel (including welded pipes)	100
Clay, concrete, reinforced concrete, pre-stressed concrete, metal (with and without flange)	80
Masonry, plastic	50

5.4. Blasting

As noted in **Section 1.5**, a separate DEMP is in-place. Applicable limits for noise and vibration-related blasting effects from the development are to be drawn from the DEMP.

6. Predicted impacts

Potential impacts from the development as predicted in the assessment documents are summarised below. These are included, noting that it must be demonstrated that the development is being carried out in a manner (and with the same level of impacts) generally consistent with the environmental assessment documents (EIS, RtS and Amendment Report).

6.1. Noise impacts

Potential noise impacts pertaining to the operation of the asbestos disposal facility and borrow pit, the construction and demolition works at LPS and the traffic associated with the development are summarised below.

6.1.1. Construction noise

The following noise levels were predicted in the assessment documents at the most-affected sensitive receivers during construction:

Table 6-1. Summary of noise levels associated with the stages – day (GHD, 2024a)

RID	Receptor type	NCA	NML, $L_{Aeq, 15min}$ dB(A), Standard hours	NML, $L_{Aeq, 15min}$ dB(A), Outside of standard hours day	Predicted $L_{Aeq, 15min}$ noise level, dB(A)			Complies?
					CS1	CS2	CS3	
R04	Residential	NCA1	47	42	<15	33	25	Yes
R32	Residential	NCA1	47	42	<15	28	26	Yes
R27	Residential	NCA2	46	41	21	<15	29	Yes
R28	Residential	NCA2	46	41	17	<15	30	Yes
AR01	Active recreation	NCA1	65	65	<15	31	27	Yes
HA01	Holiday accommodation	NCA1	60	60	<15	31	29	Yes

As **Table 6-1** shows, resulting noise levels from construction activities for the development were predicted to be below the NMLs established for the assessment.

Measures to minimise noise during construction are detailed below in **Section 7**.

6.1.2. Operational noise

The impact assessment considered some activities associated with the development as being operational activities, and assessed them differently against project trigger noise levels (PNTLs) established using guidance from the 'Noise Policy For Industry' (NPI), (EPA, 2017). As shown below in **Table 6-2**, noise levels from these development activities were also assessed as being well below the PNTLs as well as the project limit for daytime hours (40 dB(A) $L_{Aeq, 15-minute}$) established by condition B8.

Table 6-2. Summary of noise levels associated with asbestos disposal facility and borrow pit activities – day (GHD, 2024a)

RID	Receptor type	NCA	NPI Development noise trigger level, $L_{Aeq,15min}$ dB(A), day	Predicted, $L_{Aeq,15min}$ noise level, dB(A)		Complies?
				OS1	OS2	
R04	Residential	NCA1	42	<15	<15	Yes
R32	Residential	NCA1	42	<15	<15	Yes
R27	Residential	NCA2	41	17	19	Yes
R28	Residential	NCA2	41	<15	18	Yes
AR01	Active recreation	NCA1	53	<15	25	Yes
HA01	Holiday accommodation	NCA1	53	<15	24	Yes

6.1.3. Construction traffic noise

Changes to construction traffic noise levels were assessed using existing traffic data measured at the New England Highway interchange with the LPS and BPS Access Roads. This is displayed in **Table 6-3**.

Table 6-3. Peak hour volumes along New England Highway (including five years growth)

Direction	Vehicle type	Traffic volume (vehicles per hour)	
		AM Peak	PM Peak
Northbound	Light	1,085	503
	Heavy	306	142
Southbound	Light	116	661
	Heavy	33	186

In addition to existing traffic, the following development-related traffic was estimated:

- Staff maximum of 100 full time equivalents resulting in approximately 100 vehicles arriving during the AM peak and 100 vehicles leaving during PM peak.
- Heavy vehicles transporting scrap metal off site, resulting in approximately 20 trucks per day. Assumed to be worst case 6 trucks arriving during the AM peak ready to be loaded.

Based on the above input data, the traffic noise impacts along the New England Highway nearest to the receivers were determined as detailed in **Table 6-4**. As the increase in traffic noise associated with development traffic is well below 2 dB, construction traffic noise impacts were not anticipated. This outcome is expected to remain unchanged, should the forecast traffic generated from the development not differ materially from what was estimated in the EIS and RtS.

Table 6-4. Traffic noise impacts along New England Highway during AM peak period (GHD, 2024b)

Vehicle category	Existing traffic – both direction	Development traffic – both directions	Overall change in noise levels, dB	Require consideration of additional mitigation measures?
Light vehicles	1,201	100	+0.2	No
Heavy vehicles	339	6		
Total	1,540	106		

6.2. Vibration

Appropriate distances to achieve compliance with the applicable PPV values were determined through the use of guidance presented in the CNVG-PTI (a more up to date set of safe working distances compared to the Construction Noise and Vibration Strategy (CNVS) used during the EIS assessment). These are displayed in **Table 6-5**.

Table 6-5. Vibration safe working distances – CNVG-PTI

Equipment	Human comfort (OH&E Assessing Vibration – A Technical Guideline)	Cosmetic damage (BS 7385)
Piling rig – Bored <800 mm	N/A	2 m (nominal)
Piling rig–Hammer (12 t down force)	50 m	15 m
Piling rig – Vibratory (sheet piles)	20 m	2 m to 20 m
Vibratory roller (>18 tonnes)	100 m	25 m
Vibratory roller (13-18 tonnes)	100 m	20 m
Vibratory roller (7-13 tonnes)	100 m	15 m
Vibratory roller (4-6 tonnes)	40 m	12 m
Vibratory roller (2-4 tonnes)	20 m	6 m
Vibratory roller (1-2 tonnes)	15 m	5 m
Small hydraulic hammer 300 kg (5-12t excavator)	7 m	2 m
Medium hydraulic hammer 900 kg (12-18t excavator)	23 m	7 m
Large hydraulic hammer 1600 kg (18-34t excavator)	73 m	22 m
Jackhammer (handheld)	Avoid contact with structure	1 m (nominal)

6.2.1. Human comfort

Based on the safe working distances, the environmental assessment documents identified activities associated with the most intense vibration as being the works using the medium to large excavator (adopting the setback of the *Large hydraulic hammer 1600 kg (18-34t excavator)* – 73 m), and compaction works

(adopting the setback of the *Vibratory roller (>18 tonnes) – 100 m*). As no sensitive receivers are located within 100 m of the work locations, no human comfort impacts were predicted.

Larger, 120t excavators with hydraulic hammers (nominally 8,500 kg) may be used during demolition. Extrapolating the data from CNVS, the corresponding distance to avoid human comfort impacts is around 400 m. Again, no sensitive receivers are located within this distance, so the outcomes of the assessment documents are expected to remain unchanged.

Still, measures are incorporated below in **Section 7.1.2** to be implemented as required.

6.2.2. Structural damage

As above, the environmental assessment documents identified the activities presenting the highest risk as being activities works using the medium to large excavator (adopting the setback of the 'Large hydraulic hammer 1600 kg (18-34t excavator)' – 22 m), alongside compaction works (adopting the setback of the 'Vibratory roller (>18 tonnes) – 25 m'). As no sensitive receivers are located within 100 m of the work locations, no structural damage impacts were predicted.

As above, considering vibration that may be generated from the larger 120t excavators with hydraulic hammers, the corresponding indicative setback distance is around 130 m. Noting that there are no sensitive receivers within this setback distance, the outcomes of the assessment documents are expected to remain unchanged.

Again, measures have still been included below in **Section 7** to be implemented should circumstances change through delivery.

6.2.3. Underground services

For underground services, the environmental assessments determined a setback distance of 6 m for the large excavator with a hydraulic hammer. For the larger 120t excavator mounted hydraulic breaking equipment, this distance could increase to around 30 m. It was noted that the locations of buried utilities were (and remains) not fully understood, and a Dial Before You Dig (DBYD) survey was recommended prior to construction work commencing on site to locate all underground utilities that are to be retained. Once this is performed and the location of underground utilities to be retained, vibration sensitive works around those locations should be avoided. This measure remains applicable and has been reproduced below in **Section 7.1.2**.

6.3. Blasting

It is noted that the blasting would be carefully and precisely controlled when undertaken, consistent with the Blast Management Plan, a sub plan to the DEMP.

6.4. Cumulative impacts

The RtS document assessed cumulative noise impacts in reference to the development intrusiveness noise level and development amenity noise level:

"According to the NPI, the intrusiveness noise level aims to protect the community against significant changes in noise levels, whilst the project amenity noise level seeks to protect the community against uncapped incremental changes in noise level from multiple industrial noise sources (that is, cumulative noise impacts). Applying the most stringent requirement as the project noise trigger level ensures that intrusive noise is limited and long-term amenity is protected. It also ensures that no single industry can unacceptably change the noise level of an area."

As the assessment of operational noise impacts, displayed in **Section 6.1.2** shows, the development was assessed as complying with the PNTLs by more than 20 dB(A) during the day, with the predicted noise from the development being well below the background noise levels.

6.4.1. Liddell Battery and Bayswater Ancillary Works Project

The Liddell Battery and Bayswater Ancillary Works Project (LBBAWP) will occur simultaneously to the development. The 'Liddell Battery and Bayswater Ancillary Works Project Noise and vibration assessment', (Jacobs, 2021) detailed the predicted at construction and operational noise levels at receivers associated with the LBBAWP. Using results from both assessments, the highest resulting cumulative noise level at a nearby receiver was 34 dB(A). This is below the limit for daytime hours (40 dB(A) $L_{Aeq\ 15\text{-minute}}$) established by condition B8.

As such, it is unlikely for a cumulative noise impact to occur.

7. Mitigation and management

7.1. Standard measures

7.1.1. Noise

Table 7-1 lists standard noise management measures. These are to be implemented as standard, where relevant, reasonable and feasible during the development.

Table 7-1. Environmental management measures - noise

Reference	Management measure	Timing	Responsibility
NVMP1	All construction personnel shall be instructed through the site-specific induction or toolbox with regards to the importance of minimising noise emissions during the development.	Prior to and during construction	Principal Contractor
NVMP2	Unless approved by the Department, limit works to approved hours.	During construction	Principal Contractor
NVMP3	Where available and practicable select low-noise plant and equipment.	Prior to and during construction	Principal Contractor
NVMP4	Only have necessary equipment on-site and turn equipment off when not in use.	During construction	Principal Contractor
NVMP5	Complete monitoring to evaluate construction noise levels and evaluate whether the mitigation measures in place are adequate or require revision. These requirements are explained further in Section 8.4 .	During construction	Principal Contractor
NVMP6	Plant and equipment are to be inspected and serviced to facilitate operation in an efficient manner.	Prior to and during construction	Principal Contractor
NVMP7	Where possible, consider the application of less intrusive alternatives to reverse beepers such as 'squawker' or 'broadband' alarms.	During construction	Principal Contractor
NVMP8	Plan traffic flow, parking, and loading/unloading areas to minimise reversing movements where the work area allows.	Prior to and during construction	Principal Contractor

7.1.2. Vibration

Vibration impacts at nearby receivers were not assessed as likely in the impact assessment documents. The measures below in **Table 7-2** from 'Assessing Vibration: a technical guideline', (DEC, 2006) are to be implemented as required.

Table 7-2. Environmental management measures - vibration

Reference	Management measure	Timing	Responsibility
NVMP9	Do not conduct vibration intensive works within the recommended safe setback distances.	During construction	Principal Contractor
NVMP10	Undertake a Dial Before you Dig (DBYD) survey to identify buried utilities that are to be retained before undertaking any vibration intensive work.	During construction	Principal Contractor

7.1.3. Construction traffic mitigation measures

Construction traffic noise impacts at nearby receivers were not predicted. Still, the following general mitigation measures are to be applied to limit noise related to these activities are listed in **Table 7-3**.

Table 7-3. Environmental management measures - construction traffic

Reference	Management measure	Timing	Responsibility
NVMP11	Vehicle movements, including deliveries outside standard hours, should be minimised, and avoided where possible, except as required and permitted by condition A9.	During construction	Principal Contractor
NVMP12	Avoiding the use of compression brakes near residential receptors.	During construction	Principal Contractor

7.1.4. Cumulative impacts

Cumulative impacts from noise arising from the concurrent completion of the development and the LBBAWP Project were reviewed (**Section 6.4**), with the potential for impacts at surrounding sensitive receivers assessed as being unlikely. If monitoring indicates that operational noise levels are above the limits in conditions B8 and B10 at surrounding receivers are resulting from cumulative impacts, a review is to be completed so that resulting noise levels are reduced to the approved limits.

8. Compliance management

Compliance with the processes and outcomes of this plan would be adhered to through the roles and responsibilities, inspections and review of controls, training, monitoring, stakeholder engagement, incident and complaint investigation and response processes, non-compliance approaches, record keeping and reporting procedures and adaptive management actions outlined below.

8.1. Roles and responsibilities

The specific roles and responsibilities are applicable to the activities and actions outlined in this plan are summarised in **Section 4.1** of the EMS.

8.2. Inspections

Noise and vibration emissions from the development and the implementation of relevant standard controls listed above in **Section 7** would be reviewed as part of the routine environmental inspections to be completed for the development. Where opportunities for improvement arise, these would be documented in the inspection reports and promptly actioned on-site.

8.3. Training

Workers and visitors are required to undergo training and awareness programs regarding environmental management requirements, including air quality management, and the importance adhering to related requirements during activities. Refer to **Section 4.6** of the EMS.

8.4. Monitoring

8.4.1. Noise monitoring

Attended noise monitoring will be undertaken as required throughout the development, with results evaluated by comparing against predicted impacts and approved limits. Where monitoring identifies that the development is causing noise levels above the approved criteria at any sensitive receiver, the following actions will be undertaken:

- Review activities occurring at the time of the monitoring to determine the source of the exceedance
- Review the work practices undertaken against the NVMP
- Identify and implement any additional reasonable and feasible mitigation or management measures to reduce noise
- Review whether controls have been effective in reducing noise levels at receivers below approved criteria
- Adopt any lessons learnt into future planning, mitigation approaches and training

Attended noise monitoring is also to be completed:

- In response to a complaint received regarding noise (in accordance with the complaints response process detailed in Section 4 and Section 5.1 of the EMS)
- As directed by the DPHI or the NSW EPA
- As deemed required by an OOHW Assessment.

Noise monitoring parameters

Attended noise measurements will be undertaken to the following parameters:

- **Sample Period:** 15 minutes
- **Frequency Weighting:** A-Weighting
- **Time Constant:** Fast (125 milliseconds)

As a minimum, L_{Aeq} , L_{Amax} , and L_{A90} A-weighted noise levels should be recorded.

Noise monitoring locations

Noise monitoring should be undertaken at or near receivers R21 and R28, or otherwise at or near receiver location(s) relevant to the development activities.

Quality assurance

Noise monitoring will be undertaken by suitably trained and competent personnel, who are experienced in undertaking noise measurements.

Noise monitoring equipment used will be at least Type 2 instruments and calibrated in accordance with manufacturer specifications and/or relevant Australian Standards. Records of equipment laboratory calibration will be maintained by AGLM and the Principal Contractor throughout the delivery of the development. Field calibration checks are to be completed before and after the noise measurement period so that microphone drift has not been an issue during measurement.

Noise measures while winds are greater than 5m/s at ground level or 3m/s at a height on 10m, or while rainfall is present should be discarded, so that measurements are not affected adversely by weather, consistent with the NPfL.

Monitoring records will be retained throughout the delivery of the development. Noise monitoring records will record:

- Name of person undertaking the measurement.
- Date and time of measurement, length of measurement and any measurement time intervals.
- Type and serial number of monitoring instrumentation.
- Results of field calibration checks.
- Measurement location details and number of measurements at each location.
- Weather conditions during measurements.
- Operation and activities of the noise sources under investigation.
- Estimated contribution of the development's activities and
- Noise due to other extraneous and environmental sources (e.g., traffic, aircraft, trains, dogs barking, insects).

8.4.2. Vibration monitoring

Due to the proximity of affected receivers to the development, vibration monitoring at receivers is not expected to be necessary but may be offered as part of the consultation process with potential impacted receivers.

8.4.3. Blast monitoring

Airblast overpressure and ground vibrations monitoring is to be undertaken as detailed in the DEMP.

8.5. Development and implementation of an OOHV Protocol

Where development works are required to be completed outside the approved works (listed in **Section 2.5**), and resulting noise levels may exceed the levels from condition B11 a) (listed in **Table 5-1**), the Principal Contractor is responsible for the development and implementation of an OoHV Protocol. The OoHV Protocol must be Approved by DPHI prior to commencement of any out of hours work (except those covered by the exemptions listed in conditions B11(a) and B11(b)).

8.6. Community and stakeholder engagement

As noted in **Section 4**, Section 4.8 of the EMS describes overall community and stakeholder engagement processes for the development.

8.7. Enquiries and complaints

Incidents, complaints and enquiries, including those related to air quality will be managed in accordance with the process outlined in Section 7.2 of the EMS.

8.8. Hazards, Near Misses, Incidents and Non-Compliances

Hazard, near miss, incident and non-compliances will be managed in accordance with the process outlined in Section 7.1 of the EMS.

8.9. Record keeping and reporting

8.9.1. Compliance reporting

Compliance reporting will be undertaken as per Section 6.2 of the EMS.

8.9.2. Environmental audits

Routine audits will be undertaken to assess the effectiveness of environmental management measures and compliance with the NVMP and all regulatory requirements. The auditing procedure are be detailed in Section 7.3 of the EMS.

8.9.3. Publishing of monitoring data

The results of monitoring are to be published as necessary, as per Section 7.7 of the EMS.

8.9.4. Record keeping

In accordance with Condition M6.1 of EPL No. 2122, reports associated with noise and vibration related monitoring, incidents, non-compliances or complaints are to be maintained for a period of at least four years from when they were produced.

Review and improvement

8.1. Management Plan review and update

Refer to Section 7.10 of the EMS for the requirements relating to the plan review and updates.

8.2. Continuous improvement

Refer to Section 7.5 of the EMS for information relating to continuous improvement.

Appendix A: Surrounding sensitive receiver locations

Surrounding noise sensitive receiver details (GHD, 2023)

ID	Easting (m) ¹	Northing (m) ¹	Noise catchment area	Receiver type	Direction from development area	Distance to development area (m)
R001	307051	6423079	NCA 2	Residential	North	3632
R002	305131	6422060	NCA 2	Residential	North	2798
R003	309139	6421587	NCA 2	Residential	North-Northeast	3141
R004	310329	6420362	NCA 1	Residential	Northeast	2820
R005	305866	6423071	NCA 2	Residential	North	3591
R006	308526	6422455	NCA 2	Residential	North-Northeast	3471
R007	308619	6423220	NCA 2	Residential	North-Northeast	4184
R008	305808	6421899	NCA 2	Residential	North	2444
R009	306738	6422605	NCA 2	Residential	North	3113
R010	307255	6423135	NCA 2	Residential	North	3727
R011	306614	6422071	NCA 2	Residential	North	2572
R012	305461	6422388	NCA 2	Residential	North	3015
R013	308307	6421631	NCA 2	Residential	North-Northeast	2645
R014	309256	6422713	NCA 2	Residential	North-Northeast	4053
R015	305622	6422126	NCA 2	Residential	North	2718
R016	304856	6421916	NCA 2	Residential	North	2768
R017	306287	6421612	NCA 2	Residential	North	2097
R018	305866	6422180	NCA 2	Residential	North	2711
R019	312671	6419281	NCA 1	Residential	Northeast	3509
R020	305988	6421135	NCA 2	Residential	North	1661
R021	306313	6421438	NCA 2	Residential	North	1922
R022	304177	6421224	NCA 2	Residential	North	2547
R023	307343	6421751	NCA 2	Residential	North	2400
R024	309974	6420346	NCA 1	Residential	Northeast	2559
R025	310190	6422424	NCA 2	Residential	North-Northeast	4359
R026	304977	6422282	NCA 2	Residential	North	3056
R027	306180	6421254	NCA 2	Residential	North	1757
R028	305767	6421013	NCA 2	Residential	North	1612
R029	304780	6422141	NCA 2	Residential	North	3002
R030	309354	6423130	NCA 2	Residential	North-Northeast	4461
R031	306007	6421802	NCA 2	Residential	North	1321

ID	Easting (m) ¹	Northing (m) ¹	Noise catchment area	Receiver type	Direction from development area	Distance to development area (m)
R032	311495	6418844	NCA 1	Residential	Northeast	2415
AR01	307051	6423079	NCA 1	Non-residential recreational	Northeast	2126
HA01	305131	6422060	NCA 1	Non-residential holiday accommodation	Northeast	2031

Note 1: Eastings and Northings are GDA1994 MGA Zone 56

Note 2: Distance is measured from receiver to nearest development boundary.

Appendix 5 – Traffic Management Plan



Challenging today.
Reinventing tomorrow.

Liddell Future Land Use and Enabling Works - Traffic Management Plan

AGL Macquarie Limited

SSD Post Approval Documentation
31 March 2025



Liddell Future Land Use and Enabling Works - Traffic Management Plan

Client name: AGL Macquarie Limited
Project name: SSD Post Approval Documentation
Client reference: AGL **Project no:** IS501900
Version: D0v4 **Project manager:** Luke Spencer
Date: 31 March 2025 **Prepared by:** Roy Conrad, Ashish Babu
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Acronyms and abbreviations

Term	Definition
ACMs	Asbestos containing materials
AGLM	AGL Macquarie Pty Limited
BPS	Bayswater Power Station
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EPL	Environment Protection Licence
HVGT	Hunter Valley Gas Turbines
LAD	Liddell Ash Dam
LPS	Liddell Power Station
NHVR	National Heavy Vehicle Regulator
OSOM	Oversized or over mass vehicle
Development	Liddell Future Land Use and Enabling Works
RtS	Response to Submissions Report
SEARs	Secretary's Environmental Assessment Requirements
SEPP SRD	State Environmental Planning Policy (State and Regional Development) 2011
SMF	Synthetic mineral fibre
SSD	State Significant Development
TCP	Traffic Control Plan
TfNSW	Transport for NSW
TMP	Traffic Management Plan

1. Introduction

1.1 Overview

Jacobs Australia Pty Limited (Jacobs) were commissioned by AGL Macquarie Pty Limited (AGLM) to prepare a Traffic Management Plan (TMP) for the Liddell Future Land Use and Enabling Works (the Development). The Development involves demolition of Liddell Power Station (LPS) and associated infrastructure including the Hunter Valley Gas Turbines (HVGTS); ancillary works to the approved Liddell Ash Dam (LAD); construction and use of a borrow pit and asbestos disposal facility; Recontouring and revegetation of the site landform; and administrative updates to existing consent arrangements. A detailed description of the Development is provided in **Section 2**.

As the development is classified as a State Significant Development (SSD) under the *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP SRD). It is subject to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) which requires an Environmental Impact Statement (EIS) to be prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs).

An EIS was prepared and submitted, which was exhibited 4 May to 31 May 2023. A Response to Submissions (RtS) Report (GHD, 2024a) was prepared 19 February 2024 to address submissions received during exhibition. An Amendment Report (GHD, 2024b) was subsequently submitted 11 June 2024 addressing minor changes to the development. The development was approved by the Department of Planning, Housing, and Infrastructure's (DHPI's) Executive Director Energy, Resource and Industry Assessments on 31st of January 2025, and Development consent SSD-24937520 was issued.

1.2 Purpose

Although Development Consent SSD-24937520 does not contain any specific requirement for a TMP, there are specific conditions related to traffic (B20 and B21) that relate to how traffic is to be managed during the development. As such, the purpose of this TMP is to describe how traffic would be managed during the development. It is noted that this plan serves as an appendix to the Environment Management Strategy (EMS).

1.3 Scope

The scope of this TMP is to describe how traffic-related matters would be effectively managed through delivery of the Development, excluding traffic matters relating to demolition. The Demolition Environmental Management Plan (DEMP) addresses how on-site traffic related matters would be managed during demolition. Management of the remaining traffic related matters (i.e., all off-site traffic movements, and on-site movements associated with all other phases of the Project except demolition) are the subject of this TMP.

1.4 Objectives

As well as achieving the purpose of meeting all requirements of the Development consent SSD-24937520, the TMP has been prepared to ensure that all relevant commitments in the EIS, RtS and Amendment reports (collectively referred to herein as the "environmental assessments"), applicable licence, and permit requirements are being met. Through this, the TMP establishes the following goals and targets to guide the management of traffic and transport impacts from the construction of the Development:

- Compliance with all conditions, requirements and all other regulatory requirements,
- Consideration of all mitigation measures detailed in the relevant environmental assessments statement of commitments,

- Ensure training and inductions pertaining to traffic and transport impact management are provided to all staff working on site prior to starting work,
- Ensure that Project traffic and transport impacts are consistent with or less than those determined through the environmental assessments.

1.5 Related reports and plans

The following documents are related and shall be read in conjunction with this TMP:

- EMS. The EMS provides the overall environmental management strategy for the development. This TMP forms part of the EMS.
- DEMP. The DEMP addresses how on-site traffic related matters would be managed during demolition.

1.6 Authoring

This plan has been developed and reviewed by suitably qualified persons.

2. Development description

2.1 Site locality

The Development is located in the Upper Hunter Valley to the east of the New England Highway, set amongst land uses dominated by power generation, coal mining, livestock grazing and rural housing. Lake Liddell, the Main North Railway Line and a mix of remnant vegetation and grazing land are located to the east. Land to the north of the Development is generally used for agricultural grazing, as well as being occupied by remnant vegetation. The Bayswater Power Station (BPS) is located to the south of the Development, on the Western side of the New England Highway. Open cut coal mining is the dominant landscape feature to the south-east and west of the Development. The locality around the Development is displayed below in **Figure 2-1**.

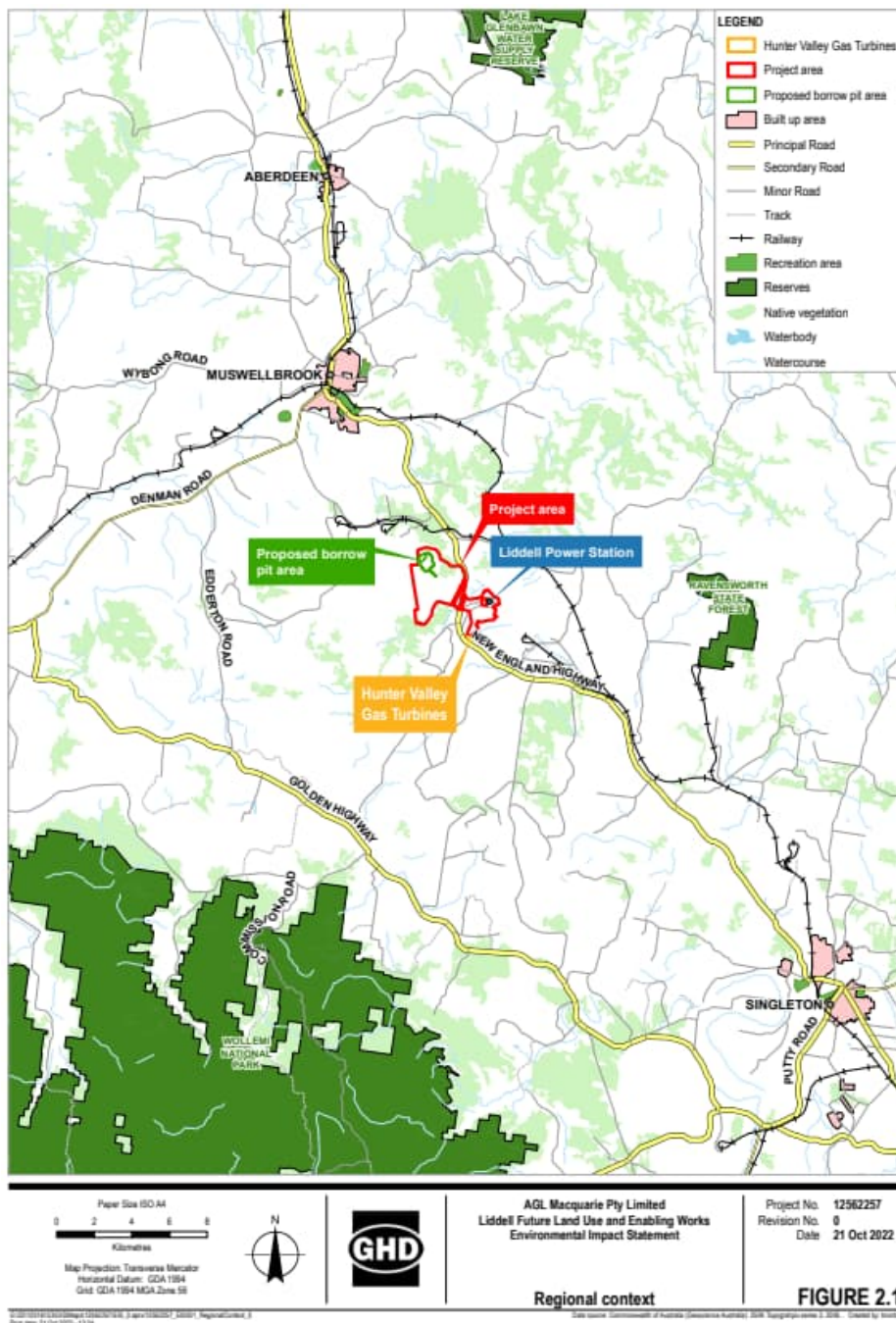


Figure 2-1. Development area (GHD,2023)

2.2 Development overview

LPS ceased operations in April 2023. The development supports the closure strategy for the demolition of the LPS, representing one of the final stages of the electricity works life cycles for LPS. Now that the LPS has been decommissioned, the demolition component of the development can commence involving the safe removal of the power station and associated infrastructure. Other components of the development such as the borrow pit area and asbestos disposal facility construction would take place concurrent with demolition works as part of Stage 1.

The development comprises of three main components:

- **LPS and associated infrastructure including gas turbines:** The development involves the demolition of LPS and redundant associated infrastructure, as well as demolition of the HVGTs and associated transmission lines and infrastructure.
- **Liddell Ash Dam (LAD):** Ancillary works to the approved LAD to manage surface water and maintain the structural integrity of ash retaining structures. Operation of the LAD would continue under DA 1/2011.
- **Borrow pit area and asbestos disposal facility:** Construction and use of a borrow pit, including expansion and use of the existing 'borrow pit area', for the extraction of material for use as capping material and for civil works to support final landform establishment. The approval also allows for the crushing of extracted material from the borrow pit. The development includes recontouring of areas of the site, where required, to enable ongoing industrial land use.

Additionally, an asbestos disposal facility would be constructed and used towards the western aspect of the borrow pit area. The facility would receive materials from the development including asbestos contaminated soil, asbestos containing materials (ACMs), synthetic mineral fibre (SMF) and small amounts of other suitable material associated with the asbestos material that is not feasible to separate.

If required, prior to the construction of the new asbestos disposal facility, a secure temporary asbestos storage area will be established to enable hazmat removal and construction of the onsite disposal facility to progress concurrently.

The development also involves the following activities:

- Recontouring of the landform and revegetation of relevant areas of the site as required
- Re-alignment of an existing water pipeline from the Fresh Water Dam to the LAD to provide water during ongoing capping.
- Administrative updates including the surrender, consolidation, and modernisation of existing consents.

The location of each component within the development area is displayed below in **Figure 2-2**. Additionally, disturbance areas associated with the development are shown in **Figure 2-3**. Further details of each component of the development are available in the environmental assessments.



Figure 2-2. Development area (GHD,2023)

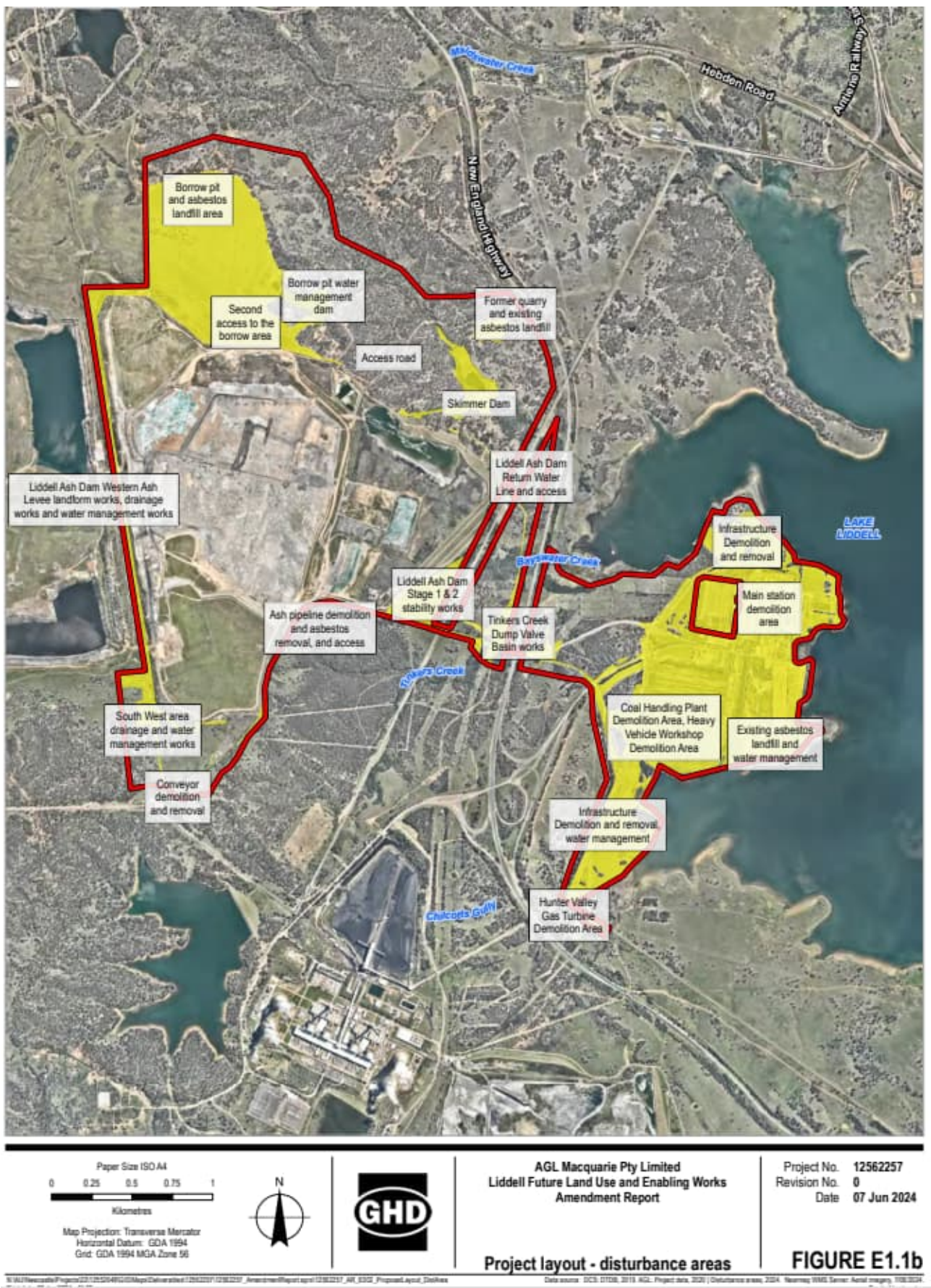


Figure 2-3. Development disturbance areas (GHD,2023)

2.3 Staging

The development will be delivered in three stages:

2.3.1 Stage 1

- Demolition of LPS and redundant associated infrastructure
- Demolition of the HVGTs and any associated transmission infrastructure
- Construction and use of asbestos disposal facility containment cells, including access road.
- Construction and use of a borrow pit for the extraction of up to 1.5 million m³ including establishment of the access road and associated water management controls.
- Rock crushing associated with Liddell Ash Dam capping works
- Rerouting of the existing dual water supply pipeline from the Tinkers Creek area along the existing ash pipeline corridor to the Liddell Ash Dam (LAD) to supply water for dust suppression and rehabilitation works.

2.3.2 Stage 2

- LAD ancillary works to manage surface water including works on the Skimmer Dam.

2.3.3 Stage 3

- Remediation (as required), recontouring and final landform works.
- LPS: Following completion of the demolition works the site will be prepared for ongoing industrial use.
- Borrow pit area and asbestos disposal facility: The borrow pit area and asbestos disposal facility will be rehabilitated to a safe, stable and non-polluting landform.
- Additional works associated with extraction from the Borrow Pit (up to a total of 13.5 million m³).
- Works associated with the LAD to maintain the structural integrity of the ash retaining structures.

Being part of the EMS, this plan applies to all three stages of the development, noting that the DEMP addresses how on-site traffic related matters would be managed during demolition.

2.4 Development as relevant to TMP

Key details of the development as relevant to the TMP include the nature, volume, timings and location(s) of traffic that would be generated during the Development (both on-site and off-site along the public road network), as well as an appreciation of traffic-related restrictions that may apply along routes (internal and external) to be used by traffic associated with the Development.

2.5 Development duration, timings and standard hours

Commencing in early 2025, the Development will take approximately 10 years to complete, with ongoing borrow pit and asbestos disposal facility associated work and maintenance activities expected to continue for a further 10+ years.

Consistent with condition A9 of Development Consent SSD-24937520, development activities would generally be completed during the following standard hours:

- Monday to Friday: 7:00am to 6:00pm

- Saturday: 8:00am to 6:00pm
- Sundays and Public Holidays: at no times

Condition A9 also lists the following development hours for particular activities:

- Blasting:
 - Monday to Friday: 9:00am to 5:00pm
 - No blasting on Public Holidays
- Maintenance, security, office work, and cleaning:
 - May be conducted at any time, provided that these activities are not audible at any residence on privately-owned land
- Delivery or dispatch of materials as requested by Police or other public authorities; emergency work to avoid the loss of lives, property or to prevent environmental harm; or Delivery of oversized plant or structures
 - At any time, only after notifying the Department.

2.6 Development site access

Traffic movements (on-site and off-site) associated with the development may generate impacts including noise and dust, especially along unsealed routes. To manage this, the following approved routes and accesses are to be adhered to:

- External access to the site is to be via the existing access to the LPS via the New England Highway, interchange and Unnamed Access Road between Bayswater and Liddell Power Station sites which are sealed surfaces.
- Existing internal haul roads, including the existing highway underpass, are to be utilised to access and transport materials to and from the various components of the development, including material from the borrow pit area to the LAD and other development areas if required, as well as ACM, SMF and asbestos contaminated soil to the asbestos disposal facility for disposal. Consistent with Condition B21, all overburden material excavated from the Borrow Pit must be transported using private haul roads.
- Use of the new haul road (to be constructed as part of the Borrow Pit) between the borrow area and the asbestos disposal facility which may be relocated over time as required as the borrow area is developed.

These internal and external routes, including the new haul road to be constructed as part of the Borrow Pit and the New England Highway overpass bridge displayed below in **Figure 2-4**.

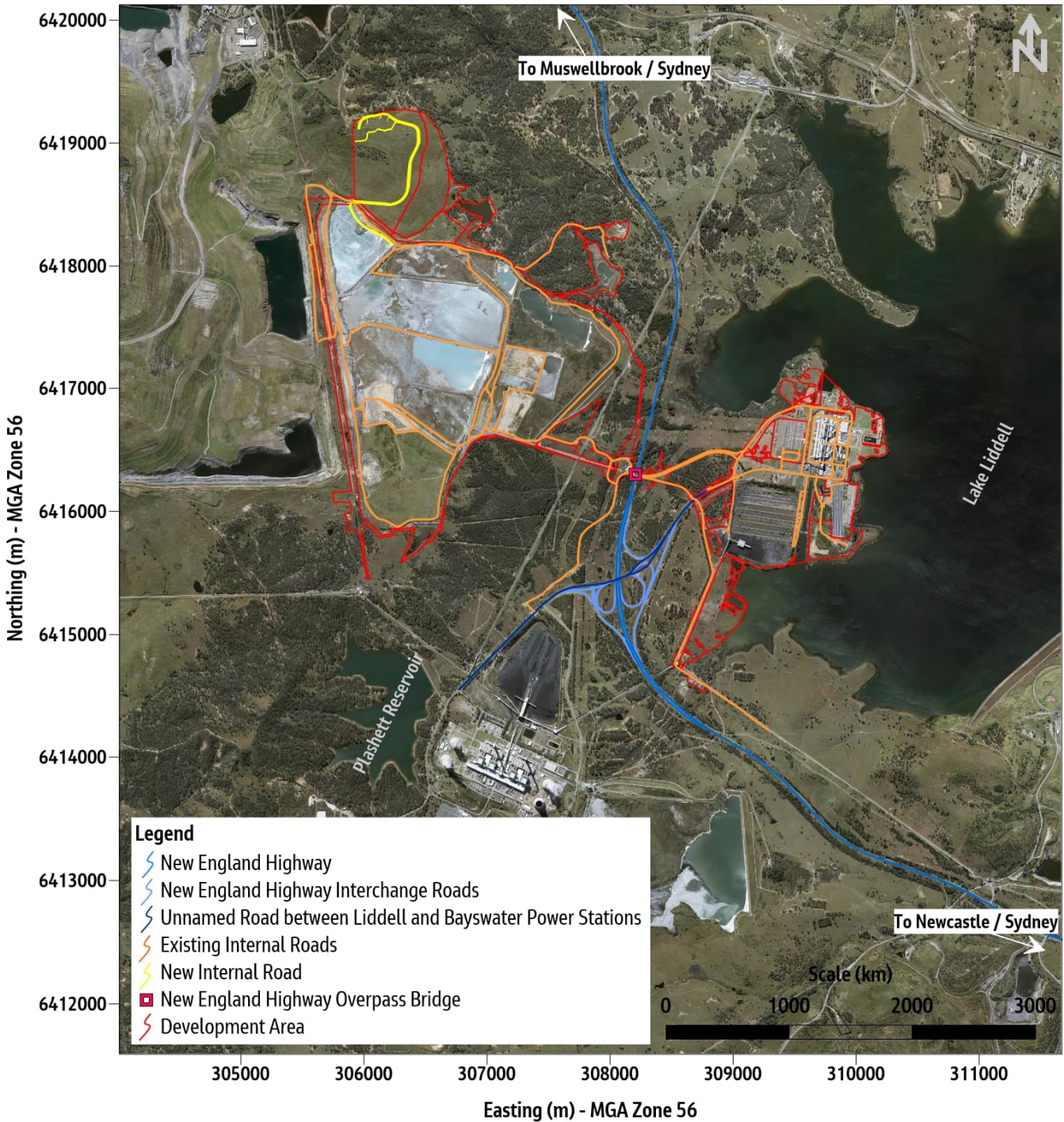


Figure 2-4. Roads and access routes

3. Environmental management framework

3.1 Overview

This section outlines the relevant policy and guidelines related to the management of traffic and transport impacts in NSW, in addition to the Development specific Development Conditions and commitments, including mitigation and management measures, developed in the environmental assessments. It is noted that there are no traffic management related requirements within EPL2122.

3.2 Development Consent

Conditions of Development Consent SSD-24937520 relevant to traffic include B20., and B21. These are listed below in **Table 3-1**, including where they are addressed in the TMP.

Table 3-1. Traffic - Consent requirements and where they are addressed

Consent requirement	Section/reference where addressed
B20. All heavy vehicle travel and transport must be undertaken in accordance with a Driver's Code of Conduct, prepared in consideration of registered industry codes of practice published by the National Heavy Vehicle Regulator.	Section 7.2.1
B21. All mine overburden material excavated from the Borrow Pit must be transported using private haul roads.	Section 7.1

3.3 Environmental Protection Licence

EPL No. 2122 does not include any specific requirements for traffic management.

3.4 Statement of Commitments

Recommendations written into the SoCs contained in the environmental assessments must also be adhered to. These commitments as relevant to traffic are detailed below in **Table 3-2**.

Table 3-2. Traffic SoCs and where addressed in the TMP

Reference	Management measure	Timing	Responsibility	Where addressed in this plan
TT1	A Traffic Management Plan (TMP) will be prepared for the project prior to construction commencing. The TMP will address traffic movements associated with the decommission phase of the project, in particular the impact of OSOM vehicles required for the project. The TMP and associated Traffic Control Plans (TCPs) will be prepared by suitably qualified persons and in accordance with the TfNSW Traffic Control at Work Sites Manual. The TMP will consider impacts	Pre-demolition, demolition and construction	AGLM and Principal Contractor	This document The process for development of TCP's is provided in Section 7.2.1

Reference	Management measure	Timing	Responsibility	Where addressed in this plan
	related to the height of the Liddell overpass bridge as strike risks may be a safety issue for heavy vehicle operators which could also compromise structural integrity. Where road safety concerns are identified at a specific location along the proposed haulage routes, the TIA will be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with the Austroads Guidelines.			Height restrictions for the New England Highway Overpass Bridge are discussed in Section 4.1.3 with associated measures included in Section 7.1 Road safety audits are discussed in TMP14, Section 7.1
TT2	All loading and unloading of materials will be limited to specific loading areas within the site. No loading or unloading will occur on public roads. Loading vehicles are generally expected to only use internal road network.	Pre-demolition, Demolition and construction	Principal Contractor	TMP2, Section 7.1 DEMP
TT3	Any public roads deemed to have been damaged by the project will be repaired to an acceptable standard, with all costs borne by AGLM or their appointed contractor.	Pre-demolition, Demolition and construction	Principal Contractor	TMP3, Section 7.1
TT4	Truck deliveries to and from the site will be scheduled outside peak hours where possible.	Pre-demolition, Demolition and construction	Principal Contractor	TMP4, Section 7.1 DEMP
TT5	To increase awareness of the increased truck volumes and the presence of OSOM vehicles, truck warning signage will be installed where required to notify other road users. Traffic management, warning, and regulatory signs will be installed where appropriate.	Demolition	Principal Contractor	DEMP
TT6	Throughout the project, AGLM will ensure the internal access road providing access to the LPS, the ash dam and the borrow pit area is maintained.	Demolition	Principal Contractor	TMP5, Section 7.1 DEMP

Reference	Management measure	Timing	Responsibility	Where addressed in this plan
TT7	All parking will occur within the site boundaries, in dedicated parking areas. All staff and drivers will be instructed not to park on public roads.	Pre-demolition, Demolition and construction	AGLM and Principal Contractor	TMP7, Section 7.1 DEMP
TT8	All staff and contractors will be informed that animals often cross the New England Highway and to take necessary precautions when driving.	Pre-demolition, Demolition and construction	AGLM and Principal Contractor	TMP8, Section 7.1 DEMP
TT9	Traffic controllers should be present where OSOM are required to make right-turning movements along the haulage route to the project site.	Pre-demolition, Demolition and construction	Principal Contractor	TMP9, Section 7.1 DEMP
TT10	The OSOM vehicle contractor is expected to undertake a pre-route assessment of the proposed routes, to assess the route for any obstructions which they deem necessary to be removed.	Pre-demolition, Demolition and construction	Principal Contractor	TMP10, Section 7.1 DEMP
TT11	A permit from the NHVR will be required prior to the undertaking of any OSOM haulage trips. All trips will need to be undertaken in accordance with the permit conditions	Pre-demolition, Demolition and construction	Principal Contractor	TMP12, Section 7.1 DEMP

3.5 Other relevant legislation, technical standards and guidelines

Other legislation, guidelines, standards and policies relevant to this TMP include:

- *Roads Act 1993.*
- *Road Transport Act 2013.*
- *Road Rules 2014.*
- *Guide to Traffic Generating Developments, 2002.*
- *Austrroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, 2021.*
- *Austrroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings, 2019.*
- *Austrroads Guide to Road Safety Part 6, 2009.*
- *Work Health and Safety Act 2011 & Work Health and Safety Regulation 2017.*

4. Existing environment

4.1 Key roads

The Development is connected to the surrounding road network via an access road and grade-separated interchange to and from the New England Highway, as shown in **Figure 2-4**. Additionally, there is an internal access road and boom gate located at LPS entry for access into the site.

4.1.1 New England Highway

The key surrounding road is the New England Highway, which is a national highway linking Newcastle, NSW to Brisbane, Queensland (QLD). The New England Highway is classified as a State Road under the control of TfNSW and is also a NHVR approved B-double and OSOM route. Near the Development, the New England Highway is dual carriageway with two lanes in each direction and a central median. The speed limit on the New England Highway in the vicinity of the Development is 100 km/h.

4.1.2 Liddell (and Bayswater) interchange and access road

LPS and BPS are accessible from the New England Highway via an interchange with an unnamed east-west access road which connects to the LPS internal access road. The interchange consists of one northbound entry ramp, one northbound exit ramp, one southbound entry ramp and two southbound exit ramps which provide grade-separated access to LPS and BPS. The access road is a single carriageway road with one lane in each direction. The road has a sign posted speed limit of 60 km/h and then changes to 40km/h closer to the station. TfNSW are understood to be planning works to increase the clearance between the bridge (supporting the unnamed access road) over the New England Highway and the North bound lanes of the New England Highway at the interchange. Should these works intersect with the Development, appropriate adjustments would be implemented to transport procedures (including this plan) as required.

4.1.3 LPS Internal Roads

Access throughout LPS and the Project Area is facilitated via existing sealed and unsealed access tracks. Key internal roads and tracks are displayed above in **Figure 2-4**. As noted in Section 2.6, the Development includes construction of a new access track at the Borrow Pit. This is also displayed above in **Figure 2-4**. The New England Highway Overpass Bridge (shown in **Figure 2-4**) is a key location with respect to traffic along the LPS internal road network. The vertical clearance from the on-site access road which passes under the New England Highway Overpass Bridge is 4.4m and the available width at this location is noted as being 3.6m.

4.2 Existing traffic volumes

Existing traffic volumes on the New England Highway interchange and access road to site are shown in **Figure 4-1** (AM) and **Figure 4-2** (PM) below.¹

¹Traffic survey by TTM Group on Tuesday 22 May 2018. The AM and PM peaks occurred from 05:45-06:45 and from 17:30-18:30.

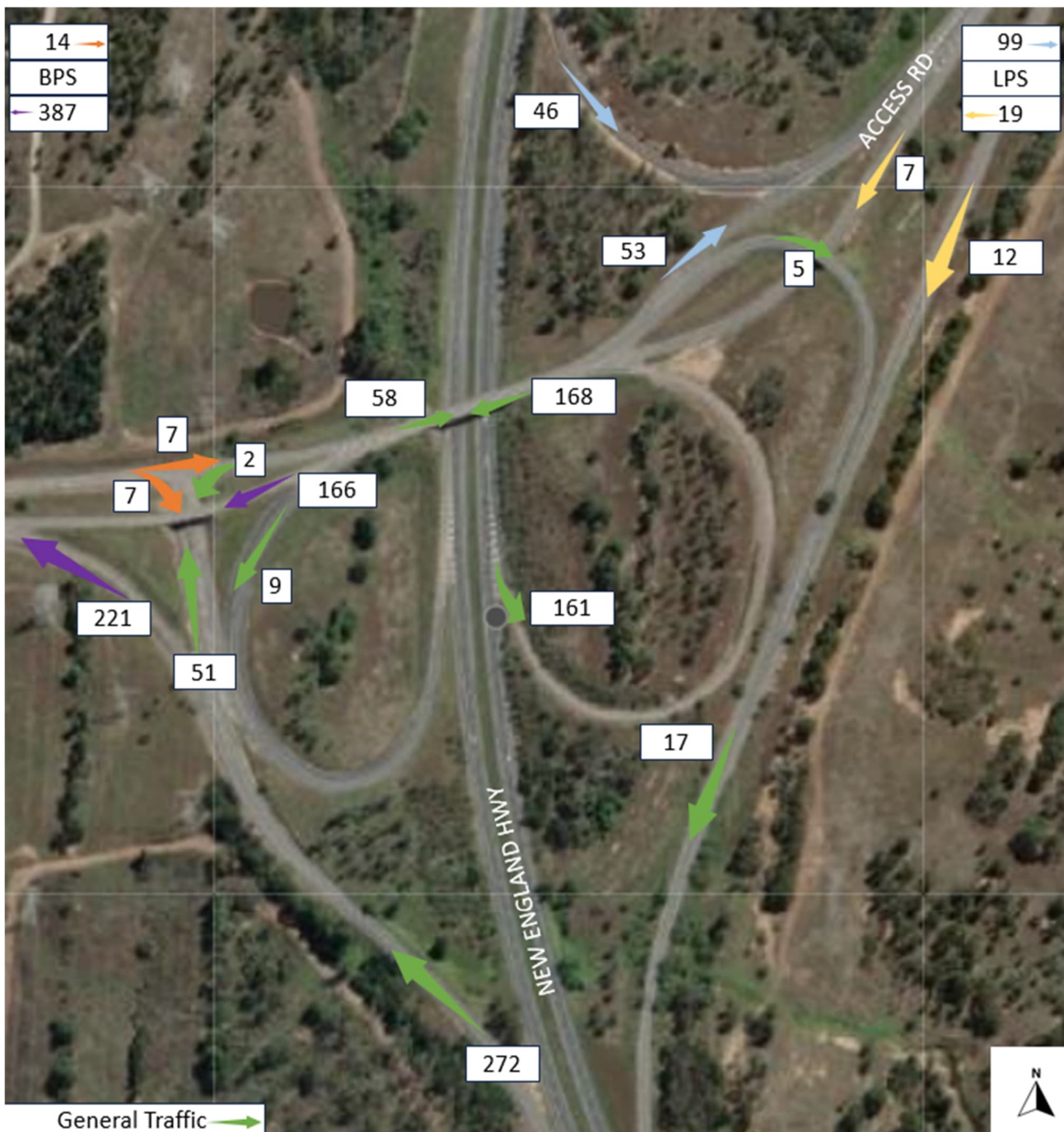


Figure 4-1. New England Highway / LPS Interchange Traffic Volumes – AM peak

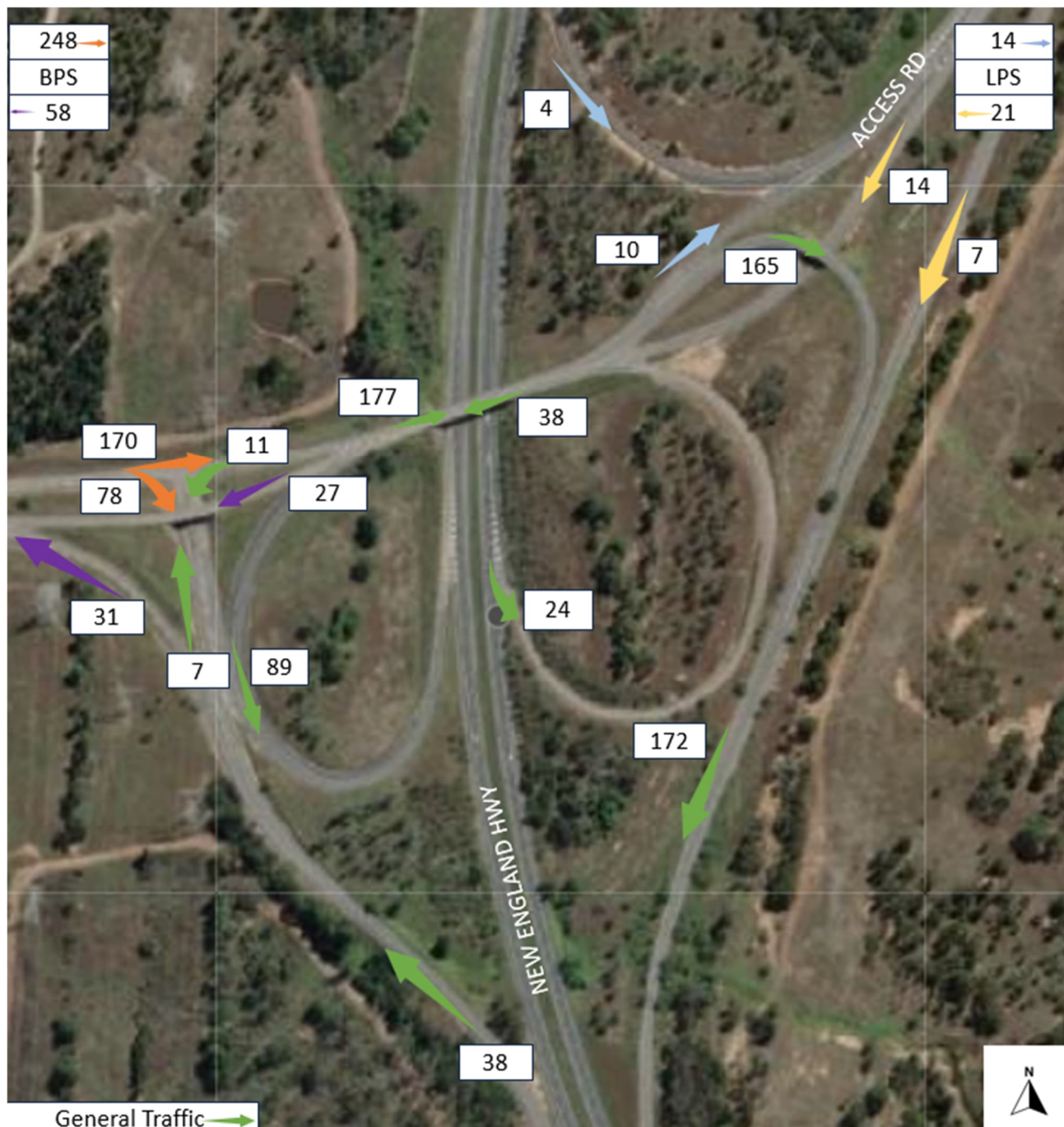


Figure 4-2. New England Highway / LPS Interchange Traffic Volumes – PM peak

4.3 Public transport services

While the Main North Rail Hunter line runs west-east along the northern side of Lake Liddell, there are no public transport stations or stops within proximity of the Development.

4.4 Active transport

No formal off-road pedestrian or cycling facilities are provided on the road network near the Development.

4.5 Existing parking

There are no formal on-road, public car parking spaces near the Development area.

5. Construction traffic associated with the Development

5.1 Overview

A description of the development, including key work areas and staging is provided above in **Section 2**. This section describes specific details of the Development as relevant to the TMP. As noted above in **Section 1.2**, Development traffic matters covered by the TMP include:

- All off-site movements, and
- On-site movements associated with all stages and activities associated with the Development except demolition. The DEMP addresses how on-site traffic related matters would be managed during demolition.

5.2 Construction schedule

Development construction works will be carried out over a timeframe of approximately 10 years, with ongoing borrow pit and asbestos disposal facility associated works and maintenance works continuing for an additional 10+ years. Details for each key aspect of the Development as relevant to traffic are summarised below in **Table 5-1**.

Table 5-1. Construction details relevant to traffic

Aspect	Construction Period	Associated traffic	Key roads
LPS and associated infrastructure including gas turbines	2025 to 2035	- Worker light vehicle movements - OSOM deliveries delivering construction plant and equipment - Heavy vehicle movements relaying demolished materials to the on-site asbestos disposal facility or otherwise off-site - Heavy vehicle movements relaying materials from the borrow pit area for landform redevelopment around LPS, HVGs and other infrastructure (Stage 2 or 3)	- Internal private access roads, including new haul road - East-west (Liddell and Bayswater) unnamed access road - New England Highway
LAD and other works in the Development area west of the New England Highway (Stage 2)	2025 to 2035	- Worker light vehicle movements - OSOM deliveries delivering construction plant and equipment - Heavy vehicle movements relaying materials from the borrow pit area for the construction of LAD surface water and ash retaining structures.	- Internal private access roads, including new haul road - East-west (Liddell and Bayswater) access road - New England Highway
Borrow pit area and asbestos disposal facility	2025 to 2045	- Worker light vehicle movements - OSOM deliveries delivering construction plant and equipment - Heavy vehicle movements relaying demolished materials to the on-site asbestos disposal facility or otherwise off-site.	- Internal private access roads, including new haul road

		- Heavy vehicle movements relaying materials from the borrow pit area to other areas of the site.	
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5.3 Haulage/delivery access routes and parking

5.3.1 General access vehicles

Access to the site must be via the New England Highway, interchange and the unnamed east-west (Liddell and Bayswater) access road and then onto the internal private access road to the Development area (as displayed in **Figure 2-4**). General Access Vehicles (GAV) which comply with mass and dimension can traverse the road network without a permit.

Requirements do not require a notice or permit to operate on the road network.

5.3.2 Heavy and over-dimensional vehicle access

OSOM movements associated with the Development would travel to and from the Development site, along major roads. The haulage route consists of a number of motorways and the Hunter Expressway, connecting to the site via the New England Highway, interchange and then the unnamed east-west (Liddell and Bayswater) access road.

While the unnamed east-west access road is approved for 25 / 26 m B-doubles, permits are required to be sought from NHVR in consultation with Transport for NSW (TfNSW) to allow OSOM vehicle access.

5.3.3 LPS internal access

On-site traffic movements associated with development construction activities (as defined above) must be via internal roads. This includes all mine overburden material excavated from the Borrow Pit which would also be transported via the new internal road displayed above in **Figure 2-4**.

5.3.4 Construction-related parking

Parking for construction vehicles for the duration of the works would be provided in and around LPS within the Development area, away from public roads. External access to the site parking would be via the New England Highway via the existing designated intersection.

5.4 Construction vehicles

The types of vehicles to be used for the construction works is expected to include:

- Light vehicles for worker movements to and from site. A 'light vehicle' in NSW is defined as a motor vehicle or trailer with a GVM or ATM, respectively, not exceeding 4.5 tonnes. This includes cars, vans, light trucks, and trailers within that weight limit
- Heavy vehicle movements, including OSOM movements. In NSW, a 'heavy vehicle' is defined as a motor vehicle with a GVM exceeding 4.5 tonnes or a trailer with an ATM exceeding 4.5 tonnes. 'OSOM' involves a heavy vehicle or combination exceeding general access mass or dimension limits, meaning it's wider, longer, or heavier than typical vehicles.

5.5 Traffic generation

Based on the material projections, up to 60 truck movements will occur in each direction, each day, resulting in approximately 120 trips to and from the site. There will be no impact to the external road network.

Traffic generated by the construction activities of the Development involve the transportation of personnel, plant, equipment and materials. The construction workforce travel to the site by private car. The workforce number required over the construction period will fluctuate depending on the activities being undertaken. It is anticipated that between 75 and around 100 construction workers will travel to/from the site each workday during the peak of demolition activities.

Expected workforce trips during construction are listed below in **Table 5-2** and **Table 5-3**.

Table 5-2. External vehicle trips²

Direction	Total trips (vehicles per hour (vpa))	
	AM Peak	PM Peak
Inbound	102	0
Outbound	0	102

Table 5-3. Traffic volumes during peak construction

Time period	LPS (number of total vehicles)		BPS (number of total vehicles)		Total
	To the site	From the site	To the site	From the site	
Daily	577	560	1,116	1,121	3,374
Morning Peak hour (6:00AM to 7:00AM)	142	27	387	14	570
Evening Peak hour (5:30PM to 6:30PM)	20	30	58	246	354

5.6 Traffic distribution

All construction traffic will be distributed 60% from the south and 40% from the north, based on observed traffic splits on the New England Highway. Trips related to scrap metal, recyclable materials and other waste disposal will mainly occur towards Muswellbrook and Newcastle.

5.7 Future Traffic Generation

The trips generated by the Development, the removed trips from the LPS, and the trips generated by the cumulative projects and land uses have been summarised in the **Figure 5-1** and **Figure 5-2**.

² Appendix M - Traffic and Transport Impact Assessment, (GHD, 2023)

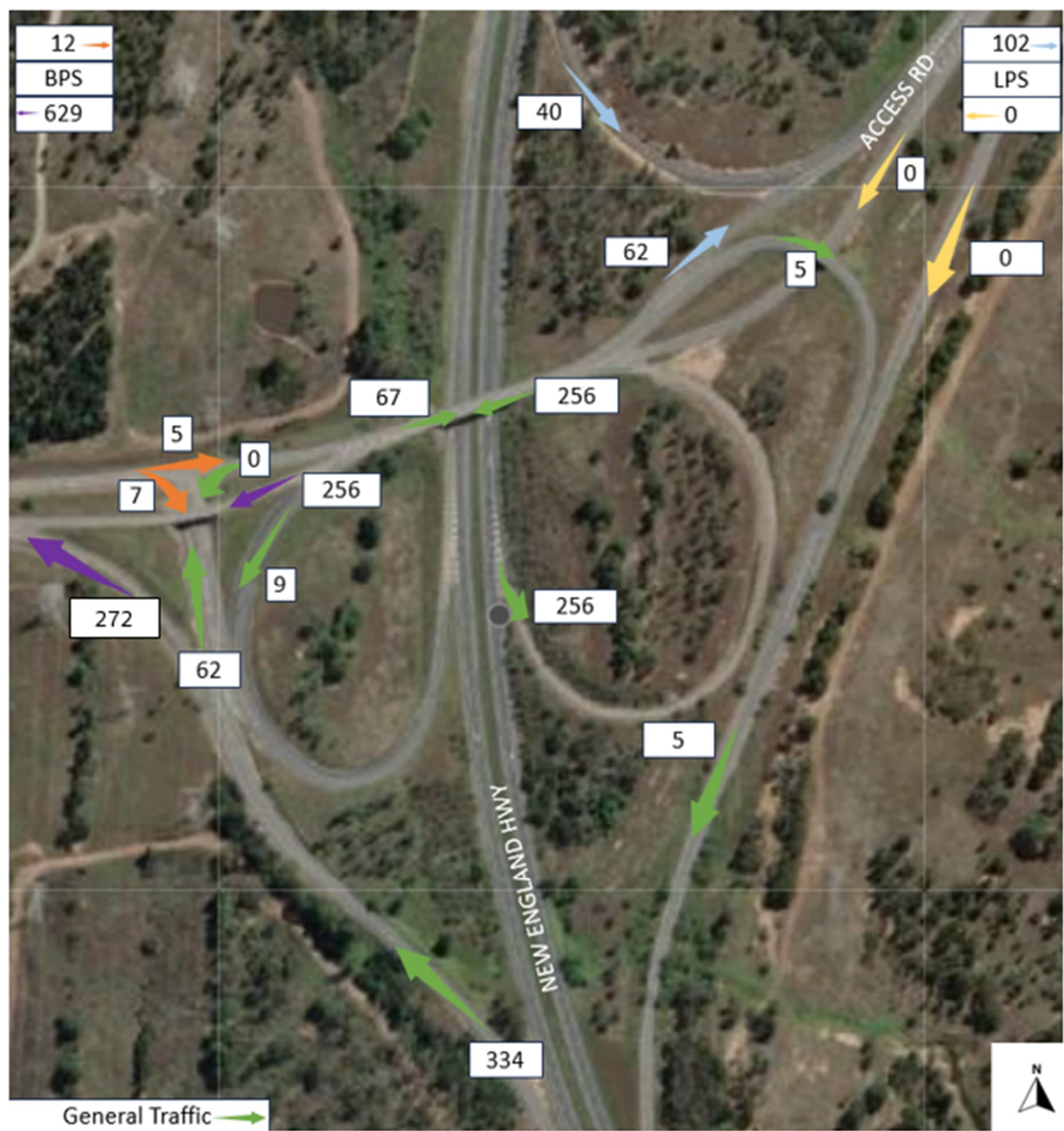


Figure 5-1: Future AM traffic volumes New England Highway/LPS and BPS interchange

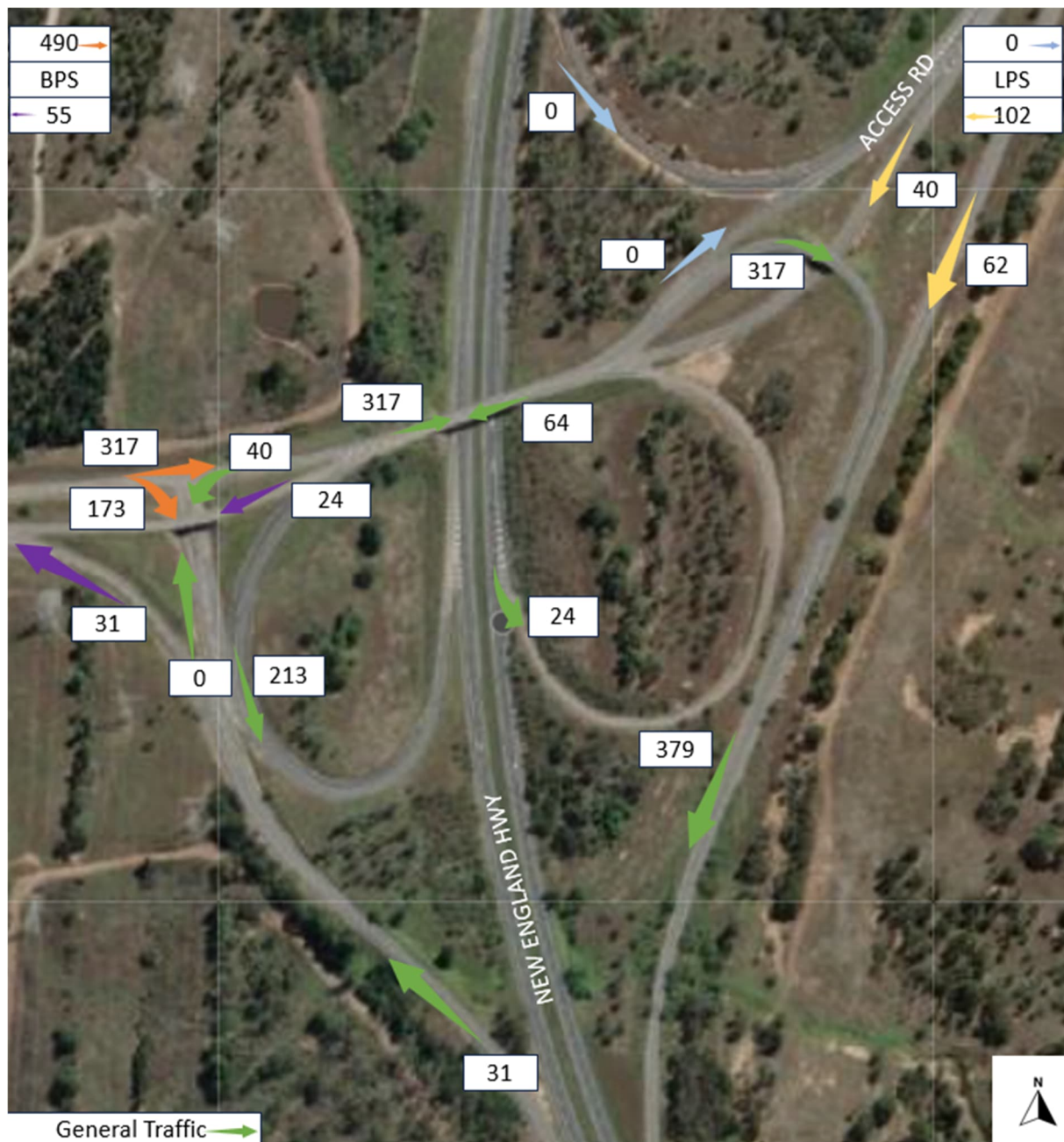


Figure 5-2: Future PM traffic volumes New England Highway/LPS and BPS interchange

6. Potential impacts

This section summarises the potential traffic-related impacts and issues determined in the environmental assessments. These are included, noting that it must be demonstrated that the development is being carried out in a manner (and with the same level of impacts) generally consistent with the environmental assessment documents

6.1 Road network capacity

The environmental assessments reviewed the impacts to the following elements of the road network:

- Intersection performance at the LPS access interchange on New England Highway.
- Merge and diverge analysis at the ramps of the LPS access interchange on New England Highway.
- Capacity analysis of the New England Highway.

The assessments determined that the impacts to the above, as a result of traffic associated with the Development, would be minimal. It was determined that affected roads would continue operating well within their respective capacities, while accommodating the additional traffic generated from the Development.

6.2 Access and egress

No impacts to existing industrial or residential property access were determined, noting that all accesses will be retained during the Development.

6.3 Public transport

There are no Public transport services in the vicinity of the Development site and therefore, the environmental assessments determined that public transport will be unaffected by traffic associated with the Development.

6.4 Active transport

There is no formal pedestrian or cycling infrastructure located near the Development area. Based on this outcome, the environmental assessment documents concluded that the potential for interaction with pedestrians and cyclists resulting from Development related traffic would be limited.

6.5 Impacts on road safety

Between 2018 – 2022, The environmental assessment documents identified that five motor vehicle crashes³ had occurred within the vicinity of the Development. All five crashes occurred on New England Highway with no fatalities, with only one incident classified as involving a serious injury. The environmental assessments determined that the Development would not affect road safety along associated roads.

6.6 Impacts on pavement conditions

The environmental assessments concluded that road degradation impact on the New England Highway would be negligible due to the existing haulage capacity of the road.

³ Source: <https://www.transport.nsw.gov.au/roadsafety/statistics/interactive-crash-statistics/crashes-by-type-and-region>

6.7 Impacts to emergency services

No impacts to emergency services from traffic associated with the Development were determined in the environmental assessment documents, since all existing road access and traffic flows would be maintained.

6.8 Impacts of OSOM vehicles

The Development requires OSOM vehicles to transport components to the Development area. The OSOM vehicle will be the largest vehicle generated by the Development works.

A preliminary desktop OSOM assessment was conducted as part of assessment documents on two proposed OSOM haulage routes from the directions of the Port of Newcastle, and from Sydney via Muswellbrook to the Development area to identify potential issues, pinch points and/or potentially at-risk road structures which may require consideration at this stage. Both routes utilise the NSW OSOM Load Carrying Vehicles Network approved roads and only differ in approach to the Development area (either from the north or south). Transport from the broader Sydney area to and from site was also assessed and found to use NSW OSOM Load Carrying Vehicles Network approved roads.

The required OSOM movements for the Development are to be co-ordinated with the relevant authorities and the requirements of any permits to minimise impacts on the road network. Where required, escorts, transport restrictions and appropriate traffic management will be adopted to ensure safe movements from the public road network onto the Development area. The transport contractor will be responsible for obtaining all required approvals and permits from relevant authorities including from the NHVR, TfNSW and local councils.

The unnamed east-west access road at the interchange is not covered by the NSW OSOM Load Carrying Vehicles Network approved roads. Therefore, a permit would be required to be sought from NHVR in consultation with Muswellbrook Shire Council to allow heavy vehicle access.

Additional permit requirements could include:

- Road Opening Permits (ROP) and Lane Occupancy Licences (ROL) for construction on state or council controlled roads and during any repair work
- Modification works for OSOM deliveries at any intersection locations
- Speed zoning authorisation
- Lane Occupancy Licences covering traffic management during OSOM deliveries (where civil works are required to accommodate OSOM vehicle manoeuvres)
- A Works Authorisation Deed (WAD) which is required for any improvement works on classified roads.

Impacts on road user safety during transportation would be mitigated through a detailed OSOM Transport Management Plan, which would be developed in consultation with TfNSW and local councils of impacted townships. This plan is to be developed by the OSOM vehicle contractor.

6.9 Cumulative impacts

The cumulative traffic impact assessment as part of the environmental assessments identified the following developments which have construction periods which may overlap with the Development construction period:

- Bayswater Power Station.
- Liddell Battery and Bayswater Ancillary Works Project.
- Ravensworth Composting Facility.
- Bayswater Water and Other Associated Operational Works Project.

Additional traffic may be generated along roads that would be used by the Development from these other projects are summarised below:

- From 2023-2033, 640 vehicles trips per day are expected to be generated to/from the New England Highway interchange. Additionally, there will be the existing traffic which is generated to/from the BPS.
- From 2033-2040, 185 trips per day are expected to be generated to/from the New England Highway interchange and additional movements to/from the BPS as a result of its decommissioning.

The environmental assessment documents determined that even with cumulative traffic from these other projects, sufficient capacity remained along affected roads.

7. Mitigation and management

7.1 Standard measures

Standard traffic management measures to be implemented during the Development are listed below in Table 7-1.

Table 7-1. Environmental management measures

Reference	Management measure	Timing	Responsibility
TMP1	All construction personnel shall be instructed through the site-specific induction or toolbox with regards to the importance of minimising traffic impacts.	Prior to and during construction	Principal Contractor
TMP2	Development areas are well separated from public areas and all loading and unloading of materials will be limited to specific loading areas within the site. No loading or unloading is to occur on public roads, and all vehicles are to enter and leave the site in a forward direction.	During construction	Principal Contractor
TMP3	Any public roads deemed to have been damaged by the Development will be repaired to an acceptable standard.	Prior to, during and after construction	Principal Contractor
TMP4	Where possible, truck deliveries to and from the site should be scheduled outside of peak hours during the day (i.e. between AM and PM peak hours).	During construction	Principal Contractor
TMP5	All internal roads will be maintained to ensure access to the LPS, the ash dam and the borrow pit area is maintained	During construction	Principal Contractor
TMP6	Site inspection can be undertaken at an appropriate frequency to minimise dirt and mud being tracked onto public roads. All vehicles transporting loose materials on public roads will have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway.	During construction	AGLM and Principal Contractor
TMP7	All parking should occur within the site boundaries, in dedicated parking areas. All staff and drivers will be instructed not to park on public roads.	During construction	AGLM and Principal Contractor
TMP8	All staff and contractors should be informed that animals often cross the New England Highway and to take necessary precautions when driving.	Prior to and during construction	AGLM and Principal Contractor

Reference	Management measure	Timing	Responsibility
TMP9	Traffic controllers should be present where OSOM are required to make right-turning movements along the unnamed access road to the Development site.	During construction	Principal Contractor
TMP10	The OSOM vehicle contractor is expected to undertake a pre-route assessment of the proposed routes, to assess the route for any obstructions which they deem necessary to be removed.	Prior to and during construction	Principal Contractor
TMP11	A permit from the NHVR will be required prior to the undertaking of any OSOM haulage trips. All trips will need to be undertaken in accordance with the permit conditions and be outside of peak traffic periods where reasonable and feasible.	During construction	Principal Contractor
TMP12	All mine overburden material excavated from the Borrow Pit must be transported using private haul roads.	During construction	Principal Contractor
TMP13	Review planned traffic movements to ensure that the height (4.4m clearance) and width (3.6m) restrictions for the on-site access road which passes under the New England Highway Overpass Bridge are adhered to.	During construction	Principal Contractor
TMP14	Complete Road Safety Audit(s) for any specific locations where road safety concerns are identified along off-site haulage routes. Audits are to be undertaken by suitably qualified persons, and in accordance with Austroads guidelines (namely <i>Austroads Guide to Road Safety Part 6, 2009</i>). Any actions arising from these audits are to be implemented as applicable.	Prior to and during construction	Principal Contractor and suitably qualified road safety auditor

7.2 Additional measures

7.2.1 Permit requirements

The unnamed east-west access road at the interchange is not covered by the NSW OSOM Load Carrying Vehicles Network approved roads. Therefore, a permit is required to be sought from NHVR in consultation with Muswellbrook Shire Council to allow heavy vehicle access.

Additional permit requirements could include:

- Road Opening Permits (ROP) and Lane Occupancy Licences (ROL) for construction on state or council controlled roads and during any repair work

- Modification works for OSOM deliveries at any intersection locations
- Speed zoning authorisation
- Lane Occupancy Licences covering traffic management during OSOM deliveries (where civil works are required to accommodate OSOM vehicle manoeuvres).
- A Works Authorisation Deed (WAD) which is required for any improvement works on classified roads.

7.2.1.1 Drivers code of conduct

As per Development consent SSD-24937520 Condition B20, A Driver Code of Conduct has been prepared in consideration of registered industry codes of practice published by the National Heavy Vehicle Regulator (refer to **Appendix A**). The Driver Code of Conduct will outline arrangements for light and heavy vehicle drivers, including:

- General requirements, including site induction requirements
- Travelling speeds and safe driving practices, particularly through residential areas and school zones
- Fatigue management
- Adherence to designated haulage routes and heavy vehicle noise
- Public complaint resolution and penalties and disciplinary action.

7.2.1.2 Traffic Control Plan

If temporary traffic control arrangements are required off-site, a site-specific Traffic Control Plan (TCP) will be submitted. The primary objective of the traffic management is to ensure safe and efficient movement of construction related vehicles entering the Development area, whilst minimising disruptions/impacts and maintaining a safe environment for vehicular traffic on New England Highway.

Records will be maintained of:

- All traffic control plans, including dates and times the plans were erected and removed.
- Any adjustments made to such schemes.
- Inspections.

All inspections will obey guidelines provided in Australian Standard (AS) 1742.3. Three inspection types identified as part of this process are:

- Pre-start, during work and pre-closedown inspections of traffic control layout (daily, by Field Supervisor).
- Inspect the traffic control layout on the day before work begins, and weekly inspections (Traffic Representative).
- Undertake traffic control safety audit at least once a month (Traffic Representative).

Consistent with SoC TT1, TCPs must be prepared by suitably qualified persons in accordance with the Austroads Guidelines.

8. Compliance Management

8.1 Roles and responsibilities

The specific roles and responsibilities are applicable to the activities and actions outlined in this plan are summarised in **Section 4.1** of the EMS.

8.2 Inspections

Traffic from the development would be managed using the relevant standard and additional controls listed above in **Section 7**. Implementation of these controls would be reviewed as part of the routine environmental inspections to be completed for the development, as well as in response to adverse weather. Where opportunities for improvement arise, these would be documented in the inspection reports and promptly actioned.

8.3 Training

Workers and visitors are required to undergo general training and awareness programs regarding environmental management requirements as per **Section 4.6** of the EMS.

8.4 Monitoring and reporting

Monitoring will be undertaken as required to oversee the impact of construction on local roads and the wider transport network. The purpose of monitoring is to identify and communicate any road safety concerns such as weather, incidents, or significant delays.

8.5 Community and stakeholder engagement

Section 4.8 of the EMS describes overall community and stakeholder engagement processes for the development.

8.6 Enquiries and complaints

Incidents, complaints and enquiries, including those related to air quality will be managed in accordance with the process outlined in **Section 6.5** of the EMS.

8.7 Hazards, near misses, incidents and non-compliances

Hazard, near miss, incident and non-compliances will be managed in accordance with the process outlined in **Section 7.2** of the EMS.

8.8 Record keeping

Compliance reporting will be undertaken as per **Section 7.8** of the EMS.

9. Review and improvement

9.1 Plan review

Refer to Section 7.10 of the EMS for the requirements relating to the plan review and updates.

9.2 Continuous improvement

Refer to Section 7.5 of the EMS for information relating to continuous improvement.

Appendix A – Drivers Code of Conduct

9.2.1.1 Driver Code of Conduct

The Driver Code of Conduct is to ensure that light and heavy drivers adhere to safe driving practices. All employees and contractors are to abide by responsible driving and adhering to the Code of Conduct.

9.2.1.1.1 General requirements

Light and heavy vehicle drivers hauling to and from the Development must:

- Have undertaken a site induction carried out by a suitably qualified employee
- Hold a valid driver's licence for the class of vehicle that they are operating and carry a current driver's licence while operating a vehicle
- Operate the vehicle in a safe manner to, from and within the site in accordance with all road rules pertaining to the vehicle, particularly in residential areas or at school zones
- Comply with the direction of authorised site personnel when within the site.

All incidents, hazards and near misses, whether resulting in an injury or not, must be reported to site management immediately. This includes incidents, hazards and near misses which have occurred on or while travelling to and from the site.

Regular toolboxes will be held to outline the potential hazards of travel on the designated routes including locations with increased collision risk, damaged road infrastructure, potential noise impacts and school zones.

9.2.1.1.2 Light and heavy vehicle speed

Light and heavy vehicle drivers are to be made aware of two types of speeding:

- Where a vehicle driver travels faster than the posted speed limit
- Where a vehicle driver travels within the posted speed limit but at a speed which is inappropriate for road conditions e.g. rain, fog, unsealed roads.

All vehicle drivers are to observe the posted speed limits to comply with Australian Road Rules. Drivers must adjust their speed appropriately to suit the road environment and weather conditions. Drivers must adjust their speed appropriately through residential areas and school zones.

9.2.1.1.3 Light and heavy vehicle driver fatigue

Site personnel fatigue will be managed via the following:

- Unless under exceptional circumstances, work periods shall not exceed 12 hours
- Any extension of this period shall require the approval of site management and where possible alternative transport shall be arranged
- The monitoring of fatigue experienced by employees working extended hours shall rely not only on reporting by employees, but also on observation and assessment by site managers
- Carpooling and bus management will be considered to ensure the drivers are within the 12-hour timeframe to manage fatigue.

Under the *Heavy Vehicle Driver Fatigue Reform* (National Transport Commission 2008), all drivers of trucks and truck combinations over 12 tonne GMV (except for Ministerial Exemption Notices that may apply) are required to operate under one of three fatigue management schemes:

- Standard Hours of Operation

- Basic Fatigue Management
- Advanced Fatigue Management.

All heavy vehicle operators are to be aware of their adopted fatigue management scheme and operate within its requirements.

9.2.1.1.4 Adherence to designated transport routes

Light and heavy drivers must follow the designated transport routes agreed upon with site personnel to and from the Project area. Heavy vehicles must travel only on heavy vehicle-approved roads and must access the site from the New England Highway, via the interchange, along the unnamed access road between Bayswater and Liddell, and then via the site entrance gate.

9.2.1.1.5 Safety in residential areas and school zones

Drivers are required to be aware and show care when driving through residential areas and near schools, including between the morning (8:00am to 9:30am) and afternoon (2:30pm to 4:00pm) periods. Drivers are to be mindful of children being dropped off and picked up at bus stops and at schools during these periods. Drivers are to comply with 40km/h speed limit for traffic passing a school bus as well as within school zones. Drivers are to give pedestrians a wide berth and be aware of the pedestrians' safety, road users' safety and their own safety at all times.

Construction vehicle movements will be managed to minimise movements during periods of higher traffic volumes and operate outside of school pick up and drop off periods.

9.2.1.1.6 Heavy vehicle noise

If possible, heavy vehicle drivers should not use compression brakes near residential areas as compression brakes can cause excessive noise, especially at night. Compression braking throughout residential areas is only to be used if required for safety reasons. When driving near residential areas, a reduction in speed is recommended to minimise the need to use compression brakes.

All heavy vehicles must be fitted with audible reversing alarms for the safety of all personnel. However, audible reversing alarms can be noisy and heavy vehicle drivers should minimise reversing near residential areas.

9.2.1.1.7 Public complaint resolution

To assist in the orderly resolution of complaints, site management will keep a register itemising all reported incidents relating to complaints in regard to heavy vehicle driver conduct external to the site.

The incident register is to include (where possible):

- Date of the complaint
- Time of the complaint
- Name of the complainant (if available)
- How the complaint was received
- Detailed description of the complaint (including location, driver/heavy vehicle details)
- What/when actions were taken to resolve the issue
- The reply to the person/organisation that made the complaint.

Once site management is satisfied that the complaint is substantiated, an investigation of the location and causes of the complaint will be undertaken. Following investigation of the issue, site management will

provide feedback to the complainant that details the investigations undertaken, the result of the investigation and measures implemented to ensure that operations remain compliant. A description of any follow-up investigations and the response provided to the complainant will also be recorded in the Complaints Register upon closure of the issue.

9.2.1.1.8 Penalties and disciplinary action

Failure to comply with this Driver Code of Conduct will lead to either the issue of a warning notice or disciplinary action. If the offending party represents another company then disciplinary action may be treated as suspension or cancellation of a service contract or arrangement with that company.

A warning notice may be issued for a number of reasons, which may include (but not limited to):

- Driving at excessive speed
- Abuse of other road users or customers
- Not carrying out instructions as advised
- Not observing the site speed restrictions
- Not reporting incidents, accidents or near misses.