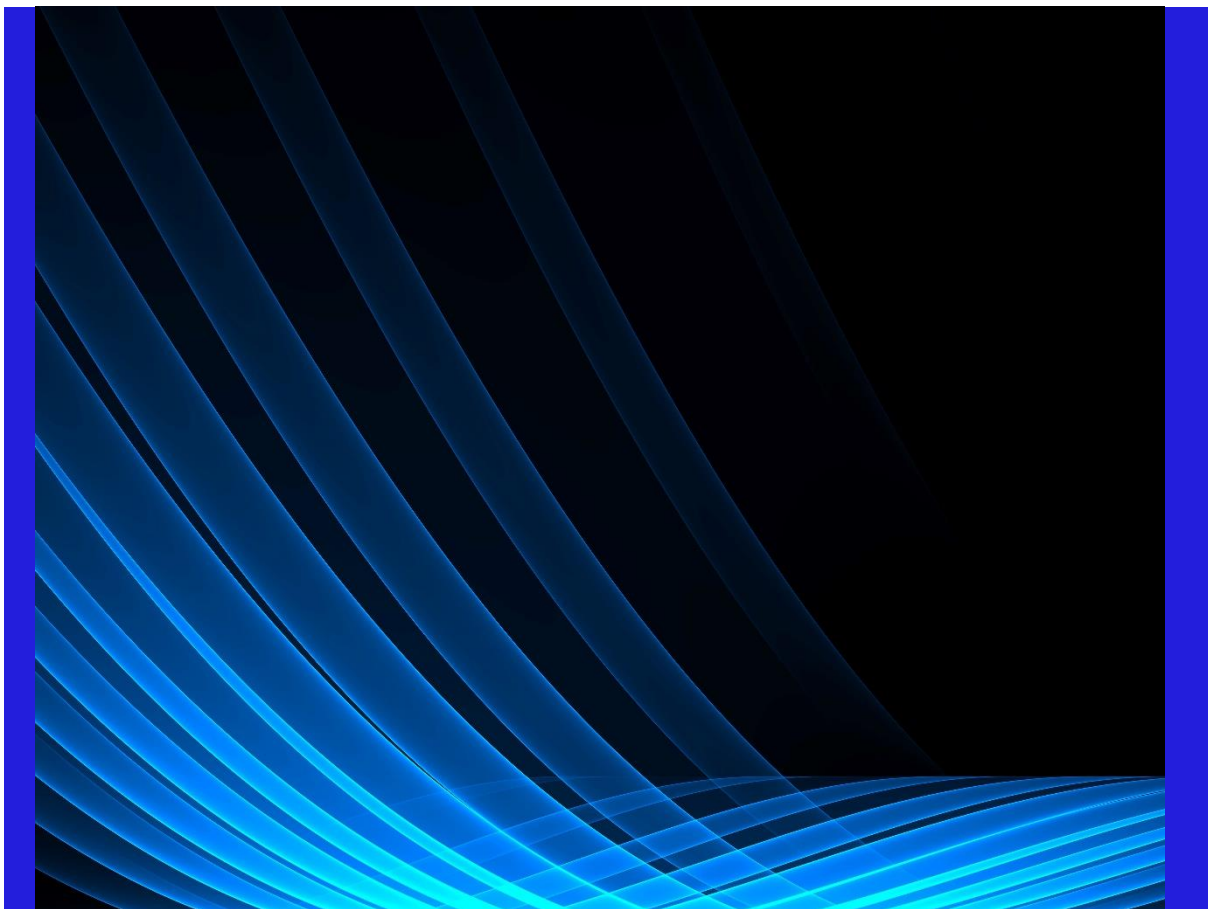


AGL Liddell Environmental Management Strategy

Revision no: Rev B

AGL Macquarie Pty Limited

22 August 2022



AGL Liddell Environmental Management Strategy

Client name: AGL Macquarie Pty Limited
Project name: AGL Liddell
Client reference: AGLM
Document no:
Revision no: Rev B
Date: 22 August 2022

Project no: IS353800
Project manager: Sara Sanderson
Prepared by: Antony Lockyer
File name: AGL Liddell Environmental Management Strategy

Document history and status

Revision	Date	Description	Author	Checked	Reviewed	Approved
Rev A	03/06/2022	Draft strategy	Antony Lockyer	S. Sanderson	P. Horn	P. Horn
Rev B	22/08/2022	Post-client review	S. Sanderson		A. Wallace	A. Wallace

Distribution of copies

Revision	Issue approved	Date issued	Issued to	Comments

Jacobs Group (Australia) Pty Limited

Level 4, 12 Stewart Avenue
Newcastle West, NSW 2302
PO Box 2147
Dangar, NSW 2309
Australia

T +61 2 4979 2600
F +61 2 4979 2666
www.jacobs.com

Copyright Jacobs Group (Australia) Pty Limited © 2022.

All rights reserved. The concepts and information contained in this document are the property of the Jacobs group of companies. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright. Jacobs, the Jacobs logo, and all other Jacobs trademarks are the property of Jacobs.

NOTICE: This document has been prepared exclusively for the use and benefit of Jacobs' client. Jacobs accepts no liability or responsibility for any use or reliance upon this document by any third party.

Executive summary

This Environment Strategy has been developed for the AGL Macquarie (AGLM) Liddell Battery and Bayswater Ancillary Works Project and serves as a framework to prepare a Construction Environment Management Plan.

AGL Macquarie Pty Limited (AGLM) own and operate the Bayswater power station (Bayswater) which is approved to generate up to 2,740 megawatts (MW), the 2,000 MW Liddell power station (Liddell), the 50 MW Hunter Valley Gas Turbines and associated ancillary infrastructure systems.

AGL has publicly announced its intention to transition towards a low-carbon future and respond to the National Energy Market (NEM) and customer requirements. Liddell is approaching its end of life and is scheduled for closure in 2023. Bayswater would continue to be operated through to 2035 to support the transition of the NEM toward net-zero emissions before being retired.

This project will facilitate the efficient, safe and reliable continuation of electricity generating works from the Bayswater and Liddell site and includes: alternative network connection arrangements (Decoupling Works), the installation of a grid connected battery, ancillary works to facilitate the ongoing operation of Bayswater and a consolidated consent for the continued operation of Bayswater.

As part of the approval, an Environment Management Strategy (EMS) is required prior to the commencement of construction. This strategy has been prepared to provide an environmental management framework for the Decoupling Works component of the project but will be updated in a staged manner to include all development stages as the project progresses. This strategy describes how AGLM and all Contractors will comply with statutory environmental requirements, manage potential environmental impacts, and ensure appropriate controls are in place to minimise and prevent risks to the environment.

The strategy utilises information gathered in the planning phase and carries it through to the operational phase ensuring continuity of relevant environmental information and transfer from the Principal Contractor, subcontractors, and all teams working on the development of the project. The strategy will serve as a guide to complete the individual management plans required for each stage of the development.

Contents

Executive summary	i
Glossary of Terms	v
Abbreviations	6
1. Introduction	7
1.1 Purpose	7
1.2 Scope.....	7
2. Project description	9
2.1 Project overview.....	9
2.2 Site location and footprint.....	10
2.3 Access details.....	10
2.4 Project elements.....	13
3. Statutory Requirements	15
3.1 Key legislative requirements.....	15
3.2 Approvals, permits and licences.....	15
3.3 Development Consent.....	16
4. Environmental Policies	17
4.1 AGL Health, Safety and Environment Policy	17
5. Environmental Risk Management	18
5.1 Risk Management and Approach.....	18
5.2 Broad Brush Risk Assessment	18
6. Community and Stakeholder Management	20
6.1 Overview.....	20
6.2 Stakeholder Consultation	20
6.3 Complaint and Enquiry Management	21
6.4 Development Consent Consultation Requirements	22
7. Environmental Management Framework	24
7.1 AGL Macquarie Environmental Management System Overview	24
7.2 Contractor HSEMS requirements	24
7.3 Roles and Responsibilities	24
7.4 Training and Awareness Program.....	27
7.5 Incident and emergency management.....	28
7.6 Inspections and audits.....	30
7.7 Compliance management	31
7.8 Continual improvement and review.....	33
8. Environmental Management	34
8.1 Overview.....	34
8.2 Air Quality Management	36
8.3 Noise and Vibration Management.....	36
8.4 Biodiversity management.....	36
8.5 Soil and Water Management	41

8.6	Waste Management.....	41
8.7	Contamination Management.....	41
8.8	Cultural and Aboriginal Heritage Management.....	42
8.9	Visual and Lighting Management.....	46
8.10	Traffic Management.....	46
8.11	Socio-economic Management.....	47
8.12	Hazard and Bushfire Management.....	47
9.	Monitoring	50

Appendices

Appendix A. Legislative Summary	51
Appendix B. Example Compliance Register	54

Tables

Table 1: Content Requirements of the Development Consent	8
Table 2. Project elements.....	13
Table 3. Approvals, permits and licences required for Decoupling Works	16
Table 4. Suggested Risk Matrix.....	19
Table 5. Risk impact definitions.....	19
Table 6. Consultation Requirements for the Project	22
Table 7. AGLM Roles and Responsibilities.....	24
Table 8. Contractor Roles and Responsibilities	26
Table 9. Incident procedure – steps and actions.....	28
Table 10. Independent audit frequency	31
Table 11: Minimum frequency of Compliance Reporting (DPIE, 2020).....	32
Table 12. Key risks and risk categories	34
Table 13: Air Quality Impact Summary.....	36
Table 14: Noise and Vibration Impact Summary	36
Table 15. Biodiversity management summary	38
Table 16: Soil and Water Impact Summary.....	41
Table 17: Waste Impact Summary	41
Table 18: Contamination Impact Summary.....	41
Table 19. Cultural and Aboriginal Heritage Management Summary	42
Table 20. Visual and Lighting Management Summary	46
Table 21: Traffic Impact Summary.....	47
Table 22. Socio-economic Management Summary	47
Table 23. Hazard Management Summary.....	47
Table 24. Monitoring requirements	50

Figures

Figure 2-1: Project	11
Figure 2-2 Location of Decoupling Works.....	12
Figure 3-1 Organisational Chart.....	27
Figure 8-1. Strategy and Management Plan requirement summary for the Decoupling Works	35
Figure 8-2: Biodiversity Study Area and Habitat for the Decoupling Works.....	37
Figure 8-3: Aboriginal Heritage.....	45

Glossary of Terms

Term	Definition
Bayswater	Bayswater Power Station
CMS Act	Coal Mine Subsidence Compensation Act 2017
Decoupling Works	Alternative network connection arrangements for the Liddell 33 Kilovolt (kV) Switching Station that provides electricity to infrastructure required for the ongoing operation of Bayswater and associated ancillary infrastructure and third-party industrial energy users
EP &A Act	NSW Environmental Planning and Assessment Act 1979
EP &A Regulation	NSW Environmental Planning and Regulation 2000
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPBC Regulations	Environment Protection and Biodiversity Conservation Regulation 2000
Liddell	Liddell Power Station
POEO Act	Protection of the Environment Operations Act 1997
Project	The Liddell Battery and Bayswater Ancillary Works Project, consisting of Battery Installation at Liddell and associated decoupling works and works associated with the ongoing operation of Bayswater.
Roads Act	Roads Act 1993

Abbreviations

Abbreviations	Definition
ACHMP	Aboriginal Cultural Heritage Management Plan
AGLM	AGL Macquarie Pty Ltd as the proponent of the Project
APZ	Asset Protection Zone
BAM	Biodiversity Assessment Method
BCD	Biodiversity Conservation Division
BCS	Biodiversity, Conservation and Science Directorate within the Department
BDAR	Biodiversity Assessment Report
BMP	Biodiversity Management Plan
CEMP	Construction Environment Management Plan
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EMF	Electromagnetic Field
EPA	NSW Environment Protection Authority
EPIs	Environmental Planning Instruments
EPL	Environmental Protection Licence
ERA	Environmental Risk Assessment
FRNSW	Fire Rescue New South Wales
HSE	Health, Safety and Environment
HSEMS	Health, Safety and Environment Management Systems
ISEPP	Infrastructure State Environmental Planning Policy
LALCs	Local Aboriginal Land Councils
LEP	Local Environment Plan
LGA	Local Government Authority
NEM	National Electricity Market
NRAR	Natural Resources Access Regulator
OSOM	Over Size Over Mass
PAD	Potential Archaeological Deposit identified as an area with potential to contain Aboriginal heritage artifacts
PCT	Plant Community Type
PIRMP	Pollution Incident Response Management Plans
RAP	Registered Aboriginal Party
RFS	Rural Fire Service
SEARs	Planning Secretary's Environmental Assessment Requirements
SEE	Statement of Environmental Effects being a planning assessment document for non-State significant development
SEPP	State Environmental Planning Policy
SSD	State significant development
SSI	State significant infrastructure
TECs	Threatened ecological community
TfNSW	Transport for New South Wales

1. Introduction

1.1 Purpose

This Environment Management Strategy has been prepared to provide a framework for the Liddell Battery and Bayswater Ancillary Works Project. The strategy will describe how the Project will comply with all relevant statutory requirements, manage potential environmental impacts, and ensure appropriate controls are in place to minimise and prevent risks to the environment. It provides a framework for environmental management and utilises information gathered in the planning phase through to the operational phase to ensure information continuity and transfer between the parties working on each phase of the project. The strategy will serve as a guide in the preparation of the CEMP and all other management plans, strategies, and programs.

Implementing the strategy and associated management plans will ensure the Project meets the Approval (Development Consent) conditions of the New South Wales Department of Planning and Environment (DPE) and will provide the Contractors, and subcontractors of the Project, the guidance needed to mitigate environmental risks, and meet or exceed their environmental obligations. Table identifies which sections of this strategy address the requirements condition C1 of the Development Consent.

1.2 Scope

This Environmental Management Strategy is the principal environmental management document that describes the systems in place to minimise and manage environmental risks associated with the development of the Project. It incorporates all requirements of the EIS, and all relevant licences, permits, and approvals for the Project.

The strategy is staged and specifically addresses the decoupling works (as described in the Environmental Impact Statement (EIS) and in Section 2). The strategy will be updated to address all stages of the development as the project progresses. Subsequent management plans will use this strategy as a guide and may be prepared and submitted on a staged basis.

The strategy aims to address Conditions C1 of the project development consent (Liddell Battery and Bayswater Ancillary Works – SSD 8889679). Table 1 identifies the sections of the strategy that relate directly to the requirements of Condition C1.

Table 1: Content Requirements of the Development Consent

Consent Requirement	Environmental Management Strategy Section
Prior to commencing construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:	
C1.a - provide the strategic framework for environmental management of the development	Section 7
C1.b - identify the statutory approvals that apply to the development	Section 3
C1.c - describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development	Section 7.3
C1.d - describe the procedures that would be implemented to:	
<i>(i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;</i>	Section 6.2
<i>(ii) receive, handle, respond to, and record complaints;</i> <i>(iii) resolve any disputes that may arise;</i>	Section 6.3
<i>(iv) respond to any non-compliance;</i>	Section 7.7
<i>(v) respond to emergencies</i>	Section 7.5
C1.e – Include:	
<i>(i) the following subplans:</i>	
• <i>soil, stormwater, water quality, flood and spoil management;</i>	Annex A
• <i>construction and decommissioning noise, including an out-of-hours works protocol;</i>	Annex B
• <i>air quality management;</i>	Annex C
• <i>contamination, including an unexpected finds protocol</i>	Annex D
• <i>waste management; and</i>	Annex E
• <i>traffic.</i>	Annex F
<i>(ii) references to any strategies, plans and programs approved under the conditions of this approval</i>	Planned Strategies, Plans and Programs for the approval of DPE are listed in this table, the strategy is the first document to be developed.
<i>(iii) a clear plan depicting monitoring to be carried out under the conditions of this approval.</i>	Appendix B

2. Project description

2.1 Project overview

AGL Macquarie Pty Limited (AGLM) own and operate the Bayswater power station (Bayswater) which is approved to generate up to 2,740 megawatt (MW), the 2,000 MW Liddell power station (Liddell), the 50 MW Hunter Valley Gas Turbines and associated ancillary infrastructure systems. Together, Bayswater, Liddell and the Hunter Valley Gas Turbines operate to produce around 23,000 gigawatt hours (GWh) annually, or approximately 35 percent (%) of New South Wales (NSW) electricity supply. AGL Energy Limited (AGL) acquired these assets, from the NSW Government in September 2014 and in doing so formed the subsidiary AGLM.

AGL has publicly announced its intention to transition towards a low-carbon future and respond to the National Energy Market (NEM) and customer requirements. Liddell is approaching its end of life and is scheduled for closure in 2023. Bayswater would continue to be operated through to 2035 to support the transition of the NEM toward net-zero emissions and then is intended to be retired. AGL has committed to closing all coal fired generation assets in its portfolio by 2050.

This project will facilitate the efficient, safe, and reliable continuation of electricity generating works from the Bayswater and Liddell site (AGLM landholding). The Project involves the following:

- **Decoupling Works:** Alternative network connection arrangements for the Liddell 33 Kilovolt (kV) Switching Station that provides electricity to infrastructure required for the ongoing operation of Bayswater and associated ancillary infrastructure and third-party industrial energy users
- **Liddell Battery (the Battery):** The installation of a grid connected Battery Energy Storage System with capacity of up to 500 MW and 2 GWh
- **Bayswater Ancillary Works (BAW):** Works associated with the ongoing operation of Bayswater which includes (but is not limited to) upgrades to ancillary infrastructure such as pumps, pipelines, conveyor systems, roads and assets to enable maintenance, repairs, replacement, expansion or demolition
- **Consolidated consents:** A modern consolidated consent for the continued operation of Bayswater through the voluntary surrender and consolidation into this application of various existing development approvals required for the ongoing operation of AGLM assets (Consolidated consents).

The Project location and key components of the decoupling works are shown in

Figure 2-1 and Figure 2-2, respectively. This strategy covers the Decoupling works only. The Battery, BAW, and Consolidated Consent activities will be developed in the future as a separate stage of work, and this strategy will be updated accordingly.

2.1.1 Decoupling Works

The Decoupling Works are expected to include and not be limited to the following:

- Establishment of new 330 kV / 33 kV transformer compounds adjacent to the Liddell switchyard. The 33 kV / 330 kV transformers are expected to be around 7 metres in height
- Installation of up to six 330 kV / 33 kV station transformers within the transformer compounds
- Installation of new switch/control room building/s, and equipment near the existing Liddell transition point inclusive of auxiliary supplies
- Installation of new 33 kV cables to connect the 330 kV / 33 kV station transformers to the existing 730 and 731 33 kV feeders to the new 33 kV switch room
- Connection to the Liddell switchyard.

AGLM are assessing the opportunity to re-use certain components of the Liddell 330 kV / 33 kV transformers and other infrastructure in these works.

The following works may also be required within the Liddell switchyard:

- 330 kV tie ins
- Removal of existing Liddell station transformer 330 kV landing spans
- Earth grid tie-in to the earth grid of the 330 kV /33 kV transformer compounds
- Replacement of protection panel equipment, installation and proofing of new rerouted protection and control cables
- Commissioning works.

2.2 Site location and footprint

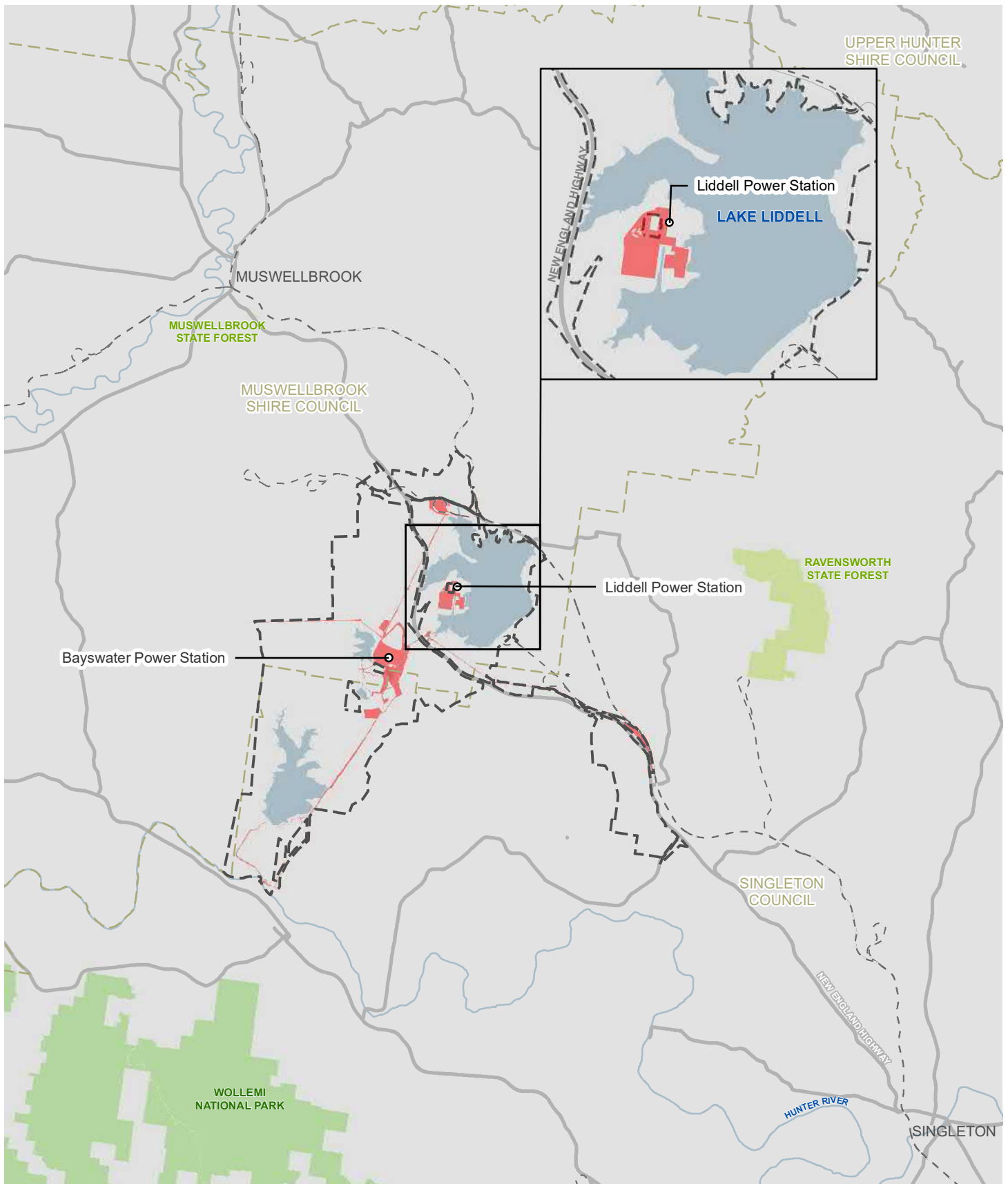
The AGLM landholding is located approximately 15 kilometres (**km**) south-east of Muswellbrook, 25 km north-west of Singleton, and approximately 165 km west north west of Sydney in NSW. The total area of the AGLM landholding is approximately 10,000 hectares (**ha**), including Bayswater and Liddell operational areas, the Ravensworth rehabilitation area, Lake Liddell and surrounding buffer lands. The location of AGLM landholding is shown in

Figure 2-1: Project .

The Decoupling components would generally be undertaken in close proximity to Liddell and are targeting the use of previously disturbed operational lands no longer required for Liddell operations (referred to as non-process development land; Figure 2-2).

2.3 Access details

Liddell is accessible from the New England Highway via an interchange with an unnamed east-west access road. 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.



Legend

- Project area
- State forest
- AGL owned land
- National park
- LGA boundary
- Railway
- Road
- Waterway
- Waterbody



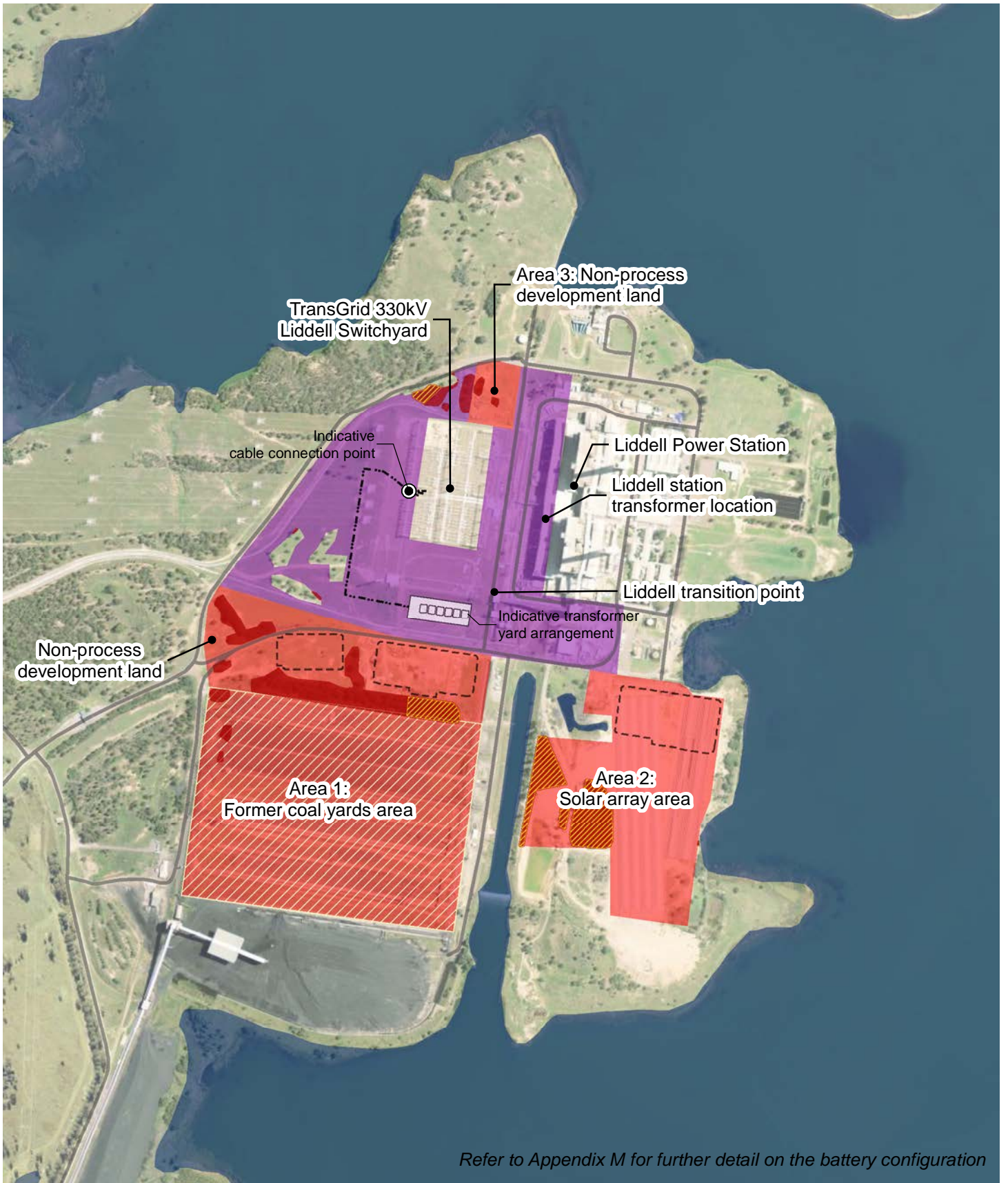
Figure 1 - 1 Project location

Data sources

Jacobs 2020
 ©Department of Finance,
 Service and Innovation Aug 2020
 AGL 2019
 GDA94 MGA56

The information and concepts contained in this document are the intellectual property of Jacobs and are subject to site survey and detailed design. Not to be used for construction. Use or copying of the document in whole or in part without written permission of Jacobs constitutes an infringement of copyright. Jacobs does not warrant that this document is definitive nor free of error and does not accept liability for any loss caused or arising from reliance upon information provided herein.

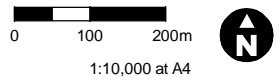




Refer to Appendix M for further detail on the battery configuration

Legend

- | | | | | |
|---------------------------------|-----|---|---|------------------------------|
| Project area | ● | Indicative cable connection point (for discussion with TransGrid) | ▨ | Species impact |
| ■ Battery energy storage system | --- | Indicative 330kV cable route | ■ | PCT impact - offset required |
| ■ Decoupling area | □ | Transformer yard relocation | — | Road |
| ▨ Former coal yards area | □ | Indicative battery block footprint | — | Waterway |
| | | | — | Waterbody |



Data sources
 Jacobs 2021
 AGL 2020
 ©Department of Finance,
 Service and Innovation Aug 2020



Imagery:
 © Department of Customer Service 2020
 GDA94 MGA56

Figure 2 - 2 The Battery and Decoupling location

2.4 Project elements

The purpose of the decoupling works is to provide a new connection between the Liddell switchyard and AGLM's 33Kv Switching Station to facilitate ongoing supply to these assets. The battery would also connect into the Liddell switchyard and the decoupling works may make provision for up to four additional 33Kv / 330 Kv connection points.

Construction works associated with Decoupling would be likely to involve:

- Installation and maintenance of environmental controls including temporary and permanent water management infrastructure
- Establishment of access from the Liddell access road
- Demolition or deconstruction of existing equipment as required
- Establishment of a hardstand pad and construction laydown areas
- Trenching and installation of cable from Battery to 330 kV / 33 kV transformer compounds
- Structural works to support Battery enclosures, inverters, transformers, buildings and transformer compounds
- Delivery installation and fit out of transformers and ancillary equipment for Decoupling Works
- Testing and commissioning activities
- Removal of construction equipment and rehabilitation of construction areas.

Table 2 summarises the key project elements through the construction and decommissioning stages.

Table 2. Project elements

Project element	Summary
Construction	
Construction – project footprint	The development site for the project is approximately 353 ha. The decoupling works cover approximately 23 ha with only a limited proportion of which would ultimately be disturbed. Where possible, construction activities would be reduced to minimise disturbance of environmentally sensitive areas.
Construction workforce	Up to 250 people per day.
Construction hours	Works would generally be limited to standard construction hours of: <ul style="list-style-type: none"> ▪ Monday-Friday 0700-1800 ▪ Saturday 0800-1300 ▪ No works on Sunday or public holidays. Works outside of standard construction hours may be required to facilitate connection works to the Liddell switchyard to coincide with outages. The delivery of Project components may also occur outside standard construction hours.
Construction schedule	The Decoupling Works are proposed to be undertaken prior to 2024 to facilitate the planned closure and decommissioning of Liddell. Decoupling Works are anticipated to take up to 12 months.
Daily construction traffic volumes	Daily traffic volumes (entering and leaving Liddell) for Decoupling are expected to be approximately: <ul style="list-style-type: none"> ▪ 50 workers arriving and departing in peak times ▪ 20 heavy vehicle movements (10 deliveries) per day ▪ Approximately 43 over size over mass (OSOM) deliveries may be required including: <ul style="list-style-type: none"> - 11 deliveries of new or refurbished transformers

Project element	Summary
	<ul style="list-style-type: none"> - OSOM deliveries would most likely occur outside of peak times and in accordance with applicable permits and licences. Unladen return trips (up to 43) may occur at any time.
Plant and equipment	<p>A range of plant and equipment would be used during construction. The final equipment and plant requirements would be determined by the construction contractor. Indicative plant and equipment has been broadly categorized into typical activities as follows:</p> <ul style="list-style-type: none"> ▪ Equipment required for earthworks: <ul style="list-style-type: none"> ▪ Front end loaders ▪ Dump trucks ▪ Road trucks ▪ Excavators ▪ Graders ▪ Compactors ▪ Water trucks. ▪ Equipment associated with the Decoupling component: <ul style="list-style-type: none"> - Concrete trucks - Elevated work platforms - Cranes - Concrete saws and grinders - Compactors and rollers - Scrapers - Backhoe - Generators.
Materials and components	<p>The following volumes of materials are likely to be required:</p> <ul style="list-style-type: none"> ▪ Approximately 300 tonnes (t) of structural steel ▪ Approximately 5000 cubic metres (m³) of concrete ▪ Cables (quantity subject to detailed design) ▪ Prefabricated buildings ▪ Two 30 kL tanks ▪ Oil water separator components ▪ Various pipelines, pumps and fittings ▪ Sand, gravel, clay and rock (quantities to be confirmed) ▪ Bitumen (quantities to be confirmed).
Decommissioning	
Rehabilitation	<p>Areas disturbed as part of construction, and not required for operation, would be rehabilitated following completion of works to return areas to the existing use. Following end of operations and demolition, the development site would be rehabilitated in accordance with all regulatory requirements</p>

3. Statutory Requirements

3.1 Key legislative requirements

This strategy reflects current legislation, policies, and strategies at both a Commonwealth and State level as relevant to the Project.

The Project is located within the Muswellbrook and Singleton Local Government Areas (**LGA**s). The Decoupling components of the Project would be within the application area of the Muswellbrook LEP and an area zoned SP2 Infrastructure (Power Station). Under Section 34 of the *State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)*, development for the purpose of electricity generating works may be carried out by any person with consent any land in a prescribed rural, industrial or special use zone. Land which is zoned as SP2 Infrastructure is prescribed for the purposes of Section 34. The Project is permissible with consent through the application of the ISEPP.

The only development types permitted within the SP2 zone are roads and the purpose shown on the Land Zoning Map, in this case 'Power Generation', including any development that is ordinarily incidental or ancillary to development for that purpose. The Project meets the definition of Power Generation and as such is permissible with development consent under the Muswellbrook LEP.

Details of the legislation relevant to this project are provided in Appendix A.

3.1.1 EP&A Act and Regulation

The Environmental Planning and Assessment Act 1979 (EP&A Act) and Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) establish the planning and approvals process in NSW. It provides for the making of Environmental Planning Instruments (EPIs) including Local Environmental Plans (LEPs) and State Environmental Planning Policies (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.

The Project is for the purpose of "electricity generating works" as defined in the Standard Instrument (Local Environmental Plans) Order 2006 and the SEPP SRD and has a capital investment value of more than \$30 million. The Project is accordingly State Significant Development (SSD) under the SEPP SRD and required assessment in accordance with Division 4.7 of the EP&A Act. The project required the preparation of an EIS in accordance with Secretary's Environmental Assessment Requirements (SEARs) and was approved by the NSW Minister for Planning via the development consent (SSD 8889679).

3.1.2 Protection of the Environment Operation 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 License (**EPL**).

Liddell is operated under EPL 2122, which would be varied to incorporate any new scheduled activity as required. There are no plans to immediately amend EPL boundaries to accommodate the Project.

3.2 Approvals, permits and licences

AGLM is responsible for obtaining the approvals in Table 3, and the Contractors responsible for delivering the decoupling stage of the project must apply for and obtain all other licences, permits and approvals 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, permits and licences required for Decoupling Works

Approval/Licence/Permit	Legislation	Status
Development Consent (SSD 8889679)	<i>Environmental Planning and Assessment Act 1979</i>	Approval received 08 March 2022
Environment Protection Licence (EPL) - EPL 2122 and 779 Modification	<i>Protection of the Environmental Operations Act 1997 (POEO Act)</i>	Project to operate under the same EPL
CMS Approval	<i>Coal Mine Subsidence Compensation Act 2017 (CMS Act)</i>	Not required for decoupling works
Permit – Carrying out an activity within a public road	<i>Roads Act 1993 (Roads Act)</i>	Not required for decoupling works
Construction and Occupation Certificates	<i>Environmental Planning and Assessment Act 1979</i>	Required for decoupling works.

3.3 Development Consent

The Liddell Battery and Bayswater Ancillary Works Development Consent (SSD 8889679) was granted March 2022.

Due to the multiple components of this project, the Planning Secretary has all allowed for the preparation and submission of any strategy, plans, or programs on a staged basis. As such, this plan is initially drafted to gain approval to start development of the Decoupling Works but will serve as the strategy to be used by all subsequent strategies and management plans.

The Development Consent condition C1 sets out the requirements for the Environmental Management Strategy which states the strategy must include:

- The strategic framework for environmental management of the development
- The statutory approvals that apply to the development
- Descriptions of the roles, responsibilities, authority, and accountability of all key personnel involved in the environmental management of the development
- Procedures that would be implemented to:
 - Keep the local community and relevant agencies informed about the operation and environmental performance
 - Receive, handle, respond to, and record complaints
 - Resolve any disputes
 - Respond to non-compliance
 - Respond to emergencies
- The following subplans
 - Soil, stormwater, water quality, flood and spoil management
 - Construction and decommissioning noise, including an out-of-hours work protocol
 - Air Quality Management
 - Contamination, including an unexpected finds protocol
 - Waste Management
 - Traffic
- Reference to any strategies, plans and programs approved under the Development Consent
- A monitoring plan that complies with the conditions of the Development Consent.

The strategy must be approved by the Secretary and implemented by the AGLM and all Contractors.

4. Environmental Policies

All management plans, strategies and programs must consider and incorporate the objectives and targets set in AGL's Environment Strategy and Health, Safety and Environment (HSE) Policy.

4.1 AGL Health, Safety and Environment Policy

AGLM's Health, Safety and Environment Policy was revised April 2021, and applies to all AGLM employees, contractors, products, services, and joint ventures under AGLM's operational control. The Health Safety Environment System sets out how the policy is implemented. The policy states AGLM will:

- *Visibly lead their people to promote a strong HSE culture across all aspects of their business, taking care in every action to minimise harm to people and the environment.*
- *Demonstrate integrity always through prioritisation of HSE consideration in the way they work in order to meet or exceed the requirements of their compliance obligations.*
- *Deliver their best by proactivity identifying, effectively controlling and monitoring, and ensuring awareness of, the HSE risks that have the potential to harm people and the environment.*
- *Consult and work collaboratively with their employees, contractors and the community on HSE issues.*
- *Shape tomorrow by setting, measuring, and reviewing their objectives priorities and targets to demonstrate proactive processes re in place to continuously reduce HSE risk exposure and improve HSE performance.*
- *Support employees who are injured at work to return to safe and sustainable work as soon as possible, and make reasonable adjustments, where appropriate, for non-work related injuries and illnesses.*

5. Environmental Risk Management

5.1 Risk Management and Approach

The Contractor for each stage of development is responsible for creating and managing an Environment Risk Assessment (ERA) for all activities with potential for environmental impacts and will revise the risk assessment throughout the construction phases of the project. The process for managing risk should align with the following steps:

1. Identify and describe risks – Risks include both positives (opportunities) and negative (threats); the cause or source of each risk should be included
2. Understand the risk (rating) – Evaluate the likelihood and consequence of the inherent risk
3. Review controls and re-assess risk (rating) – Evaluate the residual risk rating after controls are implemented
4. Evaluate and respond to risk – assess risk escalation and timing, and determine a strategy that includes timeframes and monitoring requirements
5. Check process (continual updates) – Update Environmental Management Plan and Monitoring requirements based on control effectiveness, and review and update the risk register frequently.

The avoidance hierarchy will support construction management - this hierarchy prioritises avoiding impacts, rather than minimising, repairing, or offsetting impacts. Where impacts cannot be avoided, Contractors will undertake all on-site activities in a manner that will minimise the impact of the Project on the environment.

An initial "Broad Brush" construction risk assessment will be generated based on the outcomes of the environmental impact assessments conducted as part of the EIS and is to be updated prior to commencing construction with site- and equipment-specific information. A risk register will be produced and maintained by the Contractor for each stage of development and made available to other Contractors to include into their risk assessments.

5.2 Broad Brush Risk Assessment

An initial environmental risk assessment will be prepared by the Contractor prior to construction commencing and the results will be incorporated into the Contractor's risk register. A risk assessment should be conducted for each stage of construction works, operations, and decommissioning/rehabilitation.

The initial environmental risk assessment's purpose is to identify significant environmental aspects and impacts that could eventuate during construction of the Project. Aspects and impacts for all construction activities that could contribute to harm or impact on the environment, including air, noise, water, heritage, waste, and biodiversity will be included.

The initial risk assessment will include the environmental aspect, cause, and consequence, and include a matrix of likelihood and consequence ratings. Mitigation measures to eliminate or reduce the risks would be included, and residual likelihood and consequence ratings assigned. Risks with impacts categorised as 'major' or 'severe' require a risk owner to be identified by the Contractor or AGLM.

Table 4 shows the criteria that will be employed in the risk assessment process to classify the impact and likelihood of each environmental risk. The significance of risk should consider potential impact to environmental aspects, and cost or delays to Project development as described in Table 5.

Table 4. Suggested Risk Matrix

		Impact				
		Not significant	Minor	Moderate	Major	Severe
Likelihood	Almost certain <i>Expected to occur regularly under normal circumstances</i>	Medium	Medium	High	Very High	Very High
	Likely <i>Expected to occur at some time</i>	Low	Medium	Medium	High	Very High
	Possible <i>May occur at some time</i>	Low	Medium	Medium	Medium	High
	Unlikely <i>Not likely to occur in normal circumstances</i>	Low	Low	Medium	Medium	High
	Rare <i>Could happen, but probably never will</i>	Low	Low	Low	Low	Medium

Table 5. Risk impact definitions

	Impact description				
	Not Significant	Minor	Moderate	Major	Severe
Schedule delay	<3 hours	< 2 days	< 1 week	> 1 week	Permanent disruption
Environment	Minor incident of environmental damage that can be reversed	Isolated but significant instance of environmental damage that can be reversed with moderate effort	Significant instance of environmental damage that can be reversed with intense efforts	Major loss of environmental amenity and danger of continuing	Severe widespread loss of environmental amenity and irrecoverable environmental damage
Stakeholders	Short term complaints	Short term but significant complaint	Sustained complaint(s)	Sustained and significant complaint(s)	Relationship with stakeholder irreversibly damaged
Legal and compliance	Issues of non-compliance and breach of regulation	Minor breach of legislation and or non-compliance	An event that results in fines or notice issued from regulatory authority	Major event that results in prosecution and or fine	A critical event that results in prosecution, jail and /or fine

6. Community and Stakeholder Management

6.1 Overview

Procedures for external communications to and from relevant stakeholder and or interested parties are outlined in the *Environment Communications* AGLM-HSE-PRO-008.06 document and apply to all employees and contractors operating for or on behalf of AGLM under the Liddell Battery and Bayswater Ancillary Works Project. AGLM will tailor consultation, cooperation and coordination of relevant environmental aspects and ensure that the relevant key stakeholder considerations are incorporated into the services.

The AGLM Public Website contains information available to the public and is updated by the Manager Environment and Communications Manager. The website contains contact details to lodge enquiries or questions.

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

- Conduct consultation with stakeholders, including government groups, asset owners, local community groups, businesses, residents, and local media
- Establish constructive working relationships and communication channels with stakeholders
- Consider Aboriginal cultural heritage issues in the consultation process
- Seek community feedback
- Provide regular updates to interested communities on the progress of projects.

6.2 Stakeholder Consultation

SEARs for the Project were issued to AGL on 23 September 2020. The SEARs require that AGLM undertake an appropriate and justified level of consultation with relevant parties during the preparation of the EIS, including:

- Local, State and Commonwealth government authorities
- Relevant Aboriginal stakeholders, such as the Local Aboriginal Land Councils (LALCs)
- Utilities and service providers
- Members of the public including any relevant community groups and adjoining and affected landowners.

The EIS describes the consultation that was carried out, identifies the issues raised during this consultation, and explains how these issues have been addressed.

Any conditions relating to consultation in the Development Consent are to be included in the CEMP or relevant management plans.

6.2.1 Community Consultation

Bayswater and Liddell have been established within the local community since it was built in the 1980's and has developed strong community relationships during this time. AGLM maintains a community reference group known as the AGL Macquarie Community Dialogue Group which meets quarterly. Membership of this group includes representatives from the surrounding community interest groups, Muswellbrook Shire Council, Singleton Council and Upper Hunter Shire Council, local business chambers and local Indigenous stakeholder groups.

The Project stages will be discussed with the Community Dialogue Group prior to construction in person; where in person meetings are not possible, meetings take place over Microsoft Teams. All Community Dialogue Group meeting agendas, meeting minutes, presentations can be found on the [AGL Community Webpage](#).

No concerns have been brought forward from the community on this stage of the project to date. Quarterly meetings will continue to be held with the AGLM Macquarie Community Dialogue Group, and all concerns and complaints will be addressed at the meeting, and written responses will be provided to the group within one week.

AGLM has also made contact with the following community groups that have previously expressed an interest in operations at the site:

- Environmental Justice Australia
- Hunter Community Environment Centre
- Hunter Environment Lobby Inc.
- Nature Conservation Council of NSW
- Beyond Zero Emissions.

In response to AGLM's correspondence, Beyond Zero Emissions enquired as to the closing date for submissions on the Project. AGLM advised that submissions will be accepted through the planning portal once the EIS is lodged and a closing date would be advised. No further responses were received.

6.2.2 Government authority consultation

AGLM has corresponded with various stakeholders to introduce the Project.

A summary of Agencies who provided comments on the SEARS is listed below:

- Office of Environment and Heritage, now known as the Biodiversity Conservation Division (**BCD**)
- Water and the Natural Resources Access Regulator (**NRAR**)
- Environment Protection Authority (**EPA**)
- Heritage NSW
- Department of Transport - Roads and Maritime Services (**Roads and Maritime**), now known as Transport for NSW (**TfNSW**)
- Singleton Council
- Muswellbrook Shire Council
- Dams Safety NSW.

These responses document each authority's key concerns and assessment requirements. The agency input into the environmental assessment requirements was provided to DPE and incorporated at DPE's discretion.

6.2.3 Indigenous stakeholder engagement

Aboriginal stakeholder engagement and involvement is important for the identification of Aboriginal cultural values relevant to the Project. Consultation through the EIS process was conducted in four stages, from August 2020 to January 2021. Any condition within the Development Consent relating to indigenous stakeholders during construction must be included in the CEMP.

6.3 Complaint and Enquiry Management

AGLM's Community Complaints and Feedback Policy outlines AGLM's commitment to effectively manage complaints and resolve disputes for all existing and planned projects. AGLM aim to come to an early resolution on all feedback for complaints. Personnel and contractors are to direct all community complaints to the Manager Environment, and a response is to be provided to the complainant as soon as practicable and recorded in the *Community Complaints Register* AGLM-HSE-REG-008.09.2. Community complaints can be made through the following:

AGL Complaints and Enquiries Hotline: 1 800 039 600

Email: AGLCommunity@agl.com.au, or,

Mail: AGL Community Complaints and Enquiries

Locked Bag 14120 MCMC
Melbourne, Vic 8001

If feedback is received onsite, or directly to a Contractor, the Contractor’s environmental representative will not respond to complaints from the public or other stakeholders but will immediately (or as soon as practicable) forward details of complaints onto the AGLM Manager Environment, 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. For urgent feedback, the Case Manager will work with AGLM team members with a target resolution time of 24-hours. 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.

Contractors 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.

6.4 Development Consent Consultation Requirements

The Development Consent outlines specific management plans that require consultation prior to being approved, those plans are summarised in Table 6. Condition A9 of the Development Consent states that if consultation is required:

- a. Consultation with the relevant party must occur prior to submitting the document to the Planning Secretary for Approval; and
- b. 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.

A strategy, plan or program that is staged or updated may not require consultation from all parties outlined in the Development Consent, if the Secretary agrees.

Where Consultation is required, each document (e.g., assessment or management plan) should 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 6. Consultation Requirements for the Project

Development Consent Condition	Assessment/Management Plan/Other	Consultation Requirements	Status
B2	Fire Safety Study	Fire Rescue NSW (FRNSW)	Required for Decoupling Works
B5	Emergency Plan	FRNSW and NSW Rural Fire Service (NSW RFS)	Not required for Decoupling works
B8	Biodiversity Management Plan	BCS	Required for Decoupling Works
B10	Retirement of Biodiversity credits for Offset Stages 1,2 and 3	Biodiversity, Conservation and Science Directorate (BCS)	Required for Decoupling Works
B11	Amendments to the ecosystem and species credit requirements	BCS	Required for Decoupling Works

Development Consent Condition	Assessment/Management Plan/Other	Consultation Requirements	Status
B19 and B20	Aboriginal Heritage Unexpected Finds	RAPs, Heritage NSW	Required for Decoupling Works
B22	Aboriginal Cultural Heritage Management Plan	Registered Aboriginal Parties (RAPs) and Heritage NSW	Required for Decoupling Works

7. Environmental Management Framework

7.1 AGL Macquarie Environmental Management System Overview

AGLM has established a Health, Safety and Environmental Management System (HSEMS) for operations at Bayswater and Liddell Power Stations and other associated infrastructure. Key processes, procedures, documents, management plans, and responsible people for the construction of this project are described in this section. All management plans required as part of the Development Consent, including the Construction Environment Management Plan (CEMP), should be written in accordance with the processes and procedures in place for operations at Liddell Power Station.

The purpose of the 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 and Development Consent conditions throughout the project life cycle.

7.1.1 AGL HSE Standards

This strategy and associated subplans have been developed in accordance with AGL HSE standards which include:

- AGL-HSE-STD-009.1 – Land Standard
- AGL-HSE-STD-009.2 – Groundwater Standard
- AGL-HSE-STD-009.3 – Surface Water Standard
- AGL-HSE-STD-009.4 – Air Emissions Standard
- AGL-HSE-STD-009.5 – Noise Emissions Standard
- AGL-HSE-STD-009.6 – Biodiversity Standard
- AGL-HSE-STD-009.7 – Waste Standard
- AGL-HSE-STD-009.8 – Cultural Heritage Standard
- AGL-HSE-STD-009.9 – Greenhouse Gas emissions Standard

Any subsequent management plans under this EMS, such as the Contractor's CEMP, will also be developed in accordance with these standards.

7.2 Contractor HSEMS requirements

Contractors are required to have a corporate Environmental Management System or may operate under AGLM's HSEMS. If the Contractor chooses to adopt their own Environmental Management System, it will need to meet or exceed the minimum requirements set out in AGLM's HSEMS.

7.3 Roles and Responsibilities

This section outlines proposed key roles and responsibilities for both AGLM and Contractors and sub-contractors working on all stage of the project.

7.3.1 AGL Key Personnel

AGLM's key personnel will sit above the Contractor's Environment Team and will assist with the responsibilities outlined in Table 7.

Table 7. AGLM Roles and Responsibilities

AGLM Role	Responsibility
Managing Director	<ul style="list-style-type: none"> ▪ Ultimate managerial authority and responsibility for environmental affairs

AGL Liddell Environmental Management Strategy

AGLM Role	Responsibility
Chief Executive Officer Company Directors	<ul style="list-style-type: none"> ▪ Provide leadership and strategic direction on environmental matters
AGLM General Manager	<ul style="list-style-type: none"> ▪ Managerial authority and responsibility for all environmental matters within both Liddell and Bayswater Power Station. ▪ 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
Manager Environment	<ul style="list-style-type: none"> ▪ Ensure the Environmental Management System is established, implemented, and maintained in accordance with ISO14001. ▪ Report to the AGLM General Manager on the performance of the Environmental Management System and recommendations for improvement. ▪ Planning for and responding to emerging environmental trends. ▪ Co-ordinating the regular review of the Policy and the Environmental Management System generally. ▪ 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 the interested parties register and all associated actions. ▪ Communicating Environmental performance. ▪ Assisting in the management and investigation of major environmental incidents. ▪ Preparing the regular and periodic environmental reports for the Board.
AGLM Head of Engineering & Projects AGL Capital Projects Manager	<ul style="list-style-type: none"> ▪ Ensuring effective internal and external communication programs are in place. ▪ Ensure that Environmental considerations are integrated into all business functions where practical ▪ Accountable for the effectiveness, suitability, and adequacy of the EMS ▪ Ensure Environment Policy and Objectives are established and implemented ▪ Promote continual improvement and provide support as required ▪ Ensure the EMS achieves its intended outcomes ▪ Ensure resources are available to support the EMS ▪ Define and maintain the context of the organisation and any Interested Parties
Communications Manager	<ul style="list-style-type: none"> ▪ Co-ordinating, in the context of standing emergency plans and procedures, a public relations/communication strategy to deal with environmental incidents ▪ Communication with the public and/or Interested Parties on environmental issues and initiatives.
Environment Team	<ul style="list-style-type: none"> ▪ Assist the Manager Environment & Station Managers in carrying out their environmental management responsibilities, by <ul style="list-style-type: none"> - Provide necessary technical input - 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
All AGLM personnel	<ul style="list-style-type: none"> ▪ All Management and staff within AGLM have a role in achieving a standard of environmental performance consistent with the documentation referenced in this directory

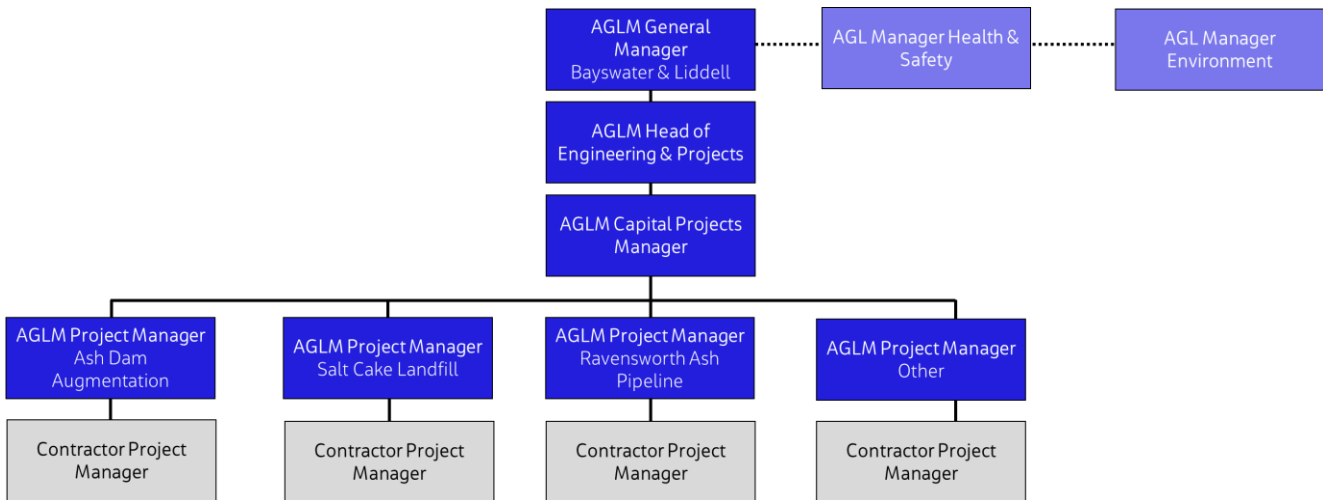
7.3.2 Contractor Key Personnel

Table 8. Contractor Roles and Responsibilities

Contractor Role	Responsibility
HSE Advisor	<ul style="list-style-type: none"> ▪ Preparing regular environmental reports to AGL ▪ Ensure the Contractor Environmental Management System is established, implemented, and maintained in accordance with ISO14001. ▪ Planning for and responding to emerging environmental trends. ▪ Initiating and supporting any external independent environmental audit program. ▪ Communicating Environmental performance. ▪ Assisting in the management and investigation of major environmental incidents. ▪ Manage the contractor's environmental management responsibilities, by ▪ Provide necessary technical input ▪ 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 ▪ Identifies environmental Incidents
Site Superintendent	<ul style="list-style-type: none"> ▪ Ensuring effective internal and external communication programs are in place. ▪ Ensure that Environmental considerations are integrated into all business functions where practical ▪ Accountable for the effectiveness, suitability, and adequacy of the HSEMS ▪ Ensure Environment Policy and Objectives are established and implemented ▪ Promote continual improvement and provide support as required ▪ Ensure the Environmental Management System achieves its intended outcomes ▪ Ensure resources are available to support the HSEMS ▪ Define and maintain the context of the organisation and any Interested Parties ▪ Ensure employees are equipped with sufficient skills to meet the objective of competent delivery of the project ▪ Responsible for resourcing employee activities and ensuring plant is operated in an efficient manner ▪ Regular review of environmental management programs including the establishment and review of environmental objectives and targets. ▪ Monitoring and improving environmental performance. ▪ Compliance with all environmental requirements and regulatory and other reporting requirements.
Contractor staff Subcontractors	<ul style="list-style-type: none"> ▪ All Contractors and staff have a role in achieving a standard of environmental performance consistent with the documentation referenced in this strategy. Contractors shall submit a HSE Management Plan for approval by a member of the AGL Macquarie Environment Team prior to commencement of works on site

7.3.3 Organisational Chart

Figure 7-1. Organisational Chart



7.4 Training and Awareness Program

7.4.1 Training needs and competency evaluation

Training needs are determined through the Training Needs Analysis procedure, which describes the specific training required on site by evaluating significant aspects of the project, environmental incident trends, and Leadership Team requirements. This is completed for all personnel, contractors, and visitors to the Project site, to ensure compliance with site policy, standards, and procedures. Review of project specific training is reviewed in response to changes in site risks, trends in environment incidents or hazards, and annually.

7.4.2 Environmental training and awareness

AGLM have established a Project specific environmental training and induction program for all Personnel who perform tasks with the potential to cause environmental harm. The *Environment Training Procedure document AGLM-HSE-PRO-008.05* outlines the process to providing training and awareness to all personnel and contractors operating for or on behalf of AGLM at the Liddell Power Station.

Internal environment training and awareness is provided to construction personnel where required by the Environment Team, and to all other teams by the Team Leaders each quarter.

Online training is available to all personnel and contractors through Empower (online learning system), and the Manager Environment is responsible for developing and updating modules related to environment aspects and impacts, as well as changes in legislation, policy or Health, Safety, and the Environment Management System.

Contractors are to work with the Manager Environment to determine the environmental competency and training required for all Contractor staff and sub-contractors and are responsible for ensuring training is conducted prior to work. A record of all contractor training is to be kept in the Environment Training Needs Matrix AGLM-HSE-FRM-008-05.1

7.4.3 Site induction

AGLM utilises a global platform to induct both employees and contractors, through the Rapid Induct system. All AGLM employees were required to complete inductions prior to visiting any operational site, and all contractors are required to undertake the new induction and supply their licences and qualifications before work is commenced on the Project. Required training includes:

- AGL Introduction

- Site Induction
- Site Entry Protocols during a Pandemic Event
- Bayswater Work Party Member Training

7.4.4 Daily pre-start meetings and Toolbox Talks

Daily pre-start meetings will be included in all management plans, and attendance will be required by all personnel and contractors attending on-site each day. These meetings should inform personnel of the activities for that day, environmental protection practices, work area restrictions, activities that may affect the work, coordination with other trades, and hazards. These should be conducted before commencement of work each day or shift, or where changes occur during a shift.

All management plans should include Toolbox Talks. All personnel and contractors are subject to attending Toolbox Talks, which should raise awareness and educate personnel on environmental issues associated with upcoming works, or to discuss previous incidents. Key potential environmental impacts and controls to be implemented will be discussed for the relevant stage of the project.

Attendance at both the daily pre-start meetings and Toolbox talks will be recorded using a sign-in sheet, which should be retained and made available for audits.

7.4.5 Other training, induction, and awareness programs

All environmental management plans and strategies will include details on specific training, induction and awareness programs that are required for each stage of development. This should include:

- Training, induction, awareness program purpose
- Training needs determination
- Frequency of training
- Person responsible for delivering training is conducted.

7.5 Incident and emergency management

7.5.1 Incidents

AGL has an HSE *Incident, Near Miss and Hazard Management Procedure* as part of AGL's HSEMS (AGL-HSE-RO-012.1), which outlines the information required to ensure HSE incidents, near misses, hazards, and regulatory issues are identified, reported, and investigated. This procedure applies to all employees and contractors, contractor employees and their sub-contractors working on the Project. The General Manager of Group HSE & Security is responsible for ensuring processes are implemented to manage HSE hazards, near misses, and incidents. The management process for all incidents, near misses, and hazard management is as outlined in Table 9.

Table 9. Incident procedure – steps and actions

Step	Action	Responsible person	Additional procedures required
1	Immediate response	Leader, or most senior person at the team, in consultation with the Manager Environment	For events that require emergency response, refer to <i>Emergency Preparedness, Response, and Management Standard</i> AGL-HSE-STD-101 and local Emergency Response Procedures

Step	Action	Responsible person	Additional procedures required
2	Leader notification	Person involved in the event if capable, or person administering assistance	None
3	Classification of incident	Leader, in consultation with the Manager Environment. If there are conflicting views relating to the event, the Head of Safety and /or Head of Environment, Health, Audit and Training	Risk assessment of event must be carried out in accordance with the HSE <i>Risk Management Standard</i> AGL-HSE-STD-044.1 Definitions of obligations of Regulatory Reportable Events are provided in the Notify Regulatory Authorities Guidelines AGL-HSE-GUI-012.1
4	Immediate notification report and escalation (if required)	Responsible Leader to complete Immediate Notification Report HSE Business Partner to email report to Head of Safety or Head of Environment, Health, Audit and Training Business General Manager to email report and verbally contacting the Executive General Manager, Chief of Staff and General Manager, Group HSE & Security	If event is a potential LTI, MTI, High Potential Event, Regulatory Reportable Events or Electrical Shock Incident, an <i>Immediate Notification Report</i> (form located in AGL-HSE-FRM-012.1) must be prepared with the SHE Business partner and Group Legal if necessary
5	HSE brief (if required)	Head of Function with the HSE Business Partner and/or Head of Environment and Group Legal (where applicable). HSE Manager Communications to distribute across AGL, operating sites, and to relevant Contractors	Brief to be in accordance with the HSE <i>Consultation and Communication Standard</i> AGL-HSE-STD-006
6 & 7	Significant event initial summary (if required) and myHSE recording	Person(s) involved (staff or contractor), or any other person involved in event or delegated the talk of the person or person's leader	Access to myHSE is through GRID (AGL) intranet
8	Investigations	Leader and HSE Business Partner	Utilise the 5-Whys Guideline (AGL-HSE-GUI-012.3) to determine root cause of incident <i>Incident Cause Analysis Method Tool</i> and <i>ICAM Guideline</i> AGL-HSE-GUI-012.2 to be used and applied, and investigation report using the <i>ICAM Investigation report template</i> AGL-HSE-TMP-012.3 to be prepared

Contractor incidents, near misses, and hazards must be entered into myHSE by the Contractor or by the responsible Contract Manager or Delegate, if the Contractor does not have access to myHSE.

7.5.2 Emergency Response

Each Contractor strategy or management plan will detail an emergency response plan that will deal with the management of incidents that constitute an emergency.

This section of the strategy or management plan will list the roles and responsibilities of project personnel responsible for managing environmental incidents and emergencies. Names and phone numbers of these project personnel should not be included in the strategy or management plan; however, these details should be available on site, able to be easily accessed in an emergency and provided to AGL.

This section should include:

- contact details for emergency services (ambulance, fire brigade, police, spill clean-up services and others if relevant)
- the location of on-site information on hazardous materials, including safety data sheets and spill containment materials
- procedures to minimise damage and to control an environmental incident or emergency
- a process for communication during the emergency
- a process for reviewing environmental incident and emergency planning, preparedness and response procedures following an environmental incident or emergency.

Communication protocols with AGL must be included. These will detail when notification should occur, what details are to be communicated and how offsite communication should be managed (media, regulators, general public interactions).

7.5.3 PIRMP

A Pollution Incident Response Management Plan (PIRMP) has been prepared for EPL 2122 and EPL 779, which addresses the environmental, human, and life safety aspects of pollution incidents within EPL 2122 and EPL 779. The PIRMP applies to all AGLM employees, contractors, and visitors to the site.

Protocols within the PIRMP must be implemented in the event of any pollution incident, which links to the AGLM-HSE-PLN-010.02 AGLM Emergency Response Plan, AGL Incident Management Procedure, and AGL-HSE-GUI-012.1 Obligations to Notify Regulatory Authorities.

The key hazards identified at the project site include spills, leaks, and emissions resulting in air, water, or land contamination, as well as unplanned water discharge from dam failure.

7.6 Inspections and audits

7.6.1 Environmental inspections

Environmental inspections at AGLM are conducted regularly at Liddell and 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 Project and updating the *Environment Inspection* AGLM-HSE-CKL-006 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-007.

7.6.2 HSEMP Audits

Contractor Environmental compliance audits are to be conducted at least annually (or as specified by AGL), and additional audits are to be completed within one month when:

- A new contractor takes over a monitoring contract
- A new licenced monitoring point or requirement is added to a licence
- A new consent condition is being introduced
- There is a change in legislation or approved method occurs.

All non-conformances identified are to be raised with the Contractor and a plan for rectification is to be decided. An event report will be raised for the non-conformance if required. The Environmental Team and Contract Coordinator are responsible for ensuring these audits are conducted, documented, and that all non-compliances are recorded and addressed.

7.6.3 Internal Environmental Audits

The AGLM Environmental Management System is audited internally annually as part of the AGL Group Operations Audit Program to assess legal compliance and the Environmental Management System effectiveness of the environmental management on site. Audits are conducted against ISO 14001, and audit criteria, scope, frequency, and methods are to be approved by the Manager Environment. The *Internal Audit Checklist* AGLM-HSE-FRM-008.08.3 is to be used, which requires staff interviews, observations, and a review of records and documentation. All non-conformances identified are to be recorded and reviewed to ensure action is taken.

Contractors will prepare a Compliance Register (Section 7.7.1) for the work they are conducting and to support the internal audits.

7.6.4 Independent Environmental Audits

Independent (external) environmental audits are conducted by government authorities, and the independent auditor must be agreed to in writing by the Secretary prior to the independent audit commencing. The Manager Environment 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 at minimum, follow the requirements of the Independent Audit Post Approval Requirements (DPIE, 2020) listed in Table 10. Independent audit frequency.

Table 10. 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)

7.7 Compliance management

7.7.1 Environmental Non-Compliance

Environmental incidents and hazards (non-conformances and non-compliances) shall be entered into myHSE and managed in accordance with the *Incident, Near Miss and Hazard Management Procedure* AGL-HSE-PRO-012.1. Chapter 7.5 provides further details on incident response and reporting. Contractors or (Contract Manager or delegate if Contractor does not have access to myHSE) are to enter non-conformances and non-compliances into myHSE.

Per the Development Consent, The Planning Secretary must be notified in writing via the Major Projects website within seven days after AGLM become aware of any non-compliance.

Corrective or preventative actions are to be managed by the *Corrective & Preventive Action Procedure* AGLM-HSE-PRO-008.

In the event non-compliances are found in an internal or external audit, they must be recorded on the AGL HSE Audit Actions SharePoint site. Appropriate responsibilities and due dates for non-compliances must be determined. If contractors do not have access to this, they must work with the Manager Environment to record the non-conformance or non-compliance. The Contractor must work with the Manager Environment to determine actions to be taken, responsible parties, and progress on closing out items.

7.7.2 Compliance Register

The contractor will develop a register or table of environmental compliance requirements 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 SSD 9697 conditions of consent that must be complied with during the planning and conduct of works under the contract
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.

Prior to commencement of works under the contract, the contractor will provide the Compliance Register to AGLM for review. The register will be used to assist the contractor to meet relevant compliance requirements, and provide support during project audits and the AGLM audit program.

7.7.3 Compliance reporting

AGL are required to report on compliance for the project. Compliance Reports of the project must be carried out in accordance with the Compliance Reporting Requirements outlined in the Compliance Reporting Post Approval Requirements (2020) and must be submitted to the Department in accordance with the timeframes set out in Table 11. AGLM must make each Compliance Report publicly available within 60 days of submitting it to the Planning Secretary

Table 11: Minimum frequency of Compliance Reporting (DPIE, 2020)

Compliance Report	Timing	Minimum Frequency
Operation Compliance Report	Reporting required for the duration of operation or as otherwise agreed by the Secretary.	At intervals, no greater than 52 weeks from the date of commencement of operation (annually) or if in care & maintenance, from the commencement date of care and maintenance (annually).
Post-Decommissioning Compliance Report	Report to be submitted to the Planning Secretary within 12 weeks of completion of decommissioning	Single report only

To support this, the contractor will provide regular reports detailing:

- Compliance with the compliance register
- Results of Audits and site inspections
- Status of any incidents or investigations
- Rehabilitation progress (where relevant)
- Change management
- Personnel changes where they impact responsible persons with respect to environment management.

Full 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.

7.7.4 Corrective and Preventative Actions

A corrective and preventative action process should be initiated following the identification of a non-conformance and/or non-compliance. Contractors must report all non-compliances, and preventative actions to AGL.

7.8 Continual improvement and review

7.8.1 Improvement and review

All strategies, management plans, and programs that are produced to meet the Development Consent requirements are to be regularly reviewed as part of a continual improvement process to ensure they remain current and relevant to the project.

A strategy, management plan, or program will be reviewed and, where necessary, revised within three months of the following:

- Submission of an incident report
- Submission of an audit report
- Approval of any modification to the conditions of the Development Consent
- A direction of the Secretary.

When a management plan, strategy or program is revised, it should be submitted to AGLM for assessment and approval in accordance with the review process outlined in each plan or strategy and submitted to DPIE if required. All reviews are to be documented and revisions noted.

8. Environmental Management

8.1 Overview

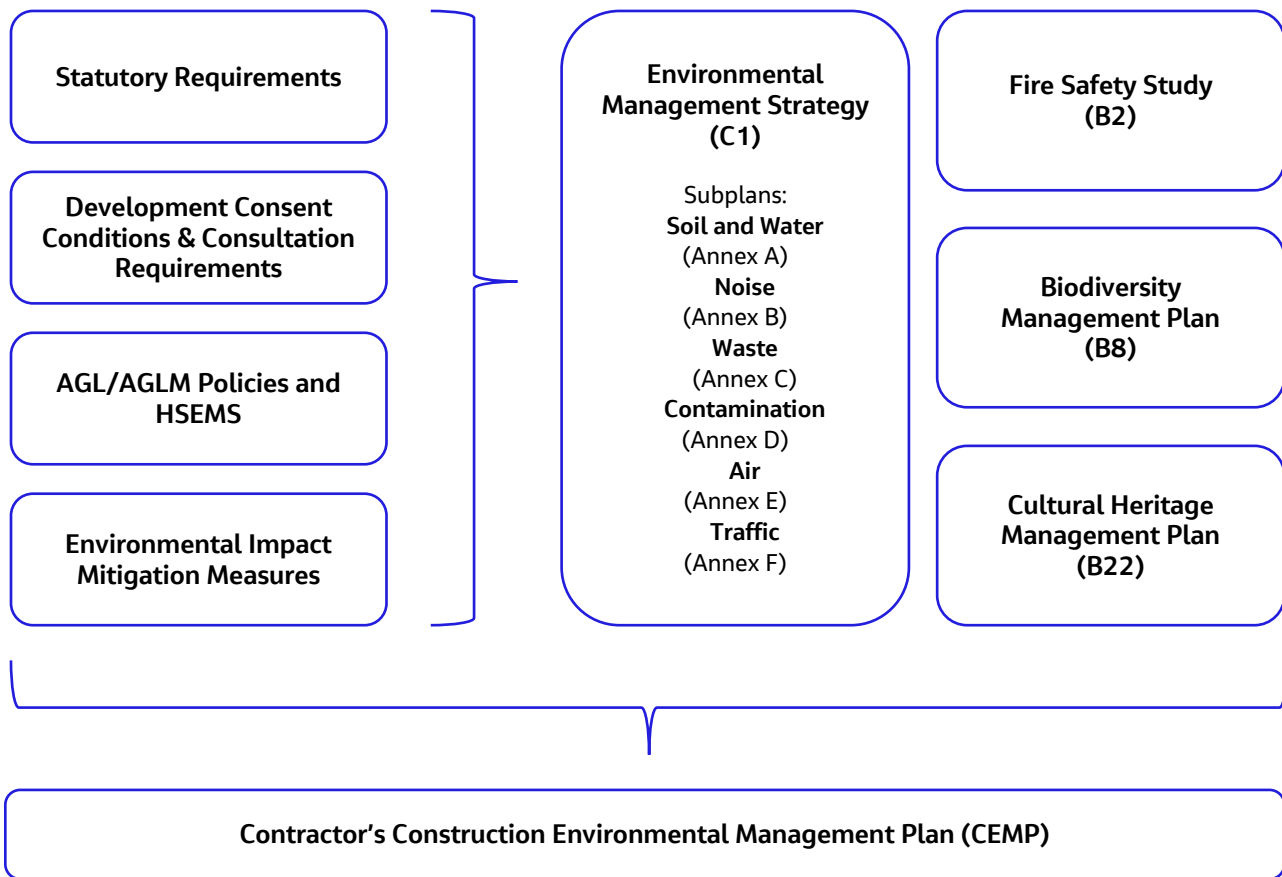
Preliminary Environmental Assessments were completed for the SEARs application, and the risk assessment outcome summary is shown in **Table 12** below. There are two tiers of management that must be implemented for the environmental aspects that have the potential to be impacted by the development of this project (**Figure 8-1**. Strategy and Management Plan requirement summary. This Environmental Management Strategy addresses all environmental management requirements that apply to the Decoupling Works component of this project.

1. **Management Plan or Strategies:** Biodiversity impacts were identified as being 'Medium risk' and as such require a comprehensive management plan to be developed prior to the commencement of construction. This is also a requirement of the Development Consent. Whilst there was a 'low risk' rating in the EIS for Heritage, the Development Consent states the requirement for a stand-alone Aboriginal Cultural Heritage Management Plan. The requirements for these plans and a strategy to develop them is provided in Sections **8.2** and **8.8**, respectively.
2. **Section within the CEMP:** All low risk categories have associated mitigation measures that must be described within the CEMP to comply with relevant legislation. These sections must be included in the CEMP. A strategy for how to address these aspects in the CEMP is provided in Annexes A-F, as well as Section 8.2 through Section 8.12.

Table 12. Key risks and risk categories

Environmental Aspects	Risk Category per EIS	Management Plan requirements for Decoupling Stage	Management Plan requirements for additional stages
Biodiversity	Medium	None – no vegetation removal	✓
Aboriginal cultural heritage	Low	✓	✓
Air Quality	Low	✓	✓
Noise and vibration (construction and decommissioning only)	Low	✓	✓
Contaminated Land	Low	✓	✓
Soil and Water	Low	✓	✓
Traffic & Transport	Low	✓	✓
Access, socio-economic, hazards, visual and lighting	Low	None – sections to be included in CEMP	None – sections to be included in CEMP

Figure 8-1. Strategy and Management Plan requirement summary for the Decoupling Works



8.2 Air Quality Management

The key impacts to Air Quality from the Decoupling Works are summarised in **Table 13**. The strategy for managing these impacts is provided in the Air Quality Management Subplan (Annex E).

Table 13: Air Quality Impact Summary

Air Quality Impact Summary	
Risk assessment summary	<p>During the Decoupling Works, the primary air quality risk would be dust generated from site clearing, materials excavation, handling, transport and placement, as well as from wind erosion of stored materials and exposed surfaces resulting in impacts at surrounding sensitive receivers.</p> <p>There would also be exhaust emissions from plant and equipment used during the construction and fugitive emissions from stored fuels and chemicals.</p>

8.3 Noise and Vibration Management

The key impacts from noise and vibration associated with the Decoupling Works are summarised in **Table 14**. The strategy for managing these impacts is provided in the Noise and Vibration Management Subplan (Annex B).

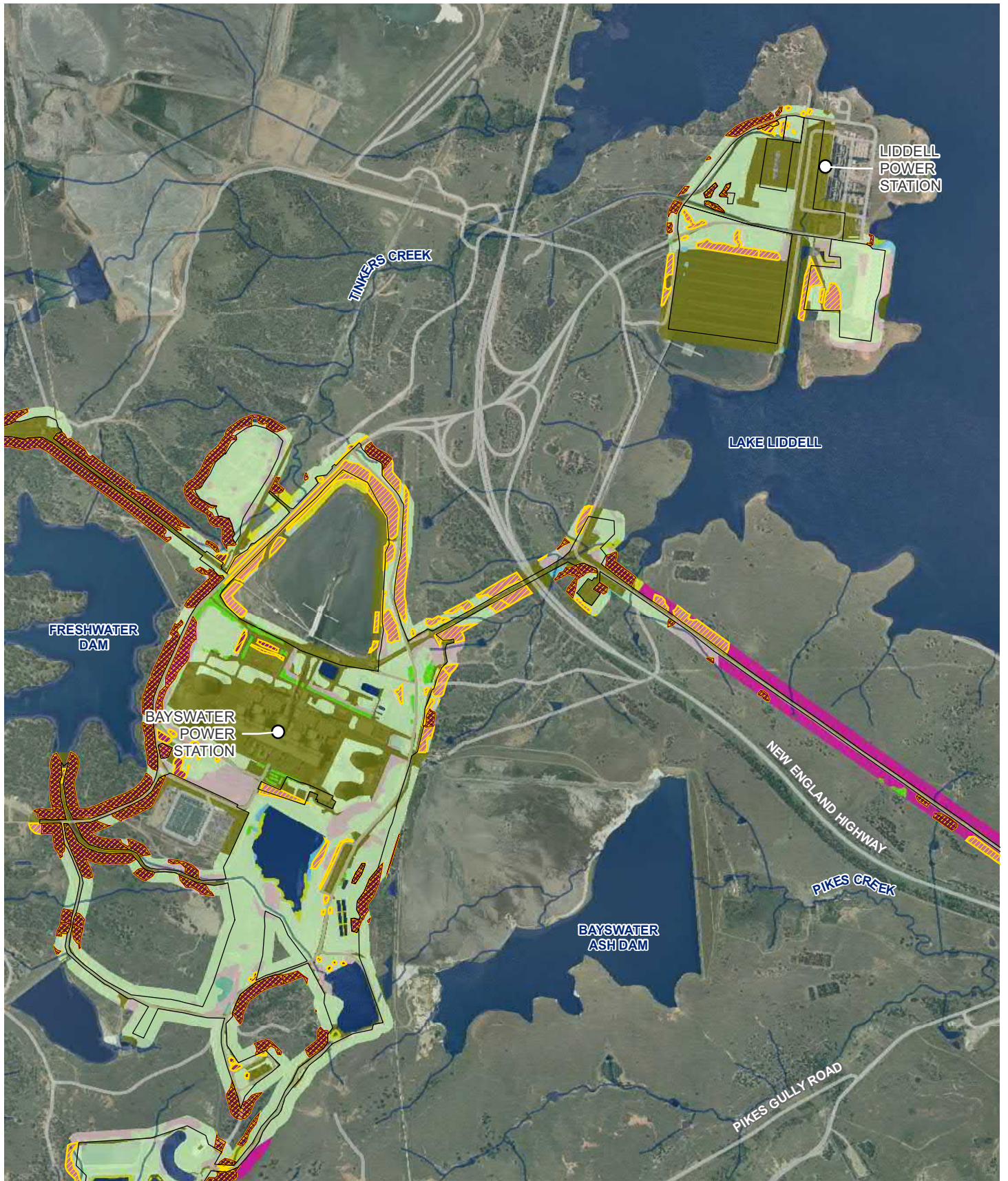
Table 14: Noise and Vibration Impact Summary

Noise and Vibration Impact Summary	
Risk assessment summary	<p>The noise and vibration assessment determined that noise levels at all residential receivers are predicted to comply with day, evening and night NMLs during each construction stage. Noise levels would be perceived as negligible at all residential receivers during each construction stage.</p> <p>Due to the distances of the nearest receivers to the construction site, vibration impacts would be unlikely.</p>

8.4 Biodiversity management

A Biodiversity Management Plan (BMP) is required for the construction stage of the Project, and a strategy to produce this is outlined in Table 15. This is based on the findings from the Biodiversity Assessment Report (BDAR) prepared for the EIS, which outlines key risks to biodiversity, and associated mitigation measures.

Figure 8-2: Biodiversity Study Area and Habitat for the Decoupling Works shows a summary of the biodiversity study area and habitats relevant to the Decoupling Works.



Legend

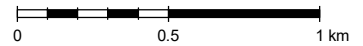
- Development site
- Road
- Waterway
- Waterbody
- Central Hunter Grey Box – Ironbark Woodland in the New South Wales North Coast and Sydney Basin Bioregions EEC
- Central Hunter Valley eucalypt forest and woodland CEEC

Plant community type (PCT) and condition

- PCT 1071 Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion - Moderate (Veg zone 7)
- PCT 1691: Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter: Good
- PCT 1691 Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter - Moderate (Veg zone 1)

- PCT 1691 Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter - Native Grassland (Veg zone 4)
- PCT 1691 Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter - Rehabilitation (Veg zone 3)
- PCT 1691 Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter - Regrowth (Veg zone 2)

- PCT 1692 Bull Oak grassy woodland of the central Hunter Valley - Moderate-good (Veg zone 6)
- PCT 1731 Swamp Oak - Weeping Grass grassy riparian forest of the Hunter Valley - Moderate-good (Veg zone 5)
- Non-Native**
- Planted trees
- Exotic grassland
- Excluded/artificial surface



1:25,000 at A4



Data sources

- Jacobs 2021
- ACL 2020
- © Department Finance, Services and Innovation Aug 2020
- Imagery: © Department of Customer Service 2020
- GDA94 MGA56

The information and concepts contained in this document are the intellectual property of Jacobs and are subject to site survey and detailed design. Not to be used for construction. Use or copying of the document in whole or in part without written permission of Jacobs constitutes an infringement of copyright. Jacobs does not warrant that this document is definitive or free of error and does not accept liability for any loss caused or arising from reliance upon information provided herein.

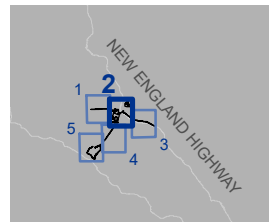


Figure 8-2 Biodiversity study area and habitat

Table 15. Biodiversity management summary

Biodiversity Management Summary								
Risk assessment summary	<ul style="list-style-type: none"> ▪ The Project would result in the direct removal of up to 42.3 ha of native vegetation ▪ The Project may impact up to 13.7 ha of the Central Hunter Grey Box – Ironbark Woodland in the NSW North Coast and Sydney Basin Bioregions TEC listed under the BC Act. This TEC comprising the combined extent of PCT 1691 (Moderate Condition) and PCT 1691 (Rehabilitation). The vegetation removal for the decoupling works will impact these PCTs/TECs. ▪ The Project may also result in a direct impact (associated with vegetation clearing) to about 10 ha of potential foraging / roosting habitat for the Southern Myotis. The Southern Myotis is the only species credit threatened species assumed to be present. 							
Relevant legislation	<ul style="list-style-type: none"> ▪ <i>Biodiversity Conservation Act 2016</i> ▪ <i>Environment Protection and Biodiversity Conservation Act 1999</i> ▪ <i>Environment Protection and Biodiversity Conservation Regulation</i> ▪ <i>EP&A Act 1979 and EP&A Regulations 2000</i> ▪ Muswellbrook Local Environmental Plan 2009 ▪ Singleton Local Environmental Plan 2013 							
Development Consent requirements (Condition reference)	<ul style="list-style-type: none"> ▪ Biodiversity Management Plan <p>B8. Prior to commencement of native vegetation clearance, unless otherwise agreed by the Secretary, the Applicant must prepare a Biodiversity Management Plan to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared by a suitably qualified and experienced biodiversity expert/s;</p> <p>(b) be prepared in consultation with the BCS;</p> <p>(c) describe the short, medium and long-term measures to be undertaken to manage vegetation and fauna habitat on the site;</p> <p>(d) describe measures to be implemented within the site to minimise:</p> <ul style="list-style-type: none"> (i) the amount of clearing, including investigation of design options to minimise disturbance of native vegetation for the battery energy storage system and Decoupling Works; (ii) impacts on fauna, including undertaking pre-clearance surveys and maximising the salvage of resources for habitat enhancement; (iii) impacts on threatened flora and fauna species or ecological communities within the development footprint and its surrounds; (iv) the spread of weeds and fungal pathogens; (v) the generation and dispersion of sediment to watercourses; and (vi) light spill from night works; and <p>(e) include a program to monitor, evaluate and report on the effectiveness of the measures.</p> <p>B9. The Applicant must implement the Biodiversity Management Plan approved by the Planning Secretary.</p> <ul style="list-style-type: none"> ▪ Biodiversity Offsets <p>B10. The Applicant must retire the biodiversity credits for Offset Stages 1, 2 and 3 as specified in Table 1 of the development consent, prior to commencing vegetation clearing in those stages. The retirement of credits must be carried out in accordance with the Biodiversity Offsets Scheme of the BC Act.</p> <p>B11. The Applicant may review and update the ecosystem and species credit requirements in Table 1 to reflect the final construction footprint and resulting extent and type of plant community types to be cleared. Amendments to the ecosystem and species credit requirements must be undertaken in consultation with BCS and approved by the Planning Secretary prior to the commencement of construction of the relevant offset stage.</p>							
Biodiversity Offset Credit Requirements for each stage of the project	Stage of Development	PCT 1691 Moderate Credits	PCT 1691 Rehabilitation Credits	PCT 1691 Native Grassland Credits	PCT 1731 Moderate/ Good Credits	PCT 1692 Moderate/ Good Credits	PCT 1071 Moderate Credits	Southern Myotis credits

Biodiversity Management Summary

Battery	-	57 (57)	-	1 (1)	-	-	37 (37)
Decoupling	2	3 (3)	-	-	-	-	2 (2)
BAW	36 (17.5)	126 (71.5)	24 (0)	6 (0)	17 (1.3)	82(0)	157 (32.9)
Total credits	38	186	22	7	17	82	196

Mitigation measures for all project stages (EIS Reference)
Those specific to decoupling works in bold.

- **Opportunities to limit the extent of vegetation clearance required would be considered as part of detailed design and construction planning. This would include:**

 - Detailed design to avoid PCTs with higher integrity scores to the extent practicable
 - Confirmation of actual disturbance footprint for each Project component
 - Recalculation of biodiversity credit requirements
 - Provision of final layout plans and agreement of associated biodiversity credit requirements to DPE and BCD
 - Retirement of biodiversity credits prior to commencement of construction for each Project component (or sub-component).
- **The regime for managing biodiversity impacts would be documented and implemented through a Flora and Fauna Management Plan and include the following requirements:**

 - Clearly delineate the boundaries of the development site as refined through the detailed design process to prevent any unnecessary clearing beyond its extent. This would include delineation and protection of the 2.04 ha patch of PCT 1691 to the west of Bayswater which is to be retained
 - Ensure vehicle and equipment parking areas and stockpile areas are identified and sited to avoid areas containing ecological value
 - Install appropriate signage such as 'No Go Zone' or 'Environmental Protection Area'
 - Identify and communicate the location of any 'No Go Zones' in site inductions
 - Speed limits within the Project area would be limited to 40 km/hr to minimise the risk of vehicle collision with fauna.
- **The Flora and Fauna Management Plan would also consider measures to mitigate impacts on flora and fauna from noise, vibration, waste, and air pollution, in accordance with the mitigations identified in this EIS.**
- **The Flora and Fauna Management Plan would also include how impacts to biodiversity would be reported and is expected to include documentation of evidence of commitments and conditions of approval being implemented for inclusion in post approval compliance auditing and reporting.**
- **The following measures will be established to manage impacts to vegetation adjacent to the development site:**

 - Materials, plant, equipment, work vehicles and soil/rock stockpiles will be placed to avoid damage to surrounding vegetation and outside tree drip-lines. Construction workers and vehicles will not access areas beyond the delineated development site. Detailed design will determine if further retainment of native vegetation is possible
 - Erosion and sediment controls will remain in place until rehabilitation has been completed. Drainage lines will be protected from runoff and stockpiling of spoil
 - Limits of the development site (only where native vegetation exists) will be accurately and clearly marked out prior to commencement of works. No activities including parking and turning of vehicles and plant / equipment will occur beyond the development site in association with the Project.
- **An inspection of native vegetation to be impacted (within the development site) will be conducted by an ecologist immediately prior to vegetation clearing works (to confirm absence of fauna species). A Spotter/Catcher ecologist will supervise vegetation clearing. Construction machinery will be checked for sheltering fauna prior to use. In the unlikely event that fauna is present, works should cease until animals can be captured and removed from the development**

Biodiversity Management Summary

	<p>site. Construction crews will be made aware that any native fauna species encountered must be allowed to leave site without being harassed.</p> <ul style="list-style-type: none"> ▪ Trenches / holes will be inspected each morning and any trapped fauna will be removed or a mechanism for fauna to escape will be provided, such as a soil or timber ramp. ▪ The following measures will be in place to manage impacts to soil and soil seed bank: <ul style="list-style-type: none"> - Where native vegetation is removed, top soil will be retained from excavation areas within the development site (where possible). Top soil stockpiles must be delineated and protected from machinery compaction and contamination during construction. Following construction and infill, top soil will be re-spread over impacted native vegetation areas (to retain native seedbank and assist with natural revegetation). Stockpiling in the vicinity of drainage lines will be avoided - Woody debris (logs and mulch) produced during vegetation clearing will be re-spread over any cleared areas to protect the soil surface from erosion and to aid habitat restoration where appropriate. ▪ If required, weed control will be undertaken by suitably qualified and / or experienced personnel. This may include: <ul style="list-style-type: none"> - Manual weed removal in preference to herbicides - Replacing non-target species removed / killed as a result of weed control activities - Protecting non-target species from spray drift - Using only herbicides registered for use within or near waterways for the specific target weed - Not applying herbicide if it is raining or if rain is expected - Mixing and loading herbicides and cleaning equipment away from waterways and drains. ▪ The CEMP will detail the procedures for management of weeds on the development site (which will be in accordance with the requirements of the Biosecurity Act 2015). ▪ Pathogen management measures will be in place to prevent introduction and spread of amphibian chytrid fungus, <i>Phytophthora cinnamomi</i> and Exotic Rust Fungi. The CEMP will provide a protocol for construction vehicles driving to and from site to prevent the spread or introduction diseases.
<p>Strategy to meet Biodiversity Management Plan requirements</p>	<ul style="list-style-type: none"> ▪ Reduce all impact to flora and fauna by addressing and completing all biodiversity mitigation measures throughout all development stages where possible ▪ Biodiversity Management Plan (BMP) to be written in accordance with the AGLM Land Management Plan AGLM-HSE-PLN-009.01. The main objective of the Ecology / Biodiversity section of this management plan is to maintain and protect biodiversity values ▪ BMP to include all requirements outlined in conditions B8 and B9 of the Development Consent (SSD 8889679).

8.5 Soil and Water Management

The key impacts to Soil and Water associated with the Decoupling Works are summarised in Table 16. The strategy for managing these impacts is provided in the Soil and Water Management Subplan (Annex A).

Table 16: Soil and Water Impact Summary

Soil and Water Impact Summary	
Risk assessment summary	<p>During earthworks and vegetation clearance, it is possible that soil erosion may occur. Soil stabilisation and revegetation would minimise potential soil dispersion impacts. The Project is unlikely to cause large-scale soil disturbance at depth and is not proposed to interface with groundwater.</p> <p>During construction, water would be required for activities such as dust suppression, drilling, concrete works and revegetation. Water would be sourced from existing onsite sources in accordance with existing water allocations.</p> <p>With the implementation of the environmental management measures described in Annex A, construction activities are unlikely to result in any significant adverse effects to soil, water quality and hydrology.</p>

8.6 Waste Management

The key impacts from Waste associated with the Decoupling Works are summarised in Table 17. The strategy for managing these impacts is provided in the Waste Management Subplan (Annex C).

Table 17: Waste Impact Summary

Waste Impact Summary	
Risk assessment summary	<p>Decoupling works are expected to generate standard construction wastes, and are expected to include:</p> <ul style="list-style-type: none"> ▪ Spoil from cut and fill activities ▪ Green waste from clearing activities ▪ General construction waste ▪ Sewage. <p>With the implementation of the environmental management measures described in Annex C, construction activities for the decoupling works are unlikely to result in any significant waste impacts.</p>

8.7 Contamination Management

The key impacts from contamination associated with the Decoupling Works are summarised in Table 18. The strategy for managing these impacts is provided in the Contamination Management Subplan (Annex D).

Table 18: Contamination Impact Summary

Contamination Impact Summary	
Risk assessment summary	<p>Two asbestos samples were associated with the ash pipeline. AGLM have confirmed that the Decoupling Works would have minimal interaction with the ash pipeline. Therefore, the identified asbestos is considered unlikely to impact on the Project. However, occupational hygiene controls will be implemented as a precaution to mitigate potential construction worker exposure to asbestos.</p> <p>The Decoupling Works would not interact with sub-surface infrastructure and would not interact with impacted soil.</p> <p>Elevated hydrocarbon concentrations are identified in the transformer corridor. Should localised elevated COPC be present in areas disturbed as part of the Decoupling works, it is likely they would</p>

Contamination Impact Summary	
	be limited in extent and unlikely to require significant remedial works (if any). Industry standard construction controls would be implemented as part of the development construction (Annex D). In light of the above, the elevated hydrocarbon concentrations present in the Decoupling area are considered unlikely to constrain the development.

8.8 Cultural and Aboriginal Heritage Management

A Cultural and Aboriginal Heritage Strategy is provided as part of this strategy for the Project, outlined in Table 19. Figure 8-3 shows the location of AHIMS sites with respect to the work locations and highlights those relevant to Liddell and Bayswater Power Stations.

Table 19. Cultural and Aboriginal Heritage Management Summary

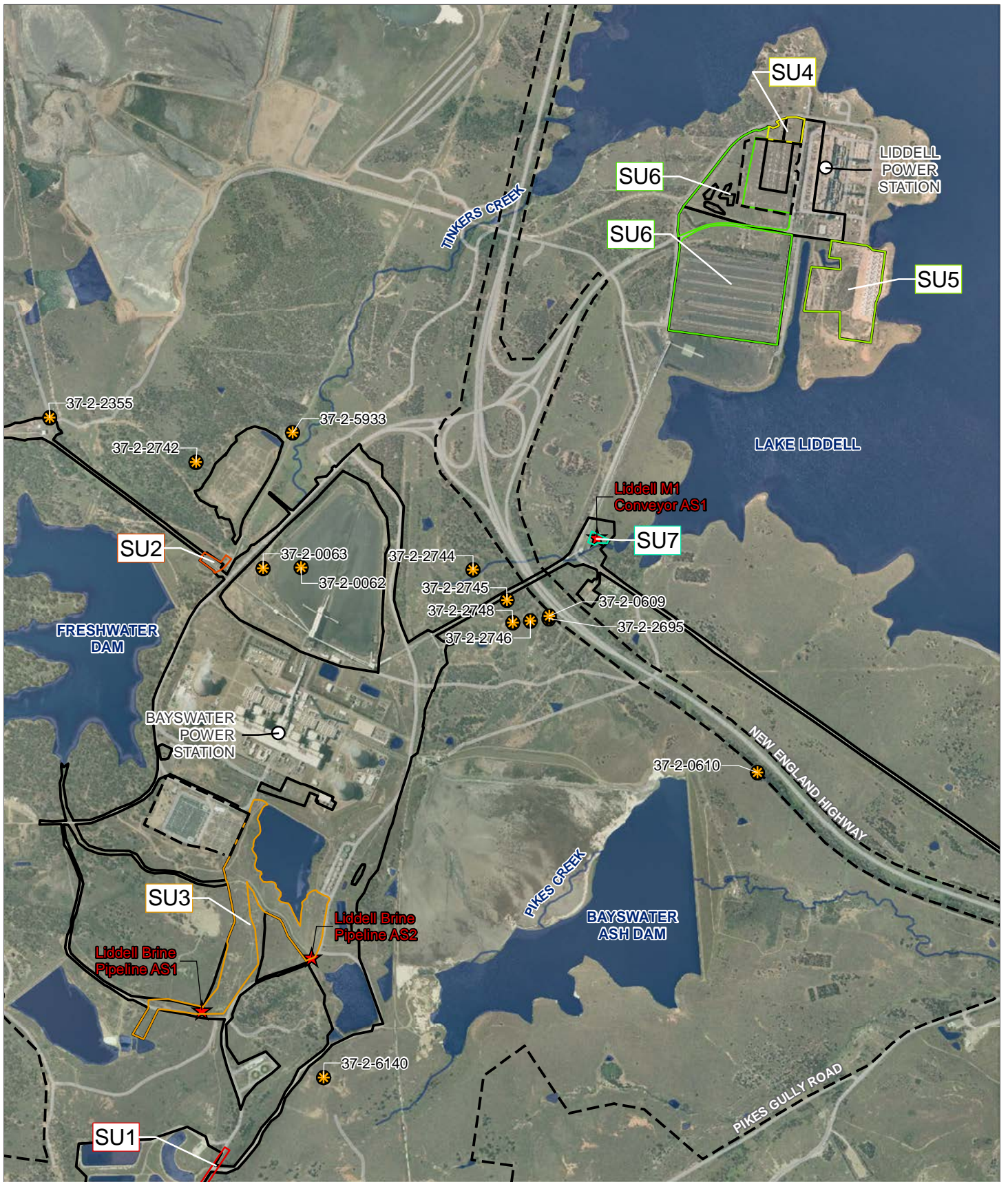
Cultural and Aboriginal Heritage Management Summary	
Risk assessment summary	<p>There are 12 sites from SU1 and SU3 wholly within the development site, which have the potential to be directly impacted by construction of the Project. A small portion of one site (BAYS AS06 (37-2-6145)) is located within the development site and would potentially be subject to impact in the event of pipeline repair works. A number of sites are located near the development site, as such they are potentially at risk of indirect impacts during construction of the Project due to it being located close to the disturbance area (refer to Figure 8-3). These sites would be protected during construction to avoid inadvertent damage.</p> <p>There are no sites within proximity to Liddell Power Station or the Decoupling Works. An Aboriginal Cultural Heritage Management Plan (ACHMP) has been developed specific to the decoupling works and should be used to develop the contractors CEMP.</p> <p>No adverse impacts on Aboriginal cultural heritage (either direct or indirect) are anticipated during operation of the Project.</p>
Relevant legislation	<ul style="list-style-type: none"> ▪ <i>Heritage Act 1977</i> ▪ <i>National Parks and Wildlife Act 1974</i> ▪ <i>Native Title Act 1993</i> ▪ <i>EP&A Act 1979 and EP&A Regulations 2000</i> ▪ Muswellbrook Local Environmental Plan 2009 ▪ Singleton Local Environmental Plan 2013
Development Consent requirements (Condition reference)	<ul style="list-style-type: none"> ▪ B22. The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development. The plan must: <ul style="list-style-type: none"> - (a) be prepared by suitably qualified and experienced persons approved by the Secretary; - (b) be prepared in consultation with Registered Aboriginal Parties and Heritage NSW; - (c) be submitted to the Planning Secretary for approval prior to carrying out construction under this consent; - (d) describe the measures to be implemented on the site to: <ul style="list-style-type: none"> • (i) comply with the heritage-related operating conditions of this consent; • (ii) ensure all workers receive suitable Aboriginal cultural heritage inductions prior to carrying out any activities which may cause impacts to Aboriginal objects or Aboriginal places, and that suitable records are kept of these inductions; • (iii) protect, monitor and/or manage identified Aboriginal objects and Aboriginal places (including proposed salvage of objects within the approved disturbance area) in accordance with the commitments made in the document/s listed in condition A2(c);

Cultural and Aboriginal Heritage Management Summary

	<ul style="list-style-type: none"> • (iv) protect Aboriginal objects and Aboriginal places located outside the approved disturbance area from impacts of the development; • (v) manage the discovery of suspected human remains and any new Aboriginal objects or Aboriginal places, including provisions for burials, over the life of the development; • (vi) maintain and manage reasonable access for relevant Aboriginal stakeholders to Aboriginal objects and Aboriginal places (outside of the approved disturbance area); and • (vii) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site; and • (viii) include a strategy for the care, control and storage of Aboriginal objects salvaged on the site, both during the life of the development and in the long term. <ul style="list-style-type: none"> ▪ B23. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.
<p>Mitigation measures for all project stages (EIS Reference) Those specific to decoupling works in bold.</p>	<ul style="list-style-type: none"> ▪ A Cultural Heritage Management Plan (CHMP) will be developed. It will include the methodologies developed in the ACHAR (Appendix F of the EIS). It will specify that project works will be restricted to the disturbance site. It will include provisions to ensure workers are made aware of cultural heritage places and their value, for example through project inductions. The CHMP will include provisions to guard against indirect impact to the Aboriginal sites near the development site. ▪ If no works are required in the vicinity of a site, the site will be conserved. ▪ The Unanticipated Finds Protocol in the ACHAR will be followed for any previously unidentified Aboriginal heritage objects found during the works. ▪ If repair or maintenance works on the Liddell to Jerrys Plains High Pressure Pipeline are required, the area of works will be subject to surface collection in accordance with Section 11 of the ACHAR of impacted sites. The sites that maybe impacted include: <ul style="list-style-type: none"> - Liddell Jerrys Plains Pipeline AS1 (37-2-6280) - Liddell Jerrys Plains Pipeline IF2 (37-2-6281) - Liddell Jerrys Plains Pipeline AS3 (37-2-6279) - Liddell Jerrys Plains Pipeline IF4 (37-2-6291) - Liddell Jerrys Plains Pipeline AS5 (37-2-6290) - Liddell Jerrys Plains Pipeline AS6 (37-2-6289) - Liddell Jerrys Plains Pipeline IF7 (37-2-6287) - Liddell Jerrys Plains Pipeline IF8 (37-2-6288) - Liddell Jerrys Plains Pipeline AS9 (37-2-6286) - Liddell Jerrys Plains Pipeline AS10 - BAYS AS06 (37-2-6145). ▪ If practicable, the design and construction of the Brine Pipeline will avoid the two recorded site areas (Liddell Pipeline AS1 (37-2-6285) and Liddell Pipeline AS2 (37-2-6282)). ▪ The sites will be protected with high visibility fencing. If impact cannot be avoided, the sites will be salvaged through surface collection. ▪ During any works on the Liddell M1 Conveyor the site (Liddell M1 Conveyor AS1 (37-2-6284)) will be conserved and protected by high visibility exclusion fencing to prevent impact.
<p>Strategy to meet the Aboriginal Cultural Heritage Management Plan requirements</p>	<ul style="list-style-type: none"> ▪ Reduce or eliminate potential impacts to Aboriginal and Cultural Heritage by addressing and completing all mitigation measures prior to and during the development where possible

Cultural and Aboriginal Heritage Management Summary

- Cultural and heritage management strategy is to comply with the AGLM Land Management Plan AGLM-HSE-PLN-009.01. The main objective of the European and Aboriginal Heritage Management section is to maintain and protect items of European and Aboriginal heritage value
 - Comply with all conditions in Development Consent (B22, B23) which include:
 - Target zero disturbance or damage to identified heritage items
 - Notify relevant authorities of identification of any heritage items
 - Environment Team to maintain a register of areas surveyed, and all heritage sites identified by surveys
 - Document all non-compliances with Development Consent conditions and mitigations measures to correct and prevent future non-compliances
-



Legend

- | | | | |
|------------------|-----------------------|--------------|-----------|
| Development site | AHIMS sites | Survey units | Road |
| AGL owned land | Valid | SU2 | Waterway |
| | Newly identified site | SU3 | Waterbody |
| | | SU4 | |
| | | SU5 | |
| | | SU6 | |
| | | SU7 | |



Data sources

- Jacobs 2021
- AGL 2020
- © Department Finance, Services and Innovation 2019
- DPE 2020
- OEH 2020
- Imagery: © Department of Customer Service 2020



Figure 8-3 Aboriginal heritage

8.9 Visual and Lighting Management

A Visual and Lighting Management Strategy is provided in the EMS for the construction stage of the Project, outlined in Table 20. All statutory requirements and mitigations measures are to be addressed in the strategy.

Table 20. Visual and Lighting Management Summary

Visual and Lighting Management Summary	
Risk assessment summary	<ul style="list-style-type: none"> Project components are largely screened by existing vegetation and topography and are typical of existing infrastructure from publicly accessible locations Visual impacts during construction would be limited to AGL personnel, and construction personnel
Relevant legislation	<ul style="list-style-type: none"> Protection of the Environment Operations Act 1997 EP&A Act 1979 and EP&A Regulations 2000
Development Consent requirements (Condition reference)	<p>The Applicant must:</p> <ul style="list-style-type: none"> (a) minimise the off-site visual impacts of the development, (b) ensure the visual appearance of infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and (c) not mount any commercial advertising signs or logos on site, except where this is required for identification or safety purposes <p>The Applicant must:</p> <ul style="list-style-type: none"> (a) minimise the off-site lighting impacts of the development; and (b) ensure that any external lighting associated with the development: <ul style="list-style-type: none"> is installed as low intensity lighting (except where required for safety or emergency purposes); does not shine above the horizontal; and complies with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version.
Mitigation measures for all project stages (EIS Reference) Those specific to decoupling works in bold.	<ul style="list-style-type: none"> Retention and enhancement of existing landscape features (areas of scrub, individual trees) will be considered where feasible. Colour of proposed structures and built form will be considered in a suitable muted palette to visually integrate the Project within the landscape where possible. Where possible, consider minimal use of reflective surfaces to avoid drawing attention to the site within views due to reflective glare. Limit the area of disturbance during construction where possible. Mitigation tree and shrub planting will be considered to visually integrate the Project within the surrounding landscape. All construction plant, equipment, waste and excess materials will be contained within the designated boundaries of the work site and will be removed from the site following the completion of construction Stockpiles will be stabilised to prevent erosion by wind and water and avoid the development of dust plumes adversely impacting air and visual quality On completion of the work disturbed areas will be stabilised and rehabilitated.
Strategy to meet the Visual and Lighting management requirements	<ul style="list-style-type: none"> Reduce all visual impacts addressing and completing all visual mitigation measures prior to, and during construction where possible Comply with all requirements within Development Consent conditions B16 and B17 Target zero complaints relating to visual or lighting aspects of the Project Document all complaints relating to visual and lighting aspects of the project and complaint response Develop mitigation measures to correct and prevent future complaints

8.10 Traffic Management

The key impacts associated with Traffic from the Decoupling Works are summarised in Table 21. The strategy for managing these impacts is provided in the Traffic Management Subplan (Annex F).

Table 21: Traffic Impact Summary

Traffic Impact Summary	
Risk assessment summary	Traffic generated by the Project includes transportation of personnel, plant, equipment and materials. As a worst-case scenario, it is assumed that all light vehicle movements would occur within one hour before shift start and one hour after shift end. The majority of heavy traffic movements would occur between 6:00am to 7:00pm. Over Size/Over Mass Vehicle deliveries are expected to occur during the decoupling works. Decoupling operations require negligible vehicle movements.

8.11 Socio-economic Management

A Socio-economic Management Strategy is provided as part of this strategy for the construction stage of the Project, outlined in **Table 22**.

Table 22. Socio-economic Management Summary

Socio-economic Management Summary	
Risk assessment summary	Potential socio-economic benefits and impacts of the Project would mainly be associated with direct and indirect employment opportunities, benefits for businesses that support construction activities, increased construction traffic, demand for workforce accommodation, and potential impacts on community values
Relevant legislation	<ul style="list-style-type: none"> ▪ <i>Protection of the Environment Operations Act 1997</i> ▪ <i>EP&A Act 1979 and EP&A Regulations 2000</i>
Mitigation measures for all project stages (EIS Reference) Those specific to decoupling works in bold.	<ul style="list-style-type: none"> ▪ AGLM will keep the community and stakeholders updated on the project via the existing community engagement forum and AGL website. ▪ Identify opportunities to maximise the use of local suppliers and businesses in the provision of goods and services ▪ Consultation with local tourist accommodation providers to identify peak tourist periods and consider timing of these periods in the planning of non time-critical construction activities.
Strategy to meet the Socio-economic management requirements	<ul style="list-style-type: none"> ▪ Reduce all socio-economic impacts by addressing and completing all socio-economic mitigation measures prior to, and during construction where possible ▪ Target zero complaints relating to socio-economic aspects of the Project ▪ Document all complaints relating to socio-economic aspects of the project and complaint response ▪ Develop mitigation measures to correct and prevent future complaints

8.12 Hazard and Bushfire Management

A Hazard Management Strategy is provided as part of this strategy for the construction stage of the Project, outlined in **Table 23**. All statutory requirements and mitigations measures are to be addressed in the strategy.

Table 23. Hazard Management Summary

Hazard Management Summary	
Risk assessment summary	<ul style="list-style-type: none"> ▪ Due to the existing separation between the Project and storage locations for hazardous chemicals, there is a low and manageable risk that the Project could interact with the storage ▪ The Project does not have any hazardous impact on the existing operation or contribute to the escalation of any event in a manner that could impact land inside the plant, through to off-site receptors.
Relevant legislation	<ul style="list-style-type: none"> ▪ <i>Protection of the Environment Operations Act 1997</i> ▪ <i>Rural Fires Act 1997</i> ▪ <i>EP&A Act 1979 and EP&A Regulations 2000</i>

Hazard Management Summary

<p>Development Consent requirements (Condition reference)</p>	<ul style="list-style-type: none"> ▪ State Environmental Planning Policy No 33 – Hazardous and Offensive Development <p>Fire Safety</p> <ul style="list-style-type: none"> ▪ Prior to commencing construction of the battery energy storage system, the Applicant must prepare a Fire Safety Study for the development, to the satisfaction of FRNSW and the Planning Secretary. The study must: <ul style="list-style-type: none"> ▪ (a) be consistent with the: <ul style="list-style-type: none"> - (i) Department’s Hazardous Industry Planning Advisory Paper No. 2 ‘Fire Safety Study’ guideline; - (ii) NSW Government’s Best Practice Guidelines for Contaminated Water Retention and Treatment Systems; and ▪ (b) describe the final design of the battery energy storage system and verify that the final design is consistent with all findings and recommendations in the Preliminary Hazard Analysis dated 25 March 2021. ▪ B3. The Applicant must implement the measures described in the Fire Safety Study approved by the Planning Secretary. <p>Storage and Handling of Dangerous Goods</p> <ul style="list-style-type: none"> ▪ B4. The Applicant must store and handle all chemicals, fuels and oils used on-site in accordance with: <ul style="list-style-type: none"> ▪ (a) the requirements of all relevant Australian Standards; and ▪ (b) the NSW EPA’s Storing and Handling of Liquids: Environmental Protection – Participants Handbook if the chemicals are liquids. ▪ In the event of an inconsistency between the requirements (a) and (b) above, the most stringent requirement shall prevail to the extent of the inconsistency. <p>Emergency Plan</p> <ul style="list-style-type: none"> ▪ B5. Prior to commissioning the battery energy storage system, the Applicant must prepare a comprehensive Emergency Plan and detailed emergency procedures for the battery energy storage system in consultation with FRNSW and the NSW RFS.
<p>Mitigation measures for all project stages (EIS Reference) Those specific to decoupling works in bold.</p>	<ul style="list-style-type: none"> ▪ During detailed design for the Project: <ul style="list-style-type: none"> - A detailed bushfire threat assessment will be conducted for the Project, including establishment of an APZ, in consultation with the RFS - The separation distance between infrastructure within the Battery will be determined in accordance with applicable Codes and Standards and manufacturer’s recommendations so that the preferred strategy of allowing a fire in one Battery enclosure or inverter to burn without the risk of propagating to other infrastructure can be maintained without the need for external firefighting - The separation distance within the Battery will be determined in accordance with applicable Codes and Standards and manufacturer’s recommendations to allow safe escape in case of a fire - The need for active firefighting requirements at the Battery will be determined in consultation with RFS and the DPE. Detailed fire fighting response and any need for fire water containment will be assessed and reported (e.g. in the format of a Fire Safety Study) post development approval, for review by DPE, Fire rescue NSW and the RFS - The health and safety associated with EMF on the site and the potential exposure to EMF will be considered for AGLM staff and contractors as part of AGLM’s obligations for their health and wellbeing under the Work Health and Safety Regulations - Measures to prevent a leak occurring from the brine pipeline, the emergency diesel generators and at the Battery, and for secondary containment should a leak occur, will be included as part of the detailed design of the Project. The likelihood of a significant loss of containment event associated with this Project (Level 4) will be designed to Rare in accordance with AGL’s Risk Management and Assessment Standard. The register of commitments (Appendix 1 of the PHA (Planager Pty Ltd, 2021)) will be integrated into the management for the Project. This includes integration of 84 individual commitments, including for the design, installation and maintenance of the Battery automatic shutdown system on exceedance of safe limits; installation of deflagration venting and fire protection inside the Battery enclosures; design of the brine pipeline, waste

Hazard Management Summary

	<p>oil facility, emergency diesel generators and the Battery such that the risk of pollution from a release is reduced to ALARP; installation of protective barriers, including at the transformers; and application of a rigorous and formal management of change process for the Project, including detailed hazard identification and risk assessment processes.</p> <ul style="list-style-type: none"> ▪ Design and selection of all electrical equipment is to minimise EMF levels and comply with ICNIRP reference levels ▪ Risks associated with the Project will be managed through a Management of Change process. AGLM implements an Asset Change Management Standard, and any major change (defined as a change that has major implications to the strength, stability, operation and design of the asset and/or health and safety of employees) must undergo a detailed risk assessment using the AGL Risk Management and Assessment Standard to assess the risks that may be introduced by the proposed change. This will be undertaken for all Project components and appropriate controls implemented to reduce the risk to an acceptable level. ▪ Storage and management of dangerous goods and hazardous materials (if required) will occur in a safe, secure location consistent with the requirements of applicable Australian Standards. ▪ The need to store or handle additional dangerous goods or hazardous substances will be subject to additional risk consideration prior to being undertaken. ▪ Refuelling will take place in a designated area within the works area, away from ignition sources and trees or vegetation and with appropriate controls to prevent any spills contacting the ground. ▪ Appropriately stocked emergency spill kits will be always available at all work areas. All staff will be made aware of the location of the spill kit and trained in its use. ▪ Temporary construction compounds will be maintained in a tidy and orderly manner to minimise potential fuel loads if any construction compounds are affected by fire. ▪ Construction activities involving flammable materials and ignition sources (for example, welding) will be proactively managed to ensure that the potential for fire is effectively minimised. High risk construction activities, such as welding and metal work, would be subject to a risk assessment on total fire ban days and restricted or ceased as appropriate. Construction personnel will be inducted into the requirement to safely dispose of cigarette butts. ▪ An emergency response plan for the Battery would be prepared for the Project and provided to the Local Emergency Management Committee.
<p>Strategy to meet the Hazard management requirements</p>	<ul style="list-style-type: none"> ▪ Comply with all conditions in Development Consent (B2 and 3) relating to fire safety, (B4) dangerous goods, and all Emergency Plan conditions (B5 and B6). ▪ Hazard management must comply with AGLM Bushfire Management Plan PSSI-HSE-40 ▪ Reduce all hazard impacts by addressing and completing all hazard mitigation measures prior to, and during construction where possible ▪ Target zero reportable incidents ▪ Document all reportable incidents ▪ Develop mitigation measures to correct and prevent future incidents

9. Monitoring

The environmental monitoring program has been developed to meet the requirements of the SSD 8889679. The monitoring program contains commitments outlined in the Construction Environment Management Plan, and all subplans associated with this strategy. When carrying out the monitoring identified within this section, the individual management plans should be referred to for further detail on the monitoring requirements.

Table 24 summarizes the monitoring obligations required for this project and references all relevant subplans and sections that contain the details of each monitoring program.

Table 24. Monitoring requirements

Aspect	Monitoring Obligation	Management Plan(s) reference
Aboriginal Cultural Heritage	The CHMP must describe the measures implemented on site to protect, monitor, and or/manage identified Aboriginal objects and Aboriginal places (<i>Per condition B22.d.(iii)</i>)	Aboriginal Cultural Heritage Management Plan

Appendix A. Legislative Summary

Legislation	Relevance to Project
<i>EP&A Act & EP&A Regulations</i>	Project is a State Significant Development (SSD) under the State Environmental Planning Policy (State and Regional development) 2011, requiring assessment in accordance with Division 4.7 of the EP&A Act due to the capital investment value exceeding \$30 million. Development Consent is required for this Project.
<i>Muswellbrook Local Environmental Plan 2009</i>	Project is partially located within the Muswellbrook Local Environmental Plan and is zoned SP2-Infrastructure: Power Station. The Project is considered compatible with the objectives of the SP2 zone, and Principal Development Standards, Heritage Conservation, Terrestrial Biodiversity and Earthworks requirements were all addressed in the EIS prepared for this project.
<i>Singleton Local Environmental Plan 2013</i>	Project is partially located within the Singleton Local Environmental Plan and is zoned RU1 - Primary Production; the Project is considered compatible with the objectives of the RU1 zone. Principal Development Standards, Heritage Conservation, Earthworks, Flood Planning, and Riparian land and water courses requirements were all addressed in the EIS prepared for this project.
<i>Stage Environmental Planning Policy 2011 (State and Regional Development)</i>	Applies to developments that are SSD; this project applies as the capital investment value is expected to be >\$30 million
<i>Surveying and Spatial Information Regulation 2017</i>	Required to remove or replace a permanent survey mark in accordance with Clause 90
<i>Mine Subsidence Compensation Act 1961</i>	Required for the erection or alteration of an improvement or subdivision of land within a mine subsidence district
<i>Crown Lands Management Act</i>	Lease, licence, permit, easement or right of way over a Crown Reserve
<i>Roads Act 1993</i>	Permit required
<i>State Environmental Planning Policy (Infrastructure) 2007</i>	The Project can be considered an expansion of an existing facility that may exceed vehicle generation thresholds to be a traffic generating facility. TfNSW has been consulted in the preparation of the SEARs for the Project and development of the EIS and the Traffic Impact Assessment
<i>State Environmental Planning Policy No 33 - Hazardous and Offensive Development</i>	The Project involves the expansion of existing operations on a site that is appropriately zoned and isolated from sensitive receptors. The Project does not involve the use of hazardous chemicals above screening levels that would trigger consideration as potentially hazardous development. The extensive buffer lands are owned by AGL and are appropriately zoned to prevent encroachment of development incompatible with the ongoing operations of Bayswater.
<i>State Environmental Planning Policy No 55 - Remediation of Land</i>	Site was determined to be suitable in its current state for the project
<i>State Environmental Planning Policy (Koala Habitat Protection) 2019</i>	The Biodiversity Development Assessment Report assessed the Project in relation to Koala habitat and concluded there is no evidence of Koala activity; no further assessment under the SEPP is required.
<i>Protection of the Environment Operations Act 1997 (POEO Act)</i>	Key legislation that governs the issues of waste generation, reuse, recycling, transport, and disposal and establish a waste hierarchy. The Act defines what is included in waste, and how it is classified. Bayswater operates under EPL 779 issued by the EPA. EPL 779 authorises the carrying out of scheduled activities of: Coal works (>5,000,000 tonnes per annum) Chemical storage waste generation (>100 Tonnes annual volume of waste generated or stored) and Generation of electrical power from coal (>4000 GWh annual generating capacity).
<i>Waste Avoidance and Resource Recovery Act 2001 (WARR Act)</i>	Key legislation that governs the issues of waste generation, reuse, recycling, transport, and disposal and establish a waste hierarchy
<i>Protection of the Environment Operations (Waste) Regulation 2014</i>	Outlines strict thresholds for obtaining an EPL and waste levy system. The supply of coal ash for beneficial reuse is regulated by the Coal Ash Order 2014 made under the POEO Waste Regulation.

AGL Liddell Environmental Management Strategy

Legislation	Relevance to Project
<i>Coal Ash Order 2014</i>	Regulates the supply of coal ash for the beneficial use under POEO Waste regulation
<i>Protection of the Environment Operations Amendment (Illegal Waste Disposal) Act 2013</i>	Amendment to the POEO Act to define and restrict illegal waste disposal activities
<i>Environmentally Hazardous Chemicals Act 1985</i>	Provides the EPA with the authority to declare chemical substances as chemical wastes and to make chemical control orders relating to those substances that are declared as chemical wastes.
<i>NSW Waste Avoidance and Resource Recovery Act 2001</i>	Outlines the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development. The WARR Act outlines the requirement for the EPA to develop a waste strategy for the State. Chapter 18 of the EIS assesses the waste management components of the Project in relation to this Act.
<i>NSW Waste Avoidance and Resource Recovery Strategy 2014-2021</i>	A significant part of the Project includes expanding facilities to recycle a greater proportion of fly ash and bottom ash. This directly meets the aims of the NSW government WARR strategy, and achievement of these aims would also assist AGL in prolonging the life of the BWAD.
<i>Coal Ash Order (2014) and Coal Ash Exemption (2014)</i>	Coal Ash generated by Bayswater and used off-site must comply with the conditions of the CAO. The proponent has an established sampling plan for the testing of fly ash and are in the process of approving their sampling plan for bottom ash with the NSW EPA.
<i>NWS EPA's Environmental Guidelines: Solid Waste Landfills (2016)</i>	The new Salt cake landfill facility will be designed, constructed, operated, and decommissioned in accordance with these guidelines.
<i>NSW Circular Economy Policy Statement 2019</i>	The proposed upgrade to the CHP aims to improve the quality of discharges from the site to the environment. Increasing the quantity of fly ash and bottom ash to be recycled will directly meet principles 1 and 2 of the Circular Economy Policy.
<i>Contaminated Land Management Act 1997</i>	The contamination status of the site is suitable in its current state for the Project. There is a duty to notify any contamination under Section 60 of the CLM Act and this would be undertaken in the event that any previously unidentified contamination is encountered that exceeds notification thresholds.
<i>Dams Safety Act 2015</i>	The BWAD is currently prescribed under the NSW Dam Safety Act 2015 (DS Act) and as a result has several conditions applied to it to ensure the safety of the structure and to minimise risk to the downstream population. The DS Act is administered through the Dams Safety NSW (DSNSW).
<i>Heritage Act 1977</i>	There are no known relics located within the study area. The impact assessment completed for the EIS provides details of the heritage items in the vicinity of the Project and the required mitigation measures to avoid any significant impacts.
<i>Biodiversity Conservation Act 2016</i>	The Biodiversity Development Assessment Report assesses the Project in relation to biodiversity and includes measures to avoid, mitigate and offset impacts to biodiversity in accordance with the BC Act and Biodiversity Assessment Method.
<i>Native Title Act 1993</i>	Searches of the register maintained by the National Native Title Tribunal indicate there are no native title claims registered with respect to the land within the project footprint. Notification requirements under section 24KA of the Native Title Act 1993 apply where construction work is required on Crown land. Notification in accordance with this section will occur concurrently with the public exhibition of the EIS.
<i>Crown Land Management Act 2016</i>	The Crown Land Management Act 2016 provides for the ownership, use and management of Crown land in NSW. Ministerial approval is required to grant a 'lease, licence, permit, easement or right of way over a Crown Reserve'. The Project area intersects with one area of Crown land.
<i>Mine Subsidence Compensation Act 1961 (Repealed)</i>	Part of Borrow Pit 1 and sections of the Ravensworth Ash pipeline within the Singleton LGA are within a mine subsidence district.

Legislation	Relevance to Project
	Subsidence Advisory NSW would be consulted during the assessment process and the Project would need to be designed to be structurally safe if mine subsidence is possible in the specific Project area.
<i>Pipelines Act 1967</i>	The Ravensworth ash pipeline is exempt under the Pipelines Act.
<i>Rural Fires Act 1997</i>	The Project would be located partially on Bush Fire Prone Land (BFPL). Consideration of possible bush fire risks is provided in Chapter 19 of the EIS.
<i>Roads Act 1993</i>	The Project requires works within road reserve areas associated with the Ravensworth ash pipeline. A Roads Act approval cannot be refused if it is necessary for carrying out SSD that is authorised and is to be substantially consistent with the consent.
<i>Water Act 1912 and Water Management Act 2000</i>	<p>The construction and operation of the Project would not alter AGL's overall water requirements with all necessary water to be drawn from within existing entitlements. AGL currently holds a number of water access licences (WAL) associated with the ongoing operation of Bayswater. As no groundwater would be abstracted during construction of the Project and harvesting of surface water is covered by existing entitlements, a new WAL or modification to existing WAL/s would not be required.</p> <p>While the Project involves works within waterfront land, a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the WM Act are not required for SSD. The design of the Borrow Pits would be developed to avoid aquifer interference.</p>
<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>	<p>Primary Commonwealth legislation relating to the environment. The EPBC Act Protected Matters Search Tool indicate that MNES within the area of influence of the Project are limited to biodiversity and has been included in the Biodiversity Development Assessment Report (BDAR) in the EIS.</p> <p>A referral was submitted under the EPBC Act and on 20 April 2020 and a delegate of the Commonwealth Minister for the Environment determined that the Project is a controlled action under the EPBC Act with the controlling provisions being listed threatened species and communities under sections 18 and 18A. The Project will be assessed under the Bilateral Agreement (Amending Agreement No.1, 2020) between the Commonwealth and NSW Governments.</p> <p>The assessment requirements for the Commonwealth MNES relevant to the Project were provided on 28 April 2020. These requirements have been addressed within this EIS</p>
<i>Environment Protection and Biodiversity Conservation Regulation</i>	The Addendum SEARs issued for the Project require that the EIS must address the matters outlined in Schedule 4 of the EPBC Regulations in relation to the controlling provisions and is summarised in Chapter 3.20 of the EIS.

Appendix B. Example Compliance Register

Category	Development Consent Condition	Activity trigger / timing	Compliance Requirement	Responsible person
General	A5(a)-(k)	No later than 12 months from date of commencement of development	Surrender development consents: <ul style="list-style-type: none"> ▪ 8/2016 (MSC) ▪ 74/2018 (MSC) ▪ 8.2018.273.1 (SC) ▪ 8.2018.23.1 (SC) ▪ 8.2018.23.2 ▪ 54_86 (MSC) ▪ 29_98 (SC) ▪ 114_2016 (MSC) ▪ 223_2004 ▪ 401_2000 (SC) ▪ 460_2001 (SC) 	AGLM Manager Environment
General	A8 (a)-(f)	Two weeks prior to development	Notify the department in writing prior to: <ul style="list-style-type: none"> ▪ Physical commencement of the development ▪ Pre-construction activities ▪ Construction of the battery energy storage system ▪ Construction of the decoupling works ▪ Construction of the Bayswater ancillary works; and ▪ Decommissioning 	AGLM Manager Environment
Hazards	B2	Prior to construction commencement	Fire Safety Study must be prepared and approved by FRNSW and the Planning Secretary	AGLM Manager Environment
Hazards	B4	Life of development	Chemicals, fuels, and oils used onsite but be stored in accordance with all Australian Standards and NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook (if liquid)	Contractor
Biodiversity	B7	Life of development	No vegetation clearance outside of disturbance area outlined in EIS	Contractor

AGL Liddell Environmental Management Strategy

Category	Development Consent Condition	Activity trigger / timing	Compliance Requirement	Responsible person
Biodiversity	B8	Prior to commencement of native vegetation clearance	A Biodiversity Management Plan must be prepared in consultation with the BCS, and approved by the Planning Secretary	AGLM Manager Environment
Biodiversity	B10	Prior to vegetation clearance	Biodiversity offset credits must be retired (for Offset Stages 1,2,3)	AGLM Manager Environment
Air Quality	B15 (a)	Life of development	No offensive odour or dust emissions to be emitted beyond boundary of site – to be included in site inspection checklist	AGLM Manager Environment
Air Quality	B15 (c)	Planning & Construction	Dust generating surfaces must be minimised to greatest extent practicable	Contractor
Aboriginal Heritage	B22	Prior to construction commencement	Aboriginal Cultural Heritage Management Plan must be approved by the Planning Secretary, and be prepared in consultation with RAPs and Heritage NSW	AGLM Manager Environment
Water	B25	Life of development	Surface discharges must comply with volume and quality limits set in EPL	Contractor
Waste	B27 (b)	Life of development	All waste must be classified in accordance with the Waste Classification Guidelines (EPA, 2014); a record of waste and classification should be kept onsite for audit purposes	Contractor
Waste	B27 (c)	Life of development	Disposal of waste may only occur at appropriately licensed waste facilities; waste receipts to be kept onsite for audit purposes	Contractor
General	C1(a) – (e)	Prior to construction commencement	An Environmental Management Strategy must be prepared and approved by the Planning Secretary and include the following subplans: <ul style="list-style-type: none"> • Soil, stormwater, water quality, flood and spoil management • Noise • Air Quality • Contamination • Waste • Traffic 	AGLM Manager Environment
Incidents	C4	Immediately after an incident	Planning Secretary must be notified of an incident via the Major Projects website immediately after AGLM/the Contractor become aware of the incident	AGLM Manager Environment & Contractor

AGL Liddell Environmental Management Strategy

Category	Development Consent Condition	Activity trigger / timing	Compliance Requirement	Responsible person
Compliance	C5	Within seven days of AGLM/the Contractor becoming aware of a non-compliance	Planning Secretary must be notified of the incident via the Major Projects website	AGLM Manager Environment & Contractor
Compliance	C8 and C9	As per Compliance Reporting Post Approval Requirements (2020): <ul style="list-style-type: none"> ▪ No greater than every 52 weeks (one year) from commencement of operation ▪ Within 12 weeks of decommissioning 	Compliance reports to be submitted to the Planning Secretary	AGLM Manager Environment
Audit	C13	Within 12 weeks of commencement of construction	Initial independent audit to be conducted	AGLM Manager Environment
Audit	C13	Within 26 weeks of commencement of operation	Initial independent audit to be conducted	AGLM Manager Environment
Audit	C13	Within 52 weeks from notification of ceasing operations	Initial independent audit to be conducted	AGLM Manager Environment
Audit	D16	Within two months of undertaking an independent audit site inspection	Independent Audit Reports and AGLM's response must be submitted to the Planning Secretary	AGLM Manager Environment

