

Liddell Power Station Battery Energy Storage System

Environmental Management Strategy

16-Jun-2023

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Environmental Management Strategy

Client: AGL Macquarie Pty Ltd

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Quality Information

Document Liddell Power Station Battery Energy Storage System
 Ref 60698503
 Date 16-Jun-2023
 Originator J. Hugo
 Checker/s N. Standen
 Verifier/s S. Walton

Revision History


Rev	Revision Date	Details	Approved	
			Name/Position	Signature
0	2-Mar-2023	Draft for client review	Neil Standen Project Manager	
1	17-Mar-2023	Second draft for client review	Neil Standen Project Manager	
2	05-May-2023	Final draft for DPE review	Neil Standen Project Manager	
3	16-Jun-2023	Final	Neil Standen Project Manager	

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Glossary of terms and abbreviations

Abbreviation	Definition
ACHMP	Aboriginal Cultural Heritage Management Plan
AECOM	AECOM Australia Pty Ltd
AGL	AGL Energy Limited
AGLM	AGL Macquarie Pty Ltd as the proponent of the Project
APZ	Asset Protection Zone
BAM	Biodiversity Assessment Method
Bayswater	Bayswater power station
BCS	Biodiversity, Conservation and Science division of the Environment and Heritage Group of the NSW Department of Planning and Environment
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
BESS Project (the)	Stage 2 of the Liddell Battery and Bayswater Ancillary Works Project consisting of the construction of a BESS with the storage capacity to facilitate a maximum discharge of up to 500 MW for a four-hour period, or up to 2 GWh
BMP	Biodiversity Management Plan
CEMP	Construction Environmental Management Plan
CIV	Capital Investment Value
CMS Act	<i>Coal Mine Subsidence Compensation Act 2017 (NSW)</i>
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2021 (NSW)
EPA	NSW Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
EPBC Regulation	Environment Protection and Biodiversity Conservation Regulation 2000 (Commonwealth)
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ERA	Environmental Risk Assessment
FRNSW	Fire and Rescue New South Wales
GWh	Gigawatt hours
HSE	Health, Safety and Environment
LALC	Local Aboriginal Land Council
LBBAWP	Liddell Battery and Bayswater Ancillary Works Project, consisting of a battery energy storage system at Liddell, decoupling works, and works associated with the ongoing operation of Bayswater

Abbreviation	Definition
LEP	Local Environmental Plan
LGA	Local Government Area
Liddell	Liddell power station
MW	Megawatt
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 artefacts
PCT	Plant Community Type
PIRMP	Pollution Incident Response Management Plan
POEO Act	<i>Protection of the Environment Operations Act 1997 (NSW)</i>
RAP	Reconciliation Action Plan
RFS	NSW Rural Fire Service
Roads Act	<i>Roads Act 1993 (NSW)</i>
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the NSW Department of Planning and Environment
SEPP	State Environmental Planning Policy
SSD	State Significant Development
TEC	Threatened Ecological Community
TfNSW	Transport for New South Wales
TISEPP	<i>State Environmental Planning Policy (Transport and Infrastructure) 2021 (NSW)</i>

1.0 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by AGL Macquarie Pty Ltd (AGLM) to prepare an Environmental Management Strategy (EMS) for a Battery Energy Storage System (BESS) to be constructed as part of the Liddell Battery and Bayswater Ancillary Works Project (LBBAWP).

The LBBAWP is a State Significant Development (SSD) under the *State Environmental Planning Policy (State and Regional Development) 2011*¹, and is subject to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

An Environmental Impact Statement (EIS) was prepared in March 2021 in accordance with the Secretary's Environmental Assessment Requirements (SEARs). Development consent (SSD-8889679) was issued by the Department of Planning and Environment (DPE) on 8 March 2022.

1.1 Background

AGLM own and operate the Bayswater power station (Bayswater) which is approved to generate up to 2,640 megawatts (MW) and the 1,500 MW Liddell power station (Liddell), as well as associated ancillary infrastructure systems. Together, Bayswater and Liddell operate to produce around 21,000 gigawatt hours (GWh) annually, or approximately 30 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 will 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.

AGLM is progressing with plans to facilitate the efficient, safe and reliable continuation of electricity-generating works from the Bayswater and Liddell power sites. The LBBAWP will be carried out in the following stages:

- Stage 1 - Decoupling Works: Alternative network connection arrangements for the Liddell 33 kilovolt (kV) switching station that provides electricity to the infrastructure required for the ongoing operation of Bayswater power station, to associated ancillary infrastructure and to potential third-party industrial energy users
- Stage 2 - BESS: Replacement of a portion of Liddell's dispatchable electricity supply is required for the National Energy Market (NEM), including construction of a grid-connected utility-scale BESS with a capacity of up to 500 megawatts (MW) and 2 gigawatt hours (GWh)
- Stage 3 - Bayswater Ancillary Works (BAW): Works associated with Bayswater power station which may include upgrades to ancillary infrastructure, such as pumps, pipelines, conveyor systems, roads and assets, to enable maintenance, repairs, replacement or expansion
- Consolidated consents: Surrender and consolidation of various existing development approvals required for the ongoing operation of AGLM assets.

An overview of AGLM landholdings and the LBBAWP is provided in Figure 1. This EMS has been developed for Stage 2 only (i.e. the BESS), which is hereafter referred to as the 'BESS Project'.

¹ Now *State Environmental Planning Policy (Planning Systems) 2021*

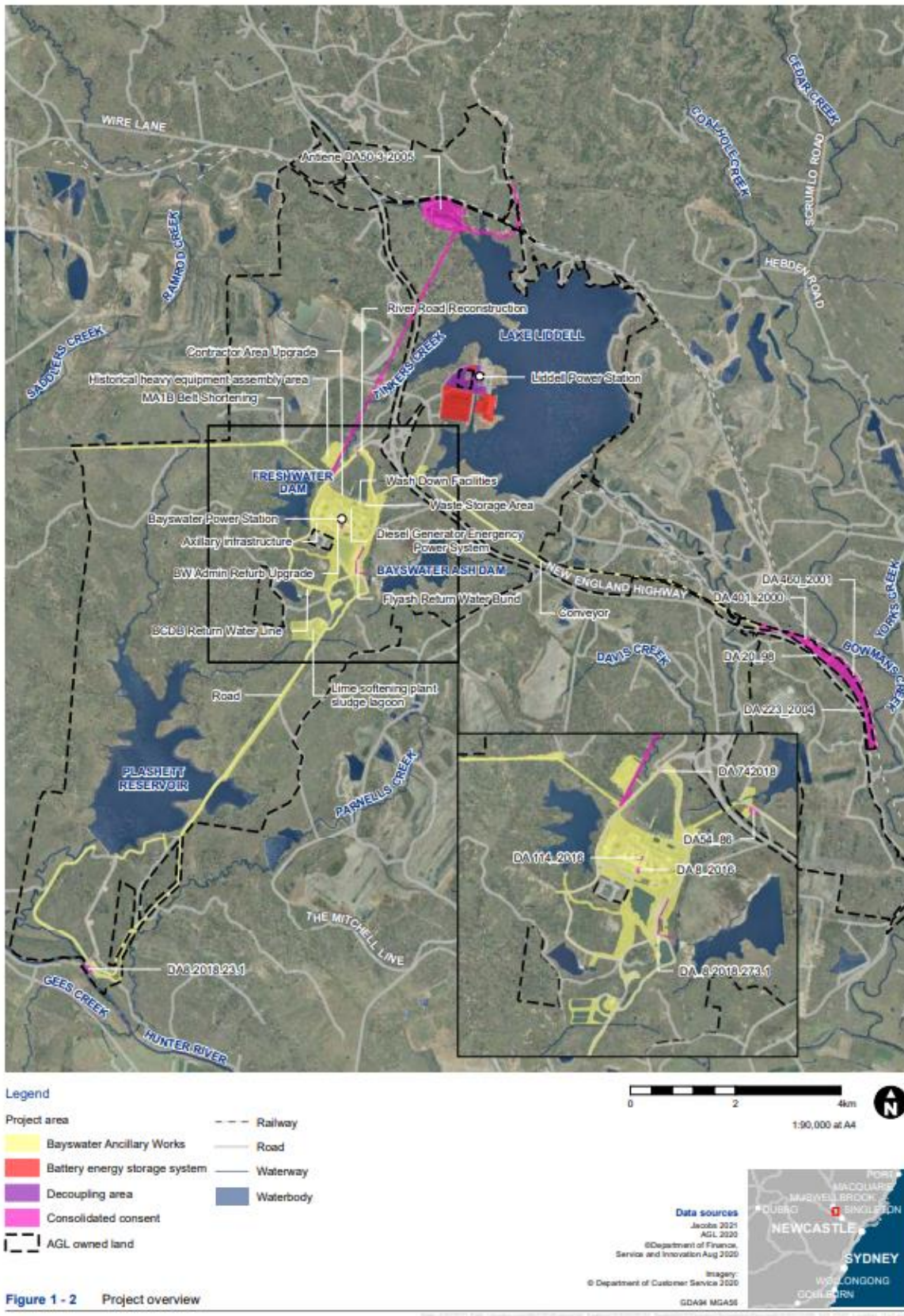


Figure 1 AGLM landholding and LBBAWP overview (source: Jacobs 2021)

1.2 Scope

A request to stage the preparation of the management plans required by the development consent was made by AGLM on 12 October 2022, in accordance with Condition A7 of development consent SSD-8889679. DPE approved this staging request on 18 October 2022, allowing for the following staged approach:

- Stage 1 – Liddell decoupling works (EMS approved on 31 August 2022)
- Stage 2 – Liddell BESS and associated works (this EMS)
- Stage 3 – Bayswater Ancillary Works and consolidated consents (future stage).

This EMS applies to activities carried out during Stage 2. It incorporates all relevant requirements of the development consent, licences, permits and approvals required for the BESS Project.

1.3 Purpose

The EMS has been prepared to provide a strategic framework for the environmental management of the BESS component of the LBBAWP (SSD-8889679). The EMS describes how the BESS 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 identifies key personnel roles and responsibilities, and procedures for project communications and complaints handling.

The EMS is supported by a series of subplans which address key environmental aspects. Implementation of the EMS and associated subplans will ensure the BESS Project minimises potential environmental impacts and complies with the development consent and the conditions of that consent. The EMS will provide contractors and subcontractors of the BESS Project the guidance needed to mitigate environmental risks and meet or exceed environmental obligations.

1.4 Relevant approvals and conditions

1.4.1 Project approvals and licences

Liddell power station was commissioned in 1971 and forms part of AGLM's integrated power generation complex. This complex also incorporates Bayswater power station (commissioned in 1985) and a range of supporting water management, coal supply, power supply and control system infrastructure.

Bayswater and Liddell power stations are regulated under several planning approvals. Most development at the site pre-dates current planning requirements enforced through the EP&A Act, however, alterations and additions following 1 September 1980 were subject to the provisions of the Act.

Development consent (SSD-8889679) was granted for the LBBAWP on 8 March 2022, which includes the voluntary surrender and consolidation of various existing development approvals into SSD-8889679.

In accordance with Section 55 of the *Protection of the Environment Operations Act 1997* (POEO Act), Liddell and Bayswater power stations are operated under Environment Protection Licence (EPL) 2122 and EPL 779, respectively.

1.4.2 Development consent conditions

This EMS has been prepared in accordance with condition C1 of Development Consent SSD-8889679, providing a strategic framework for environmental management of the BESS Project. A range of subplans have also been developed to address specific requirements of condition C1 and the subplans are appended to this EMS. The requirements of condition C1 and where these have been addressed within this EMS are outlined in Table 1. All other relevant conditions which have not been captured under another management plan are outlined in Table 2.

Table 1 Relevant conditions of the Development Consent

Consent requirement	Section / reference
C1. Prior to commencing construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:	This document
(a) provide the strategic framework for environmental management of the development;	Section 4.0
(b) identify the statutory approvals that apply to the development;	Section 3.0
(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Section 4.3
(d) describe the procedures that would be implemented to:	
(i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;	Section 5.2
(ii) receive, handle, respond to, and record complaints;	Section 5.3
(iii) resolve any disputes that may arise;	Section 5.3
(iv) respond to any non-compliance;	Section 9.0
(v) respond to emergencies; and	Section 4.5
(e) include:	
(i) the following subplans:	
• soil, stormwater, water quality, flood and spoil management;	Appendix C
• construction and decommissioning noise, including an out-of-hours works protocol;	Appendix D
• air quality management;	Appendix E
• contamination, including an unexpected finds protocol	Appendix F
• waste management; and	Appendix G
• traffic.	Appendix H
(ii) references to any strategies, plans and programs approved under the conditions of this approval; and	Section 6.0
(iii) a clear plan depicting monitoring to be carried out under the conditions of this approval.	Section 7.0

Table 2 Other relevant conditions of the Development Consent (not addressed in another management plan)

Category	Condition	Compliance requirement	Section / reference
Notification of commencement			
N/A	A8	At least two weeks prior to the commencement of the following activities, the Applicant must notify the Department in writing of the date of: <ul style="list-style-type: none"> (a) physical commencement of the development; (b) pre-construction activities; (c) construction of the battery energy storage system; (d) construction of the decoupling works; (e) construction of the Bayswater ancillary works; and (f) decommissioning. 	Section 7.0
Demolition			
N/A	A10	The Applicant must ensure that all demolition work on site is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.	Section 7.0
Batteries			
Battery Storage Restriction	B1	The battery energy storage system or systems associated with the development must not exceed a total delivery capacity of 500 MW or a storage capacity of 2 GWh	Section 7.0
Hazards			
Fire Safety Study	B2	No later than 3 months prior to battery units arriving at the battery energy storage system site, the Applicant must prepare a Fire Safety Study for the development, to the satisfaction of FRNSW and the Planning Secretary unless otherwise agreed by 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 <i>[Request to amend this condition was approved by DPE on 30 January 2023]</i>	A Fire Safety Study will be prepared to address these conditions, separate to this EMS
	B3	The Applicant must implement the measures described in the Fire Safety Study approved by the Planning Secretary.	
Emergency Plan	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. <ul style="list-style-type: none"> (a) be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning' and RFS's Planning for Bushfire Protection 2019 (or equivalent); 	An Emergency plan will be prepared to address these conditions,

Category	Condition	Compliance requirement	Section / reference
		<ul style="list-style-type: none"> (b) identify the fire risks and hazards and detailed measures for the development to prevent or mitigate fires igniting; (c) include procedures that would be implemented if there is a fire on-site or in the vicinity of the site; (d) list works that should not be carried out during a total fire ban; (e) include availability of fire suppression equipment, access, and water; (f) include procedures for the storage and maintenance of any flammable materials; (g) notification of the local RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation proposed to be carried out during a bushfire danger period to ensure whether conditions are appropriate (h) detail access provisions for emergency vehicles and contact details for both a primary and alternative site contact who may be reached 24/7 in the event of an emergency; (i) include location of hazards (physical, chemical, and electrical) that may impact on firefighting operations and procedures to manage identified hazards during firefighting operations; (j) include details of the location, management, and maintenance of the Asset Protection Zone and who is responsible for the maintenance and management of the Asset Protection Zone; (k) include bushfire emergency management planning; and (l) include details of the how RFS would be notified, and procedures that would be implemented, in the event that: <ul style="list-style-type: none"> (i) there is a fire on-site or in the vicinity of the site; (ii) there are any activities on site that would have the potential to ignite surrounding vegetation; or (iii) there are any proposed activities to be carried out during a bushfire danger period; and (m) include details on how the battery storage facility and sub-systems can be safely isolated in an emergency. 	separate to this EMS
	B6	The Applicant must implement the Emergency Plan for the duration of the development, provide a copy of the plan to the local Fire Control Centre and keep two copies of the plan on- site in a prominent position adjacent to the site entry point at all times	
Biodiversity			
Biodiversity offsets	B10	The Applicant must retire the biodiversity credits for Offset Stages 1, 2 and 3 as specified in Table 1 below, 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.	Offsets are considered unlikely for the BESS project
	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	
Amenity			
Visual	B16	The Applicant must: <ul style="list-style-type: none"> (a) minimise the off-site visual impacts of the development; 	Section 7.0

Category	Condition	Compliance requirement	Section / reference
		(b) ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and (c) not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.	
Lighting	B17	The Applicant must: (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. 	Section 7.0
Environmental Management Strategy			
Revision of Strategies, Plans and Programs	C3	Within 3 months, unless the Planning Secretary agrees otherwise, of: (a) the submission of an incident report under condition C4 below; (b) the submission of an audit report under condition C13 below; and (c) the approval of any modification to the conditions of this consent; or (d) a direction of the Secretary under condition A3 of Schedule 2; the Applicant must review and, if necessary, revise the studies, strategies or plans required under the conditions of consent to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Secretary for approval, unless otherwise agreed with the Secretary.	Section 10.0
Compliance			
Incident Notification, Reporting and Response	C4	The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 4.	Section 4.5
Non-Compliance Notification	C5	The Planning Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance.	Section 9.1
	C6	A non-compliance notification must identify the development and the application number for it, set out the condition of approval that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	Section 9.1
	C7	A non-compliance which has been notified as an incident does not need to also be notified as a noncompliance	Section 9.1
Compliance Reporting	C8	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)	Section 9.2

Category	Condition	Compliance requirement	Section / reference
	C9	Compliance Reports must be submitted to the Department in accordance with the timeframes set out in the Compliance Reporting Post Approval Requirements (2020), unless otherwise agreed to by the Planning Secretary.	Section 9.2
	C10	The Applicant must make each Compliance Report publicly available within 60 days of submitting it to the Planning Secretary, unless otherwise agreed by the Planning Secretary.	Section 9.2
Notifications			
Notification of Department	C12	Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.	Section 7.0
Independent environmental audit			
N/A	C13	Independent Audits of the development must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020, or its latest version).	Section 8.3
	C14	Proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit.	Section 8.3
	C15	The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in the Compliance Reporting Post Approval Requirements (2020, or its latest version), upon giving at least 4 weeks' notice (or timing) to the Applicant of the date upon which the audit must be commenced.	Section 8.3
	C16	In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020, or its latest version), the Applicant must: <ul style="list-style-type: none"> (a) review and respond to each Independent Audit Report prepared under condition C13 of this approval, or condition C15 where notice is given by the Planning Secretary; (b) submit the response to the Planning Secretary; and (c) make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Planning Secretary, unless otherwise agreed by the Planning Secretary 	Section 8.3
	C17	Independent Audit Reports and the Applicant's response to audit findings must be submitted to the Planning Secretary within 2 months of undertaking the independent audit site inspection, as outlined in the Independent Audit Post Approvals Requirements (2020) unless otherwise agreed by the Planning Secretary.	Section 8.3

2.0 Project description

2.1 Stage 2 project overview

Stage 2 of the LBBAWP involves construction, operation and decommissioning of a BESS with the storage capacity to facilitate a maximum discharge of up to 500 MW for a four-hour period, or up to 2 GWh. The BESS will be located within 'Area 2' the existing solar array area and will be connected to the existing TransGrid 330kV substation via a new 330kV high-voltage power line (refer to Figure 2).

The BESS project will involve the demolition of the existing solar array area. The disturbance area for the BESS, is expected to be around eight hectares (ha). The BESS will be mounted on slab footings and will be containerised or otherwise enclosed in a formalised layout.

The approximate component requirements to achieve the maximum storage capacity for the BESS (based on indicative information provided by potential technology providers) are as follows:

- Approximately 900 pre-assembled battery enclosures containing lithium-ion type batteries, internal cooling and fire suppression systems
- Approximately 148 medium voltage skid (inverter and transformers)
- Approximately 148 off 630 Volt (V) to 33 kV step-up transformers
- One control room, two electrical rooms, one social facility room and four storage rooms
- 33 kV reticulation system and collector switchrooms
- Overhead, underground, or a combination of both, subject to detailed design, 330 kV line to connect to TransGrid 330 kV substation
- Two 33 kV / 33kV / 330 kV three-winding transformers and 330 kV connection equipment
- Ancillary infrastructure, including water tanks for bushfire protection purposes, lightning protection, security fencing and closed-circuit television (CCTV).

An indicative layout of the BESS is shown on Figure 3.

2.2 Site description and access

The Project is situated on AGLM landholdings within the Muswellbrook Local Government Area (LGA), located approximately 15 kilometres (km) southeast of Muswellbrook, 25 km northwest of Singleton, and approximately 165 km northwest of Sydney in NSW. The total area of the AGLM landholding is approximately 10,000 ha, including Bayswater and Liddell power station operational areas, the Ravensworth rehabilitation area, Lake Liddell and surrounding buffer lands.

The Project will be located in close proximity to Liddell and is targeting the use of previously disturbed operational lands no longer required for Liddell operations. Specifically, the BESS Project will be carried out at the location of the redundant solar array area, shown as 'Area 2' in Figure 2. This solar array has previously been damaged and is non-operational.

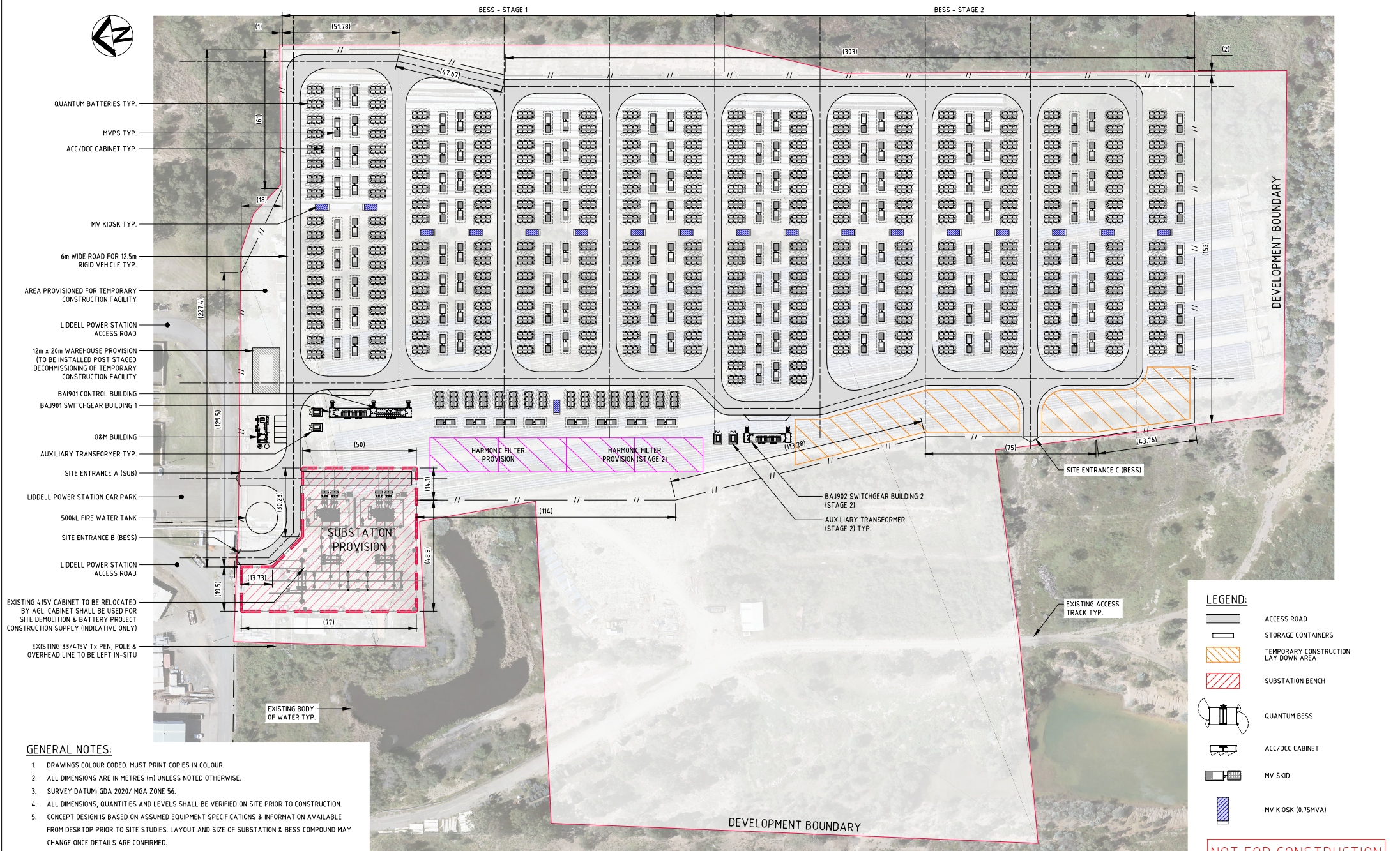
Operations at Liddell are separated from surrounding land uses by AGLM's extensive landholdings. Surrounding land uses are dominated by mining activities, including Ravensworth, Mount Arthur, Hunter Valley Operations, Liddell and Maxwell collieries in the vicinity of Liddell.

There are limited sensitive receivers or social infrastructure in the vicinity of the BESS Project. The closest social infrastructure and sensitive receiver is the Lake Liddell Recreation Area, approximately 2 km north east of the BESS Project. The nearest residential receiver is located near the Lake Liddell Recreation Area, approximately 3.5 km north east of the BESS Project.

The New England Highway passes between Bayswater and Liddell, with access provided from the highway via grade separated interchanges with long entry and exit lanes, allowing for less mobile heavy haulage. Liddell also has an internal road network, accessed via security gates and parking available for workers. The Main North railway line runs on the eastern side of Lake Liddell.



Figure 2 Overview of Stage 1 and 2 of the LBBAWP (source: Jacobs 2021)



LEGEND:

- ACCESS ROAD
- STORAGE CONTAINERS
- TEMPORARY CONSTRUCTION LAY DOWN AREA
- SUBSTATION BENCH
- QUANTUM BESS
- ACC/DCC CABINET
- MV SKID
- MV KIOSK (0.75MVA)

NOT FOR CONSTRUCTION
17.02.2023 11:40 AM

- GENERAL NOTES:**
1. DRAWINGS COLOUR CODED. MUST PRINT COPIES IN COLOUR.
 2. ALL DIMENSIONS ARE IN METRES (m) UNLESS NOTED OTHERWISE.
 3. SURVEY DATUM: GDA 2020/ MGA ZONE 56.
 4. ALL DIMENSIONS, QUANTITIES AND LEVELS SHALL BE VERIFIED ON SITE PRIOR TO CONSTRUCTION.
 5. CONCEPT DESIGN IS BASED ON ASSUMED EQUIPMENT SPECIFICATIONS & INFORMATION AVAILABLE FROM DESKTOP PRIOR TO SITE STUDIES. LAYOUT AND SIZE OF SUBSTATION & BESS COMPOUND MAY CHANGE ONCE DETAILS ARE CONFIRMED.

ITEM	STAGE 1 (250MW/500MWh)	STAGE 2 (250MW/500MWh)	TOTAL (500MW/1000MWh)
AUX TRANSFORMER	2	2	4
MV KIOSK	8	8	16
MV SKID (INVERTER + TRANS.)	74	74	148
GRIDSOLY QUANTUM	444	444	888
ACCDC CABINET	148	148	296

SITE PLAN
SCALE 1:500

REV	DATE	REVISION DESCRIPTION	DES	RVD	APP	AUTH	CLIENT
0.2	17.02.2023	EQUIPMENT & LAYOUT REVISED	L.M.	K.M.	J.L.	A.M.	
0.1	10.02.2023	ISSUED FOR INFORMATION	L.M.	K.M.	J.L.	A.M.	



ENERVEN PROJECT No: 699

ENERVEN™

NAME	DATE
DESIGNED L. MUNIZ	10.02.2023
REVIEWED K. MACKAY	10.02.2023
APPROVED J. LOMBARD	10.02.2023
AUTHORISED A. MALCOLM	10.02.2023

LIDDELL BESS
CONCEPT SITE LAYOUT
SITE PLAN - SATELLITE OVERVIEW

SIZE	DRAWING NUMBER	REVISION
A1	699.EEI.GN.DWG.003	0.2

Figure 3 Preliminary site layout (indicative only)

2.3 Construction activities

Construction activities associated with the BESS Project 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 infrastructure as required, including the existing solar array area
- Establishment of a hardstand pad and construction laydown areas
- Cut and fill to battery compound, transformer compounds, footings and construction laydown area
- Trenching of 33kV reticulation system
- Trenching and/or overhead line installation to TransGrid 330 kV substation
- Structural works to support enclosures, inverters, transformers, buildings and transformer compounds
- Delivery, installation and electrical fit-out
- Testing and commissioning activities
- Removal of construction equipment and reinstatement of construction areas.

3.0 Legislation and guidelines

This section identifies the environmental legislative requirements relevant to Stage 2 of the LBBAWP. It lists legislation applicable to the Site as well as relevant permits or licences held or required to be held.

3.1 EP&A Act and Regulation

The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) provide the framework for environmental planning in NSW. They provide for the establishment of Environmental Planning Instruments (EPIs) including Local Environmental Plans (LEPs) and State Environmental Planning Policies (SEPPs), which set out specific environmental planning requirements for local government areas (LGAs) and the State (either generally or in certain areas), respectively. The applicable EPIs and the EP&A Regulations determine the relevant planning approval pathway and the associated environmental assessment requirements for a proposed development.

3.1.1 Environmental Planning Instruments

The LBBAWP is located within the Muswellbrook and Singleton LGAs. The BESS Project is located solely within Muswellbrook LGA and as such is within the application area of the *Muswellbrook Local Environmental Plan 2009* (Muswellbrook LEP). The BESS Project is located on land zoned as SP2 Infrastructure (Power Station). Under Section 2.36 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TISEPP) (formerly Section 34 of the Infrastructure SEPP), development for the purpose of 'electricity generating works' is permitted with consent on any land in a prescribed non-residential zone which includes SP2 Infrastructure. On this basis, the LBBAWP is permissible with consent through the application of the TISEPP.

Under the Muswellbrook LEP, the development types permitted within the SP2 Infrastructure land zone includes aquaculture, roads, and the purpose shown on the Land Zoning Map of the LEP (i.e. Power Station) including any development that is ordinarily incidental or ancillary to development for that purpose. The LBBAWP meets the definition of Power Station, being a development ancillary to that purpose and as such is permissible with consent under the Muswellbrook LEP.

The *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) provides for the identification of development that is State significant or regionally significant, and in the case of some infrastructure – critically State significant. Schedules 1 to 6 of the Planning Systems SEPP outline triggers for development to be considered State or regionally significant. Section 20 of Schedule 1 provides that development for the purpose of electricity generating works that has a capital investment value (CIV) of more than \$30 million is State significant development (SSD). The LBBAWP has a CIV greater than \$30 million and accordingly qualifies as SSD.

3.1.2 Development consent

Development consent for the LBBAWP was granted by the Minister for Planning on 8 March 2022 under Part 4, Section 4.38 of the EP&A Act, subject to conditions. As outlined in Condition C1 of development consent SSD-8889679 (refer to Section 1.4.2), AGLM is required to prepare an Environmental Management Strategy prior to the commencement of construction.

The development consent conditions, environmental impact statement, and other plans required under the conditions of the development consent, act as the guiding documents for the development of this EMS and for environmental planning compliance at the Site.

3.2 Protection of the Environment Operations Act 1997

The POEO Act is the principal legislation established to protect, restore, and enhance the quality of the environment in NSW and reduce potential risks associated with pollution with regards to human health and degradation of the environment. The POEO Act also establishes an environment protection licencing system for certain activities that are generally large-scale, industrial development, referred to as 'scheduled activities'. Scheduled activities are those defined in Schedule 1 of the POEO Act.

Liddell is operated under EPL 2122, which specifies the environmental performance requirements for operations, including emission limits of certain pollutants. The BESS Project does not constitute a scheduled activity and is therefore not subject to the requirements of the EPL.

3.3 Other legislation and guidelines

The BESS Project will be conducted in a manner consistent with the legislative requirements and guidance set out in the documents below:

- *Biodiversity Conservation Act 2016* (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Commonwealth)
- *Heritage Act 1977* (Heritage Act)
- *National Parks and Wildlife Act 1974* (NPW Act)
- *Protection of the Environment Operations (General) Regulation 2021*
- *Protection of the Environment Operations (Clean Air) Regulation 2021*
- *Protection of the Environment Operations (Waste) Regulation 2014*
- Waste Classification Guidelines (NSW EPA 2014)
- *Water Management Act 2000* (WM Act)
- *Managing Urban Stormwater: Soils and Construction Vol 1* (Landcom 2004).

Further details of legislation relevant to the Project is provided in Appendix A.

3.4 Approvals, permits and licences

AGLM is responsible for obtaining the necessary approvals, permits and licences required for the LBBAWP, as provided in Table 3. The Contractors responsible for delivering the BESS Project stage must comply with the requirements of these approvals, permits and licences, where applicable.

Table 3 Approvals, permits and licences required for the BESS Project

Approval/ licence/ permit	Legislation	Status
Development consent	EP&A Act	Approval received 8 March 2022 (SSD-8889679)
Environment Protection Licence modification	POEO Act	Not applicable to the BESS Project
Approval under Section 21 of the <i>Coal Mine Subsidence Compensation Act 2017</i> (CMS Act)	CMS Act	Not applicable to the BESS Project
Permit under Section 138 of the <i>Roads Act 1993</i> (the Roads Act)	Roads Act	Not applicable to the BESS Project

4.0 Environmental management framework

4.1 Environmental Management System

AGLM operates and maintains a Health, Safety and Environmental Management System (HSEMS) which supports continual improvement of operations at Bayswater and Liddell power stations and other associated infrastructure. The HSEMS is a 'demonstrated equivalent' to the ISO 14001:2015 standard as determined by the NSW Environment Protection Authority (EPA).

The HSEMS provides the overall framework for health, safety and environmental management and includes a range of supporting standards, guidelines, procedures, and tools to implement it. Implementation of the HSEMS during planning and carrying out of works ensures that relevant health, safety and environmental factors are considered, and hazards and risks are avoided, eliminated or minimised to an acceptable level.

4.1.1 AGL Health, Safety and Environment Policy

AGL operates under its Health, Safety and Environment (HSE) Policy (October 2022) that commits to conducting business in a way that prevents harm to people, customers and the community, and minimises AGL's impact on the environment.

The HSE Policy applies to all AGL and AGLM employees, contractors, products, services and joint ventures under AGL's operational control. Specifically, the HSE Policy states that AGL will:

1. *Visibly lead our people to promote a strong HSE culture across all aspects of our business, taking care in every action to minimise harm to people and the environment.*
2. *Demonstrate integrity always through prioritization of HSE considerations in the way we work in order to meet or exceed the requirements of our compliance obligations.*
3. *Deliver our best by proactively identifying, effectively controlling and monitoring, and ensuring awareness of, the HSE risks that have the potential to harm people and the environment.*
4. *Consult and work collaboratively with our employees, contractors and the community on HSE issues. Better together.*
5. *Shape tomorrow by setting, measuring, and reviewing our objectives, priorities and targets to demonstrate proactive processes are in place to continuously reduce HSE risk exposure and improve HSE performance.*
6. *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.*

The HSEMS sets out how this HSE Policy is implemented.

4.1.2 Supporting documents

The HSEMS is supported by a series of standards, procedures and plans that set out the actions and controls to achieve the objectives of the HSEMS. These include:

- AGL-HSE-STD-009.01 – Land Standard
- AGL-HSE-STD-009.02 – Groundwater Standard
- AGL-HSE-STD-009.03 – Surface Water Standard
- AGL-HSE-STD-009.04 – Air Emissions Standard
- AGL-HSE-STD-009.05 – Noise Emissions Standard
- AGL-HSE-STD-009.06 – Biodiversity Standard
- AGL-HSE-STD-009.07 – Waste Standard
- AGL-HSE-PRO-006.01 – HSE Consultation and Communication Procedure
- AGL-HSE-PRO-007.10.03 – Hazardous Areas Procedure
- AGL-HSE-PRO-007.16 – Electromagnetic Field Non-Ionising Radiation Procedure
- AGL-HSE-PLN-009.01 – Land Management Plan
- AGL-HSE-PLN-009.02 – Water Management Plan
- AGL-HSE-PLN-009.04 – Air Quality Greenhouse Gas and Noise Management Plan

- AGL-HSE-STD-009.08 – Cultural Heritage Standard
- AGL-HSE-STD-009.09 – Greenhouse Gas Emissions Standard
- AGL-HSE-PLN-009.07 – Waste Management Plan
- AGL-HSE-PLN-010.02 – Pollution Incident Response Management Plan

4.2 Contractor Environmental Management System requirements

Any contractor or sub-contractor engaged to provide services for AGLM is required to have an organisational Environmental Management System or may operate under AGL's HSEMS. If a contractor has their own Environmental Management System, it must meet or exceed the minimum requirements set out in AGL's HSEMS.

4.3 Roles and responsibilities

This section outlines the key roles and responsibilities for both AGLM and its contractors and sub-contractors working on the BESS Project.

4.3.1 AGLM key personnel

AGLM's key personnel will be responsible for the management of contractors and sub-contractors and will each have the respective responsibilities provided in Table 4.

Table 4 AGLM roles and responsibilities

Role	Responsibilities
General Manager	<ul style="list-style-type: none"> • Responsible for all environmental matters regarding Liddell and Bayswater operations • Review environmental management programs including the establishment of environmental objectives and targets • Monitor and improve environmental performance • Renew operating licences • Comply with all licence conditions and regulatory reporting requirements
Project Manager	<ul style="list-style-type: none"> • Provide adequate resources for the implementation of this EMS • Ensure all appropriate approvals have been obtained • Ensuring that all staff or contractors under their control are aware of environmental compliance issues and environmental controls listed in this EMS • Oversee project implementation • Order Stop-work for an activity that may cause environmental harm
Site Manager	<ul style="list-style-type: none"> • Overall responsibility for the Liddell Power Station site
Environment Manager	<ul style="list-style-type: none"> • Oversee the implementation of this EMS • Notify regulatory authorities and affected stakeholders of incidents or non-compliances in accordance with this EMS • Order Stop-work for an activity that may cause environmental harm • Coordinate ongoing consultation with stakeholders • Coordinate periodic reviews of this EMS • Facilitate training of all employees and contractors in accordance with this EMS
Environment Advisor	<ul style="list-style-type: none"> • Assist the Environment Manager as required in the implementation of this EMS • Provide training to all relevant personnel • Order Stop-work for an activity that may cause environmental harm • Coordinate investigations of environmental related non-compliances, incidents or complaints • Coordinate the management of records required under this EMS • Review and action environmental inspection and audit findings

Role	Responsibilities
	<ul style="list-style-type: none"> Monitor environmental aspects, particularly in relation to waste management and construction and access works
Supervisors	<ul style="list-style-type: none"> Participate in awareness and environment training Assist the Environment Advisor with investigations into non-compliances, incidents or complaints Report and raise any issues that arise that may have an environmental impact
All personnel	<ul style="list-style-type: none"> Undertake works in accordance with this EMS Participate in awareness and environment training Report and raise any issues that arise that may have an environmental impact

4.3.2 Contractor key personnel

The contractor key personnel will include service providers engaged by AGLM for the BESS Project and any sub-contracted personnel. Table 5 outlines the contractor key personnel and responsibilities.

Table 5 Contractor roles and responsibilities

Contractor role	Responsibility
Environment Advisor	<ul style="list-style-type: none"> Initiate and support any external independent environmental audit program by liaising and providing required information Communicate environmental performance to the AGLM Environment Manager/Advisor Assist in the management and investigation of environmental non-compliances, incidents or complaints Manage the contractor's environmental management plan Provide necessary technical input Co-ordinate environmental compliance Assist in developing environmental objectives and targets and environmental management programs Identify environmental incidents
Site Superintendent	<ul style="list-style-type: none"> Ensure effective internal and external communication programs are in place Ensure that environmental considerations are integrated into all business functions where practical Promote continual improvement and provide support as required Ensure this EMS achieves its intended outcomes Ensure employees are equipped with sufficient skills to meet the objective of competent delivery of the project Ensure plant is operated in an efficient manner Review environmental management programs including the establishment and review of environmental objectives and targets Monitor and improve environmental performance Comply with all environmental requirements and regulatory and other reporting requirements Ensure appropriate licences are held by sub contractors (i.e. waste) where necessary Participate in awareness and environment training Report and raise any issues that arise that may have an environmental impact
Contractor staff Subcontractors	<ul style="list-style-type: none"> Undertake works in accordance with this EMS Participate in awareness and environment training Report and raise any issues that arise that may have an environmental impact

4.4 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* (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 Liddell and Bayswater.

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

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

Contractors are to work with the Environment Manager 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 carrying out work. A record of all contractor training is to be maintained in the *Environment Training Needs Matrix* (AGLM-HSE-FRM-008-05.1).

4.4.1 Liddell and Bayswater general site inductions

All AGLM employees and contractors are required to complete general inductions prior to attending any operational site. Personnel must also provide relevant licences and qualifications prior to carrying out work. The following inductions are required for all personnel:

- AGL Full Induction All Sites
- AGLM Site Induction.

Inductions are delivered through an online platform – RapidInduct. Site-specific inductions are also provided on an as-required basis for some areas that have additional requirements.

4.4.2 Liddell BESS specific site induction

All AGLM staff and contractors will also be required to attend an induction specific to the BESS project prior to commencing work at the site. The induction will include the environmental commitments and measures contained within this EMS and each of the subplans.

4.4.3 Training and competence

Environmental issues will be discussed at daily pre-start meetings and weekly 'toolbox' talks. Pre-start meetings will be conducted prior to commencing works each day to raise potential safety and environmental issues, discuss works to be carried out and familiarise with the emergency response procedures.

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

Additional training requirements will be assessed and implemented as required. Attendance is mandatory and attendees of pre-start and toolbox talks will be required to sign an attendance form. All records will be maintained.

The Contractor Site Superintendent will be responsible for ensuring that all construction personnel are appropriately qualified and experienced to undertake the specific tasks to which they are assigned and/or are responsible for.

4.4.4 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:

- Purpose of the training, induction, and awareness program
- Training needs determination
- Frequency of training

- Person responsible for delivering the training.

4.5 Incident and emergency management

4.5.1 Incidents

AGL maintains an HSE *Incident, Near Miss and Hazard Management Procedure* as part of the HSEMS (AGL-HSE-PRO-012.1), outlining the procedure for identification, reporting and investigation of HSE incidents, near misses, hazards and regulatory issues. This procedure applies to all employees, contractors and their sub-contractors working for or on behalf of, AGLM.

Incidents, near misses, and hazards involving a Contractor(s) must be entered into myHSE by the Contractor or by the responsible Contract Manager or delegate, if the Contractor does not have access to the application.

An environmental incident is an unplanned event that causes or has potential to cause material harm to the environment. Environmental incidents include but are not limited to:

- Spills of chemicals including oils and fuels
- Unintended damage to native vegetation
- Injury to wildlife
- Dust and noise impacts on the surrounding community.

It is the responsibility of all personnel working on the BESS project to report and raise any issues that arise that may have an environmental impact. Should there be a concern that conditions of this EMS are not being met and unauthorised impacts are occurring to the environment, the following steps will be undertaken:

1. Site Manager is to be notified
2. Environment Manager will notify DPE [and any other relevant stakeholders] of the incident as soon as possible
3. the Project Contractor will engage a suitably qualified and experienced person(s) to:
 - Investigate the complaints/claims
 - Review the environmental performance of the EMS.
4. AGLM provide DPE and [and any other relevant stakeholders] with a written report within 30 days that describes:
 - the nature of the non-compliance concern
 - the date and time of the incident
 - the likely cause of the incident
 - actions that have been taken
 - proposed measures to address the incident.

The Planning Secretary must be notified in writing via the Major Projects portal immediately after the AGLM becomes aware of an incident. The notification must identify the development (including the application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 4 of SSD-8889679.

4.5.2 Emergency response

AGLM currently maintains a site-wide Emergency Response Plan. A BESS project-specific Emergency Plan will be prepared prior to commissioning the BESS in accordance with condition B5 of the development consent. Any environmental emergency or incident will be notified to the Environment Manager and Project Manager who will notify the relevant emergency services or regulatory authorities where applicable. Table 6 identifies emergency contacts relevant to the BESS Project.

Contractor management plans will include an emergency response plan that will detail the procedure during an emergency.

An emergency response plan should include:

- Contact details for emergency services, including those in Table 6 and any others as relevant
- The location of on-site information on hazardous materials, including safety data sheets and spill containment materials
- Procedures to minimise environmental damage and to control an environmental incident or emergency
- A process for communication during an emergency
- A process for reviewing environmental incident and emergency planning, preparedness and response procedures following an environmental incident or emergency.

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

Table 6 Emergency contacts

Contact	Name / type of emergency	Primary contact
EPA Pollution Line	Environmental incident notification	131 555 (hotline) or (02) 4908 6800 (Newcastle office)
Fire Brigade	Emergency	000
	NSW Rural Fire Service	(02) 6575 1200 (Hunter Valley office) (02) 8741 5555 (Headquarters)
Police	Emergency	000
	Muswellbrook Police Station	(02) 6542 6999
Ambulance	Life threatening situations	000
	Non-life threatening situations	131 233
State Emergency Service	Assistance during flood and storm emergencies	132 500
NSW Poisons Information Centre	Bites, stings and poisons	131 126
WIRES wildlife rescue	Injured wildlife	1300 094 737

4.5.3 Pollution Incident Response Management Plan

Liddell maintains a PIRMP in accordance with Condition 05 of EPL 2122 which provides a detailed description of the action to be taken, immediately after a pollution incident, to reduce or control any pollution. It addresses the environmental, human, and life safety aspects of pollution incidents within the EPL. The PIRMP applies to all employees, contractors, their subcontractors, and visitors to the site.

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

The key pollution hazards related to the BESS Project include spills, leaks, and emissions resulting in air, water, or land contamination.

Despite the BESS not being subject to the requirements of the EPL, the PIRMP would still guide the process to be undertaken in the event of any pollution incident.

5.0 Community and stakeholder consultation

5.1 Overview

AGL procedure *Environment Communications* AGL-HSE-PRO-008.06 describes the protocols for external communications to and from relevant stakeholders and interested parties. This procedure applies to all employees and contractors operating for or on behalf of AGLM under the LBBAWP. AGLM will tailor consultation, cooperation and coordination of relevant environmental aspects and ensure that the relevant key stakeholder considers are incorporated into the LBBAWP. It also ensures that general public enquiries and complaints are handled and responded to appropriately.

AGL maintains a public website that contains information regarding operations and current projects and is updated by the Environment Manager and Communications Manager as required. The website also contains contact details to submit enquiries.

AGL also maintains a stakeholder consultation standard which applies to all activities (e.g., new development, expansions of existing infrastructure, and ongoing operations). The standard requires AGL 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.

5.2 Stakeholder consultation

SEARs for the LBBAWP were issued on 23 September 2020. The SEARs required that AGLM undertake an appropriate and justified level of communication with relevant parties during the preparation of the EIS, including:

- Local, State and Commonwealth government authorities
- Relevant Aboriginal stakeholders, including 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 those issues were addressed.

Following lodgement of the EIS, the LBBAWP (including EIS) was exhibited for interested parties and individuals to provide comments and indicate whether they support or object to the project. These responses were collected following exhibition and responded to in the form of a Response to Submissions report.

Any conditions relating to consultation in the development consent are to be included in the Contractor's CEMP or relevant management plans.

5.2.1 Community consultation

Liddell and Bayswater have been an established part of the Upper Hunter community since the 1970's and 1980's respectively and have 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 LBBAWP will be discussed with the Community Dialogue Group prior to construction. Interested parties can register for receiving regular project updates by sending an email to: liddellinfo@agl.com.au.

No concerns have been brought forward by the community on the BESS Project stage to date. Quarterly meetings will continue to be held with the AGLM 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 also made contact with the following community groups that had 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.

5.2.2 Government authority consultation

Throughout the planning phase of the LBBAWP, AGLM consulted with various government authorities and agencies, and will continue to do so during construction and operation as required.

A summary of agencies who provided comments throughout the planning phase is provided below:

- Biodiversity Conservation Division (now Biodiversity, Conservation and Science Directorate)
- Crown Lands
- Dams Safety NSW
- Department of Planning, Industry and Environment - Hazards Group (now Department of Planning and Environment)
- Department of Planning, Industry and Environment – Water (now Department of Planning and Environment)
- Department of Primary Industries - Agriculture
- Environment Protection Authority
- Fire and Rescue NSW
- Geological Survey of NSW - Mining, Exploration and Geoscience
- Heritage Council of NSW
- Heritage NSW
- Muswellbrook Shire Council
- NSW Rural Fire Service
- Singleton Council
- Subsidence Advisory NSW
- Transport for NSW.

5.2.3 Indigenous stakeholder engagement

Indigenous stakeholder engagement and involvement is important for the identification of cultural values of the land on which the project is located and its surrounds. Indigenous stakeholder consultation was carried out in four stages during the preparation of the EIS, from August 2020 to January 2021.

AGL recognises the Aboriginal and Torres Strait Islander peoples as the Traditional Owners of the lands on which we work, and we acknowledge those communities' continuing connections to their lands, waters and cultures. It always was and always will be, Aboriginal land.

AGL have prepared a Reconciliation Action Plan (RAP) which aims to build upon the vision for a unified and inclusive Australia where Aboriginal and Torres Strait Islander peoples are respected and have equal voice, rights and opportunities for prosperity. The RAP commits AGL to certain actions and provides a detailed framework for Aboriginal and Torres Strait Islander engagement and reconciliation.

The RAP can be found on AGL's website [here](#).

5.3 Complaints handling

AGLM's Community Complaints and Feedback Policy outlines AGLM's commitment to the effective management of complaints and resolution of 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 Environment Manager, and a response is to be provided to the complainant as soon as practicable and recorded in the *Community Complaints Register* AGL-HSE-REG-008.09.2. Community complaints can be made through the following channels:

AGL Complaints and Enquiries Hotline: 1800 039 600

Email: AGLCommunity@agl.com.au

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 Environment Manager, 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 30 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.

5.4 Development Consent consultation requirements

Development consent SSD-8889679 specifies certain plans and other documentation that require consultation prior to approval by the Planning Secretary. These plans are summarised in Table 7.

In accordance with Condition A7, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition, if the Secretary agrees.

Where consultation is required, each document will clearly outline the consultation requirements and provide details of communication with the relevant party, the outcomes, and where they are addressed in that document.

Table 7 EMS consultation requirements of the development consent

Condition	Plan/ other document	Party required to be consulted	Application
B8	Biodiversity Management Plan (BMP) (AECOM, 2023)	Biodiversity, Conservation and Science Directorate (BCS)	Applies to BESS Project
B10	Retirement of biodiversity credits	BCS	Applies to BESS Project
B11	Amendments to the ecosystem and species credit requirements	BCS	Applies to BESS Project
B19 and B20	Aboriginal heritage unexpected finds	Heritage NSW and Registered Aboriginal Parties	Applies to BESS Project
B22	Aboriginal Cultural Heritage Management Plan (ACHMP) (AECOM, 2023)	Heritage NSW and Registered Aboriginal Parties	Applies to BESS Project

5.4.1 Ongoing consultation

Biodiversity

The draft Biodiversity Management Plan (AECOM, 2023) was submitted to BSC for review on 21 March 2023. A copy of BCS's response is provided in Appendix A of the BMP.

AGLM will continue consulting with BCS regarding biodiversity offsets and any amendments to the ecosystem and species credit requirements.

Heritage

The draft Aboriginal Cultural Heritage Management Plan (AECOM, 2023) was distributed to all RAPs listed in Table 3 of the ACHMP on 24 February 2023 for consultation and comment.

A copy of the RAP correspondence and Heritage NSW's response is provided in Appendix B and Appendix C of the ACHMP

As detailed in Section 5.5 of the ACHMP, notification will be provided in writing to RAPs and Heritage NSW in the following instances:

- there are significant changes to approved operations at the site resulting in potential implications for Aboriginal heritage management
- there is a discovery of an Aboriginal object/site
- there is an opportunity to participate in Aboriginal archaeological survey or salvage works (should these be required)
- there are discussions regarding the long-term management of Aboriginal heritage objects/places at the site.

Environmental Management System

A draft of this EMS was submitted to DPE for review on 12 May 2023. A copy of DPE's response and how comments have been addressed in the final EMS is provided in Appendix B of this document.

6.0 Related management plans and procedures

6.1 Aboriginal Cultural Heritage Management Plan

An ACHMP is required to be implemented prior to commencement of construction in accordance with Condition B22 of SSD-8889679. The ACHMP has been prepared separately to this EMS as a standalone document. For Aboriginal heritage matters, the ACHMP should be read in conjunction with this EMS.

6.2 Biodiversity Management Plan

A BMP is required to be implemented prior to commencement of native vegetation clearance in accordance with Condition B8 of SSD-8889679. The BMP has been prepared separately to this EMS as a standalone document. For biodiversity matters, the BMP should be read in conjunction with this EMS.

6.3 Subplans

This EMS is supported by a series of subplans which relate to the management of specific environmental aspects. These supporting subplans are summarised in Table 8 and are provided in full at the corresponding Appendix.

Table 8 Subplans

Subplan	Overview	Reference
Soil and Water Management Sub Plan (SWMP)	This plan summarises potential soil and water impacts from the construction of the BESS project as identified in the EIS (Jacobs 2021) and identifies the environmental management measures to be implemented to minimise soil and water impacts.	Appendix C
Construction Noise Management Sub Plan (CNMP)	This plan summarises potential construction and decommissioning noise impacts of the BESS project as identified in the EIS (Jacobs 2021) and identifies the environmental management measures to be implemented to minimise noise impacts.	Appendix D
Air Quality Management Sub Plan (AQMP)	This plan summarises potential construction impacts of the BESS project on the local environment as identified in the EIS (Jacobs 2021) and identifies the environmental management measures to be implemented to minimise air quality impacts.	Appendix E
Contamination Management Sub Plan (CMP)	This plan summarises potential impacts from contamination associated with the construction of the BESS project as identified in the EIS (Jacobs 2021) and identifies the environmental management measures to be implemented to minimise contamination impacts.	Appendix F
Waste Management Sub Plan (WMP)	This plan summarises potential impacts from waste associated with the construction of the BESS project as identified in the EIS (Jacobs 2021) and identifies the environmental management measures to be implemented to minimise waste impacts.	Appendix G
Traffic Management Sub Plan (TMP)	This plan summarises potential impacts from traffic associated with the construction of the BESS project as identified in the EIS (Jacobs 2021) and identifies the environmental management measures to be implemented to minimise traffic impacts.	Appendix H

7.0 Other environment management measures

The management measures provided in Table 9 include other requirements from EIS, RTS or development consent SSD-8889679 which have not been captured under other management plans for the BESS Project.

Table 9 Environmental management measures – other (EIS / RTS / development consent)

Reference	Environmental management measures	Responsibility	Timing
GEN01	At least two weeks prior to the commencement of the following activities, AGLM must notify DPE in writing of the date of: <ul style="list-style-type: none"> physical commencement of the development pre-construction activities construction of the battery energy storage system decommissioning. 	AGLM	Pre-construction
GEN02	Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, AGLM will notify the DPE via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of these phases of the development are to be staged, then AGLM must notify the DPE in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.	AGLM	Pre-construction Construction Operation Decommissioning
GEN03	All demolition work on site will be carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.	Project Contractor	Construction
GEN04	The battery energy storage system or systems associated with the development will not exceed a total delivery capacity of 500 MW or a storage capacity of 2 GWh	AGLM	Operation
GHG1	The CEMP will include requirements for identification and minimise greenhouse gases (GHG) during construction	Project Contractor	Construction
NAH1	Should any historical archaeological remains be discovered during construction, all works will stop, the area cordoned off and a heritage professional engaged to examine and advise on the significance of the archaeological finds. If deemed to be of significance, under section 146 (s146) of the Heritage Act, a s146 form would be submitted to notify the Heritage Council of the discovery of relics. Further investigation may be required, and appropriate management will be agreed through consultation with Heritage NSW.	Project Contractor	Construction
NAH2	In the unlikely event that human remains are uncovered, all work must cease immediately in the vicinity of the remains and the area	Project Contractor	Construction

Reference	Environmental management measures	Responsibility	Timing
	cordoned off. The local NSW Police must be notified, who would make an initial assessment as to whether the remains are part of a crime scene, or Aboriginal remains. If the remains are thought to be Aboriginal, Heritage NSW must be contacted as per AH4.		
V1	Retention and enhancement of existing landscape features (areas of scrub, individual trees) will be considered where feasible.	Project Contractor	Pre-construction
V2	Colour of proposed structures and built form will be considered in a suitable muted palette to visually integrate the Project within the landscape where reasonable and feasible. Where a muted palette is not possible, such as for the battery enclosures, AGLM will consider the use of vegetation screen instead.	Project Contractor	Pre-construction
V3	Where reasonable and feasible, consider minimal use of reflective surfaces to avoid drawing attention to the site within views due to reflective glare.	Project Contractor	Pre-construction
V4	Limit the area of disturbance during construction where possible.	Project Contractor	Construction
V5	Mitigation tree and shrub planting will be considered to visually integrate the Project within the surrounding landscape.	Project Contractor	Construction
V6	<ul style="list-style-type: none"> 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 reinstated. 	Project Contractor	Construction
V7	Offsite visual and lighting will be minimised where reasonable and feasible.	Project Contractor	Construction
V8	Advertising signs or logos will not be mounted on site, except where this is required for identification or safety purposes.	Project Contractor	Construction
V9	Any external lighting associated with the development will: <ul style="list-style-type: none"> be installed as low intensity lighting (except where required for safety or emergency purposes) not shine above the horizontal comply with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version. 	Project Contractor	Construction
SE1	AGLM will keep the community and stakeholders updated on the Project via the	AGLM	Pre-construction

Reference	Environmental management measures	Responsibility	Timing
	existing community engagement forum and AGL website		
SE2	Opportunities to maximise the use of local suppliers, labour and businesses in the provision of goods and services for construction will be identified	AGLM	Construction
SE3	Consultation with local tourist accommodation providers should be carried out to identify peak tourist periods and consider timing of these periods in the planning of non-time-critical construction activities	AGLM	Construction
I1	AGLM will continue to consult with TransGrid and ETMC regarding any perceived impacts on the Liddell switchyard.	AGLM	Pre-construction
I2	AGLM will consult with Ausgrid as the network provider responsible for other onsite supply regarding continued supply.	AGLM	Pre-construction Construction
CL1	The CEMP will include a process to review and update management measures if any other development commences in proximity to the Project	Project Contractor	Pre-construction

8.0 Monitoring and auditing

The Project Manager will ensure the BESS Project's identified environmental aspects are consistently monitored and any deviation from planning control programs are identified and corrected in an effective manner.

8.1 Monitoring

Regular inspections of the BESS Project area will be carried out to ensure environmental controls and required processes are being implemented appropriately and are being maintained.

The Site Superintendent will undertake weekly and/or daily site inspections of the BESS Project area using an inspection checklist to evaluate the effectiveness of the environmental controls and to ensure ongoing compliance with the requirements of this EMS and any other relevant plan.

Specific monitoring measures described within each of the related management plans and subplans will be incorporated into the inspection program and inspection checklists where relevant. An overview of specific construction monitoring from each sub plan is provided in Table 10. Inspections of the area will also be undertaken within 24 hours following significant rainfall events.

AGLM-HSE-FRM-008.10.1 provides information on the responsibilities and scheduling of environmental monitoring tasks for required environmental aspects. Once operational, monitoring would be carried out in accordance with the existing monitoring arrangements at Liddell Power Station.

Table 10 Specific monitoring from environmental sub plans

Type of monitoring	Frequency	Responsibility	Records
Soil and water			
Erosion and sediment controls have been installed effectively prior to construction	Once	Project Contractor	Inspection checklist
General observations of erosion and sediment controls to ensure they remain installed effectively	Daily	Project Contractor	Daily pre-starts
Environmental site inspection: <ul style="list-style-type: none"> • Inspection of control measures – clean, adjust and replace as required • Inspection of disturbed areas and stockpiles – ensure dust and sediment control measures are active • Inspection of sealed roads – identify any sediment/soil which has been transferred offsite • Inspection of local water quality (i.e. turbidity, hydrocarbon spills/slicks) – identify any potential spills or deficient erosion and sediment controls. 	Weekly	Project Contractor	Inspection checklist
Adverse weather event inspection: <ul style="list-style-type: none"> • Inspection of control measures • Inspection of disturbed areas and stockpiles • Inspection of sealed roads • Inspection of local water quality. 	As required	Project Contractor	Inspection checklist
Rainfall and weather forecasts	Daily	Project Contractor	Daily pre-starts
Noise			
Both attended and unattended noise monitoring may be undertaken at representative stages	As required	Project Contractor	Inspection checklist

Type of monitoring	Frequency	Responsibility	Records
Air quality			
A recommended trigger, action and response plan (TARP) for the construction and decommissioning of the BESS project is provided in Table 5 of Appendix E	Daily	Project Contractor	Inspection checklist
Contamination			
Visual monitoring will be undertaken during all ground-disturbing works to identify suspected contamination. Where potentially contaminated material is discovered, the unexpected finds procedure in Section 5.1 of Appendix F will be applied.	During ground-disturbing works	Project Contractor	Inspection checklist
Waste			
Environmental inspection <ul style="list-style-type: none"> Implementation of waste management activities Site is neat, tidy and free of litter Stockpiled and segregated waste collection points are clearly signposted Quantities of stored materials are appropriate based on construction scheduling/procurement constraints	Weekly	Project Contractor	Inspection checklist
Inspection of contaminated materials	Twice daily when required	Project Contractor	Asbestos register Improvement actions
Traffic			
Environmental site inspection: <ul style="list-style-type: none"> Inspection of internal roads for signs of deterioration and maintenance requirements Inspection of traffic signage installed for the BESS project to ensure they are: <ul style="list-style-type: none"> Clearly visible and mounted securely Performing their function in directing traffic and alerting road users of heavy vehicles and potential safety issues Inspection of site entrances to ensure they are clear, free of overgrowth and a clear line of sight is provided for vehicles exiting the site. 	Weekly	Project Contractor	Inspection checklist
Adverse weather event inspection: <ul style="list-style-type: none"> Inspection of internal roads following periods of heavy rain or an adverse weather event. 	As required	Project Contractor	Inspection checklist
Biodiversity			
<i>Pre-clearance survey:</i> An inspection of native vegetation to be impacted to confirm the absence of fauna species	Prior to vegetation clearance works	Environment manager and project ecologist	Pre-clearance survey
<i>Fauna inspections:</i> Inspection of trenches/holes	Each morning	Environment manager and Project contractor	Inspection checklist

Type of monitoring	Frequency	Responsibility	Records
<i>General site inspections:</i> Undertake site walkthrough to inspect 'No-Go' zones, construction activities and any emerging issues	At least weekly	Environment manager and Project contractor	Inspection checklist
<i>Weeds and pathogens:</i> Inspection of construction area, including laydown areas and stockpiles for emerging weeds	Weekly inspection of full site	Environment manager	Inspection checklist
<i>Weeds and pathogens:</i> Inspection of vehicles for attached soil and other vectors for the transport of weeds into and out of the construction area	During the movement of earthmoving machinery in and out of the site	Environment manager	Inspection checklist
<i>Weeds and pathogens:</i> Inspection of all areas disturbed during construction for the emergence of weeds	Monthly for the first 6 months post-construction and 6 monthly for the following 18 months thereafter	Environment manager	Inspection checklist
Aboriginal heritage			
No specific monitoring requirements are proposed as part of the ACHMP. However, potential impacts would be managed in accordance with the management measures listed in Section 4.0 of the ACHMP, which includes an 'unanticipated finds protocol'.	N/A	N/A	N/A

Records will be kept of all environmental monitoring, management and corrective actions undertaken during construction of the BESS Project. Records will include information on the environmental performance of the construction activities and will include the following details, where relevant:

- Incidents or non-compliances with environmental obligations and legislative requirements
- Deficiencies in the standard of environmental performance
- Environmental management or corrective action required
- Complaints associated with construction activities
- Any other relevant issue.

8.2 Internal auditing

The HSEMS is internally audited annually as part of the AGL Group Operations Audit Program to assess legal compliance and the effectiveness of the system on site. Audits are conducted against ISO 14001, and audit criteria, scope, frequency, and methods are approved by the Environment Manager. The *Internal Audit Checklist* AGLM-HSE-FRM-008.08.3 specifies the audit requirements, including 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 are required to prepare a Compliance Register for the work they are conducting and to support the internal audits.

8.3 Independent auditing

Independent (external) environmental audits are required for the BESS Project. Conditions C13-C18 of Development consent SSD-8889679 outline the requirements for independent environmental audits. Independent audits must be carried out in accordance with the requirements outlined in the Independent Audit Post Approval Requirements (Department of Planning, Industry and Environment (DPIE), 2020).

The proposed independent auditor must be endorsed by the Planning Secretary prior to the commencement of an independent audit.

The frequency of independent audits will, at a minimum, follow the requirements from Table 1 of the Independent Audit Post Approval Requirements (DPIE, 2020) as presented in Table 11. The Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified Table 11, upon giving at least 4 weeks' notice.

Table 11 Independent audit frequency

Phase	Initial independent audit	Ongoing independent audits intervals
Construction	Within 12 weeks of the commencement of construction	At intervals, no greater than 26 weeks from the date of the initial Independent Audit or as otherwise agreed by the Secretary
Operation	Within 26 weeks of the commencement of operation	At intervals, no greater than 3 years or as otherwise agreed by the Secretary
Closure	Within 52 weeks from notifying of suspension/ceasing of operations	At intervals no greater than 1 year or as otherwise agreed by the Secretary

AGLM will review and respond to each Independent Audit Report. The Independent audit and response will be submitted to the Planning Secretary within 2 months of undertaking the independent audit site inspection. The Independent Audit Report and AGLMs response must also be made publicly available within 60 days of submission to the Planning Secretary.

9.0 Compliance and reporting

Conditions C4-C11 of development consent SSD-8889679 outline the requirements for incidents, non-compliance and compliance notifications and reporting.

9.1 Non-compliance notification

All non-conformance and non-compliance must be entered into myHSE and managed in accordance with the *Incident, Near Miss and Hazard Management Procedure* AGL-HSE-PRO-012.1. Section 4.5 provides further detail on incident response and reporting. Contractors or Contract Manager are to enter non-conformances and non-compliances into my HSE and appropriate responsibilities and due dates for non-compliances must be determined. If contractors do not have access to this, they must work with the Environment Manager to record the non-conformance or non-compliance and progress closing out items.

The Secretary must be notified in writing via the Major Projects website within seven days after AGLM becomes aware of any non-compliance. A non-compliance notification must:

- Identify the development and the application number (SSD-8889679)
- Set out the condition of approval that the development is non-compliant with
- Describe the way in which it does not comply and the reasons for the non-compliance (if known)
- List what actions have been, or will be, undertaken to address the non-compliance.

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

9.2 Compliance register

The Project Contractor will develop a register or table of environmental compliance requirements to assist with monitoring and recording compliance with requirements. The Project Contractor will submit the Compliance Register to AGLM for review prior to commencement of construction of the Project. The register will:

- Provide an identification number for each compliance requirement
- Identify the requirements in all SSD-8889679 conditions of consent that must be complied with during the planning and conduct of works under the contract
- Detail the monitoring methods to be used to assess compliance with each compliance requirement
- Detail the type of data or evidence that is to be collected to assess whether compliance has been achieved.

9.3 Compliance reporting

Compliance reports are required for the BESS Project. Compliance reporting must be carried out in accordance with the requirements outlined in the *Compliance Reporting Post Approval Requirements* (DPIE, 2020). The frequency of compliance reporting will, at a minimum, follow the requirements of the Compliance Reporting Post Approval Requirements (DPIE, 2020) as presented in Table 12.

AGLM must make each compliance report publicly available within 60 days of submitting it to the Secretary, unless otherwise agreed by the Planning Secretary.

Table 12 Minimum frequency of compliance reporting

Compliance report	Phase	Timing	Minimum frequency
Operation compliance report	Operation Care and maintenance	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 &

Compliance report	Phase	Timing	Minimum frequency
			maintenance, from the commencement date of care and maintenance (annually)
Post-decommissioning compliance report	Decommissioning	Report to be submitted to the Planning Secretary within 12 weeks of completion of decommissioning	Single report only

To support this, the Project Contractor will provide regular reports which will detail (at a minimum):

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

The level of detail required within the reports would be determined on a contract-by-contract basis and would reflect the level of environmental risk and scale of works under the proposed contract. In the event the scope of works change, the level of reporting may be required to change.

9.4 Corrective and preventative actions

A corrective and preventative action process must be implemented immediately following the identification of a non-compliance or non-conformance and the notification process outlined in Section 9.1.

10.0 Continual Improvement and Review

10.1 Review of EMS

This EMS and all other associated plans will be regularly reviewed as part of a continual improvement process to ensure they remain current and relevant to the BESS Project. All revised plans must be submitted to AGL for assessment and approval in accordance with the review process in each plan, and then submitted to the DPE if required.

This EMS and all other associated plans will be reviewed, and where necessary, revised within three months of:

- 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.

Appendix A

Legislative summary

Appendix A Legislative summary

Legislation	Relevance to the Project
<i>EP&A Act & EP&A Regulations</i>	Project is a State Significant Development (SSD) under the State Environmental Planning Policy (Planning Systems) 2021, 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 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>Stage Environmental Planning Policy (Planning Systems) 2021</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 for certain activities on public roads. 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>State Environmental Planning Policy (Transport and Infrastructure) 2021</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 (Resilience and Hazards) 2021 (formerly the 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 (Resilience and Hazards) 2021 (formerly the State</i>	Site was determined to be suitable in its current state for the project

Legislation	Relevance to the Project
Environmental Planning Policy No 55 - Remediation of Land)	
<i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> (formerly the State Environmental Planning Policy (Koala Habitat Protection) 2019)	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 pollution, waste generation, reuse, recycling, transport, and disposal and establish a waste hierarchy. The BESS Project does not constitute a scheduled activity and is therefore not subject to the requirements of the EPL.
<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.
<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>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>	Prescribed dams are regulated 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

Legislation	Relevance to the Project
	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'.
<i>Rural Fires Act 1997</i>	Consideration of possible bush fire risks is provided in Chapter 19 of the EIS.
<i>Water Act 1912 and Water Management Act 2000</i>	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). 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. 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.
<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>	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. 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

Legislation	Relevance to the Project
	<p>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>
<p><i>Environment Protection and Biodiversity Conservation Regulation</i></p>	<p>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.</p>

Appendix B

Regulator consultation

Appendix B Regulator consultation

**Liddell Battery and Bayswater Ancillary Works
Post Approval Review**



Documents reviewed:

Environmental Management Strategy – Stage 2

Revision: 05 May 2023

Reviewed: Jack Turner, June 2022

	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
A8 At least two weeks prior to the commencement of the following activities, the Applicant must notify the Department in writing of the date of: (a) physical commencement of the development; (b) pre-construction activities; (c) construction of the battery energy storage system; (d) construction of the decoupling works; (e) construction of the Bayswater ancillary works; and (f) decommissioning.	Yes	Section 7.0		No action
A10 The Applicant must ensure that all demolition work on site is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.	Yes	Section 7.0		No action

**Liddell Battery and Bayswater Ancillary Works
Post Approval Review**



<p>A12 The Applicant must ensure that all plant and equipment used on site, or in connection with the development, is:</p> <p>(a) maintained in a proper and efficient condition; and</p> <p>(b) operated in a proper and efficient manner</p>	<p style="text-align: center;">Yes</p>	<p>Section 7.0, Appendix [E]</p>		<p>No action</p>
<p>B12. The Applicant must:</p> <p>(a) ensure that noise generated by any construction is managed in accordance with the Interim Construction Noise Guideline (DECC, 2009), or its latest version; and</p> <p>(b) take all reasonable and feasible steps to minimise noise from construction and operational activities.</p>	<p style="text-align: center;">Partial</p>	<p>Appendix [D] Section 2.1 and Section 7.0</p> <p>Refer comments below</p>		<p>No action</p>
<p>B13. All construction work at the premises must be conducted between 7 am and 6 pm Monday to Friday and between 8 am and 1 pm Saturdays and at no time on Sundays and public holidays, unless an out of hours protocol is included within an approved Construction Environment Management Plan or the Planning Secretary agrees otherwise</p>	<p style="text-align: center;">Partial</p>	<p>Appendix [D] Section 7.9</p> <p>Refer comments below</p>		<p>No action</p>

**Liddell Battery and Bayswater Ancillary Works
Post Approval Review**



<p>B14 The following activities may be carried out outside the recommended construction hours:</p> <p>(a) construction that causes LAeq(15minute) noise levels that are:</p> <p>(i) no more than 5 dB above Rating Background Level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009); and</p> <p>(ii) no more than the Noise Management Levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses;</p> <p>or</p> <p>(c) for the delivery of materials required by the police or other authorities for safety reasons; or</p> <p>(d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.</p>	<p>Partial</p>	<p>Appendix [D] Section 7.1</p> <p>Refer comments below</p>		<p>Noted</p>
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**Liddell Battery and Bayswater Ancillary Works
Post Approval Review**



<p>B15. The Applicant must take all reasonable and feasible steps to:</p> <ul style="list-style-type: none"> (a) minimise odour, fume and dust emissions of the development; (b) eliminate or minimise the risk of spontaneous combustion; and (c) minimise to the greatest extent practicable, dust generating surfaces exposed on the site. 	<p>Yes</p>	<p>Appendix [E]</p>		<p>No action</p>
<p>B16 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 all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and (c) not mount any advertising signs or logos on site, except where this is required for identification or safety purposes. 	<p>Yes</p>	<p>Section 7.0</p>		<p>No action</p>

**Liddell Battery and Bayswater Ancillary Works
Post Approval Review**



<p>B17 The Applicant must: (a) minimise the off-site lighting impacts of the development; and (b) ensure that any external lighting associated with the development: ▪ 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.</p>	<p>Yes</p>	<p>Section 7.0</p>		<p>No action</p>
<p>B25 The Applicant must ensure that all surface discharges from the development comply with all relevant provisions of the POEO Act, including any discharge limits (both volume and quality) set for the development in any EPL.</p>	<p>Yes</p>	<p>Appendix [C] Section 6.1</p>		<p>No action</p>

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<p>B26. The Applicant must: (a) ensure the development is designed, constructed and maintained to minimise impacts on surface water, flooding and groundwater at the site; (b) minimise any soil erosion associated with the construction, upgrading or decommissioning of the development in accordance with the relevant requirements in the Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual, or its latest version; (c) ensure the battery energy storage system and ancillary infrastructure are designed, constructed and maintained to avoid causing any erosion on site; and (d) ensure all works are undertaken in accordance with the Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018), or its latest version unless DPE Water agrees otherwise.</p>	<p>Partial</p>	<p>Appendix [C] Section 5.0</p> <p>The key mechanism for the management of soil and water is the ESCP.</p> <p>A copy of the ESCP should be provided as part of the plan. It can be noted that this is subject to further design changes if this is the case.</p>		<p>An indicative Erosion and Sediment Control Plan (ESCP) for the project has been included in Appendix C - Soil and Water Management Sub Plan. Please note that this ESCP is indicative and subject to further design changes. The construction contractor will be required to prepare a detailed ESCP prior to the commencement of construction.</p>
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<p>WASTE B27. The Applicant must: (a) take all reasonable steps to minimise the waste generated by the development; (b) classify all waste in accordance with the Waste Classification Guidelines (EPA, 2014); (c) dispose of all waste at appropriately licensed waste facilities or as expressly permitted in an applicable EPL; and (d) manage any asbestos or asbestos-contaminated materials identified during construction and operation of the development in accordance with the requirements under the Protection of the Environment Operations (Waste) Regulation 2014.</p>	Yes	Appendix [G]		No action
<p>C1. Prior to commencing construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must: (a) provide the strategic framework for environmental management of the development;</p>	Yes	Section 4.0		No action

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(b) identify the statutory approvals that apply to the development;	Yes	Section 3.0		No action
(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Yes	Section 4.3		No action
(d) describe the procedures that would be implemented to: (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;	Yes	Section 5.2		No action
(ii) receive, handle, respond to, and record complaints;	Yes	Section 5.3		No action
(iii) resolve any disputes that may arise;	Yes	Section 5.3		No action
(iv) respond to any non-compliance;	Yes	Section 9.0		No action
(v) respond to emergencies; and	Yes	Section 4.5		No action
(e) include: (i) the following subplans: soil, stormwater, water quality, flood and spoil management;	Partial	Appendix [C] A copy of the ESCP should be provided as part of the plan. It can be noted that this is subject to further design changes if this is the case.		An indicative Erosion and Sediment Control Plan (ESCP) for the project has been included in Appendix C - Soil and Water Management Sub Plan. Please note that this ESCP is indicative and subject to further design changes. The construction contractor will be required to prepare a detailed ESCP prior to the commencement of construction.

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construction and decommissioning noise, including an out-of-hours works protocol;	Partial	<p>Appendix [D]</p> <p>Language used regarding monitoring in Section 8.0 includes that measures 'may' be undertaken and 'Routine' monitoring is described in EMM N6. Be specific as to when attended and unattended monitoring will be completed.</p> <p>EMM N2 notes works will be limited to standard hours 'where possible' – this should be amended (or deleted) to note that work hours are specified in the consent</p> <p>'Where possible' is used throughout in the context of implementing measures, suggest 'where reasonable and feasible' as per the definitions in the ICNG, unless the measure will be implemented wherever it is possible to implement.</p>		<p>Section 8 was updated to clarify when routine attended and unattended noise monitoring will take place. Added cross-reference to N6 to Section 8.</p> <p>N2 amended to reference development consent conditions B13 and B14.</p> <p>Amended all instances of 'where possible' reviewed and updated.</p>
air quality management;	Yes	Appendix [E]		No action
contamination, including an unexpected finds protocol	Yes	Appendix [F]		No action
waste management; and	Yes	Appendix [G]		No action
traffic.	Yes	Appendix [H]		No action
(ii) references to any strategies, plans and programs approved under the conditions of this approval; and	Yes	Section 6.0		No action
(iii) a clear plan depicting monitoring to be carried out under the conditions of this approval.	Yes	Section 7.0		No action

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<p>C4 The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 4.</p>	<p>Yes</p>	<p>Section 4.5</p>		<p>No action</p>
<p>C5 The Planning Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance.</p>	<p>Yes</p>	<p>Section 9.1</p>		<p>No action</p>
<p>C6 A non-compliance notification must identify the development and the application number for it, set out the condition of approval that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance</p>	<p>Yes</p>	<p>Section 9.1</p>		<p>No action</p>

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C8 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)	Yes	Section 9.2		No action
C9 Compliance Reports must be submitted to the Department in accordance with the timeframes set out in the Compliance Reporting Post Approval Requirements (2020), unless otherwise agreed to by the Planning Secretary	Yes	Section 9.2		No action
C10 The Applicant must make each Compliance Report publicly available within 60 days of submitting it to the Planning Secretary, unless otherwise agreed by the Planning Secretary	Yes	Section 9.2		No action

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<p>C12 Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase. If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.</p>	<p>Yes</p>	<p>Section 7.0</p>		<p>No action</p>
<p>General Comments</p>				
<p>Ensure all plans labelled as 'DRAFT' are updated to final</p>				<p>All plans have been updated to final.</p>
<p>Review throughout – consider if the use of 'where possible' or similar is appropriate. In some cases this may be the appropriate wording. In other cases it may be more appropriate to:</p> <ul style="list-style-type: none"> - use 'where reasonable and feasible'; - delete the wording (if the measure relates to a strict requirement of the conditions); or - amend to state the specific instance where the measure would be implemented 				<p>All plans have been reviewed for instances of “where possible” and updated where appropriate. Note that some instances of “where possible” where this is the most appropriate language.</p>

Appendix C

Soil and Water Management Sub Plan

Appendix C Soil and Water Management Sub Plan

Appendix D

Construction Noise Management Sub Plan

Appendix D Construction Noise Management Sub Plan

Appendix E

Air Quality Management Sub Plan

Appendix E Air Quality Management Sub Plan

Appendix F

Contamination Management Sub Plan

Appendix F Contamination Management Sub Plan

Appendix G

Waste Management Sub Plan

Appendix G Waste Management Sub Plan

Appendix H

Traffic Management Sub Plan

Appendix H Traffic Management Sub Plan