

Scoping Report

Lake Munmorah Battery Energy Storage System

Version 1.2

6 Aug 2026



Document control

Document status	Final
Document suite	Environment
Release authority	Christopher Doyle
Release date	6 Aug 2026
Proposal name	Lake Munmorah Battery Energy Storage System
Proposed activity	Construct and operate a BESS with up to a 100MW (up to 400MWh) capacity at the Ausgrid Lake Munmorah 132kV Zone Substation at 395 Pacific Highway, Lake Munmorah NSW 2259
Work breakdown structure	NC-00965-1-4-07
Proponent name	Ausgrid
Proponent address	24-28 Campbell St, Sydney, NSW 2000
Prepared by	R. Rockwood
Title	Project Manager
Qualifications	BEnvEng (First Class Hons), CPEng, NER, MIEAust

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Ausgrid ABN 78 508 211 731
24-28 Campbell Street
Sydney NSW 2000

Document history

Revision history		
Version	Date	Nature of revision
1.0	9 Apr 2026	Draft
1.1	5 May 2026	Final for DPHI submission
1.2	6 July 2026	Incorporating DPHI comments

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Executive summary

Background

Ausgrid is seeking development consent to construct and operate a Battery Energy Storage System (BESS) with a capacity of up to 100 MW with a 4-hour duration (up to 400 MWh) at its existing Lake Munmorah Zone Substation (referred to as the Project). The Project would provide storage and firming capacity to the National Electricity Market (NEM), which would increase the stability of the electricity network, including ancillary frequency control services. The Project would support the transition of the NEM from largely fossil fuel generation to renewable energy, contributing to New South Wales (NSW) and Australian decarbonisation targets.

The Project is classified as State Significant Development (SSD) under Division 4.7 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). This scoping report has been prepared to support a request for Secretary's Environmental Assessment Requirements (SEARs), which would guide the preparation of an Environmental Impact Statement (EIS) to support the SSD application (SSDA).

The site

The Project is proposed at 395 Pacific Highway Lake Munmorah (Lot 2, DP 1320899), at the existing Lake Munmorah Zone Substation (the site). The lot size is approximately 1.26 ha and is owned by Ausgrid. The area within the site that is to be developed by the Project (the Development Footprint or Project Area) is that full lot area. The area to be developed for the BESS is approximately 1.1 ha.

The site is located within the Central Coast Council Local Government Area (LGA), approximately 110 km north of the Sydney CBD and zoned as SP2 Electricity Transmission and Distribution. The main land uses surrounding the site are educational establishments, places of worship, residential, roads and environmental conservation.

The site has been subject to historic disturbance from the construction of the Lake Munmorah Zone Substation and carpark area.

The Project

The Project comprises of a BESS facility that would store electricity from the grid during periods of high generation and release it during periods of high demand. Key features include:

- Construction and operation of a BESS with up to 100MW power output capacity with 4-hour duration (up to 400MWh) and Lithium Iron Phosphate chemistry
- Connection of the BESS to Lake Munmorah Zone Substation infrastructure via a 33 kV underground cable
- Ancillary infrastructure including cabling and collector units, internal access roads, laydown areas, control and operational buildings, car parking, fire and stormwater management, lighting and CCTV.

Likely impacts of the Project

The environmental issues relevant to the Project have been identified using a risk-based approach, in accordance with the *State significant development guidelines – preparing a scoping report* (DPIE, 2022). This process involved reviewing previous reports, undertaking investigations (including site inspections), and desktop searches of relevant environmental databases. The key environmental issues that have been identified for detailed assessment within the EIS are:

- Biodiversity
- Soils, groundwater and contamination
- Surface water and flooding
- Aboriginal heritage
- Noise and vibration
- Traffic and transport
- Hazards and risk
- Bushfire
- Visual
- Social and economic.

Other matters that will be considered in the EIS are:

- Non-Aboriginal heritage
- Air quality
- Waste management.

Cumulative impacts for these matters will also be assessed in the EIS.

In preparing the EIS for the Project, the focus would be avoidance and minimisation of potential impacts on the environment and local communities, where practicable and feasible. Consultation with stakeholders including the local community would continue throughout the Project's assessment, design and construction phases.

1 Introduction

1.1 Project Overview

Ausgrid is seeking development consent to construct and operate a Battery Energy Storage System (BESS) with a capacity of up to 100 megawatts (MW) over a 4-hour duration (up to 400MWh) (referred to as the Project). The proposed location of the Project is within the existing Ausgrid 132 kV Lake Munmorah Substation at 395 Pacific Highway, Lake Munmorah NSW 2259 (the site). The Project is proposed to be in the northern portion of the property, Lot 2 DP 1320899. See Figure 1 for the Project location.

The Project forms part of Ausgrid's strategy to enhance grid resilience and support the energy transition. The need for large-scale energy storage will maintain network stability, manage peak demand and integrate variable renewable generation.

The Project aligns with national and state energy strategies including the NSW Electricity Strategy, NSW Electricity Infrastructure Roadmap and the Integrated System Plan (AEMO, 2024). The Project also contributes to Ausgrid's long-term decarbonisation goals, supporting a net-zero emissions future by 2045.

The site was selected due to its proximity to the Lake Munmorah Zone Substation, an existing Ausgrid asset. This location enables efficient grid connection while minimising the need for transmission infrastructure. Parts of the site have been subject to historical disturbance from the construction of the Lake Munmorah Zone Substation.

Key features of the Project include:

- Construction and operation of a BESS with a capacity of up to 100MW over a 4-hour duration (up to 400 MWh)
- Containerised battery units, inverters and medium voltage transformers
- Connection of the BESS to the Lake Munmorah Zone Substation via a 33 kV underground cable
- Combined control and switch room building
- Ring main units
- Operation & maintenance warehouse
- Auxiliary transformer
- Backup diesel generator
- Onsite carparking
- Ancillary infrastructure including internal access roads, laydown areas, stormwater management systems, security fencing, lighting and CCTV.

1.2 Project Objectives

The objectives of the Project are to:

- Provide firming capability to support increasing levels of renewable energy generation
- Provide electricity to the NEM during peak periods and store excess electricity during periods of low demand
- Provide system services to help correct and/or stabilise the wider transmission network.

1.3 The Applicant

The Project applicant is Ausgrid (ABN: 78 508 211 731), located at 24-28 Campbell Street, Sydney NSW 2000. Ausgrid is the largest distributor of electricity in eastern Australia, providing power to 1.8 million customers and powering 60% of NSW's Gross Domestic Product. Its network is made up of substations, powerlines, underground cables and power poles, covering 22,275 square kilometres throughout Sydney, the Central Coast and Hunter Valley.

NSW Treasury holds the largest stake in the Ausgrid business (49%), with the remainder made up of institutional investors.

Ausgrid operates in the NEM as both a Distribution Network Service Provider (DNSP) and a Transmission Network Service Provider (TNSP).

1.4 Related Development

To prepare infrastructure for new and changing customer connections as part of the renewable energy transition, Ausgrid plans to augment the Lake Munmorah Zone Substation to include an additional high voltage transformer and connection. These augmentation works will be assessed and determined by Ausgrid separately under Part 5 of the EP&A Act.

1.5 Purpose

This document provides a description and strategic context of the Project in accordance with the *State significant development guidelines – preparing a scoping report* (DPIE, 2022).

It presents a preliminary risk-based assessment to identify matters that will be addressed in the EIS to NSW Department of Planning, Housing and Infrastructure (DPHI) to receive SEARs for the Project.



FIGURE 1:
PROJECT LAYOUT



Legend

- Site Boundary
- Site Access Points
- BESS Area
- Development Footprint
- Lake Munmorah Zone Substation
- Motorway
- Main Road
- Local road
- Watercourse
- Electricity Transmission Lines**
 - 132 kV

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Coordinate Reference System:
GDA2020 MGA Zone 56

2 Strategic Context

2.1 Strategic Planning

2.1.1 Australia's Long Term Emissions Reduction Plan

Australia's whole-of-economy Long-Term Emissions Reduction Plan is focused on technology and sets out how Australia will achieve net zero emissions by 2050 (DCCEEW, 2022a). One of the principles of the plan is keeping energy prices down with affordable and reliable power. The plan outlines how government will:

- Drive down the cost of low emissions technologies (including battery storage)
- Deploy these technologies at scale
- Help regional industries and communities seize economic opportunities in new and traditional markets
- Work with other countries on the technologies needed to decarbonise the world's economy.

The Technology Investment Roadmap (TIR) is the foundation of the Long-Term Emissions Reduction Plan and sets a process to develop and deploy low emissions technologies (including battery storage). By focusing government investment, it aims to make these emerging technologies cost competitive with existing high emission technologies (DCCEEW, 2022b). The TIR includes a requirement to prepare Low Emissions Technology Statements (LETs), which review, refine and evaluate the government's investment in low carbon emission technologies (DCCEEW, 2021).

The current LETs (2021) include energy storage as an existing priority technology for government investment. The LETs indicate that broad deployment of electrical energy storage will facilitate integration of low-cost solar and wind electricity in the grid. The LETs state that energy storage will provide network security services and a source of reliable, dispatchable electricity. This should help reduce pressure on electricity prices by meeting peaks in consumer demands. As the Project intends to provide a source of reliable, dispatchable electricity, it would be consistent with the principles of the Long-Term Emissions Reduction Plan.

2.1.2 Integrated System Plan

The Integrated System Plan (ISP) is a whole-of-system plan that provides a coordinated generation and transmission investment plan to transition the NEM over the next 30 years. The Australian Energy Market Operator (AEMO) updates the ISP every two years, and the most recent ISP was published in June 2024.

Under the 'Step Change' scenario, identified in the 2024 ISP as the most likely scenario, the NEM will need to cater for investment in generation capacity, storage, firming generation and transmission augmentation as coal generation withdraws through to 2050.

The 2024 ISP predicts under the Step Change scenario that about 90% of the current 21 gigawatt (GW) of coal capacity would retire by 2034-35, with the remainder retiring before 2040. The ISP suggests that 49 GW / 646 GWh of new battery and hydro storage (distributed and utility scale), would be required to respond to a dispatch signal and help firm renewable energy sources entering the market. This further supports the need for the Project.

2.1.3 NSW Electricity Strategy

The NSW Electricity Strategy is the NSW Government's plan for a reliable, affordable, and sustainable electricity future. The strategy outlines three approaches for the NSW government to meet these objectives:

- Support the market to deliver reliable electricity at the lowest price, while protecting the environment
- Set an Energy Security Target to ensure the State has sufficient generation capacity to cope with unexpected generator outages during periods of peak demand, such as during heat waves, and
- Ensure the State has sufficient powers to deal with an electricity emergency if one arises.

The strategy outlines the cheapest and most efficient way to develop a modern and complex energy system to replace coal-fired generators is to build a mix of low-cost renewables, gas-fired generators and other storage options, such as batteries and pumped hydro. The Project supports these objectives, as a grid-scale energy storage system, it would help NSW Government plan for a reliable and affordable electricity future.

2.1.4 NSW Electricity Infrastructure Roadmap

The NSW Electricity Strategy (DPIE, 2019) is to be implemented through the NSW Electricity Infrastructure Roadmap (DPIE, 2020). It envisions a modern electricity system in NSW built on the following five pillars:

- *“Driving investment in regional NSW: supporting our regions as the State’s economic and energy powerhouse.”*
- *Delivering energy storage infrastructure: supporting stable, long-term energy storage in NSW.*
- *Delivering Renewable Energy Zones: co-ordinating regional transmission and renewable generation in the right places for local communities.*
- *Keeping the grid secure and reliable: backing the system with gas, batteries or other reliable sources as needed.*
- *Harnessing opportunities for industry: empowering new and revitalised industries with cheap, reliable and low emissions electricity”.*

The *Electricity Infrastructure Investment Act 2020* was passed in late 2020. The Project is in line with the vision of the NSW Electricity Infrastructure Roadmap as it represents a private regional investment, delivers energy storage, is appropriately zoned and uses existing transmission infrastructure, provides security to the NEM and provides cost effective and reliable electricity with negligible additional emissions.

Ausgrid has a plan to achieve decarbonisation of its assets by 2045. These targets are a first for an energy distribution organisation in Australia and demonstrate commitment to the environment (Ausgrid, 2025). The Project is a component of Ausgrid's plans to enable decarbonisation and net-zero emissions while responding to the requirements of the market in relation to reliable and affordable electricity.

2.1.5 State Infrastructure Strategy 2022-2042

The NSW State Infrastructure Strategy (SIS) 2022-2042 (Infrastructure NSW, 2022) builds on the NSW Government's major long-term infrastructure plans as outlined within NSW State Infrastructure Strategy 2012. The strategy sets out the government's priorities for the next 20 years and highlights ongoing investment is required to keep pace with population growth, ensure competitiveness of NSW industry and meet Governments social and economic goals.

Some of the relevant objectives and strategic directions of the SIS include:

- Embed reliability and resilience
- Achieve an orderly and efficient transition to Net Zero
- Protect our natural endowments
- Integrate infrastructure, land use and service planning.

The Project would help the NSW Government meet these objectives and strategic directions.

2.1.6 Central Coast Regional Plan 2041 (NSW Department of Planning and Environment)

The Central Coast Regional Plan 2041 sets out a long-term vision to guide sustainable growth and development across the Central Coast, including Lake Munmorah. It aims to create a “15-minute region” where residents can easily access jobs, services, and recreation within their local communities. The plan focuses on enhancing liveability, productivity, and sustainability while preserving the region's unique natural assets.

The Regional Plan is developed around four principles:

- Growth: support a net zero emissions economy and foster employment growth, competitiveness and innovation
- Community: promote places to be together by weaving nature into our towns and cities which have welcoming and safe streets and public spaces
- Resilience: reduce risks associated with place-based shocks and stresses to improve the community's ability to withstand, recover from and adapt to changes and become more resilient
- Equity: ensure communities are safe and healthy with residents having opportunities for economic advancement, housing choices and a secure retirement

One of the key pillars of the plan is Sustainability, with Objective 3 stating the need to “*Transition to a low carbon economy and protect the natural environment.*” The plan supports NSW's commitment to net zero emissions by 2050, encouraging renewable energy projects and climate-resilient infrastructure.

The NSW Government's *Electricity Infrastructure Roadmap* identifies the Hunter-Central Coast as one of at least 5 renewable energy zone (REZ) in NSW. The development of the REZ will take advantage of existing transmission infrastructure, transport links, water resources and a skilled workforce.

The Project also aligns with Objective 1 by contributing to “*more jobs close to home,*” and Objective 7 by enhancing the resilience of Central Coast Council's energy network.

2.1.7 Central Coast Council Sustainability and Climate Action Plan 2022-2025

This strategy outlines the Central Coast Council's approach to sustainability and climate action, integrating environmental priorities with practical initiatives. In addition to promoting energy-efficient design and sustainable development, the strategy includes a focus area on renewable energy, which involves installing solar panels on council facilities to generate clean electricity.

The Project will support this initiative by providing a battery energy storage system that can store excess energy and supply it into the grid when required.

2.1.8 Central Coast Council Community Strategic Plan 2025-2035

The *Central Coast Community Strategic Plan 2025-2035* (Central Coast Council, June 2025) (CCCSP) sets out the strategies and actions for the development of the Central Coast Council's community. The vision of the CCCSP is *'Together we will strengthen and support our community, protect our environment, and create an inclusive, prosperous and accessible place to live, work and thrive, for today and future generations.'* The plan is centred around five frameworks: people, environment, place, economy and leadership.

Natural resource challenges are noted in this plan, including sustainable and reliable supply for water, energy and raw materials. The development of energy alternative sources is highlighted. The Project aligns with this as it supports the development of the renewable energy sector by providing grid scale energy storage.

2.2 Site setting

2.2.1 Regional context

The site is in the Central Coast LGA, which homes approximately 350,000 people (Central Coast Council, 2024). The site is located approximately 110km north of the Sydney CBD and 44km south of Newcastle. Figure 2 shows the location of the site in the regional context.



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FIGURE 2:
REGIONAL CONTEXT

Legend

- Site Boundary
- Parks, Forests and Reserves
- Waterbodies
- Motorway
- Main Road
- Local road
- Watercourse

Electricity Transmission Lines

- 132kv

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Coordinate Reference System:
GDA2020 MGA Zone 56

The main employment centres in the Central Coast LGA are health care and social assistance sectors.

Major transport routes include the Pacific Highway (A43), which borders the southern property boundary, and the M1 Pacific Motorway located approximately 10 km west, providing regional connectivity to Sydney and Newcastle.

The site is surrounded by educational facilities and residential areas. Directly north of the site is St Brendan's Catholic Church and school, to the west are educational facilities including Lake Munmorah Public School, Lake Munmorah High School and St Brigid's Catholic College. South of the site (across Pacific Highway) is predominantly residential areas including a 50s plus leisure learning centre and medical centre.

2.2.2 The site

The site (Lot 2 DP 1320899) is entirely owned by Ausgrid and zoned SP2 Electricity Transmission and Distribution under the Central Coast Council LEP. A map showing the zoning is provided in Figure 3.

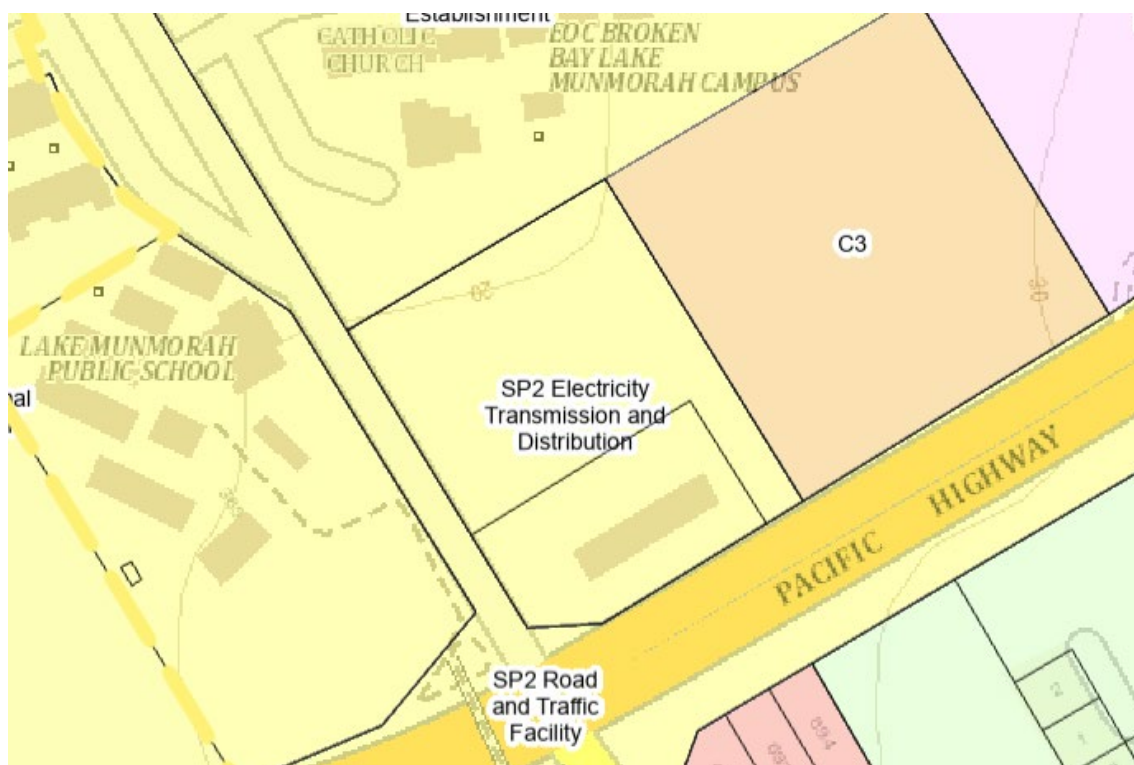


Figure 3: Land zoning map

The area within the site to be developed for the Project (Development Footprint/Project Area) is approximately 1.26 ha as the full lot size, the area to be developed for the BESS is approximately 1.1 ha, see Figure 1.

Primary access to the site is proposed via the Pacific Highway from an existing access point (Figure 9) and via Carters Road from an existing driveway (Figure 8). The driveway from Pacific Highway requires formalisation and sealing to be reinstated. The Lake Munmorah Zone Substation driveway off Carters Road would remain for substation operation only.

The proposed location of the Project has undergone previous ground disturbance, containing hardstand from the former substation yard (Figure 4) and a new paved carpark area (Figure 5). The site is relatively flat with some mature trees outside the disturbed areas.



Figure 4: Former substation yard



Figure 5: Carpark area utilised by surrounding neighbours

2.2.3 Surrounding land use

Educational Establishment (SP2): the site is surrounded by several educational establishments. These include public, Catholic and special-purpose schools.

- Lake Munmorah Public School
- Lake Munmorah High School
- St Brigid's Catholic College

- St Brendan's Catholic Primary School and Catholic Church
- St Brendan's Early Learning Centre
- TASK out of hours school care (within Lake Munmorah Public School).

Road and Traffic Facility (SP2): The site is adjacent to the Pacific Highway (bordering the southern property boundary), a major arterial route supporting regional connectivity and infrastructure access.

General Residential (R1) and Low Density Residential (R2): the closest residential zoned land is R2 Low Density Residential approximately 120m south of the site.

Environmental Management (C3): directly east of the site is a parcel of land zoned C3 Environmental Management, which consists of bushland and is intended to preserve the area's ecological and landscape values.

Public Recreation (RE1) and Private Recreation (RE2): to the southwest of the site is an area zoned RE1 containing the Lake Munmorah 50s Plus Leisure and Learning Centre. RE2 contains the residential area south of the site.

The closest residential area is Lake Munmorah (approximately 120m south) and is considered the primary residential receiver sensitive to the Project. The type and number of non-residential sensitive receivers located within 250m of the Project are presented in Table 2-1.

Table 2-1: Potential non-residential sensitive receivers

Type of receiver	No. of receivers within 250m
Educational / school	5
Church / place of worship	2
Public recreation	1

2.2.4 Land ownership and agreements

The Project is proposed on land owned by Ausgrid. There are no existing lease agreements on this site. Figure 3 shows land zoning surrounding the site.

The existing 132kV Lake Munmorah Zone Substation will remain on the same site and continue operation. The existing paved carpark area will remain onsite in a reconfigured capacity pending stakeholder engagement outcomes and construction site planning.

Ausgrid will also hold discussions with Central Coast Council in relation to strategic support from Ausgrid for local sustainability and social value opportunities as part of a Voluntary Planning Agreement. This would include initiatives that prioritise opportunities that align with both Council and Ausgrid's strategic priorities.

3 The Project

3.1 Project overview

The Project comprises a BESS facility that would store electricity from the grid and release it during periods of high demand as well as providing other ancillary services to the NEM.

Key features of the Project would include:

- Construction and operation of a BESS with a capacity of up to 100MW over a 4-hour duration (up to 400 MWh)
- Containerised battery units, inverters and medium voltage transformers
- Connection of the BESS to the Lake Munmorah Zone Substation via a 33 kV underground cable
- Combined control and switch room building
- Ring main units
- Warehouse and operation & maintenance building
- Auxiliary transformer
- Backup diesel generator
- Onsite carparking
- Ancillary infrastructure including internal access roads, laydown areas, stormwater management systems, security fencing, lighting and CCTV.

Further details regarding the Project are provided in the following sections of this scoping report. These details are subject to updates during the preparation of the EIS and the detailed design. Whilst the construction of the Project may be carried out in stages, the scoping report and EIS will consider and address the environmental impacts associated with the Project as a whole.

3.1.1 Battery storage technology and plant

The BESS technology provider is to be confirmed during the design development. However, it would consist of a series of containerised batteries. The integrated battery packs would be approximately 2.5 m tall and have a footprint of approximately 3.5 m by 7 m and would be arranged in a series of rows. The units would consist of the battery packs (battery cells, inverters and cooling systems), medium voltage (MV) transformers and associated connection and control systems. See Figure 6 and Figure 7 for a typical battery container and battery site.



Figure 6: Typical battery container



Figure 7: Typical BESS site

The battery units would be mounted on a compacted gravel or concrete slab.

The Project is intended to have an operational life of up to 50 years and may be replaced and/or upgraded within this timeframe. Should this not occur, components would be removed and re-purposed where possible. The land would be rehabilitated consistent with the surrounding area, and in accordance with legislative requirements to achieve predevelopment conditions as far as is reasonably practicable.

3.1.2 Underground cable connection

An underground 33kV cable is proposed to connect the Project to the Lake Munmorah Zone Substation. This is included within the site boundary. The design of this component will be subject to detailed design during the development of the EIS.

3.1.3 Vehicle access

The road network surrounding the site is designed for heavy haulage due to surrounding industrial land uses.

Primary access to the site is proposed via the Pacific Highway from an existing access point (Figure 9) and via Carters Road from an existing driveway (Figure 8). The driveway from Pacific Highway requires formalisation and sealing to be reinstated.

There are no changes to the existing driveway off Carters Road that currently services the Lake Munmorah Zone Substation.



Figure 8: Existing site access via Carters Road



Figure 9: Existing site access via Pacific Highway

Carters Road is a sealed, single lane, two-way Council owned road. Pacific Highway (A43) is a sealed, dual carriageway with a grassed central median, State-owned road.

3.1.4 Operational workforce and hours

Once constructed, the Project would operate 24 hours a day, seven days a week primarily as an unmanned facility. The BESS would typically be managed remotely and staffed as required during both planned and unplanned maintenance periods. It is anticipated that up to 5 PTE roles are required equating to 2 FTE.

Maintenance and operation activities include:

- Vegetation trimming to maintain electrical safety clearances and asset protection zones
- General landscape maintenance
- Access track maintenance
- Fence and gate maintenance and repairs
- Battery unit component replacement and testing.

3.2 Project construction

3.2.1 Construction overview

It is anticipated construction of the Project would occur from early 2028 to mid-2029. However, these dates are subject to change pending equipment lead times and availability. The construction duration may vary depending on weather conditions, technical parameters, environmental issues, availability of contractors and Ausgrid staff.

Some construction activities may require work on Sundays or during other out of hours periods due to electrical outage constraints.

Works that would generate audible noise at any sensitive receiver would be undertaken between 7am and 6pm Monday to Friday and 8am and 1pm on Saturday.

Construction works would likely involve:

- Installation of environmental controls including erosion and sediment controls and site fencing
- Setup of temporary site facilities including laydown areas
- Development of site access and internal access roads
- Earthworks to form the BESS pad and ancillary infrastructure areas
- Concrete works associated with equipment and building foundations
- Construction of permanent stormwater drainage network
- Structural works to support battery units
- Construction of supporting structures, e.g. permanent operations building and workshop area
- Delivery, installation and electrical fit-out of battery units and transformers
- Construction of the cable connection between the BESS and Lake Munmorah Zone Substation
- Installation of a backup diesel generator for use during operation in case of emergency
- Testing and commissioning activities
- Removal of construction equipment and rehabilitation of construction areas, including landscaping.

3.2.2 Construction plant and equipment

Table 3-1 provides an indicative list of the plant and equipment that would be used to construct the Project. The equipment list would be further refined during detailed design.

Table 3-1: Indicative plant and equipment for construction

Enabling works and prefabrication	
Front end loaders	Excavators
Dump trucks	Graders
Road trucks	Compactors
Water trucks	Light Vehicles
Structural, civil, mechanical and electrical works	
Front end loaders	Dump trucks
Road trucks	Excavators
Graders	Bobcats
Concrete trucks and pumps	Compactors and rollers
Elevated work platforms	Light Vehicles
Cranes	Backhoe
Concrete saws and grinders	Generators
Water trucks	
Commissioning	
Elevated work platforms	Generators
Cranes	Light Vehicles
Finishes and Demobilisation	
Water trucks	Backhoe
Compactors	Light Vehicles

3.3 Decommissioning

At the end of the Project's design life or agreed timetable, the batteries would either be disposed of and recycled at a suitably approved disposal facility, or subject to confirmation, be returned to the original equipment manufacturer for refurbishment and recycling. The site would be rehabilitated as required.

3.4 Estimated development cost

The total estimated EDC for the Project is anticipated to be greater than \$30 million. The EDC would be confirmed as part of preparation of the EIS.

3.5 Alternatives considered

Alternatives to the Project have been considered and these would continue to be developed to ensure requirements are met, and can avoid or minimise potential environmental, social and/or economic impacts. Following a constraints and opportunities analysis, the following alternatives have been considered:

- The “do nothing approach”
- Site location alternatives
- BESS technology and provider alternatives.

3.5.1 The “do nothing” approach

The ‘do nothing’ approach would involve not constructing and operating a BESS at the site. As discussed in section 2, the NEM requires firming and storage capability to store energy and meet electricity demand. Without the Project, the projected future increase in demand for energy storage may not be adequately addressed. Given the existing network capacity and adjacent land holdings, any comparable alternate network solution will likely come at higher cost and higher community and environmental impact than that proposed.

The ‘do nothing’ option would not meet the objectives of the Project (section 1.2) or the demands on the NEM (refer to section 2.1) and is therefore not considered a feasible option.

3.5.2 Site location

Ausgrid has completed a detailed site selection review, which included a rating for possible sites with a view of avoiding environmental and social impacts, as well as constructability constraints.

The sites that presented the least constraints are the sites that Ausgrid is looking to progress. This review of sites considered key selection parameters including siting of the BESS in proximity to the point of energy generation and distribution. By locating grid-scale storage on the distribution network closer to customers, Ausgrid will increase network resilience and support greater penetration of variable renewables.

The site was selected due to:

- Proximity to the electricity transmission network and high electricity demand centres
- Capacity of the transmission network to deliver electricity stored without constraint
- Availability of suitably zoned land with compatible existing land uses surrounding the site (refer to section 2.2.3)
- Minimal impacts on the environment, compared with developing at other sites
- Access for the delivery of heavy construction loads
- Availability of skilled construction and operational workforce.

3.5.3 BESS technology

Ausgrid is yet to complete a review and evaluation of the available solutions in the market to select a BESS Original Equipment Manufacturer (OEM). A detailed assessment of criteria will be undertaken including efficiency, system reliability, inverter readiness and integrator compatibility to provide a consolidated BESS solution.

The BESS technology chemistry is proposed to be Lithium Iron Phosphate.

The OEM and BESS technology will be determined during the design process.

3.6 Project benefits

The Project is expected to benefit the State and the local community. Some key benefits associated with the Project include:

- Improved network security and diversified energy generation and storage offering within NSW
- Alignment with Commonwealth and NSW policy (discussed in section 2.1)
- Support for increased renewable power generation during peak periods, placing downward pressure on wholesale electricity prices in accordance with the ISP (discussed in section 2.1.2)
- Expanding the role Distributed Network Service Providers play in energy transition by supporting the delivery of energy storage on the distribution network at a pace that is faster, lower cost, and has less impact on communities
- Creation of direct jobs during Project construction and operation phases
- Diversification of skills and employment which helps to promote growth and transition of the local community.

Batteries are becoming an integral part of the electricity market's response to the withdrawal of coal fired power stations from the market and are playing an important role in supporting increased levels of renewable generation while improving the strength of the network.

4 Statutory Context

4.1 Environmental Planning and Assessment Act 1979

4.1.1 Overview

The EP&A Act and EP&A Regulation provide the framework for land use planning and development control in NSW. The EP&A Act and the Regulation is supported by Environmental Planning Instruments (EPIs), which include State Environmental Planning Policies (SEPPs) and LEPs.

Part 4 of the EP&A Act establishes a framework for assessing development that requires consent and categorises development as either '*exempt development*', '*complying development*', '*development that requires consent*', or '*prohibited development*'. The term '*development*' is defined under section 1.5 of the EP&A Act.

4.1.2 Planning approval pathway

BESS projects are considered electricity storage projects defined as '*electricity generating works*' under the Transport and Infrastructure SEPP as a building or place used for the purpose of electricity storage. Section 2.36 of the Transport and Infrastructure SEPP states that development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed non-residential zone. The Project is located within the SP2 Electricity Transmission and Distribution zone under the Central Coast LEP, which is a prescribed non-residential zone under section 2.35 of the Transport and Infrastructure SEPP. On this basis, the Project is permissible with development consent.

Division 4.7 of the EP&A Act defines development that is SSD and notes that development can be declared as such by an EPI. Pursuant to the Planning Systems SEPP, '*electricity generating works*' are deemed to be SSD if they have an EDC of more than \$30 million. This Project will have an EDC more than \$30 million.

Section 4.12(8) of the EP&A Act states that a "*development application for State significant development is to be accompanied by an environmental impact statement prepared by or on behalf of the applicant in the form prescribed by the regulations*". Part 8, Division 2 of the EP&A Regulation sets out the requirements of an EIS and requires that the content of an EIS is '*subject to the environmental assessment requirements that relate to the EIS*'. Environmental assessment requirements are typically sought through a request for SEARs submitted to DPHI.

In line with section 4.5 of the EP&A Act, the consent authority for the Project would be the NSW Minister for Planning and Public Spaces or the Independent Planning Commission (IPC) (in the case of greater than 50 public objections to the application, local council objection, and/or reportable political donations made by the proponent in the two years prior to lodgement). As noted in section 4.40 of the EP&A Act, SSD applications are evaluated and determined in line with the requirements of section 4.15 of the EP&A Act. Matters for consideration include relevant EPIs, likely impacts to the built and natural environment and social and economic impacts, submissions made on the application, site suitability and the public interest. These matters will be duly considered and presented within the EIS.

Sections 4.41 and 4.42 of the EP&A Act identify authorisations that are not required for a SSD, and authorisations that cannot be refused, if necessary, for carrying out a SSD, respectively.

A summary of the approval requirements that may relate to the Project is provided in Table 4-1. These approvals, if required, cannot be refused if they are necessary for carrying out the SSD.

Table 4-1: Relevant approvals required under section 4.42 of EP&A Act

Approval	Comment
An aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i>	The Project would not involve aquaculture. Therefore, no aquaculture permit would be required
An approval under section 15 of the <i>Mine Subsidence Compensation Act 1961</i>	The Project is located within a mine subsidence district and underground coal mining area; therefore, an approval may be required and will be investigated during the EIS
A mining lease under the <i>Mining Act 1992</i>	The Project does not include any mining activities. A mining lease would not be required
A production lease under the <i>Petroleum (Onshore) Act 1991</i>	The Project would not involve petroleum production
An Environment Protection Licence (EPL) under Chapter 3 of the <i>Protection of the Environment Operations Act 1997</i> (for any of the purposes referred to in Section 43 of that Act)	A review of Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> (POEO Act) was conducted, and the Project would not include any scheduled activities. Consequently, an EPL is not required.
Consent under Section 138 of the <i>Roads Act 1993</i>	The site is located on Pacific Highway which is owned and managed by Transport for NSW. Carters Road is a local road, owned and managed by Central Coast Council. Primary access to the site is proposed via the Pacific Highway from an existing access point and via Carters Road from an existing driveway. The driveway from Pacific Highway requires formalisation and sealing to be reinstated. Approval under the Roads Act may be required and further assessed in the EIS.
A licence under the <i>Pipelines Act 1967</i>	No pipelines would be required for the Project and therefore a licence would not be required

The need for any other approvals would be addressed in the EIS.

4.2 Mandatory matters for consideration

4.2.1 State Environmental Planning Policies

4.2.1.1 State Environmental Planning Policy (Planning Systems) 2021

The Planning Systems SEPP applies to NSW. Chapter 2 of the Planning Systems SEPP relates to State and Regional development with the aim to identify development that is significant to the State. Part 2.2 of the Planning Systems SEPP relates to development that is declared SSD. Pursuant to section 2.6(1) of the Planning Systems SEPP, development is declared to be SSD for the purposes of the EP&A Act if:

- *The development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the [EP&A] Act, and*
- *The development is specified in Schedule 1 or 2 [of the Planning Systems SEPP].*

As discussed in Section 4.1.2, the Project is declared as SSD under section 2.6 of the Planning Systems SEPP. Furthermore, section 2.10 of this SEPP states that Development Control Plans (DCPs) do not apply to SSDs.

4.2.1.2 State Environmental Planning Policy (Biodiversity and Conservation) 2021

The chapters of *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (Biodiversity and Conservation SEPP) relevant to the Project, include:

- Chapter 2 Vegetation in non-rural areas
- Chapter 3 Koala habitat protection 2020
- Chapter 4 Koala habitat protection 2021.

Chapter 2 Vegetation in non-rural areas

The aims of Chapter 2 are the protection of the biodiversity values of trees and other vegetation in non-rural areas of the State and the preservation of the amenity of non-rural areas of the State through preserving trees and other vegetation.

The Biodiversity and Conservation SEPP applies to the Central Coast LGA and land use zones contained under section 2.3, which includes land zoned SP2.

Section 2.6(1) states that ‘a person must not clear vegetation in any non-rural area of the State to which Part 2.3 applies without the authority conferred by a permit granted by the council’. In addition, section 2.6(2) further states that ‘a person must not clear native vegetation in any non-rural area of the State that exceeds the biodiversity offset scheme threshold without the authority conferred by an approval of the Native Vegetation Panel under Part 2.4.’

Part 2.3 of the Biodiversity and Conservation SEPP applies to vegetation in any non-rural area of the State that is declared by a development control plan to be vegetation to which [Part 2.3] applies. As the Project constitutes SSD the development control plan does not apply. The requirement to consider vegetation under the Central Coast Council DCP is not applicable.

However, an investigation will be undertaken with the BAM and a BDAR will be prepared as part of the EIS as outlined in section 4.3.6.

Chapter 3 Koala habitat protection 2020

The aim of Chapter 3 is to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of population decline. This Chapter of the SEPP applies only to land zoned ‘RU1 Primary Production’, ‘RU2 Rural Landscape’ and ‘RU3 Forestry’, within LGAs specified in Schedule 2 of Chapter 4. The site is zoned SP2 Electricity Transmission and Distribution, as such, the provisions of this chapter do not apply to the Project.

Chapter 4 Koala habitat protection 2021

The aim of Chapter 4 is to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline. Chapter 4 applies to the LGAs listed in Schedule 2, which includes Central Coast Council.

The NSW government has created koala management areas (KMAs). The KMA applicable to the Project (Sydney region) is the *Central Coast Koala Management Area*. As an approved koala management plan is in place, reference is made to section 4.8 of this policy, which provides guidance regarding the “*development assessment process – approved koala plan of management for land*”.

Of interest to this Project is section 4.8(2), which states:

(2) the council's determination of the development application must be consistent with the approved koala plan of management that applies to the land.

The consent authority for the purpose of SSD is the Minister for Planning and Public Spaces or the Independent Planning Commission. When considering the application of Chapter 4 of this policy, section 4.8(2) refers to “Council’s determination”. However, as the Minister for Planning and Public Spaces is the relevant consent authority, section 4.8 infers that SSD is exempt from the application of Chapter 4 of the Biodiversity and Conservation SEPP.

Notwithstanding the above, any impacts to koalas and potential habitat species would be considered in accordance with the requirements of the *Biodiversity Conservation Act 2016* (BC Act); with the outcomes addressed in the EIS and supported through the production of a BDAR.

4.2.1.3 State Environmental Planning Policy (Resilience and Hazards) 2021

The objective of this SEPP is to provide state-wide planning approach to resilience and hazards. The chapters of Resilience and Hazard SEPP relevant to the Project include:

- Chapter 3: Hazardous and offensive development
- Chapter 4: Remediation of Land.

Chapter 3 Hazardous and offensive development

The aim of this chapter is to ensure that, in considering any development application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact (among others).

Part 3 under Chapter 3 of the Resilience and Hazards SEPP applies to industrial developments that are considered “*potentially hazardous or offensive industry*”. The definition of a potentially hazardous industry and potentially offensive industry is provided in section 3.2 of the Resilience and Hazards SEPP.

Development that constitutes a potentially hazardous industry must be accompanied by a Preliminary Hazard Analysis (PHA). For completeness, section 3.12 sets out the matters that the consent authority must consider including:

- “(a) current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development, and*
- (b) whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply, and*
- (c) in the case of development for the purpose of a potentially hazardous industry—a preliminary hazard analysis prepared by or on behalf of the applicant, and*
- (d) any feasible alternatives to the carrying out of the development and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location the subject of the application), and*
- (e) any likely future use of the land surrounding the development.”*

For development proposals classified as ‘*potentially hazardous industry*’ the SEPP (and DPHI’s *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* (January 2011)) establish a test by way of a preliminary screening assessment and PHA to determine the risk to people, property and the environment. The EIS would include an assessment of the

potential hazards and risks of the Project in accordance with the requirements of the Resilience and Hazards SEPP.

Chapter 4 Remediation of land

The aim of this Chapter is to provide a state-wide planning approach to the remediation of contaminated land, where the purpose of remediation of contaminated land is to reduce the risk of harm to human health or any other aspect of the environment. Pursuant to section 4.6(1), “a consent authority must not consent to the carrying out of any development on land unless-

(a) it has considered whether the land is contaminated, and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.”

Furthermore section 4.6(2) states that “before determining an application for consent to carry out development that would involve a change of use on any of the land specified under subsection (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land guidelines.”

The EIS will consider contamination risks and mitigation measures for managing any potential contaminated material that may be encountered during construction (but which would not preclude the intended land use).

4.2.1.4 State Environmental Planning Policy (Transport and Infrastructure) 2021

The aim of Chapter 2 of the Transport and Infrastructure SEPP is to facilitate the effective delivery of infrastructure across the State. The site is zoned SP2 Electricity Transmission under the Central Coast LEP. This land use zone is defined as a ‘prescribed non-residential zone’ for the purpose of electricity generating works. Under section 2.36 of the Transport and Infrastructure SEPP, the Project is considered permissible with consent at the site.

Section 2.48 of this policy relates to determination of development applications that are likely to affect an electricity transmission or distribution network. Specifically, section 2.48(1) states that “this section applies to a development application... for development comprising or involving any of the following:

(a) The penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,

(b) Development carried out – (a) within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or (b) immediately adjacent to an electricity substation, or (c) within 5m of an exposed overhead electricity power line.

(c) [not relevant]

(d) Development involving or requiring the placement of power lines underground, unless an agreement with respect to the placement underground of power lines is in force between the electricity supply authority and the council for the land concerned.”

Before determining an application to which section 2.48 relates, the consent authority must:

(a) Give written notice to the electricity supply authority for the area in which the development is to be carried out, inviting comments about potential safety risks, and

(b) Take into consideration any response to the notice that is received within 21 days after the notice is given.

The Project is located on property owned by Ausgrid and connect to the Lake Munmorah Zone Substation; no easement or leases are required.

Section 2.119 of the Transport and Infrastructure SEPP relates to development in or adjacent to road corridors and road reservations. The objectives of this section are to ensure that development near classified roads does not interfere with their operation, safety, or efficiency, while also minimising the impact of traffic noise and vehicle emissions on adjacent land uses. Before granting consent for development fronting a classified road, the consent authority must ensure:

- Vehicle access is provided via an alternative road where practicable and safe
- The design and operation of the development do not negatively impact the safety, efficiency, or function of the classified road
- The development is not sensitive to traffic noise and emissions or incorporates measures to mitigate potential impacts.

Details on the surrounding road network and vehicle access are provided in section 3.1.3. The impacts will be further assessed in the EIS.

4.2.1.4 State Environmental Planning Policy (Sustainable Buildings) 2022

The aims of this SEPP are as follows:

- (a) to encourage the design and delivery of sustainable buildings*
- (b) to ensure consistent assessment of the sustainability of buildings*
- (c) to record accurate data about the sustainability of buildings, to enable improvements to be monitored*
- (d) to monitor the embodied emissions of materials used in construction of buildings*
- (e) to minimise the consumption of energy*
- (f) to reduce greenhouse gas emissions*
- (g) to minimise the consumption of mains-supplied potable water*
- (h) to ensure good thermal performance of buildings.*

Chapter 3 of the *State Environmental Planning Policy (Sustainable Buildings) 2022* (Sustainable Buildings SEPP) provides standards for non-residential development and requires the consent authority to consider sustainability measures. Key considerations include minimising construction waste, improving energy efficiency, incorporating passive design, enabling renewable energy generation and storage, monitoring energy use and reducing potable water consumption. Furthermore section 3.2 (2) indicates that development consent must not be granted unless the consent authority is satisfied the embodied emissions relating to the development have been quantified.

As part of the EIS, an assessment will be undertaken on the embodied carbon of the Project.

4.2.2 Central Coast Local Environmental Plan 2012

The Project is zoned SP2 Electricity Transmission and Distribution. The objectives of this land use zone as stated in the LEP are:

- To provide for infrastructure and related uses
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

The following development standards and local provisions under the LEP have been considered and provided in Table 4-2.

Table 4-2: LEP provisions

LEP Provision	Compliance
Section 4.3 Height of buildings	The site does not have a maximum building height under the LEP. As such, this principal development standard does not apply to the Project.
Section 4.4 Floor space ratio	The site does not have a floor space ratio under the LEP. As such, this principal development standard does not apply to the Project.
Section 5.10 Heritage conservation	The site is not mapped under the LEP to contain any objects, items or sites of heritage significance.
Section 5.21 Flood planning	The site is not mapped under the LEP to be impacted by flood planning; however, the EIS will consider flooding and water with regards to the Project.
Section 6.1 Acid sulfate soils	The site is not mapped under the LEP to be impacted by acid sulfate soils; however, the EIS will consider the potential of soils and contamination.

4.3 Other relevant NSW legislation

4.3.1 Aboriginal Land Rights Act 1983

The *Aboriginal Land Rights Act 1983* (ALR Act) was established to provide land rights to Aboriginal persons, as well as provide for representative Aboriginal Land Councils to vest land in those Councils. The ALR Act, is administered by the NSW Department of Aboriginal Affairs and establishes a compensatory regime, which recognises that land is of spiritual, social, cultural and economic importance to Aboriginal people. The ALR Act established the NSW Aboriginal Land Council (NSWALC) and a network of over 120 Local Aboriginal Land Councils (LALCs) and requires these bodies to:

- *Take action to protect the culture and heritage of Aboriginal persons in the LALC's area, subject to any other law*
- *Promote awareness in the community of the culture and heritage of Aboriginal persons in the LALC's area.*

LALCs constituted under the ALR Act can make claims in respect of 'claimable Crown Land'. The Registrar of the ALR Act must maintain the Register of Aboriginal Land Claims under section 166 of the ALR Act. All land claims that have been made under the ALR Act are recorded in the Register. The site is owned by Ausgrid and is not Crown Land. There was a previous land claim made on the site that was determined by the Attorney General of NSW to not exist. Refer to Figure 10 from Native Title Vision with the current listing.

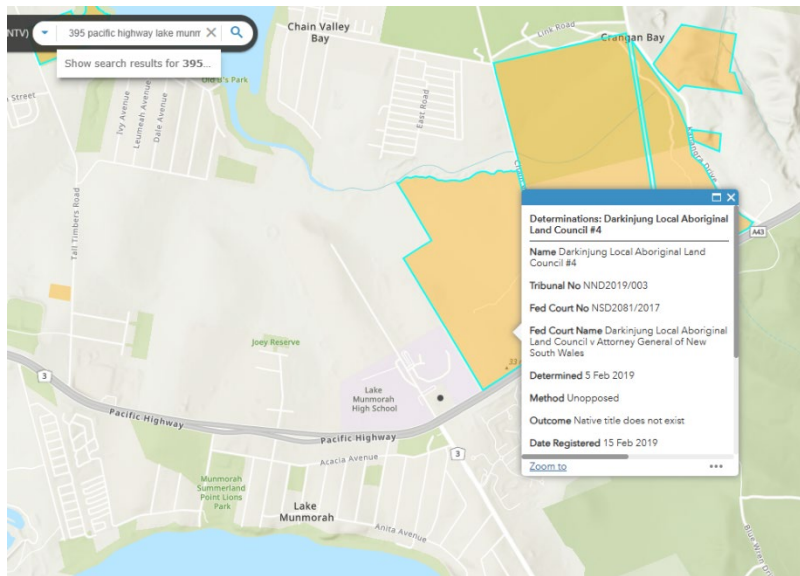


Figure 10: Native Title Vision extract – Lake Munmorah

4.3.2 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by DCCEE NSW, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act gives the Chief Executive responsibility for the proper care, preservation and protection of 'Aboriginal objects' and 'Aboriginal places' defined as:

- An *Aboriginal object* is any deposit, object or material evidence (that is not a handicraft made for sale) relating to Aboriginal habitation of the area that compromises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains)
- An *Aboriginal place* is a place so declared by the Ministers under section 84 of the NPW Act because in the opinion of the Minister, the place is or was of special significance with respect to Aboriginal culture. It may or may not contain Aboriginal objects.

An Aboriginal Heritage Impact Permit (AHIP) is required under section 90 of the NPW Act before harming or desecrating an Aboriginal object otherwise such action is an offence under the NPW Act. Despite this, under section 4.41 of the EP&A Act, an AHIP is not required for SSD. Instead, potential impacts to Aboriginal heritage are managed under Aboriginal Cultural Heritage Assessment Reports (ACHARs). An Aboriginal due diligence assessment has been completed for the Project, with the results summarised in section 6.5. An ACHAR will be prepared for the EIS.

4.3.3 Water Management Act 2000

The *Water Management Act 2000* (WM Act) establishes a framework for managing water in NSW. Section 91 of the WM Act discusses activity approvals and notes there are two types of approvals, controlled activity approvals and aquifer interference approvals.

The WM Act specifies certain activities as controlled activities when carried out on waterfront land. This is defined as within 40 m of the banks of a river, lake or estuary (or are prescribed by the regulations). Despite this, a controlled activity approval for this Project would not be required by section 4.41 of the EP&A Act. This section of the EP&A Act specifies certain approvals that are not required for SSD, including an activity approval under section 91 of the WM Act. This section of the EP&A Act however does not remove the requirement for obtaining an aquifer interference approval. Separate exemptions under the *Water Management (General) Regulation 2018* may apply for an aquifer interference approval or water access licence.

The impacts of the Project to surface water, water quality and flooding would be assessed as part of the EIS.

4.3.4 Protection of the Environment Operations Act 1997

The objectives of the POEO Act include to rationalise, simplify and strengthen the regulatory framework for environment protection. Chapter 3 of the POEO Act outlines the specific circumstances under which an EPL must be obtained.

Schedule 1 of the POEO Act provides a list of activities for which an EPL would be required. Clause 17 of Schedule 1 lists general electricity works as a scheduled activity where they exceed the capacity to generate 30MW. The Project does not involve the generation of electricity, but stores and releases electricity that has been generated elsewhere. Therefore, an EPL is not required for the Project.

4.3.5 Contaminated Land Management Act 1997

The *Contaminated Land Management Act 1997* (CLM Act) general objective is to establish a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated enough to require regulation under Division 2 of Part 3 of the CLM Act. A search of the NSW EPA contaminated land database (26 November 2025) confirmed the site is not listed as a notified contaminated site under the CLM Act and there are no sites in Lake Munmorah with notices in place. Further assessment will be undertaken in the EIS.

Section 60 of the CLM Act also includes a 'duty to notify' where significant contamination is identified. This section would be relevant if any previously unidentified contamination is encountered that exceeds notification thresholds.

4.3.6 Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Conservation Act 2016* (BC Act) is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development (as described in section 6(2) of the *Protection of the Environment Administration Act 1991*).

Section 7.9(2) of the BC Act states that a development application for SSD is to be accompanied by a BDAR (as defined under section 7.1 of the BC Act), unless both the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.

It is not anticipated that the Project would result in significant impacts to biodiversity, however impacts would be confirmed in a BDAR as part of the EIS.

4.3.7 Roads Act 1993

The *Roads Act 1993* (Roads Act) confers certain functions (in particular, carrying out road work) on Transport for NSW (TfNSW) and other roads authorities. Section 7 of the Roads Act defines the respective road authorities depending on the classification of the road. Of relevance to this Project is Pacific Highway and Carters Road.

Section 138 of the Roads Act relates to works and structures, *whereby a person must not erect a structure or carry out work in, on or over a public road... otherwise than with the consent of the appropriate road's authority*. The Project may require works within road reserve areas. As such, that approval under section 138 of the Roads Act may be required.

4.3.8 Heritage Act 1977

The *Heritage Act 1977* (NSW) aims, to promote an understanding of heritage, encourage conservation and provide for protection of NSW State heritage. State and/or local heritage significance can relate to historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values of a place, building, work, relic, moveable object or precinct. No heritage items were identified under the NSW State Heritage Register or Central Coast Council LEP on the site.

4.4 Commonwealth legislation

4.4.1 Airports Act 1996 and Airports (Protection of Airspace) Regulations 1996

The *Airports Act 1996* (Airports Act) and the *Airports (Protection of Airspace) Regulation 1996* (Airports Regulation) establish a framework for the protection of airspace at and around airports. Warnervale airport is approximately 19km southwest of the site, however this airport does not meet the definition of ‘airports’ to which Part 12 of the Airport Act applies.

However, the Project would involve the potential use of temporary cranes during construction. Guidance related to the operation of cranes and tall structures in the vicinity of airports and airfields is provided by the Civil Aviation Safety Authority (CASA), pursuant to AC 139.E-01v1.0 – CASA Advisory Circular – Reporting of Tall Structures (Advisory Circular), 2021. Due to the risk posed by tall structures to low flying aircraft the RAAF and Airservices Australia need to be informed of any tall structures more than 30 m from ground level within 30 km of an aerodrome or structures more than 45m elsewhere. As the site is located within 30 km of Warnervale airport, the requirements of the Advisory Circular will be applicable.

Ausgrid will consult with the RAAF and Airservices Australia with respect to the potential impact that may result from the use of cranes during construction.

4.4.2 Environment Protection and Biodiversity Conservation Act 1999

Section 18 of the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) requires a proponent of a development or action to obtain approval from the Commonwealth Minister for the Environment and Water when undertaking an activity which is likely to cause a significant impact to a Matter of National Environmental Significance (MNES). MNES include threatened species or ecological communities listed under the EPBC Act.

If the Project is likely to result in a significant impact on a MNES, referral to the Minister would be required to determine whether the Project is a controlled action or can be undertaken in a manner to mitigate potential impacts. If the Project constitutes a controlled action, the activity will be subject to further assessment before a determination is made by the Minister regarding whether the action can be carried out, subject to conditions.

A search of the EPBC Act Protected Matters Search Tool (PMST) was undertaken on 26 November 2025 for the site with a 10km buffer. The results of the PMST for the site are provided in Table 4-3 and included in Appendix B.

Table 4-3: MNES with 10km buffer from the site

MNES	MNES with 10km buffer
World Heritage Properties	None
National Heritage Places	None
Wetlands of International Importance	None
Great Barrier Reef Marine Park	None
Commonwealth Marine Area	1
Listed Threatened Ecological Communities	5
Listed Threatened Species	107
Listed Migratory Species	79

The Project does not meet the requirements for referral under the EPBC Act as it is not expected to result in significant impacts to MNES. The PMST identified the presence of a commonwealth marine area, threatened ecological communities and species, and migratory species within the broader area. However, the site itself is disturbed reducing the likelihood of significant habitat value. This will be assessed further in the EIS and as part of the BDAR.

4.4.3 Native Title Act 1993

The *Native Title Act 1993* (NT Act) provides for the recognition and protection of native title for Aboriginal peoples and Torres Strait Islanders. The NT Act recognises native title for land over which native title has not been extinguished and where persons are able to establish continuous use, occupation or other classes of behaviour and actions consistent with a traditional cultural possession of those lands. The NT Act also makes provision for Indigenous Land Use Agreements (ILUA) to be formed, as well as a framework for notifying native title stakeholders for certain future acts on land where native title has not been extinguished.

A search of the National Native Title Tribunal Register was undertaken on 5 May 2025 using the National Native Title Tribunal online system. The search returned no active claims associated with the site. Refer to section 4.3.1 regarding a historic claim. No native title rights will be impacted by the Project.

5 Engagement

This section of the Scoping Report describes the engagement activities carried out to inform the scoping phase of this Project.

5.1 Introduction

A Community and Stakeholder Engagement Plan (CSEP) was developed to guide the engagement approach for this Project. The full CSEP is in Appendix C.

The CSEP is intended to guide Ausgrid, and associated representatives and contractors, with engagement to inform community and stakeholders impacted by or interested in the Project.

Specifically, the engagement activities outlined in the CSEP support the following Project phases:

- Preparation of the Scoping Report (request for Secretary's Environmental Assessment Requirements (SEARs) – **outcomes outlined in this section**)
- Preparation of the Environmental Impact Statement (EIS)
- All project milestones, including throughout construction and operation.

5.2 Engagement approach

Ausgrid seeks to establish and maintain authentic relationships with the community and interested stakeholders through consultation and effective communications from an early stage of the Project. This is to ensure the community is meaningfully included during the project lifecycle.

Ausgrid's engagement approach has been tailored to meet the needs and expectations of the community and stakeholder groups, ensuring all individuals are treated with the same high level of respect.

Ausgrid will provide updates to the local community and stakeholders at key milestones throughout planning, construction and operation, with the aim to demonstrate commitment to transparency and accountability. Ausgrid will continue to communicate openly, actively solicit feedback from the community, and foster collaborative relationships with local stakeholders.

Engagement activities to inform the scoping phase of Lake Munmorah BESS were undertaken between November 2025 and March 2026. Activities were designed to introduce the Project to nearby landowners, the local council and Members of Parliament. Engagement was targeted to these stakeholders to ensure those who are potentially affected by the Project were engaged from the beginning.

The engagement approach was adapted from the International Association of Public Participation's Public Participation spectrum. The engagement objectives during scoping aligned with the goals of **informing** and **consulting** with stakeholders.

Table 5-1-1: IAP2 Spectrum

	Inform	Consult	Involve	Collaborate	Empower
Public participation goal	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/ or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
Promise to the public	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

This engagement methodology and its outcomes were also informed by and are consistent with the NSW Department of Planning, Housing, and Infrastructure (DPHI's) State Significant Development Guidelines – Preparing a Scoping Report and the Undertaking Engagement Guidelines for State Significant Projects.

The engagement approach ensured:

- Adjoining landholders, stakeholders and local communities were provided with timely and relevant information about the Project, in plain English, and have opportunity to provide feedback.
- Communication to and from landholders and other community stakeholders was adequately documented.
- All interested stakeholders were provided with a responsive point of contact for any enquiries, complaints, or suggestions.
- Stakeholders with potential interest in the Project were identified and provided with consistent messages and opportunity to be heard.
- Minimal disruption to landholders, other impacted stakeholders, and the wider community.

- Engagement activities supported the broader Program to meet planning approval requirements and secure the required approvals from regulators and decision makers in a timely manner.

Ausgrid will continue to implement these engagement objectives throughout the lifecycle of the project.

5.3 Stakeholder analysis

As outlined in *Undertaking Engagement Guidelines for State Significant Projects*, DPHI defines stakeholders as community, relevant agencies, landowners and land users and stakeholders involved in prospective resource developments.

The consultation activities highlighted in Table 5-2 have been delivered to introduce stakeholders and community to the Project and provide the opportunity to answer questions and understand key concerns.

5.3.1 Surrounding community identification

The nearest residences are approximately 120 metres south of the project site, separated by the Pacific Highway. This distance, combined with the physical barrier created by the highway, has informed our approach to early engagement.

Initial scoping activities have prioritised key stakeholders, including schools along Carters Road, local Members of Parliament, and Council representatives.

Following submission of the Scoping Report and commencement of early technical studies, Ausgrid will undertake more detailed consultation with the broader community to inform the EIS.

5.4 Engagement activities

This section summarises the engagement activities undertaken to inform the Scoping Report. Feedback shared has been summarised in section 5.6.

Table 5-2: Scoping Report – stakeholder analysis and consultation activities

Stakeholder	Date	Details
Close neighbours (within 300m)		
Education - St Brendan's Catholic Primary School - St Brigid's Catholic College	14 November 2025	Direct letter – invitation to project briefing
	28 November 2025	Project briefing – online
- Lake Munmorah High School - Lake Munmorah Public School	14 November 2025	Direct letter – invitation to project briefing
	5 December 2025	Project briefing – face to face (Lake Munmorah Public School unable to attend; information conveyed by Lake Munmorah High School)
Surrounding community (within 1.5km)		
- Manning Park Public School - Gwandalan Public School	5 December 2025	Project briefing – face to face

Stakeholder	Date	Details
Members of Parliament		
State MP Yasmin Catley (Member for Swansea)	14 November 2025	Letter issued – invitation to attend project briefing
	6 March 2026	Project briefing – online
Federal MP Pat Conroy (Member for Shortland)	14 November 2025	Direct letter – invitation to attend project briefing
	13 February 2026	Project briefing – online
Local Government		
Central Coast Council - Mr David Farmer (CEO) - Mr Luke Nicholls (Director Environment and Planning) - Councillors (Budgewoi Ward) - Cr Helen Crowley - Cr Doug Eaton OAM - Cr John Mouland (Deputy Mayor)	17 November 2025	Direct letter – project introduction and request for meeting
	24 February 2026	Pre-DA meeting held with Council staff to provide project overview
First Nations stakeholders		
Darkinjung Local Aboriginal Land Council (LALC)	Ongoing	Ausgrid has an ongoing relationship with Darkinjung LALC and will keep them informed and involved throughout the project lifecycle.

5.5 Early engagement – feedback received

5.5.1 Key themes

This section summarises the feedback received during engagement to inform Scoping.

General sentiment

Based on early engagement, sentiment is mixed and interest is high. There is a general understanding of, and support for, the purpose of the Project. This is balanced with a desire to ensure that potential impacts on the nearby school community are carefully considered.

The main issues raised related to traffic, emergency access, and safety and hazards. These have been outlined in more detail below.

Stakeholders appreciated early engagement and recognised the importance of sharing information at the feasibility stage. Questions were constructive and there was a willingness to continue dialogue, particularly when early results from technical studies are available during the EIS preparation.

Engagement will be ongoing with these stakeholders to ensure their feedback is incorporated into Project design and proposed mitigations as much as possible.

Traffic

All schools consulted raised traffic concerns, particularly on Carters Road during school hours. It was noted that the schools currently stagger their start and end times to account for the increased traffic on Carters Road.

The schools requested that, during construction, the Project avoids truck movements during school drop-off or pick-up hours, and schedules high impact works during school holidays.

Local MPs provided feedback that the Carters Road and Pacific Highway intersection is very busy and there are often delays, so the Project should avoid increasing these delays or exacerbating existing traffic issues.

Stakeholders also discussed previous proposals to construct an alternate access road that connects with Carters Road, either to the east or west, given the significant traffic constraints in the area.

There is a paved carpark north of the Lake Munmorah Zone Substation, accessed via Carters Road. Local schools, MPs, and Central Coast Council indicated their preference for this parking area to remain. The existing paved carpark area will remain onsite in a reconfigured capacity pending stakeholder engagement outcomes and construction site planning.

Emergency access

Nearby schools raised emergency access as a potential issue, noting the land in the area is classed as bushfire prone. If a bushfire were to impact the Project, there was some concern about emergency evacuation routes given the location of the Project at the Carters Road and Pacific Highway intersection.

The schools noted that they hold coordinated emergency drills, and any risk from the Project would need to be factored into their emergency planning.

The schools also provided feedback that one of their emergency egress routes passes to the east of the existing substation, and this may be inaccessible if the Project is involved in an emergency.

Safety and hazards

The fire risk of lithium-ion batteries was raised during early engagement, with some stakeholders discussing recent media reports of fires caused by household appliances or e-scooters. These stakeholders also acknowledged the relatively low quality of batteries involved in household fires.

Potential health risks from a BESS were also raised during early engagement, both in the event of a fire and during normal operation.

This involved questions about electromagnetic fields (EMF) and the health impacts of increased EMF in the area. Information was shared with these stakeholders about EMF levels at the existing Lake Munmorah substation and future levels with a BESS at the site remaining well below internationally accepted standards.

There were also more general questions about potential risks of living or working near a BESS, including fire risk and associated air quality risks. Information about BESS fire detection and suppression systems was shared with these stakeholders, along with an overview of the technical assessments that will be conducted as part of the EIS to assess these risks.

Stakeholders asked whether the Project would consult with the Rural Fire Service (RFS), and it was confirmed that both RFS and Fire and Rescue NSW would be closely consulted during Project development.

Stakeholders also recommended that Ausgrid engage with the Coal Ash Health Community Advisory Committee and Future Sooner, a local technical group. These groups will be included in future engagement.

5.6 Revised consultation approach, based on feedback to date

The Community and Stakeholder Engagement Plan (CSEP) (Appendix C) outlines the engagement approach for the Project across three phases:

- Preparation of the Scoping Report (request for Secretary's Environmental Assessment Requirements (SEARs))
- Preparation of the Environmental Impact Statement (EIS)
- All project milestones, including throughout construction and operation.

A monitoring and evaluation process is integrated into Ausgrid's engagement principles and is included in the CSEP.

Following initial engagement activities, some revisions have been made to the engagement strategy for the EIS preparation:

1. Additional communications will be employed to follow up with the community and stakeholders after engagement throughout early 2026.
 - Engagement to inform the Scoping Report was targeted at sensitive receivers, Central Coast Council, elected officials and Darkinjung LALC. EIS engagement will include the broader residential and business community.
 - A dedicated project website will be created to include detail on the project and information about opportunities to engage.
 - There will be more opportunities to brief Central Coast Council as the Project progresses.
 - Engagement with Darkinjung LALC and other First Nations stakeholders will continue throughout planning, construction and operation.
2. Ausgrid will continue to provide information on the dedicated webpage and offer multiple ways for feedback, including:
 - The dedicated project email address and phone number will remain live and active.
 - In-person pop-up information sessions/ briefings will be held during EIS engagement.
 - A community survey will be conducted.
3. The monitoring and evaluation of engagement activities will be assessed against key metrics, including engagement reach and the effectiveness in capturing feedback. Adjustments will be made as necessary.

Aligned with objectives within the CSEP, the next phase aims continue to:

- Build awareness and understanding of the Project and its benefits alongside broader business commitments with key stakeholders.
- Provide updates on the Project scope (including draft design), timing and potential impacts clearly to potentially affected stakeholders.
- Facilitate a robust engagement process to meet requirements for planning approval.

- Mitigate reputational risk, through timely, clear and transparent communications and engagement.

The engagement plan for the Project is outlined below in 5.6.3.

5.6.1 Agency Consultation

Agency consultation will be undertaken with the relevant stakeholder groups identified in the SEARs (once realised). Details of the engagement, and the outcomes of the consultation, will be submitted to DPHI as part of the EIS.

5.6.2 Proposed future newsletter distribution



Figure 11: Community catchment area

5.6.3 EIS Community engagement plan

Table 5-3: Community engagement plan

Timing	Activity and Engagement Methods	Purpose	Target audience
To inform EIS			
Mid 2026	Stakeholder contact: letters, emails, in-person/virtual meetings, phone call	• Provide project update, answer questions, outline EIS process and potential impacts, understand concerns and potential mitigations, offer meeting with Project team.	• Sensitive receivers • Elected officials • Central Coast Council • Darkinjung LALC

Timing	Activity and Engagement Methods	Purpose	Target audience
	Community update: newsletter, email to database, dedicated phone / email	Provide project update, answer questions, outline EIS process and potential impacts, promote upcoming engagement opportunities and survey	- Surrounding residential community - Neighbouring businesses
	Community pop-up: FAQs, factsheets, information boards, feedback forms (hard copy and online), community survey	Inform about project, potential impacts and SSDA pathway; understand community values, priorities, concerns, risks and mitigations; capture feedback; encourage sign up to mailing list	- Surrounding residential community - Local businesses
	Webpage update: website, factsheet, digital advertising	- Provide project update - Publish survey	- Local community - Other interested stakeholders
Late 2026	Stakeholder contact: letters, emails, in-person/virtual meetings, phone call	Provide project update, answer questions, share EIS technical assessment findings, understand concerns and potential mitigations.	- Sensitive receivers - Elected officials - Central Coast Council - Darkinjung LALC
	Community update: newsletter, email to database, dedicated phone / email	Provide project update, outline results of EIS assessments, overview key feedback and how it shaped the project, outline next steps	- Surrounding residential community - Neighbouring businesses
	Webpage update: website, factsheet, digital advertising	Provide project update	- Local community - Other interested stakeholders
To inform public exhibition			
Upon exhibition start	Stakeholder letter	Announce EIS exhibition period, invite feedback via Planning Portal, offer briefings or meetings	All stakeholders that have had meetings to date
	Community update: website content, direct community email (to database)	Announce EIS exhibition period, invite feedback via Planning Portal	- Local community - Other interested stakeholders
Upon determination	Stakeholder letter	Summarise feedback and engagement to date, thank contributors, outline how feedback has been used and next steps	All stakeholders that have had meetings to date

Timing	Activity and Engagement Methods	Purpose	Target audience
	Webpage and community update: website update, newsletter, community email	Summarise engagement activities, key themes and outcomes, outline how feedback was used and next steps	- Surrounding residential community - Neighbouring businesses
Ongoing engagement – throughout construction and operation Ausgrid will continue to engage with the community post EIS approval. This will include regular updates, information about construction and detailed enquiry and complaints protocols. At this time, the CSEP will be updated to include an engagement methodology and approach to frequency of communication.			

6 Proposed assessment of impacts

6.1 Introduction

The identification of issues to be addressed in the EIS has been undertaken through a risk-based approach in accordance with the *State significant development guidelines – preparing a scoping report* (DPIE, 2022). This process involved reviewing previous reports, undertaking targeted investigations including site inspections, and desktop searches of relevant environmental databases in to identify key issues and sensitive areas. A summary of the key environmental matters identified during the risk assessment is provided in this section with a scoping summary table in Appendix A.

The below sections demonstrate the proponent's understanding of environmental matters and the need for further assessment. These will be further assessed in the EIS.

6.2 Biodiversity

6.2.1 Existing environment

The site is generally disturbed due to historic construction of the Lake Munmorah Zone Substation and the asphalt carpark area. The ground contains landscaped areas around the substation buildings, patches of grassed land and some mature trees on the central western boundary and the eastern boundary.

There are records of the threatened plant *Tetratheca juncea* and *Angophora inopina* in the nearby vegetated areas to the east and west of the site. Additionally, there are records of the threatened frog *Crinia tinulla* in the swampland areas to the east of the site. This frog species is associated with still waterbodies located in acid swamplands, wallum heaths, open vegetation on sand plains, and flooded areas of swamp forests. It is unlikely this habitat remains on the site due to the historic disturbance.

Refer to Figure 12 for an extract of the Biodiversity Values Map, indicating higher biodiversity values in those areas directly to the east of the site and across Carters Road (shaded purple).

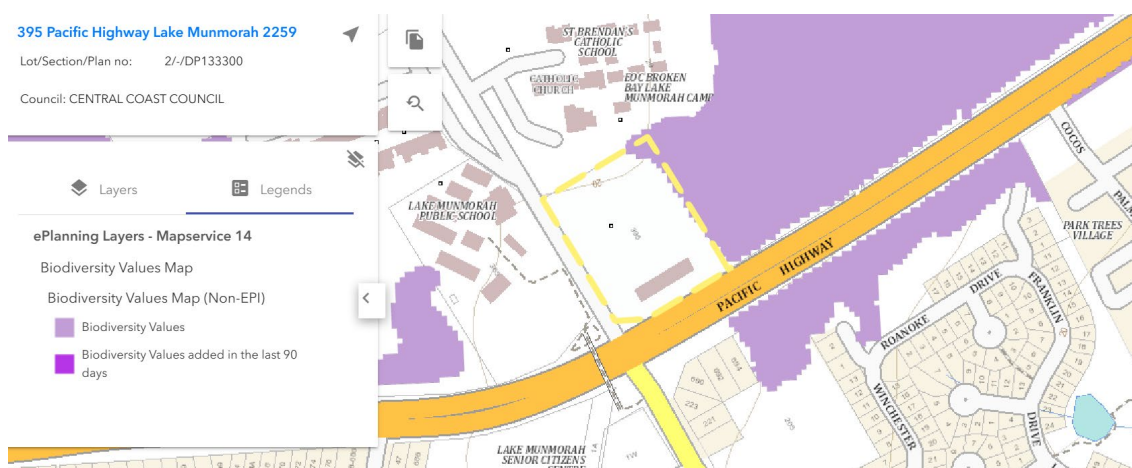


Figure 12: Biodiversity Values Map (extract from NSW Planning Portal Spatial Viewer, 2026)

6.2.2 Potential impacts

The construction and operation of the Project may affect habitat for potential threatened fauna species in the locality. The following impacts upon biodiversity have been considered as having potential to occur during the construction of the Project:

- Loss of native vegetation
- Impacts and/or loss to threatened flora species and/or threatened ecological communities
- Loss of habitat connectivity, within or through the site
- Direct disturbance to fauna from noise and/or light spill during construction and/ or operation
- Fauna injury or mortality due to construction activities and use of vehicles on site
- Facilitation of the spread of invasive weeds, animals or diseases
- Erosion and sedimentation of topsoil
- Indirect impacts to biodiversity values off-site.

6.2.3 Assessment approach

A BDAR to assess impacts would be produced to support the EIS. The assessment of the potential impacts of the Project on ecological values would be completed in line with the BAM.

Targeted surveys will be undertaken as part of the preparation of the BDAR to confirm the presence/absence of threatened species and ecological communities within the site. Survey effort, timing, and methodology for the targeted surveys will be outlined within the BDAR.

The BDAR will include mitigation measures designed to avoid or reduce biodiversity impacts, prior to the consideration of offsets.

6.3 Soils, groundwater and contamination

6.3.1 Existing environment

Soils

The site is located within the Doyalson Soil Landscape, which consists of gently undulating rises with slope gradients at less than 20%. The underlying geology of the site is the Narrabeen Group – Clifton Subgroup – Munmorah Conglomerate Formation which is comprised of pebbly sandstone, grey green and grey siltstone and claystone with some small coarse quartz inclusions at the base of the Tuggerah Formation. Broad crests and ridges exist with broad drainage lines. Rock outcrop is absent (Apex, 2024).

Hydrology

Lake Munmorah is situated approximately 700m to the south of the site. The Munmorah State Conservation Area is located to the east of the study area and comprises several ephemeral creeks and waterways including Birdie Creek, approximately 2km southeast of the site. Birdie Creek is a second order watercourse. Karignan Creek is located approximately 1km to the north of the site and is a tributary to Chain Valley Bay (Lake Macquarie) which also has numerous lower order watercourses (Apex, 2024).

Contamination

The Project will occur on land that has been highly disturbed by historic construction of the Lake Munmorah Zone Substation.

A search of the NSW EPA contaminated land database (26 November 2025) confirmed the site is not listed as a notified contaminated site under the CLM Act and there are no sites in Lake Munmorah with notices in place.

6.3.2 Potential impacts

The following impacts upon soils, groundwater and contamination have been considered as having potential to occur during the construction and operation of the Project:

- Excavations and earth movement may cause soil erosion and sedimentation (including the potential for sediment laden run-off)
- Vehicle movement may cause soil compaction, or disturbance and dispersion of soil including dust generation
- Potential for chemical and fuel spills during construction and/or operation, which may result in localised contamination of soils and groundwater.

6.3.3 Assessment approach

A preliminary and detailed contamination assessment would be undertaken, reviewing historical land uses, existing contamination reports and regulatory databases to determine potential contamination risks. The assessment would be prepared in accordance with the *Contaminated Land Guidelines: Consultants Reporting on Contaminated Land* (NSW EPA, 2020), the *National Environment Protection Measure (Assessment of Site Contamination)* (NEPC, 2013) and other relevant guidelines. Investigation works will be documented in the EIS. Measures to manage potential contamination risks will be identified if required.

A qualitative assessment will be conducted to evaluate potential soil erosion and sedimentation risks in relation to earthworks and runoff. This assessment would discuss key potential impacts and outline management approaches and would be in accordance with the Blue Book (Landcom, 2004).

The EIS will assess potential chemical and fuel spills during construction and operation including outlining appropriate management measures.

6.4 Surface water and flooding

6.4.1 Existing environment

Climate

Information obtained from the closest weather station to the site at Cooranbong (Lake Macquarie) shows the average annual rainfall is 1148.6mm with typically a wet January to April (BoM, 2026).

Surface water and flooding

There are no prescribed streams or waterbodies within the site. The closest is Karignan Creek located approximately 1km north of the site, with associated drainage lines from this creek located approximately 250m north of the site.

There is no mapping of coastal wetlands or coastal use areas applicable to the site.

The site is not located on a flood risk area, however local (overland) flooding may occur during major rainfall events.

6.4.2 Potential impacts

The Project has the potential to affect the quality and quantity of surface water runoff during construction and operation. The following surface water impacts have been considered as having potential to occur during construction and operation of the Project:

- Accidental spill or discharge of chemicals or hydrocarbons, such as fuels and oils in vehicles or equipment with the potential to contaminate stormwater runoff and groundwater
- Erosion of soil and sedimentation through run off and transport of eroded sediments to waterways particularly during high rainfall events
- Flooding during construction resulting in inundation of the site and flood hazard for construction workers. Flooding during the operational phase has the potential to impact the Project.

6.4.3 Assessment approach

Potential impacts to surface water quality and flooding, including impediments to the flow of water will be considered in a WIA in the EIS. This would include:

- An assessment of the potential construction and operational impacts related to surface water and water quality
- The potential construction and operational flood impacts across a range of flood events including the PMF (as outlined in the NSW Flood Impact and Risk Assessment Guideline LU01)
- Assess potential chemical and fuel spills during construction and operation including outlining appropriate management measures.
- Quantify and identify sources of water required for construction and operation of the Project.

6.5 Aboriginal heritage

6.5.1 Existing environment

An Aboriginal due diligence assessment was completed by Apex Archaeology in August 2024. The assessment concluded the site was highly disturbed from previous land use including the construction of the Lake Munmorah Zone Substation and car park. There are no previously recorded archaeological sites or new archaeological material identified during the survey.

A basic AHIMS database search was conducted for the site with a 200m buffer in April 2024 (Apex, 2024), which identified no sites.

6.5.2 Potential impacts

Construction of the Project is unlikely to result in impacts upon Aboriginal cultural heritage due to previous ground disturbance. It is unlikely Aboriginal items or areas would be present onsite.

6.5.3 Assessment approach

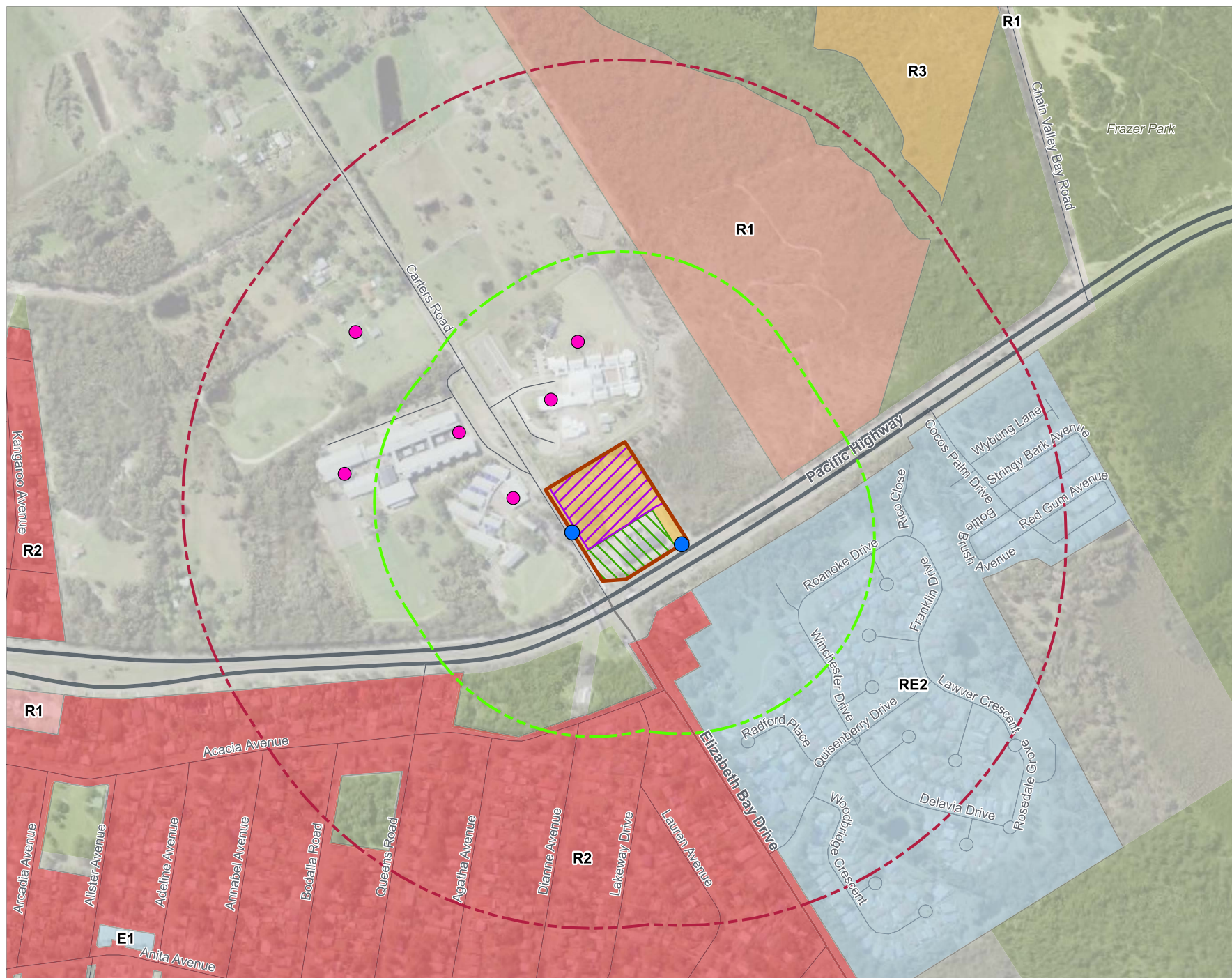
An ACHAR and consultation with Registered Aboriginal Parties (RAPs) will be completed as part of the EIS. The ACHAR would be prepared to meet the likely requirements of the SEARs. The SEARs are expected to require an assessment of the Aboriginal heritage values of the site in accordance with Heritage NSW's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

6.6 Noise and vibration

6.6.1 Existing environment

The existing ambient noise sources at the site are from the operation of the existing Lake Munmorah Zone Substation, vehicle traffic on Pacific Highway and school operations. Receivers according to land use zones are listed in section 2.2.3. Refer to Figure 13.

FIGURE 13:
SENSITIVE RECEIVERS



Legend

- Site Boundary
- Site Access Points
- BESS Area
- Development Footprint
- Lake Munmorah Zone Substation
- 250m site buffer
- 500m site buffer
- Parks, Forests and Reserves
- Motorway
- Main Road
- Local road
- Educational facilities

Residential Receiver

- E1 - Local Centre
- R1 - General Residential
- R2 - Low Density Residential
- R3 - Medium Density Residential
- RE2 - Private Recreation

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Sensitive receivers within 500m of the Project include:

- Residential properties approximately 120m south of the site
- Schools adjacent to the north property boundary line and directly west of Carters Road.

6.6.2 Potential impacts

The following noise and vibration impacts have been considered to have the potential to occur during construction and operation of the Project:

- Construction noise and vibration associated with earthworks
- Operational noise from the Project (cooling fans for the battery units).

6.6.3 Assessment approach

A Noise and Vibration Impact Assessment (NVIA) will be prepared as part of the EIS and will be undertaken in accordance with applicable legislation, policies and guidelines, including:

- Interim Construction Noise Guideline (Department of Environment, Climate Change and Water, 2019)
- NSW Noise Policy for Industry (EPA, 2017)
- NSW Road Noise Policy (DECCW, 2011)
- NSW EPA Guideline Assessing Vibration: A Technical Guideline (AVTG) (DEC, 2006)
- The German Standard DIN 4150 Part 3-2016 Structural Vibration – Effects of vibration on structures (Deutsches Institute for Normung, 1999).

The NVIA will assess the potential noise and vibration impacts from the Project during the construction and operational phases. Baseline monitoring will be used to determine background noise levels and establish site-specific noise criteria. The NVIA will model Project noise emissions to understand the magnitude of the potential impacts and to support reasonable and feasible mitigation measures, as required.

6.7 Traffic and transport

6.7.1 Existing environment

As outlined in section 2.2.2 and section 3.1.3, primary access to the site is proposed via the Pacific Highway from an existing access point (Figure 9) and via Carters Road from an existing driveway (Figure 8). The driveway from Pacific Highway requires formalisation and sealing to be reinstated.

The existing paved carpark area will remain onsite in a reconfigured capacity pending stakeholder engagement outcomes and construction site planning. Access to this is still via Carters Road.

The area is well serviced by public transport due to the schools. The closest bus stop is on the southern property boundary of the site, on the Pacific Highway in front of the Lake Munmorah Zone Substation building (refer to Figure 14) as well as approximately 165m west of the site on the Pacific Highway (servicing bus routes 95, 95X, 98 and 99). Bus stops are also located within the school entrances off Carters Road (servicing bus routes 98 and 99).



Figure 14: Existing bus stop on Pacific Highway

The closest railway station is Wyee station approximately 11km west of the site.

6.7.2 Potential impacts

The Project may result in the following traffic impacts:

- Temporary increased traffic volumes on nearby roads during construction. This would include light vehicles used to transport workers, as well as heavy vehicles to transport equipment
- During operation, the Project would generate low levels of traffic and mainly involve light vehicle movements for maintenance personnel
- Potential cumulative impacts with other construction projects, where the projects construction periods overlap.

6.7.3 Assessment approach

A Transport Impact Assessment (TIA) will be undertaken for the EIS to consider traffic impacts during construction and operation. The assessment would be informed and undertaken in accordance with the SEARs. Any road upgrades would be confirmed in this assessment.

The assessment would consider proposed routes and swept paths for any oversized vehicles, outline expected traffic volumes during construction, assess the capacity of the existing road network to accommodate construction traffic and provide mitigation measures as appropriate.

Consultation with TfNSW and Central Coast Council will be undertaken where required.

The EIS will include a standard assessment of cumulative impacts of the Project as per the *Cumulative Impacts Assessment Guidelines for State Significant Development Projects* (DPIE, 2022).

6.8 Hazards and risk

6.8.1 Existing environment

Bushfire

The Project is located within an area mapped as bushfire prone (vegetation buffer and vegetation category 1), refer to Figure 15. Category 1 represents the highest risk consisting of forest, woodlands, heaths, forest wetlands and timber plantations. Bushfire risk is increased during periods of drought or extreme weather, with dry vegetation becoming a flammable fuel source.

FIGURE 15:
BUSHFIRE CATEGORY
ZONING

Legend

-  Site Boundary
-  BESS Area
-  Development Footprint
-  Lake Munmorah Zone Substation
-  Waterbodies
-  Parks, Forests and Reserves
-  Watercourse
-  Motorway
-  Main Road
-  Local road
- RFS Bushfire Prone Land**
 -  Category 1
 -  Category 3
 -  Vegetation buffer

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Environmental hazards

Installation, commissioning and operation of a BESS can present hazards associated with overheating, fire, hazardous chemicals and gas emissions. The Project is located within an area containing existing environmental hazards, including the Lake Munmorah Zone Substation and several sensitive receivers including residences and schools.

Electromagnetic fields

Electromagnetic fields (EMFs) are associated with a range of sources and occur both naturally and because of human activity. Sources of EMF include power lines, electrical wiring, and electrical appliances; therefore, people are constantly exposed to EMFs in their home and work environments.

The major existing source of EMF is the Lake Munmorah Zone Substation and overhead transmission infrastructure located on the site.

6.8.2 Potential impacts

Bushfire

During construction, earthworks equipment and potential ignition sources could increase the risk of bushfire, particularly in dry and windy conditions. The presence of flammable materials and disturbed vegetation may also contribute to the spread of fire, posing risks to nearby infrastructure, workers and surrounding areas.

During operation there is a risk of fire associated with thermal runaway, fires could spread to the surrounding area. The site and surrounds contain category 1 and vegetation buffer bushfire prone land and presents a bushfire risk that could affect the construction and operation of the Project.

Environmental hazards

Environmental hazards include the risk of fire associated with thermal runaway of the battery containers and associated release of emissions.

The design and installation of the Project will be undertaken in accordance with relevant Australian Standards and manufacturer guidelines and will be operated in accordance with the manufacturer's requirements. Appropriate fire controls would be incorporated into the detailed design and considered as part of the Fire Safety Study.

Electromagnetic fields

The Project would generate lower levels of EMF than the existing Lake Munmorah Zone Substation and is unlikely to produce EMF at levels of concern.

6.8.3 Assessment approach

A Preliminary Hazard Analysis (PHA) would be prepared as part of the EIS to assess potential environmental hazards including EMF from the Project. The PHA would be prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 4 – Hazard Analysis* (HIPAP 4), and *Hazardous Industry Planning Advisory Paper No. 6 – Hazard Analysis* (HIPAP 6). Controls to avoid or reduce the likelihood and/or consequence of these hazards would be identified.

A Bushfire Assessment will also be prepared as part of the EIS in accordance with *Planning for Bushfire Protection 2019* (NSW RFS). This will identify bushfire hazards, evaluate risks to the Project and recommend mitigation measures.

The Project's detailed design will seek to minimise risk from hazards through the provision of suitable spacing between the battery units (as recommended by the manufacturer) and through the provision of adequate space for fire-fighting access.

6.9 Other matters

Table 6-1 provides an overview of other environmental matters that would require limited assessment in the EIS.

Table 6-1: Summary of other environmental matters

Environmental matter	Existing environment	Potential impacts	Assessment approach
Non-Aboriginal heritage	A search of the State Heritage Inventory and Central Coast Council LEP was undertaken in March 2026 which identified one item: Farm homestead complex (I24) approximately 740m north of the site	I24 is located approximately 740m away from the site and no impacts are likely due to the Project.	Non-Aboriginal heritage will be assessed within the body of the EIS
Social and economic	Lake Munmorah is located within the Central Coast Council LGA and has a population of 5,084 people (ABS 2021). The main employment industries are technicians/trades workers, professionals and clerical/administrative workers.	The following social and economic impacts have the potential to occur during construction and operation of the Project: Positive - Employment of construction workforce - Job creation during operation - Benefits to nearby businesses from passing trade and during construction/operation Negative - Temporary disruptions to road users - Visual impacts to surroundings - Noise from BESS operation - Construction impacts including noise, vibration, dust and construction traffic	A Social and Economic Impact Assessment will be prepared as part of the EIS
Air quality and greenhouse gases	A search of the National Pollutant Inventory (NPI) undertaken in March 2026, maintained by DCCEEW identified the following sources of pollutants in proximity to the site: Mannering Colliery (coal mining)	Excavation has the potential to generate dust resulting in short term, localised impacts to air quality during construction. The operation of construction machinery has the potential to generate emissions from exhausts.	Air quality will be assessed within the body of the EIS

Environmental matter	Existing environment	Potential impacts	Assessment approach
	approximately 5km west of the site Chain Valley Colliery (coal mining) approximately 7km north-west of the site Other existing sources of sources of air pollution would include vehicle emissions from Pacific Highway.		
Visual	The visual character of the site and surrounds is a mix of educational facilities, places of worship, environmental conservation areas, roads and residential. The surrounding topography is relatively flat.	The following elements of the Project have the potential to result in visual impacts: - Construction machinery including temporary facilities - Earthworks - Battery units Nearby receivers including the schools and vehicles passing by on Carters Road will be potentially visually impacted by the Project.	A Visual Impact Assessment will be prepared as part of the EIS
Waste	Not applicable	Waste would be generated by the Project during construction and operation including: - Construction waste e.g. hazardous waste, chemicals, used oil - General rubbish from staff - Waste would be generated during decommissioning at the battery end of life including component replacement and/or disposal.	Waste will be assessed within the body of the EIS

6.10 Cumulative impacts

Cumulative impacts may arise if the Project is developed alongside other projects nearby, or where operational impacts of two or more projects affect the same receptor. In this case, the combined impact of these projects may become greater than each project's individual impact.

Cumulative impacts of the Project would be assessed in the EIS and would depend on residual impacts from the Project and the potential to generate cumulative impacts with other proposed projects in the vicinity. This assessment may be qualitative or quantitative depending on the environmental aspect being assessed.

A search of the DPHI Major Projects database and Central Coast Council Development tracker was undertaken in April 2026 to identify projects within proximity to the Project that have the potential to overlap. These are summarised in Table 6-2.

Table 6-2: Relevant future projects for cumulative impact assessment

Future project	Distance to the site	Project status
Munmorah Power Station – Rehabilitation	Approximately 4km southwest	Determined. Demolition expected to take 2.5 years with no clear start date outlined in their schedule or approval. Overlap of these two projects is possible and will be assessed in the EIS.
Up to 18 Development Applications under “assessment” relating to minor home renovations	Lake Munmorah suburb	Under assessment. Given the scale of the developments, overlap is not considered to be considerable, however this will be assessed further in the EIS
Hunter Central Coast Renewable Energy Zone (REZ)	Various	The Hunter-Central Coast REZ aims to ensure the region has a key role in a renewable energy future, powering existing industries and supporting economic growth. The modernisation of the Hunter-Central Coast electricity system will assist industries to decarbonise and access cleaner, cheaper and more reliable renewable energy by connecting new renewable energy and storage projects. Some overlap may occur for REZ projects in the Lake Macquarie district. The only listed project is the Waratah Super Battery detailed below.
Lake Munmorah Recreation Precinct	Approximately 2km west	In construction expected completion September 2026. New recreation destination including park space and amenities. Overlap is unlikely due to construction being completed by the time the Project commences.
Waratah Super Battery	Approximately 4km southwest	Determined. Project is completed with final commissioning stages in 2026. Overlap is unlikely due to construction being completed by the time the Project commences.

7 Conclusion

Ausgrid proposes to construct and operate a BESS with a capacity of up to 100MW over a 4-hour duration (up to 400MWh) adjacent to the existing Lake Munmorah Zone Substation.

This scoping report has been prepared in accordance with the *State significant development guidelines – preparing a scoping report* (DPIE, 2022), in support of an application for SEARs for the Project.

The matters that have been identified for further detailed assessment for the EIS are:

- Biodiversity
- Soils, groundwater and contamination
- Surface water and flooding
- Aboriginal heritage
- Noise and vibration
- Traffic and transport
- Hazards and risk
- Bushfire
- Visual
- Social and economic.

Other matters that will be considered in the EIS are:

- Non-Aboriginal heritage
- Air quality
- Waste management.

In preparing the EIS for the Project, the focus would be avoidance and minimisation of potential impacts on the environment and local communities, where practicable and feasible. Consultation with stakeholders including the local community would continue throughout the Project's assessment, design and construction phases.

It is requested that DPHI confirm the Project as SSD and issue SEARs to facilitate the preparation of an EIS.

8 References

- AEMO, 2024, 2024 Integrated System Plan
- Apex Archaeology, 2024, 395 Pacific Highway Lake Munmorah NSW, Aboriginal due diligence assessment
- Ausgrid, 2026, Community and Stakeholder Engagement Plan
- Australian Bureau of Meteorology, 2026, Climate Data Online, <http://www.bom.gov.au/climate/data/?ref=fr>
- Australian Bureau of Meteorology, 2025, Groundwater Dependant Ecosystem Atlas (GDE Atlas), <http://www.bom.gov.au/water/groundwater/gde/>
- Civil Aviation Safety Authority, 2021, CASA Advisory Circular – Reporting of Tall Structures (Advisory Circular)
- DEC, 2006, NSW EPA Guideline Assessing Vibration: A Technical Guideline (AVTG), NSW Government
- DPHI, 2026, Major Projects – State Significant Applications. <https://www.planningportal.nsw.gov.au/major-projects/projects>
- DPHI, 2024, Undertaking Engagement Guidelines for State Significant Projects
- Deutsches Institute for Normung, 1999, The German Standard DIN 4150 Part 3-2016 Structural Vibration – Effects of vibration on structures
- DPIE, 2022a, State Significant Development Guidelines
- DPIE, 2022b, Appendix A to the State significant development guidelines - preparing a scoping report, NSW Government
- DPIE, 2023, Social Impact Assessment Guideline, NSW Government
- DPIE, 2022c, Cumulative Impact Assessment Guidelines for Significant Projects
- DPIE, 2019, NSW Electricity Strategy
- Central Coast Council, 2022, Local Environmental Plan 2022
- Central Coast Council, June 2025, Community Strategic Plan 2025-2035
- Infrastructure NSW, 2022, NSW State Infrastructure Strategy (SIS) 2022-2042
- Landcom, 2004, Managing Urban Stormwater: Soils and Construction – Volume 1
- NSW EPA, 2014, Waste Classification Guidelines, NSW Government
- OEH, 2011, Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW. NSW Government.

Appendix A Scoping Summary Table

Matter	Level of assessment	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Biodiversity	Detailed	Yes	General	<i>Biodiversity Assessment Method</i> (Department of Planning, Industry and Environment 2020)	6.2
Soils, groundwater and contamination	Detailed	No	General	<i>National Environment Protection (Assessment of Site Contamination) Measure</i> (National Environment Protection Council 2011) <i>Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997</i> (Environment Protection Authority 2015) <i>Guidelines for the Assessment and Management of Groundwater Contamination</i> (NSW Environment Protection Authority 2007)	6.3
Surface water and flooding	Detailed	No	General	<i>Managing Urban Stormwater: Soils and Construction – Volume 1</i> (Landcom 2004) <i>Australian and New Zealand guidelines for fresh and marine water quality</i> (ANZECC & ARMCANZ 2000)	6.4
Aboriginal heritage	Detailed	No	Specific	<i>Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales</i> (Office of Environment and Heritage 2011) <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (Department of Environment, Climate Change and Water 2010)	6.5

Matter	Level of assessment	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Noise and vibration	Detailed	Yes	General	<i>Noise Policy for Industry</i> (Environment Protection Authority 2017) <i>Interim Construction Noise Guideline</i> (Department of Environment, Climate Change and Water 2019) <i>NSW Road Noise Policy</i> (Department of Environment, Climate Change and Water 2011) <i>Assessing vibration: A technical guideline</i> (Department of Environment, Climate Change and Water 2006)	6.6
Traffic and transport	Detailed	Yes	Specific	<i>Guide to traffic management Part 12: Integrated Transport Assessments for Developments</i> (Austroads 2020)	6.7
Hazards and risk	Detailed	No	General	<i>Assessment Guideline: Multi-Level Risk Assessment</i> (Department of Planning and Infrastructure 2011)	6.8
Visual	Detailed	No	General	<i>Guidelines for Landscape and Visual Impact Assessment – 3rd Edition</i> (Institute of Environmental Management and Assessment 2013)	6.9
Social and economic	Detailed	No	Specific	<i>Social Impact Assessment Guideline – For State Significant Developments</i> (Department of Planning and Environment 2021)	6.9
Non-Aboriginal heritage	Standard	No	General	<i>Assessing Significant for Historical Archaeological Sites and 'Relics'</i> (Heritage Branch of the Department of Planning 2009)	6.9
Air quality	Standard	No	General	<i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> (Environment Protection Authority 2016)	6.9

Matter	Level of assessment	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Waste management	Standard	No	General	<i>Waste Classification Guidelines Part 1: Classifying Waste</i> (NSW Environment Protection Authority 2014) <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-2021</i> (NSW Environment Protection Authority 2014)	6.9

Appendix B Protected Matters Search Report



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Nov-2025

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	107
Listed Migratory Species:	79

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	13
Commonwealth Heritage Places:	None
Listed Marine Species:	106
Whales and Other Cetaceans:	15
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	7
Regional Forest Agreements:	1
Nationally Important Wetlands:	3
EPBC Act Referrals:	23
Key Ecological Features (Marine):	None
Biologically Important Areas:	9
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area

[Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name	Buffer Status
Commonwealth Marine Areas (EPBC Act)	In buffer area only

Listed Threatened Ecological Communities

[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area	In feature area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community likely to occur within area	In feature area
Posidonia australis seagrass meadows of the Manning-Hawkesbury ecoregion	Endangered	Community likely to occur within area	In buffer area only
River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria	Critically Endangered	Community likely to occur within area	In feature area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area	In buffer area only

Listed Threatened Species

[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Breeding known to occur within area	In buffer area only
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area	In buffer area only
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat known to occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In buffer area only
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only
Erythroriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area	In buffer area only
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In buffer area only
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In buffer area only
Pycnoptilus floccosus Pilotbird [525]	Vulnerable	Species or species habitat known to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area	In buffer area only
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area	In feature area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In buffer area only
FISH			
Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Serirolella brama Blue Warehou [69374]	Conservation Dependent	Species or species habitat known to occur within area	In buffer area only
FROG			
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat known to occur within area	In feature area
Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Uperoleia mahonyi Mahony's Toadlet [89189]	Endangered	Species or species habitat known to occur within area	In feature area
MAMMAL			
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat known to occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Isoodon obesulus obesulus Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Notamacropus parma Parma Wallaby [89289]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
PLANT			
Acacia bynoeana Bynoe's Wattle, Tiny Wattle [8575]	Vulnerable	Species or species habitat known to occur within area	In feature area
Angophora inopina Charmhaven Apple [64832]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat known to occur within area	In feature area
Corunastylis insignis Wyong Midge Orchid 1, Variable Midge Orchid 1 [84692]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat known to occur within area	In feature area
Cynanchum elegans White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Diuris praecox Newcastle Doubletail [55086]	Vulnerable	Species or species habitat known to occur within area	In feature area
Eucalyptus camfieldii Camfield's Stringybark [15460]	Vulnerable	Species or species habitat known to occur within area	In feature area
Eucalyptus parramattensis subsp. decadens Earp's Gum, Earp's Dirty Gum [56148]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Euphrasia arguta [4325]	Critically Endangered	Species or species habitat may occur within area	In feature area
Genoplesium branwhiteorum listed as Corunastylis sp. Charmhaven (NSW 896673) [93200]	Critically Endangered (listed as Corunastylis sp. Charmhaven)	Species or species habitat known to occur within area	In feature area
Grevillea parviflora subsp. parviflora Small-flower Grevillea [64910]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Melaleuca biconvexa Biconvex Paperbark [5583]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Rhizanthella slateri Eastern Underground Orchid [11768]	Endangered	Species or species habitat may occur within area	In feature area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Rutidosis heterogama Heath Wrinklewort [13132]	Vulnerable	Species or species habitat known to occur within area	In feature area
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat known to occur within area	In feature area
Tetratheca juncea Black-eyed Susan [21407]	Vulnerable	Species or species habitat known to occur within area	In feature area
Thelymitra adorata Wyong Sun Orchid [84724]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thismia clavarioides [90425]	Endangered	Species or species habitat may occur within area	In buffer area only
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
SHARK			
Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Galeorhinus galeus School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453]	Conservation Dependent	Species or species habitat may occur within area	In buffer area only
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In buffer area only
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Breeding known to occur within area	In buffer area only
Ardenna pacifica Wedge-tailed Shearwater [84292]		Breeding known to occur within area	In buffer area only
Ardenna tenuirostris Short-tailed Shearwater [82652]		Breeding known to occur within area	In buffer area only
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In buffer area only
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat known to occur within area	In buffer area only
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area	In buffer area only
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Migratory Marine Species			
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In buffer area only
Carcharias taurus Grey Nurse Shark [64469]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dugong dugon Dugong [28]		Species or species habitat may occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status	
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area	In buffer area only	
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In buffer area only	
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In buffer area only	
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In buffer area only	
Natator depressus Flatback Turtle [59257]		Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only	
Rhincodon typus Whale Shark [66680]		Vulnerable	Species or species habitat may occur within area	In buffer area only
Migratory Terrestrial Species				
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area	
Hirundapus caudacutus White-throated Needletail [682]		Vulnerable	Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]			Species or species habitat likely to occur within area	In feature area
Migratory Wetlands Species				
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area	

Scientific Name	Threatened Category	Presence Text	Buffer Status
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
Calidris alba Sanderling [875]		Roosting known to occur within area	In buffer area only
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area	In feature area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area	In buffer area only
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area	In buffer area only
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area	In buffer area only
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area	In buffer area only
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area	In buffer area only
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area	In buffer area only
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area	In buffer area only
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area	In buffer area only
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area	In buffer area only
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Commonwealth Lands [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
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Communications, Information Technology and the Arts - Australian Postal Corporation

Commonwealth Land - Australian Postal Commission [16105]	NSW	In buffer area only
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Communications, Information Technology and the Arts - Telstra Corporation Limited

Commonwealth Land - Australian Telecommunications Commission [12246]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11757]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11718]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11715]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11717]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11713]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11716]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11719]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11714]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11731]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [11722]	NSW	In buffer area only
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Defence - Defence Housing Authority

Commonwealth Land - Director of War Service Homes [11712]	NSW	In buffer area only
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Listed Marine Species [\[Resource Information \]](#)

Scientific Name	Threatened Category	Presence Text	Buffer Status
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Bird

Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In buffer area only
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]	Vulnerable	Breeding known to occur within area	In buffer area only
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding known to occur within area	In buffer area only
Ardenna tenuirostris as Puffinus tenuirostris Short-tailed Shearwater [82652]		Breeding known to occur within area	In buffer area only
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
Calidris alba Sanderling [875]		Roosting known to occur within area	In buffer area only
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area overfly marine area	In buffer area only
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area overfly marine area	In buffer area only
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In buffer area only
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area overfly marine area	In buffer area only
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only
Eudyptula minor Little Penguin [1085]		Breeding known to occur within area	In buffer area only
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In buffer area only
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area	In buffer area only
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area	In buffer area only
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area overfly marine area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area overfly marine area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area	In buffer area only
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area	In buffer area only
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Pelagodroma marina White-faced Storm-Petrel [1016]		Breeding known to occur within area	In buffer area only
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat known to occur within area	In buffer area only
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area	In buffer area only
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Stercorarius antarcticus as Catharacta skua Brown Skua [85039]		Species or species habitat may occur within area	In buffer area only
Sterna striata White-fronted Tern [799]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area	In buffer area only
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche bulleri platei as Thalassarche sp. nov. Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area overfly marine area	In buffer area only
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In buffer area only
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area	In buffer area only
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In buffer area only
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area	In buffer area only
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In buffer area only
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area	In buffer area only
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area	In buffer area only
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In buffer area only
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In buffer area only
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area	In buffer area only
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In buffer area only
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In buffer area only
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In buffer area only
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area	In buffer area only
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In buffer area only
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In buffer area only
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In buffer area only
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In buffer area only
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In buffer area only
Mammal			
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area	In buffer area only
Dugong dugon Dugong [28]		Species or species habitat may occur within area	In buffer area only
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Whales and Other Cetaceans		[Resource Information]	
Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area	In buffer area only

Current Scientific Name	Status	Type of Presence	Buffer Status
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In buffer area only
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In buffer area only
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In buffer area only
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In buffer area only
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In buffer area only
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only

Current Scientific Name	Status	Type of Presence	Buffer Status
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In buffer area only
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In buffer area only
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In buffer area only

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Bird Island	Nature Reserve	NSW	In buffer area only
Colongra Swamp	Nature Reserve	NSW	In buffer area only
Lake Macquarie	State Conservation Area	NSW	In buffer area only
Munmorah	State Conservation Area	NSW	In buffer area only
Pulbah Island	Nature Reserve	NSW	In buffer area only
Wollarah	National Park	NSW	In buffer area only
Wyrabalong	National Park	NSW	In buffer area only

Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.	

RFA Name	State	Buffer Status
North East NSW RFA	New South Wales	In feature area

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
Budgewoi Lake Sand Mass	NSW	In buffer area only
Colongra Swamp	NSW	In buffer area only
Tuggerah Lake	NSW	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Hunter-Central Coast Offshore Energy Initial Marine Field Investigations	2023/09480		Completed	In buffer area only
Hunter Central-Coast Offshore Energy Project	2023/09478		Assessment	In buffer area only
Lakes Ridge Residential Subdivision	2023/09580		Completed	In buffer area only
Ramsgate Estate Wyee Point, NSW	2023/09456		Completed	In buffer area only
School campus K-12 development project	2023/09598		Assessment	In buffer area only
Controlled action				
Residential subdivision	2007/3411	Controlled Action	Post-Approval	In buffer area only
Subdivide and Develop	2008/4419	Controlled Action	Post-Approval	In buffer area only
Subdivision and Urban Development at Gwandalan and Catherine Hill Bay	2012/6382	Controlled Action	Post-Approval	In buffer area only
Wallarah 2 Coal Project	2012/6388	Controlled Action	Post-Approval	In buffer area only
Wallarah 2 Coal Project	2007/3881	Controlled Action	Completed	In buffer area only
Not controlled action				
construction of additional coal handling facilities at the Wyee Rail Unloader	2004/1364	Not Controlled Action	Completed	In buffer area only
Demolition of Ablutions Block, Snapper Island, NSW	2018/8303	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Myuna Colliery extension of underground mining	2011/5956	Not Controlled Action	Completed	In buffer area only
Northern Precinct residential development	2007/3412	Not Controlled Action	Completed	In buffer area only
Road interchange	2002/592	Not Controlled Action	Completed	In buffer area only
Wallarah Peninsula Residential development	2004/1490	Not Controlled Action	Completed	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Wallarrah Peninsula residential development - coastal sector	2006/2810	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
2D marine seismic survey in PEP-11 permit area, NSW	2002/879	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Multipurpose Centre Dora St Lot 122 DP 881828 Morisset	2003/1084	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Residential Development Subdivision	2011/5953	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Referral decision				
Breeding program for Grey Nurse Sharks	2007/3245	Referral Decision	Completed	In buffer area only
Residential Subdivision Dickson Road Lots 231 & 233 DP755271	2003/1105	Referral Decision	Completed	In buffer area only
Biologically Important Areas			[Resource Information]	
Scientific Name		Behaviour	Presence	Buffer Status
Dolphins				
Tursiops aduncus				
Indo-Pacific/Spotted Bottlenose Dolphin [68418]		Breeding	Likely to occur	In buffer area only
Seabirds				
Ardenna carneipes				
Flesh-footed Shearwater [82404]		Foraging	Known to occur	In buffer area only
Ardenna grisea				
Sooty Shearwater [82651]		Foraging	Likely to occur	In buffer area only
Ardenna pacifica				
Wedge-tailed Shearwater [84292]		Foraging	Likely to occur	In buffer area only
Ardenna tenuirostris				
Short-tailed Shearwater [82652]		Foraging	Likely to occur	In buffer area only
Diomedea exulans antipodensis				
Antipodean Albatross [82269]		Foraging	Known to occur	In buffer area only
Procellaria parkinsoni				
Black Petrel [1048]		Foraging	Likely to occur	In buffer area only
Sharks				

[Carcharias taurus](#)

Grey Nurse Shark [64469]

Foraging

Known to occur

In buffer area only

[Megaptera novaeangliae](#)

Humpback Whale [38]

Migration
(north and south)

Known to occur

In buffer area only

Bioregional Assessments

[[Resource Information](#)]

SubRegion	BioRegion	Website	Buffer Status
Hunter	Northern Sydney Basin	BA website	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

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Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111

Appendix C Community and Stakeholder Engagement Plan



Wired for good.™

Lake Munmorah BESS

Community and Stakeholder Engagement Plan

September 2025

Document control

Document status	FINAL
Document type	Plan
Approval Authority	Emma Forbes, Stakeholder and Engagement Manager
Release date	September 2025
Review period	Quarterly
Review due by	

Approved by
Emma Forbes
Stakeholder Engagement Manager
8 September 2025

Revision	Date	Revised by	Description of changes
1.0	September 2025	Alana Kosklin	Draft
2.0	April 2026	Alana Kosklin	Update to implementation plan

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Acknowledgement of Country

We acknowledge the Traditional Custodians of the lands where the Ausgrid distribution network is located, and we pay our respects to the elders, past, present and emerging. Our network and operations span the traditional country of 17 languages, tribal and nation groups in Sydney, the Central Coast and Hunter regions of New South Wales.

We want to lead and foster a workforce, and approach to our operations, that embraces the learnings, voices, cultures and histories of these Traditional Owners into our own organisation. We acknowledge the profound and enduring contributions of Indigenous peoples to our shared communities and commit to working collaboratively towards reconciliation, justice, and respect for all First Nations peoples. We commit to planning and delivering engagement that is respectful of First Nations people and works toward reconciliation.

Acronyms

ABS	Australian Bureau of Statistics
AEMO	Australian Energy Market Operator
BESS	Battery Energy Storage Systems
CSEP	Community and Stakeholder Engagement Plan
DNSP	Distributed Network Service Provider
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EP&A Act	Environmental Protection and Assessment (NSW) Act 1979
EWO	Energy and Water Ombudsman
IAP2	International Association of Public Participation
MWh	Megawatt-hour
NEM	National Energy Market
NECF	National Energy Customer Framework
SAL	Suburbs and Localities area for ABS Census data
SEAR	Secretary's Environmental Assessment Requirements
SEIA	Social Economic Impact Assessment
SEM	Stakeholder Engagement Manager
SSDA	State Significant Development Application

1. Introduction

Ausgrid is proposing grid-scale Battery Energy Storage Systems (BESS) connected to existing Ausgrid zone substations across its network. Grid-scale storage is critical to supporting the continued growth of renewables and broader energy transition, while continuing to ensure a safe and reliable electricity network. Ausgrid is leading the planning, design and approvals processes for BESS sites, with the intention to hand over the construction, operation and maintenance to a third party.

Ausgrid's BESS portfolio includes projects across three tranches (the Program). The BESS are being proposed by Ausgrid via the State Significant Development Application (SSDA) pathway. The proposals will be assessed by the NSW Department of Planning, Housing, and Infrastructure (DPHI).

1.1. Plan purpose and objectives

This Community and Stakeholder Engagement Plan (CSEP) outlines the communications and engagement approach for the proposed Lake Munmorah BESS (the Project). It is intended to guide Ausgrid, and associated representatives and contractors, in the delivery of engagement activities to inform community and stakeholders impacted by or interested in the Project during the environmental planning and approval stage.

Specifically, the engagement activities outlined in this CSEP support the following Project phases:

- Preparation of the Scoping Report (request for Secretary's Environmental Assessment Requirements (SEARs))
- Preparation of the Environmental Impact Statement (EIS)
- All project milestones, including throughout construction and operation.

This CSEP will also ensure:

- Adjoining landholders, stakeholders and local communities are provided with timely and relevant information about the Project, in plain English, and have opportunity to provide feedback.
- Communication to and from landholders and other community stakeholders is adequately documented.
- All interested stakeholders are provided with a responsive point of contact for any enquiries, complaints, or suggestions.
- Stakeholders with potential interest in the Project are identified and provided with consistent messages and opportunity to be heard.
- Minimal disruption to landholders, other impacted stakeholders, and the wider community.
- Engagement activities support the broader Program to meet planning approval requirements and secure the required approvals from regulators and decision makers in a timely manner.
- Communications procedures and protocols are followed.

The CSEP is a living document and will be updated iteratively at the start and end of project phases, and at key milestones and hold points. The focus of this version is community and stakeholder engagement to support the early planning and approvals process for the proposed Lake Munmorah BESS.

1.2. Project description

Ausgrid is seeking development consent to facilitate the construction, operation and maintenance of a Battery Energy Storage System (BESS) with a capacity of up to 120MW at Lake Munmorah. The proposed location of the BESS is at 395 Pacific Highway, Lake Munmorah, see Figure 1.

A BESS is a group of large, rechargeable batteries connected to form one very large battery. The proposed BESS is on property owned by Ausgrid, behind an existing Ausgrid-owned substation.

The Project comprises a BESS facility that would store electricity from the grid and release electricity during periods of high demand. Key features of the Project would include but not be limited to:

- Construction and operation of a BESS with a capacity of up to 120MW (construction of the Project may be carried out in stages)
- Connection of the BESS to the existing Lake Munmorah substation via underground connection
- Other ancillary infrastructure and services required such as internal access roads, laydown areas, control and operational buildings.

The Project is expected to result in significant benefits to the State and local community, including:

- Improved network security and diversified energy supply and storage within New South Wales
- Support for increased renewable power generation during daytime peak periods, placing downward pressure on wholesale electricity prices in accordance with the NSW Integrated System Plan
- Support economic development within NSW, through the creation of new jobs during the construction and operation phase.

Figure 1: Proposed site location



1.3. Surrounding context

The site is located within the Central Coast LGA, approximately 35km north-east of Gosford. Lake Munmorah is a small suburb on the northern end of the Central Coast LGA, to the north and north-east of the lake it is named for. The proposed location of the BESS is on property owned by Ausgrid, behind an existing Ausgrid-owned substation.

The site is surrounded by a mix of education facilities (to the north and east) and residential properties (to the south and west). It is located on Pacific Highway, a main arterial road for the area.

1.4. Applicable legislation, policy and codes

Federal and state government regulations require all major infrastructure projects to undergo a robust environmental assessment before approval is considered. Projects within the BESS Program will be classified as State Significant Infrastructure under Part 4 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) and Clause 94 of the State Environmental Planning Policy (Infrastructure) 2007.

As an Authorised Network Operator, Ausgrid's engagement is informed by a number of regulatory requirements, listed in Table 1 below. As the Project progresses, this table will be updated to reflect changes.

Table 1: Applicable legislation and policy

Act	Description
Electricity Supply Act 1995	- Section 45 requires that written notice of the proposal to carry out works (other than routine repairs or maintenance works) is given to the local council. The relevant local council must be given a reasonable opportunity (40 days from the date on which the notice was given) to make submissions on the proposal. - All submissions must be considered prior to the start of the works. A second notification providing at least 21 days' notice to both council and nearby residents (requires that councils be notified and provided with 40 days to comment on certain projects).
Electricity Infrastructure Investment Act 2020 (NSW)	Section 3 of the Electrical Infrastructure Investment Act sets out the overall object of the Act which relates to Renewable Energy Zone (REZ) projects. Clause (1) (d) to foster local community support for investment in new generation, storage, network and related infrastructure, and clause (2) to improve employment and consultation with traditional Aboriginal owners of land which infrastructure may be built and operated on.
Environmental Planning and Assessment Act (NSW) 1979	Section 5.16 of the EP&A Act outlines the requirements for assessment of a project against the Secretary's Environmental Assessment Requirements (SEARs). SEARs typically include requirements for consultation with stakeholders and community that may be impacted by or have an interest in a project. Further detail is provided in the NSW DPHI <i>Undertaking engagement guidelines for state significant projects</i> (March 2024)
State Environmental Planning Policy (Transport and Infrastructure) 2021	- Clauses 2.10-2.12 and 2.14 of the SEPP require that consultation is undertaken with the relevant local council if the development has impacts on council-related infrastructure or services, local heritage, flood liable land or certain land within the coastal zone. - Clause 2.15 of the SEPP requires that consultation is undertaken with relevant public authorities other than council, in certain circumstances. - Clause 2.45 of the SEPP provides that written notification must be given to the relevant local council and the occupiers of adjoining land for development for the purpose of a new or existing electricity substation. Any responses received within 21 days after the notice is given must be taken into consideration; and - The written notification required under the SEPP and the 40-day notification required under the Electricity Supply Act 1994 are usually issued concurrently.

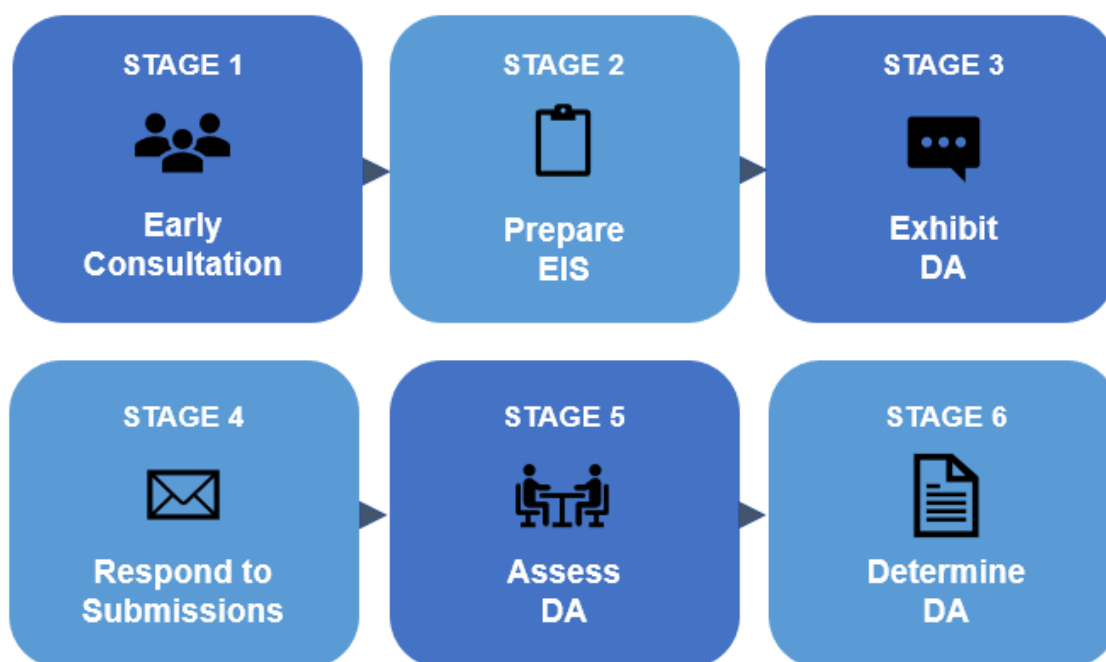
National Energy Customer Framework (NECF) legislation	Ausgrid must notify customers and retailers at least four clear business days before all planned interruptions unless the customer signs a waiver agreeing for the work to proceed with less notice. The previous notification requirement for this activity was two business days. Breaches of the legislation may attract civil penalties or result in enforceable undertakings being issued against Ausgrid.
---	---

1.5. SSDA community participation requirements

In accordance with the EP&A Act, State Significant Developments (SSDs) are required to carry out a comprehensive assessment process involving extensive community participation. Community participation includes informing, consulting and involving those who are interested in, or affected by, the proposed changes to an area as a result of a proposed project. Community participation also includes obtaining expert advice from relevant public authorities including local, state and federal government agencies.

The NSW Government SSD assessment process is summarised in Figure 2.

Figure 2: NSW State Significant Development assessment process



Requirements for stakeholder engagement and community participation are prescribed in the Secretary's Environmental Assessment Requirements (SEARs), issued by the NSW Department of Housing, Planning and Infrastructure (DPHI). SEARs are issued following submission and consideration of the Project's Scoping Report.

Typically, SEARs require consultation with stakeholders (local councils, utilities and infrastructure services), Traditional Owners and Local Aboriginal Land Councils (LALC), adjoining and potentially impacted landowners and the wider community.

Community and stakeholders who may be impacted or have an interest in the Project should have opportunities to provide feedback about the Project, its potential impacts and proposed mitigation measures or safeguards.

DPHI's *Undertaking Engagement Guidelines for State Significant Projects* outline DPHI's expectations for engagement across the approvals process. These are that proponents should facilitate effective engagement by:

- Engaging as early as possible
- Providing clear and concise information about the Project and its impacts
- Delivering engagement activities that are accessible and inclusive to encourage participation
- Reporting back to community and stakeholders on what was heard, what has or has not been changed and why.

Engagement should be proportionate to the scale and likely impacts of the Project and provide a suitable geographic reach and number and range of activities, for each stage of engagement.

1.6. Project timeline

Table 2: Project timeline

Timing	Phase
Late 2025 to early 2026	Preparation of the Scoping Report
Early to mid-2026	Submit Scoping Report and request SEARs
Mid-2026 to early 2027	Prepare EIS and complete technical assessments, and submit to DPHI
2027	EIS Public Exhibition Prepare and lodge Submissions Report Project determination
2028	Construction (if approved)
From 2029	Earliest BESS is operational (if approved)

2. Communications and engagement approach

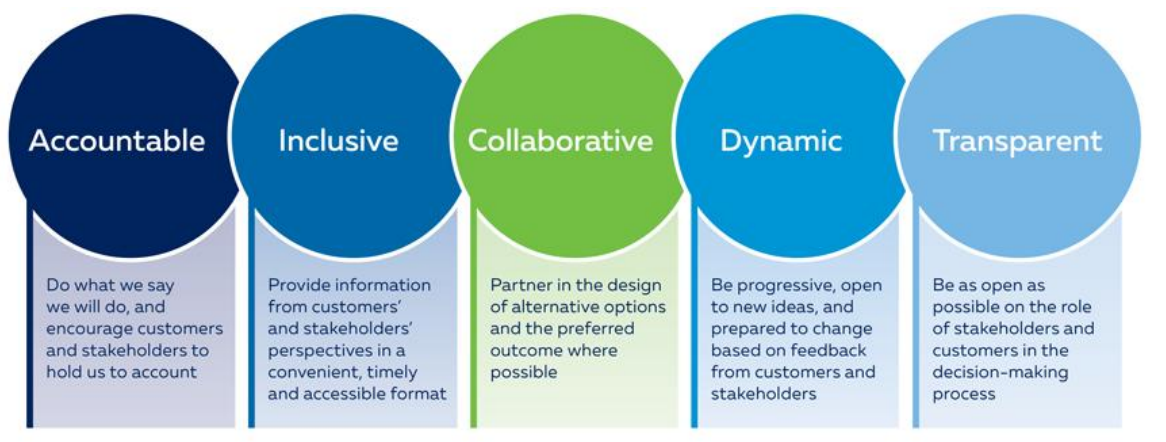
Ausgrid's Engagement Principles, which will be applied to all engagement for this Project, have been developed to align closely with:

- Ausgrid's Community Engagement Framework
- Ausgrid's Environmental Handbook NS174c
- Ausgrid's Engagement Framework 2024 – 2029 Regulatory Proposal
- DPHI's Community Participation Plan
- International Association for Public Participation (IAP2).

Our approach will be tailored to meet the needs and expectations of each community and stakeholder group, ensuring all individuals are treated with the same high level of respect. In addition to these principles, engagement should be risk-based and proportionate.

To ensure best practice, the CSEP has been developed in accordance with the NSW Premier's Department Regional Communities Consultation Guide (April 2025). This includes prioritising inclusive community engagement, incorporating impact assessments, and ensuring culturally appropriate engagement with First Nations peoples. These efforts are supported through transparent information sharing, active listening, and the responsive management of community concerns.

Figure 3: Ausgrid's engagement principles



2.1. Objectives

The CSEP's overarching objectives are to:

- Build awareness and understanding of the Project and its benefits alongside broader business commitments with key stakeholders
- Communicate Project scope, timing and potential impacts clearly to potentially affected stakeholders
- Facilitate a robust engagement process to meet requirements for planning approval
- Mitigate reputational risk, through timely, clear and transparent communications and engagement.

2.2. IAP2 Spectrum

Our engagement approach aligns with the International Association of Public Participation (IAP2) spectrum.

This established method of engagement helps to identify and define the public's role in any consultation processes. It also helps proponents:

- Tailor engagement strategies to the specific needs, circumstances and stakeholders
- Promote inclusivity and responsiveness
- Encourage transparency and accountability by clearly outlining the level of involvement stakeholders can expect.

For the proposed Lake Munmorah BESS, engagement objectives align with **inform**, **consult** and **involve**.

Table 2: IAP2 spectrum as applied to Lake Munmorah BESS

Inform	Consult	Involve	Collaborate	Empower
Provide balanced and objective information to assist understanding of the problem, opportunities and solutions.	Obtain feedback on analysis, alternatives and decisions.	Work directly with stakeholders to ensure their aspirations are understood and considered.	Partner with stakeholders in each aspect of the decision including development of alternatives and identification of the preferred solution.	Place final decision-making in the hands of the stakeholder.
Our commitment for Lake Munmorah BESS				
Community and stakeholders	Community and stakeholders	Select stakeholders	Select stakeholders	Project team and government decision-makers
Accessible and inclusive information about the Project including: • Scope • Benefits • Progress • Non-negotiable elements, clearly explaining why these elements are set • Project decision making process.	Seek feedback to inform negotiable aspects of the Project, including during the SSDA process. Provide updates about how feedback has been considered in decision making and Project development.	Testing ideas and options, understanding aspirations, values, concerns and issues and ensure these are considered.	Work together to develop solutions or alternatives for relevant aspects of the Project.	Decision-making such as SSDA.

2.3. Negotiables and non-negotiables

The scope of communication and engagement activities for this Project clearly outlines what the engagement process will focus on, what Ausgrid is seeking input on, and how feedback will be considered in the decision-making process.

To inform the consultation with community and stakeholders, the following table outlines the items that can and can't be influenced (shaped or changed) throughout engagement:

- **Negotiables:** Negotiable items can be influenced in response to feedback.

- Non-negotiables: Non-negotiable items cannot be influenced in response to feedback.

Table 3: Lake Munmorah BESS negotiables and non-negotiables

Negotiables	Non-negotiables
• Safeguards to mitigate environmental and community impacts, as required, including: ○ Noise treatments ○ Traffic, access and parking mitigation strategies ○ Tree planting, or re-vegetation initiatives in the local area	• BESS capacity, layout or configuration within site or technical design aspects • Site suitability assessment • Planning pathways • BESS operations and maintenance activities and parameters.

3. Stakeholders

3.1. Local community and neighbours

The Project is located within the Lake Munmorah SAL (Suburbs and Localities area for ABS Census data). This has been used to provide a community demographic profile. The Central Coast LGA is profiled, for comparison, and in recognition there is a wider area of community interest for the project.

Broadly, the Lake Munmorah community:

- Is made up of older residents, with a median age of 50 years.
- Is home to a slightly higher Aboriginal and Torres Strait Islander population (5.5% in Lake Munmorah vs. 4.9% in the Central Coast).
- Is predominantly Australian-born (84%), with strong English language proficiency (92.8%).
- Are largely homeowners, with 49.6% owning outright and 29.9% paying off a mortgage. A further 17.9% rent privately – lower than the Central Coast average of 27.5%.
- Is of roughly average education levels, with 43% having completed tertiary studies or holding a Certificate III or IV, and 34.2% having completed Year 10 to 12 as their highest level of education.
- Has lower workforce participation levels (48.3%), likely due to the older population of the area.

3.2. Community demographic profile

Table 4: Community demographic profile

		Lake Munmorah (SAL 12262)	Central Coast LGA
Total population		5,084	346,596
Median age (years)		50	43
Aboriginal and Torres Strait Islander people		5.5%	4.9%
Country of birth	Australia	84%	79%
	Overseas	16%	21%
Languages other than English spoken at home (Top five)		• Arabic (0.5%) • Spanish (0.3%) • Indonesian (0.2%) • Greek (0.2%) • Maltese (0.2%)	• Mandarin (0.6%) • Spanish (0.5%) • Italian (0.3%) • Tagalog (0.3%) • Cantonese (0.3%)
English proficiency (speaks English only, well or very well)		92.8%	87.7%
Median household income (weekly)		\$1,155	\$1,507
Housing tenure	Owned outright	49.6%	34.5%
	Owned with mortgage	29.9%	34%
	Private renting	17.9%	27.5%
Highest education level attained	Years 10 to Year 12	34.2%	31%
	Bachelor's degree and above	10.5%	17.9%

	Certificate III and IV	24.5%	21%
Employment status	Full time	49.5%	50.1%
	Part time	33.3%	33.4%
	Unemployment rate	4.7%	4.7%
	Workforce participation rate	48.3%	55.7%
Employment by industry (Top three)		- Hospitals (except Psychiatric Hospitals) (4.6%) - Supermarket and Grocery Stores (4%) - Other Social Assistance Services (3.8%)	- Hospitals (except Psychiatric Hospitals) (5%) - Other Social Assistance Services (3.4%) - Aged Care Residential Services (3.2%)

ABS Census 2021, Census of Population and Housing 2021

3.3. Considerations for community engagement

Based on the community profile, communications material should be:

- Accessible and easy to understand, using plain English and visuals, where available, to communicate complex or technical content
- Use a multimedia approach – using a digital library while also making efforts to provide hard copy materials in key community venues and locations, such as libraries, town centres or community halls.

Engagement with near neighbours, or those residents, property and business owners living within proximity of the Lake Munmorah substation, will also fall in the 'involve' and 'consult' section of the IAP2 Spectrum of Public Participation. These community stakeholders may be impacted by construction activities such as traffic, noise and amenity.

The broader community around the site may take a keen interest in the Project due to general interest in growing renewable projects, and Ausgrid will work closely with community representatives, key interest groups, councils, local MPs and other key stakeholders.

3.4. Distribution area

Figure 3 below shows the community newsletter distribution area. Community newsletters will be distributed during EIS preparation to keep the community informed and promote upcoming engagement activities. This distribution area captures nearby residential properties as well as education facilities.

This area has been used to identify sensitive receivers and the surrounding community. The closest residential properties are around 120m to the south of the Project site, across the Pacific Highway. Lake Munmorah Public School and St Brendan's Catholic Primary School are both within 75m of the Project site. Lake Munmorah High School is around 150m from the site and St Brigid's Catholic College is around 300m from the site.

Figure 4: Community newsletter distribution area



3.5. Stakeholder identification

In DPHI's *Undertaking Engagement Guidelines for State Significant Projects*, stakeholders are defined as individuals, groups or organisations who are affected by, have an interest in, or have the potential to influence the outcome of a Project.

For the purposes of this CSEP, stakeholders have been categorised by:

1. Close neighbours (within 300m)
2. Surrounding community (within 1.5km)
3. First Nations
4. Elected officials
5. Agency stakeholders

Table 5: Engagement aims and potential interests, by stakeholder category

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
Close neighbours (within 300m)			
<u>Sensitive receivers</u> - Lake Munmorah Public School - Lake Munmorah High School - St Brigid's Catholic College - St. Brendan's Catholic Primary School - St Brendan's Early Learning Centre - St Brendan's Catholic Church - TASK out of hours school care (Lake	To inform Scoping Report - Upfront engagement to provide accurate information about the proposal and potential impacts - Manage concerns and initial questions - Proactively identify any concerns and answer questions To inform EIS - Provide an update on the proposal and potential impacts - Inform about technical studies, including relevant outcomes,	- High interest - Medium influence	- Construction impacts (traffic, noise, vibration) - Operational impacts (noise, hazards)

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
Munmorah Public School) - Lake Munmorah Preschool Kindergarten (44 Dianne Ave) - Table Church (1 Acacia Ave) - Lake Munmorah 50s Plus Leisure and Learning Centre (1 Acacia Ave) <u>Residential neighbours</u> 690 – 694 Pacific Hwy (Residential) 219A – 223 Elizabeth Bay Dr (Residential) 1 – 2 Conradi Close (Residential) 12 – 13 Winchester Dr (Residential) 1A – 6 Acacia Ave (Residential)	implication to stakeholder and next steps - Understand concerns and issues and mitigate, where possible Throughout construction and operation - Regular updates at each project milestones - Proactive information sharing - Ongoing enquiry management and complaints handling		
Surrounding community (within 1.5km)			
Residential (not directly affected) - Elizabeth Bay Drive - Pacific Hwy - Carters Road - Acacia Avenue - Kangaroo Avenue	To inform Scoping - Upfront engagement to provide accurate information about the proposal and potential impacts - Manage concerns and initial questions	- Medium interest - Low influence	- Visual amenity - Noise - Traffic impacts

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
• Possum Street • Kookaburra Avenue • Wallaby Road • Radford Place • Conrad Close • Roanoke Drive • Rico Close • Franklin Drive • Palm Drive • Stringy Bark Avenue • Red Gum Avenue • Bottlebrush Avenue • Delavia Drive • Lawver Crescent • Quisenberry Drive • Sohrabi Place • Covington Court • Blacksburg Court • Berkley Court • Princeton Court • Hartog Avenue • Lauren Avenue • Anita Avenue • Lake way Drive • Dianne Avenue • Agatha Avenue	To inform EIS • Provide an update on the proposal and potential impacts • Inform about technical studies, including relevant outcomes, implication to stakeholder and next steps • Understand concerns and issues and mitigate, where possible		

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
- Queens Road - Bodalla Road - Annabel Avenue - Adelline Avenue - Viney Lane - Alister Avenue - Arcadia Avenue - Boronia Road - Hardling Avenue - Terrance Avenue - Kellys Road - Anthony Street - Fortune Crescent - Lena Close - Clarence Street - Andrew Street - Azalea Close Industrial/ commercial Pacific Highway - AuzWide Bus and Motorhome Conversions (325 Pacific Hwy) - The Garage Service Centre (335 Pacific Hwy) - BP (335 Pacific Hwy) - La Notte Uno Restaurant Lake Munmorah (616 Pacific Hwy)			

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
- Lake Munmorah Motel (620-624 Pacific Hwy) - Club Munmorah (550 Pacific Hwy) - Food Star Takeaway (638 Pacific Hwy) Carters Road - Karignan Plantation Wholesale Plant Nursery and Trees Impact Tree Farm (103 Carters Road) - Integrity Car Sales and Rentals Central Coast (78 Carters Road) Elizabeth Bay Drive - Utopia Hair Artistry & Beauty (171 Elizabeth Bay Drive) Quisenberry Dr - Pilates Cartel Lake Munmorah (2/1 Quisenberry Drive) Anita Avenue - Mona's Pizza (97 Anita Avenue) - Treat Yo Self Hair&Beauty (95 Anita Avenue) - Lake Munmorah Quality Meats (95 Anita Avenue)			

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
Education facilities Goodstart Early Learning Lake Munmorah			
Recreational facilities - RFS Park - McCulloch Reserve - Munmorah Sports Ground	Interested in what Ausgrid is doing and how it will impact the suburb/ use of the reserve	- Low interest - Low influence	
Road users - Drivers - Cyclists - Pedestrians	- To proactively identify any potential impacts. - Manage impacts through the traffic management plan	- Medium interest - Medium influence	Traffic impacts
Health care - Douglass Hanly Moir Pathology (95 Anita Avenue) - Lake Munmorah Dental Practice (165-203 Elizabeth Bay Drive) - Lake Munmorah Health Specialists (3 Acacia Avenue) - Lake Munmorah Doctors Surgery (678 Pacific Hwy)	- To proactively identify any potential impacts. - To identify and manage any community concern early in the process	- Low interest - Low influence	Potential impacts of construction or operation on properties, customers or visitors

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
First Nations stakeholders			
Traditional Owners of the land where the project is taking place (Darkinjung)	- To actively show respect and acknowledge their role as custodians of the land we work on - To proactively identify any potential impacts. - To identify and manage any issues of concern early in the process	- Medium interest - High influence	- Visual amenity - Noise - Traffic impacts - Aboriginal cultural heritage impacts
Darkinjung Local Aboriginal Land Council (LALC)	- To actively show respect and acknowledge their role as custodians of the land we work on - To proactively identify any potential impacts - To identify and manage any issues of concern early in the process	- Medium interest - High influence	- Visual amenity - Noise - Traffic impacts - Aboriginal cultural heritage impacts
Elected officials			

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
Local Government Central Coast Council - Mr David Farmer (CEO) - Mr Luke Nicholls (Director Environment and Planning) - Councillors (Budgewoi Ward) - Cr Helen Crowley - Cr Doug Eaton OAM - Cr John Mouland (Deputy Mayor)	Throughout project lifecycle - Proactively manage Ausgrid's relationship and reputation in the region - Coordinate engagement across Ausgrid work - Proactive manage risk of opposition to the Project - Inform about scope, potential impacts and next steps - Understand concerns and issues and mitigate, where possible - Provide updates at each project milestone	- High interest - High influence	- Access to and from the site (use of Enterprise Drive) - Proactively manage Ausgrid's relationship and reputation in the region - Coordinate engagement across Ausgrid work - Proactive manage risk of opposition to project - Inform about project scope, potential impacts and next steps - Understand concerns and issues and mitigate, where possible
State MP Yasmin Catley (Member for Swansea)		- High interest - High influence	- Community concern - Alignment with state energy commitments
Federal MP Pat Conroy (Member for Shortland)		- Medium interest - High influence	- Community concern - Alignment with federal energy commitments
Agency stakeholders			
Other utilities - Jemena - Central Coast Council's Water Supply Services - NBN	To inform EIS - To proactively identify any potential impacts on their operation or assets - To provide the opportunity to coordinate work delivery	- Medium Interest - High influence	- Potential service disruption - Location of assets - Potential impacts of construction or operation on properties, customers or visitors

Stakeholder	Engagement aim	Influence / interest	Potential interests or concerns
Telstra	- Inform about scope, potential impacts and next steps - Discuss implication on agencies services - Understand concerns and issues and mitigate, where possible - Collaborate to address risk mitigation and safeguards in local context and at Program level - Build on working relationships built throughout Tranche 1 (if applicable) to inform Tranche 2 projects.		- Impacts to customer bills - Opportunities to participate in community benefits
Transport stakeholders - Transport for NSW (TfNSW) - Private bus companies, including school bus operators - Active transport groups		- Medium Interest - High influence	- Potential traffic impacts - Potential impacts of construction or operation on properties, customers or visitors
Emergency Services - Lake Munmorah Rural Fire Brigade (6/8 Alister Ave, Lake Munmorah) - Fire and Rescue NSW Doyalson Fire Station (51-53 Pacific Hwy, Doyalson) - NSW Ambulance (closest station is 135 Dora St, Morisset) - NSW Police (closest station is 14 Denning St, The Entrance)		- Medium interest - High influence	- Hazards - Potential traffic impacts

3.6. First Nations engagement

Ausgrid is aware of its responsibility as an infrastructure planner to involve First Nations communities in our project planning and delivery. We will do this by forming ongoing and meaningful relationships with the Indigenous communities whose Country the BESS projects are located on.

Through meaningful stakeholder engagement, Ausgrid will demonstrate purposeful co-creation within our organisation, building on existing relationships held with Local Aboriginal Land Councils (LALC), and establishing new relationships with other community groups.

First Nations engagement for this Project will be guided by:

- Advice and best practice informed by Indigenous Energy Australia
- Aboriginal Heritage consultant (in line with Aboriginal Cultural Heritage Assessment Report (ACHAR) requirements)

Table 6: First Nations stakeholders

Stakeholder	Potential Interest	Reason for engaging
Darkinjung LALC	LALCs that cover areas impacted by the BESS projects and will want to ensure the projects achieves outcomes for their communities.	Aboriginal LALCs have the right to be consulted about developments on their traditional lands.
Traditional Owners and Aboriginal Groups	Traditional Owners may want input on how development on their traditional lands is designed and constructed.	Traditional Owners need to be consulted on how they want development on their traditional lands to be designed and constructed.
Regional community groups	Smaller community groups throughout the areas.	Some smaller community groups don't feel represented through LALCs and the larger corporations. Need to ensure we engage with a broad group of First Nations stakeholders.

4. Risks and mitigation

Following completion of the environmental assessments and technical studies (to inform the EIS), this risk and opportunities assessment will be revised.

At the time of writing this CSEP, the risks at this site in Lake Munmorah are largely associated with:

- Potential impacts during construction (noise, traffic / trucks and vibration) on nearby education facilities
- Safety and hazard management (during construction and operation)
- Community concerns about hazards during operation, given BESS are an emerging technology, and the Project's proximity to sensitive receivers
- Traffic management (during construction), particularly use of Pacific Highway and any proposed use of Carters Road, which is a cul-de-sac

Measures to mitigate identified potential risks include:

- Proactive and tailored engagement with stakeholders to build relationships and keep them informed about the Project
- Timely and clear communications that make technical information accessible for all community and stakeholders
- Being clear about what is negotiable, not negotiable, what is known, unknown and not yet decided as the Project progresses from concept design and planning approvals to detailed design, construction and operation
- Early collaboration with community and stakeholders to develop, and deliver, community benefits.

Lake Munmorah BESS presents an opportunity for Ausgrid to launch a state-of-the-art grid-scale battery technology through a proactive engagement strategy that encourages public participation and transparently incorporates stakeholder feedback. This approach also strengthens Ausgrid's social license as a key player in Australia's clean energy transition.

This section summarises the key risks and opportunities for consideration when communicating and engaging with community and stakeholders.

4.1. Key risks

Table 7: Key risks for community and stakeholder engagement

Risk	Stakeholders affected	Mitigation measure
Engagement fatigue in areas impacted by other energy infrastructure projects	• Local, State and Federal stakeholders • Residential and business communities	• Coordinated approach with other Ausgrid projects for engagement, timing and frequency • Clear communications about scope and purpose of all engagement activities
Confusion between BESS and community batteries, and how customers may benefit or interact	• Residents with PV systems • Ausgrid customers	• Clear communication about scope and benefits, and key messages differentiating the projects
Delayed project approvals	• State, Federal and Local elected representatives	• Early engagement with elected representatives to clearly explain

Risk	Stakeholders affected	Mitigation measure
	- EWO - Neighbouring properties - Residential and business community	assessment processes, impacts and mitigation measures - Clear communication about scope and process for assessments - Records of communications and engagement with directly impacts stakeholders
Complaints about proposed sites due to perceived impacts (noise, vibration, visual, traffic, hazards, etc)	- Neighbouring properties - Residential and business community	- Early communications about impacts/interactions, assessment process and mitigations/safeguards for construction and operations - Accessible technical studies for impacted stakeholders to understand extent of impacts
Opposition to proposed site due to proximity to education facilities and other sensitive receivers	- Neighbouring properties - Residential and business community	- Early communications about impacts/interactions, assessment process and mitigations/safeguards for construction and operations - Accessible technical studies for impacted stakeholders to understand extent of impacts
Changes in timing, plans and impacts results in frustration from stakeholders	- Local, State and Federal stakeholders - Agency stakeholders - Residential and business communities	- Internal information sharing protocols in place to facilitate regular updates - Communications across teams encouraged by leadership - Scheduled regular workshops and other communications to update stakeholders

1.1. Key opportunities

Table 8: Key opportunities for community and stakeholder engagement

Opportunity	Potential benefits	Recommended actions
Launch of BESS technology and Ausgrid's combined efforts in enabling renewables transition (particularly with Ausgrid's involvement in the HCCREZ)	Generate social license	- Early engagement that builds understanding and trust - Seeking feedback, incorporate feedback, showcase how feedback was incorporated - Permanent site signage promoting project benefits
Community education about BESS technology and its benefits	- Build awareness and interest in new technology - Test community education content for more complex sites	Community education campaign to explain how technology works and benefits, tailored for lay audience and potentially schools

Build meaningful relationships	• Build long term relationships with neighbours, First Nations community and stakeholders	• Early engagement that builds understanding and trust • Consider feedback (where possible) to understand drivers and community needs to create shared benefits and outcomes
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5. Key Messages

5.1. Strategic narrative

- Ausgrid is planning for the energy network of the future, now.
- As we switch to more renewable sources, like solar and wind, we need energy storage. In fact, NSW needs six times more energy storage before 2030.
- We're proposing large energy storage, Battery Energy Storage Systems (BESS), connected to the distribution network, to improve the reliability, stability and affordability of the electricity network.
- By connecting BESS to our existing substations, we are reducing the impact on our communities and the environment and decreasing the need to build more large transmission and distribution lines, which helps reduce costs and makes electricity more affordable.
- Ausgrid is committed to investing in new technologies to make the network more sustainable, reliable and affordable. We also need to make sure the network is ready for customers' future needs.

5.2. Why grid-scale BESS

- A Battery Energy Storage System (BESS) is a group of large rechargeable batteries, connected to form one very large battery. BESS collect energy, store it when there is a lot and then release it when there is high demand for electricity. These large batteries are critical to ensuring the reliability of electricity supply for households and businesses.
- By connecting BESS to our existing substations, we are reducing the impact on our communities and the environment and decreasing the need to build more large transmission and distribution lines, which helps reduce costs and makes electricity more affordable.
- BESS enable more renewable energy to come online by storing energy when there is more than we need and releasing it when it's required. This keeps the power supply steady, even when the sun isn't shining or the wind isn't blowing, providing a more resilient and reliable electricity network.
- BESS connected to Ausgrid's current network better utilises existing infrastructure, reducing the need for additional infrastructure investment making the cost of electricity cheaper over time.
- BESS enable more renewable energy like wind and solar to connect to the energy network. By connecting to our existing substations, it avoids the need for new transmission lines, reducing the environmental and community impacts of large infrastructure projects.
- Distribution-connected grid-scale storage can deliver improved network reliability and stability, helping defer more expensive network investment. Co-locating grid-scale storage next to substations also has less environmental and community impact than new transmission lines.
- There is a clear opportunity for the distribution network to leverage existing capacity and do more of the heavy lifting in the energy transition.
- With substations across the network, internal expertise in the design and planning of electricity connections and external partnerships in place, we are strongly positioned to facilitate the planning and design for BESS and accelerate their delivery.

5.3. Project description

- Ausgrid is proposing a Battery Energy Storage System (BESS) on its own land near an existing substation. We are preparing to take the Lake Munmorah BESS site through the planning and approval process, providing opportunity for our customers and local communities to better understand this technology and the Project.
- The proposed Lake Munmorah BESS will have a capacity of up to 120MW and be able to store up to 240MWh – that's enough electricity to power up to 12,960 Ausgrid customers per day.
- We're planning for BESS to be located next to Ausgrid-owned substations, minimising impacts to private property by using existing transmission and energy infrastructure, where possible.
- We're considering a range of factors to select suitable sites for BESS. These include available space within Ausgrid-owned property, connections to the network, existing background noise levels and cumulative impacts on noise and vibrations.
- This project is in the planning phase, with ongoing studies to understand the potential environmental and community impacts. Findings will be shared with local community and stakeholders through a SSDA process.
- Construction is expected to start in 2028, with the Lake Munmorah BESS expected to be operating from 2029, at the earliest. Ausgrid is evaluating the environmental impacts, including noise, vibration, traffic, and visual amenity, and how we will mitigate these through an EIS process, seeking feedback from stakeholders and the community.

5.4. The planning process

The Lake Munmorah BESS is being proposed by Ausgrid via the State Significant Development Application (SSDA) pathway. The proposal will be assessed by the NSW Department of Planning, Housing, and Infrastructure (DPHI).

- **Early engagement** – We're starting early conversations with the community and stakeholders to help shape our initial studies. These early assessments help us understand what might be possible on the site.
- **(We are here) Lodging the Scoping Report** – After early engagement, we will submit a Scoping Report to DPHI. The Scoping Report includes what we've learned so far and asks for the Secretary's Environmental Assessment Requirements (SEARs). The SEARs guide what needs to be covered in the Environmental Impact Statement (EIS), and ensure community, government agencies and service providers can provide feedback.
- **Further engagement before the EIS** – Before we submit the EIS, we'll come back to the community and stakeholders to share what the technical studies found and what we're proposing for the site. This is another chance for the community to provide feedback.
- **Lodging the EIS** – After this second round of engagement, we'll submit the EIS as part of our formal development application.
- **Post lodgement** – Plans will go on public exhibition. At this time, formal submissions can be made to DPHI.
- **Determination** – If approved, we will provide regular updates at project milestones, including construction and operation.

6. Communication tools and protocols

Table 10 outlines the communications tools and maps their use against the IAP2 Spectrum of Public Participation. This is intended to provide community and stakeholders with clarity about the level of influence of their feedback collected via each method.

Table 9: Communications tools and protocols

Engagement method	Audience	Purpose	Participation				
			Inform	Consult	Involve	Collaborate	Empower
Briefings (formal and informal)	All stakeholders	Presentations and discussions with community and stakeholder groups to gather feedback, ideas or options. Formal and informal.	✓	✓			
Door Knocking / letterbox drops	Neighbouring Landholders and residents	Notify neighbouring landholders to raise Project awareness, notify and have their questions answered.	✓				
Interactive online tools	All stakeholders	Online platforms that allow community participation including feedback forms, webinars, public meetings, surveys, submissions, workshops.	✓	✓			
Pop-up stalls	All stakeholders (targeting general public)	Pop-up stalls (staffed) at a physical location in community displaying information, plans, documents and surveys.	✓	✓			
Public Displays	All stakeholders (targeting general public)	Staffed or unstaffed displays of information, plans or documents made publicly available.	✓	✓			
Surveys	All stakeholders	A series of questions suitable for internal and external stakeholders to understand preferences, seek feedback and provide input.		✓			
Workshops	All stakeholders	Structured method suitable for small groups of internal and external stakeholders to explore specific, complex issues.	✓	✓	✓		

7. External Communications

7.1. Media

All media will be managed in a manner that is consistent with Ausgrid's existing media policy.

Ausgrid's community engagement specialists work closely with Public Affairs to inform them about upcoming projects and construction issues to ensure media can be used where appropriate to complement other communication activities. All employees will consider the nature of the work and advise Public Affairs if they expect there to be significant community issues or if any issues arise during works. Media releases will be prepared to announce Project milestones or significant community updates and issued to relevant local, regional, national and industry media as required.

7.2. Social media and website

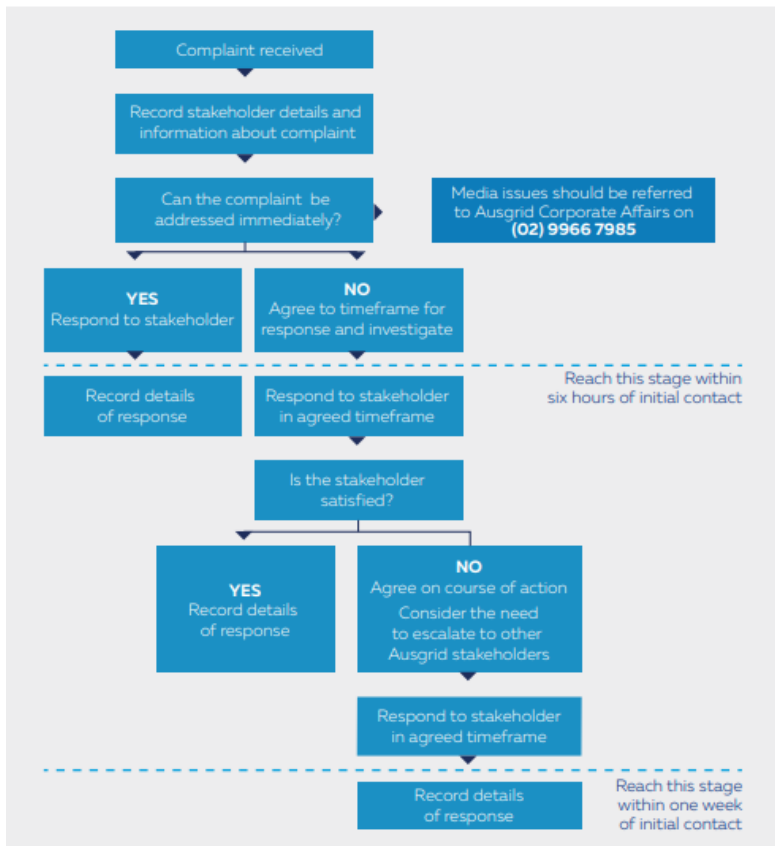
Ausgrid will use social media and a dedicated webpage to regularly communicate with stakeholders and will include updates and significant Project milestones FAQs and fact sheets will be developed to support social media engagement and website updates to quickly respond to enquiries.

Ausgrid's social and website content is coordinated by Ausgrid's Brand and Reputation team.

7.3. Enquiries and complaints management

Enquiries and complaints provide important feedback to improve project processes, mitigation measures and avoid or minimise further concerns. Ausgrid will put in place processes to ensure that all enquiries and complaints are responded to, mitigated, or completed as soon as possible. These requirements will apply 24 hours a day. Within 24 hours of being notified of a complaint by the customer, either Ausgrid or its contractor will attend to the complaint and propose an action plan to rectify the problem, obtain the complainant's agreement to the proposed actions and the timing of those actions, notify the project manager formally of the agreed method for resolving the complaint, and complete and update Ausgrid's complaint register database. The process is detailed in Figure 5. This process will be made available to the community and stakeholders.

Figure 5: Complaints management approach



8. Reporting and measurement

The Stakeholder Engagement Manager and Community and Stakeholder Engagement Leads will monitor the implementation of this Plan CSEP to ensure the approach is meeting both the engagement and project objectives. The CSEP will be reviewed on a six-month basis, and prior to the start of a new stage of communications and engagement and updated as required.

The outcomes engagement will be communicated back to the community and stakeholders to demonstrate how their feedback was considered. Any feedback or issues identified during the monitoring process will lead to adjustments in processes and communication channels, as needed. Monitored performance indicators will include the responsiveness and effectiveness of communication with stakeholders and the community, as well as information flow.

Ausgrid will prepare communications and stakeholder engagement outcomes reports at key milestones to:

- Provide and track feedback from stakeholders to the project team
- Meet legislative requirements
- Track trending issues
- Look for opportunities to further reduce the impact on the community and key stakeholders
- Improve the quality of communications and engagement.

The complaints register will include a summary of total number of complaints received in the period and overarching statistics including:

- Date and time of the complaint
- Method by which the complaint was made
- Nature of the complaint
- If the complaint was avoidable or unavoidable
- The name, address and contact details of the complainant
- How long the complaint took to close.

Ausgrid will use a stakeholder database to record and report stakeholder interactions, including the management of complaints and inquiries. Reports from this platform will support formal reporting, performance monitoring against the objectives of this CSEP, and the overall project evaluation.

9. Implementation Plan – planning and approvals phase

Timing	Activity	Engagement methods and tools	Purpose	Target Audience
Early consultation – Scoping Report preparation <i>Note: early consultation will be targeted to local government and sensitive receivers</i>				
Nov 2025 – March 2026	Stakeholder letters, emails and phone calls	- Individual stakeholder letters - Site map and/or visualisation - Commence Project briefings (in-person or online) - Phone calls and emails	- Introduce Project and request a meeting - Establish relationship	- Local council, elected officials and LALC - Neighbouring sensitive receivers - Non-government organisations, utilities and government agencies
	Stakeholder briefings	- Site map and/or visualisation - Presentation – Project introduction	- Inform about project scope and timing, potential impacts and upcoming further engagement - Gather early feedback	
Early consultation – EIS preparation <i>Note: EIS consultation will engage with a broader range of stakeholders and surrounding community</i>				
Throughout 2026	Ongoing targeted engagement with nearby sensitive receivers and other stakeholders	- Letter and email - Meeting (in-person or virtual) - Phone call	- Provide updates about project and answer questions - Outline EIS process and potential impacts - Understand concerns, risks and issues, and potential mitigations	- Sensitive receivers - Local council, elected officials and LALC
Mid 2026	Webpage	- Website, establish dedicated phone number and/or email - FAQs	Inform about project and potential impacts	All stakeholders

Timing	Activity	Engagement methods and tools	Purpose	Target Audience
		Newsletter and stylised maps	- Promote upcoming opportunities for community engagement - Promote sign up to EDM for project updates	
	Letterbox drop	Issue community newsletter	- Inform about project, EIS process and potential impacts (as a result of studies) - Promote upcoming opportunities for community engagement - Promote community survey - Promote sign up to EDM for project updates	- Sensitive receivers - Surrounding residential community - Neighbouring businesses
	Survey	Online survey	- Understand community concerns and issues - Gather feedback on mitigations	- Sensitive receivers - Surrounding residential community - Nearby businesses
	Pop-up community information sessions	- FAQs and factsheets - Information boards - Survey (hard copy and online)	- Inform about project, potential impacts and SSDA pathway - Understand community values and priorities, concerns, risks and issues, and potential mitigations, and capture feedback - Explain EIS exhibition and engagement process to encourage participation	- Surrounding residential community - Nearby businesses
Late 2026	Community newsletter and webpage updates	- Community newsletter - Website and factsheet	Thank community and stakeholders for feedback	Non-government organisations, utilities and government agencies

Timing	Activity	Engagement methods and tools	Purpose	Target Audience
		Letters, emails and phone calls to registered stakeholders	- Summarise engagement activities, key themes and outcomes - Outline how feedback has been considered and next steps - Outline next steps (exhibition) and invite feedback, via Planning Portal	- Neighbouring and nearby businesses and properties - Surrounding residential community - Sensitive receivers
	Stakeholder meetings, as required	- Face-to-face meeting - Phone call - Briefing packs	- Provide update on previous issues and questions raised, overview of relevant EIS content - Understand concerns, issues and risks - Encourage providing formal feedback via Planning Portal	All stakeholders that have had meetings to date

Appendix D Preliminary Social Impact Scoping Worksheet

Social Impact Assessment (SIA) Worksheet																	
Project name: Lake Munmorah BESS																	
Date: 04 June 2025																	
CATEGORIES OF SOCIAL IMPACTS	POTENTIAL IMPACTS ON PEOPLE		PREVIOUS INVESTIGATION OF IMPACT		CUMULATIVE IMPACTS		ELEMENTS OF IMPACTS - Based on preliminary investigation					ASSESSMENT LEVEL FOR EACH IMPACT				PROJECT REFINEMENT	MITIGATION / ENHANCEMENT MEASURES
what social impact categories could be affected by the project activities	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.		Has this impact previously been investigated (on this or other project/s)?	If "yes - this project," briefly describe the previous investigation. If "yes - other project," identify the other project and investigation	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?	If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics					Level of assessment for each social impact	What methods and data sources will be used to investigate this impact?			Has the project been refined in response to preliminary impact evaluation or stakeholder feedback?	What mitigation / enhancement measures are being considered?
	Is the impact expected to be positive or negative						extent i.e. number of people potentially affected?	duration of expected impacts? (i.e. construction vs operational phase)	intensity of expected impacts i.e. scale or degree of change?	sensitivity or vulnerability of people potentially affected?	level of concern/interest of people potentially affected?		Secondary data	Primary Data - Consultation	Primary Data - Research		
access	Carfers Rd is a thoroughfare for educational premises. Potential disruptions to school operations caused by temporary disruptions to road users (including pedestrians and cyclists). Increased road traffic may negatively impact perception of the area.	Negative	No	N/A	No	Not required	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Not yet but will be investigated at the EIS stage	Assessment and management of traffic impacts will be provided in the EIS chapter and Transport Impact Assessment Report.
culture	Potential for minor changes to Connections to Country for Aboriginal communities, natural values or heritage items, resulting in impacts to cultural elements which are valued by the community.	Negative	No	N/A	Yes	Other environmental impacts assessed in the EIS	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Targeted consultation	Potentially targeted research	Not yet but will be investigated at the EIS stage	A ACHAR and desktop assessment of non-Aboriginal heritage impacts will be undertaken in the EIS
culture	Potential for minor changes to natural values or heritage items, resulting in impacts to cultural elements which are valued by the community	Negative	No	N/A	No	Not required	No	No	Unknown	No	Unknown	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Not yet but will be investigated at the EIS stage	No further assessment required
health and wellbeing	Potential temporary health and wellbeing impacts for those who live or use areas within the vicinity of the site, such as direct impacts to health associated with dust or ongoing construction noise.	Negative	No	N/A	Yes	Other environmental impacts assessed in the EIS	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Not yet but will be investigated at the EIS stage	Assessment and management of noise and vibration, air quality, visual, etc. will be provided as part of their respective EIS chapters and specific reports. Discussions will take place with affected residents. SIA specific mitigations to be developed as required.
health and wellbeing	Adverse impacts to community and visitors' sense of place. Noise from construction could detract from the sense of place and negatively impact on people's perception of the broader region.	Negative	No	N/A	Yes	Other environmental impacts assessed in the EIS	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Targeted consultation	Not required	Not yet but will be investigated at the EIS stage	Assessment and management of noise and vibration will be undertaken in the EIS
surroundings	Potential visual impact on the surrounding area from construction activities.	Negative	No	N/A	No	Not required	No	No	No	No	Unknown	Detailed assessment of the impact	Required	Targeted consultation	Not required	Not yet but will be investigated at the EIS stage	Assessment and management of visual impacts will be provided as part of the EIS.
surroundings	Potential impacts on residents and businesses located close to construction activity due to increased noise and vibration, dust and construction traffic.	Negative	No	N/A	Yes	Other environmental impacts assessed in the EIS	Yes	Yes	Yes	Yes	Yes	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required	Not yet but will be investigated at the EIS stage	Assessment and management of traffic, noise and vibration, air quality, etc. will be provided as part of their respective EIS chapters and specific reports. Discussion with affected residents. SIA specific mitigations to be developed as required.
livelihoods	Potential benefits to businesses, including benefit from a net gain in passing trade (depending on the business location) during construction owing to the presence of construction workers.	Positive	No	N/A	No	Not required	No	No	No	No	Unknown	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required	Not yet but will be investigated at the EIS stage	An economic analysis will be undertaken as part of the EIS. Consultation with business groups to understand local impacts of the development and how they may be enhanced.
livelihoods	Potential benefits for local construction related businesses, such as construction recruitment agencies, construction companies and resource suppliers.	Positive	No	N/A	No	Not required	No	No	No	No	Unknown	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required	Not yet but will be investigated at the EIS stage	An economic analysis will be undertaken as part of the EIS. Consultation with business groups to understand local impacts of the development and how they may be enhanced.
livelihoods	Direct and indirect employment opportunities in the area, for example to supply goods, services and materials to the project's construction, which can positively influence the local community's capacity to earn an income in the area.	Positive	No	N/A	No	Not required	No	No	No	No	Unknown	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required	Not yet but will be investigated at the EIS stage	An economic analysis will be undertaken as part of the EIS. Consultation with business groups to understand local impacts of the development and how they may be enhanced.
decision-making systems	Community members may express dissatisfaction with their ability to influence the strategic decision making and construction methodology or planning for the project.	Negative	No	N/A	No	Not required	No	No	No	No	Unknown	Minor assessment of the impact	Required	Targeted consultation	Not required	Not yet but will be investigated at the EIS stage	Consultation with interested community members as part of project development.
community	Potential for combined and consecutive social impacts on the community with other projects under construction nearby. Specifically noise and vibration, and cumulative traffic impacts are likely to be of concern to residents within the locality.	Negative	No	N/A	Yes	Potential cumulative impact, particularly if the BESS is constructed with other projects in the area	No	No	No	No	Unknown	Minor assessment of the impact	Required	Targeted consultation	Targeted research	Not yet but will be investigated at the EIS stage	Consideration of cumulative amenity impacts throughout EIS and consideration within SIA in a social context.
community	Potential noise impacts of BESS impact on the community	Negative	No	N/A	Yes	Potential cumulative impact, particularly if the BESS is constructed with other projects in the area	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Not yet but will be investigated at the EIS stage	Assessment and management of noise and vibration will be provided as part the EIS chapters and specific report. Discussion with affected residents. SIA specific mitigations to be developed as required.
community	Potential visual impacts changing visual amenity of the locality. The closest residential visual receptors are located approximately 120m south. There is existing road corridor between the site and these residences which may provide a buffer. The project may also be visible to schools and vehicles travelling	Negative	No	N/A	No	Not required	Yes	No	Yes	No	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Not yet but will be investigated at the EIS stage	Assessment and management of visual impact will be provided as part the EIS chapters and specific report. Discussion with affected residents. SIA specific mitigations to be developed as required.
health and wellbeing	Potential concern regarding risk to the community in the case of hazardous accidents within the Site.	Negative	No	N/A	No	Not required	No	No	Unknown	No	Unknown	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Not yet but will be investigated at the EIS stage	Assessment and management of noise and vibration, air quality, visual etc. will be provided as part of their respective EIS chapters and specific reports. Discussion with affected residents. SIA specific mitigations to be developed as required.
surroundings	Changes to local noise environment as a result of the presence of the operational BESS.	Negative	No	N/A	No	Not required	No	No	Yes	Yes	Unknown	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Not yet but will be investigated at the EIS stage	Assessment and management of noise and vibration will be provided as part of the EIS chapter and Noise and Vibration Impact Assessment report. Discussion with affected residents. SIA specific mitigations to be developed as required.
livelihoods	Potential benefits for businesses and community member's livelihoods, such as benefits to businesses associated with operation and maintenance, including landscaping and the follow economic benefit of maintenance workers visiting local businesses.	Positive	No	N/A	No	Not required	No	No	No	No	Unknown	Minor assessment of the impact	Required	Targeted consultation	Not required	Not yet but will be investigated at the EIS stage	Consultation with business groups to understand local impacts of the development and how they may be enhanced.

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community	Potential for cumulative visual, traffic or noise impacts to local community of this project alongside others in the area, particularly new developments in the locality.	Negative	No	N/A	Yes	Potential cumulative impact, particularly if proposed BESS nearby is constructed at the same time. This could also be impacted by Ampol's regular operations.	No	No	No	No	Unknown	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required	Not yet but will be investigated at the EIS stage	Consideration of cumulative amenity impacts throughout EIS and consideration within SIA in a social context.