



Illawarra Firming Power Station

Scoping Report

Squadron Energy

25 March 2026

→ **The Power of Commitment**





| Project name | | Illawarra Firming Power Station | | | | | |
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1. Introduction

1.1 Project overview

Squadron Energy is proposing the development of the Illawarra Firming Power Station (the project) which would be located at Unanderra, approximately six kilometres (km) south of the city of Wollongong, in New South Wales (NSW), within the Wollongong City Council (WCC) Local Government Area (LGA) (Figure 1.1).

The project involves the development of a gas turbine firming power station with a capacity of approximately 300 – 400 megawatts (MW). The project would also include turbine controls units, gas and transmission line connections, fuel oil storage, a demineralised water plant, demineralised and raw water tanks, office and control room facility and a switchyard.

The project would be situated at 23 Glastonbury Avenue, Unanderra (Lot 210 DP811435). An approximately 6.8 hectare (ha) portion of the lot would be leased from the current landholder, Shinagawa Refractories Australasia. The existing Endeavour Energy transmission substation and Springhill Field Service Centre are located immediately north of the project site. A lateral of the Eastern Gas Pipeline runs through the southern and eastern portions of the lot providing direct access to gas supply from the Port Kembla Energy Terminal. Other services are located within easements along the eastern extent of the lot.

The project site is accessed directly from Glastonbury Avenue and is zoned as E5 – Heavy Industrial under the *Wollongong Local Environmental Plan 2009 (Wollongong LEP 2009)*.

1.2 Applicant details

The Applicant for the Project is Illawarra Firming Power Station Pty Ltd, within the Squadron Energy group of companies, one of Australia's leading renewable energy companies that develops, operates, and owns renewable energy and firming assets across Australia. Currently, Squadron Energy has 2 gigawatts (GW) of renewable energy assets in operation and under construction.

The applicant's details are provided in Table 1.1:

Table 1.1 *Illawarra Firming Power Station Project applicant details*

| | |
|-----------------------|---|
| The Applicant | Illawarra Firming Power Station Pty Ltd (ACN 674 936 282) |
| Postal Address | Level 15, 55 Market Street, Sydney NSW 2000 |
| ABN | 67 674 936 282 |

1.3 Project objectives

The objectives of the project are to:

- facilitate the NSW government's Electricity Infrastructure Roadmap (the Roadmap) (DPIE, 2020) actions to deliver new firming capacity to better respond to NSW's electricity needs and improve reliability of the grid
- deliver reliable backup power when renewables aren't meeting demand whilst contributing to decarbonisation of the NSW electricity grid, to reduce emissions and achieve net zero emissions by 2050
- provide a dispatchable peaking electricity supply to the NSW grid during peak demand periods and reduce the risk of loadshedding and blackouts
- utilise existing transmission and gas infrastructure with the aim of lowering social and environmental impacts
- provide both direct and indirect employment opportunities during construction and operation
- work with the community and stakeholders in the identification, mitigation and monitoring of any potential environmental impacts and ensure quality, safety and environmental standards are maintained.

1.4 Strategies to avoid, minimise or offset impacts

Several sites were investigated within the region, with the project site considered the most suitable for the purpose of the project (refer Section 2.3.8). Strategies to avoid, minimise or offset impacts that have been identified during the scoping phase, include:

- avoiding impacts to other non-compatible land uses by locating the project on compatible land close to existing transmission and gas infrastructure
- siting the project in a developed industrial area, close to existing road and electrical networks, avoiding the need for long above ground transmission lines which may fragment properties or natural habitat, and result in detrimental environmental consequences including amenity impacts
- minimising potential noise, air quality and visual impacts on residential receivers
- avoiding areas of heritage sensitivity through considered siting of key project elements and working with Council to protect, recover or relocate and artefacts identified through ongoing investigations for the Environmental Impact Statement (EIS)
- providing the local community and stakeholders with adequate and sufficient information on the Illawarra Firing Power Station project through consultation processes to continue to seek feedback to avoid and/or minimise impacts.

1.5 Purpose and structure

With an estimated development cost of more than \$30 million, the project is classified as a State Significant Development (**SSD**) in accordance with section 2.6 (1) and Schedule 1 (10) of State Environmental Planning Policy (Planning Systems) 2021 (**Planning Systems SEPP**). Under the provisions of Clause 4.12(8) of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*, an Environmental Impact Statement (**EIS**) is required, and would be prepared to accompany the SSD application.

This scoping report has been prepared by GHD Pty Ltd (**GHD**) on behalf of Squadron to support the application to the NSW Department of Planning, Housing and Infrastructure (**DPHI**) to request the Secretary's environmental assessment requirements (**SEARs**). The SEARs will form the basis of an EIS prepared in accordance with the EP&A Act and the Environmental Planning and Assessment Regulation 2021 (**EP&A Regulation**). The report has been prepared in accordance with the *State significant development guidelines – preparing a scoping report* (DPE, 2022a) and aims to:

- describe the project in simple terms
- detail the strategic and statutory context of the project
- detail alternatives options that have been considered and identify further refinements that would be investigated during the development of the project and preparation of the EIS
- provide a preliminary indication of stakeholder views based on engagement activities that have been undertaken to date, demonstrate landholder acceptance and provide an overview of the community engagement that would be carried out during preparation of the EIS
- provide a description of the existing environment and potential impacts and identify key matters requiring further assessment in the EIS and the proposed approach to addressing each of these matters.

The structure and content of this report is as follows:

- **Chapter 1 – Introduction:** outlines the key elements of the project, identifies the proponent and the purpose of this report.
- **Chapter 2 – Strategic context:** provides an outline of the justification of the project in the context of Commonwealth and NSW policy, and alternatives that were considered.
- **Chapter 3 – The Project:** provides an outline of the project.
- **Chapter 4– Statutory context:** provides an outline of the statutory approvals framework, including applicable legislation and planning policies.
- **Chapter 5 – Engagement:** outlines the consultation which has been undertaken to date and the consultation strategy that is proposed during the preparation of the EIS.

- **Chapter 6 – Proposed assessment of impacts:** provides a preliminary assessment of the potential impacts of the project on the environment and outlines the proposed scope of the EIS for each of the identified key and other environmental issues.
- **Chapter 7 – Conclusion:** outlines the key conclusions of this report.
- **Chapter 8 – References:** lists references used in preparation of this report.

1.6 Scope and limitations

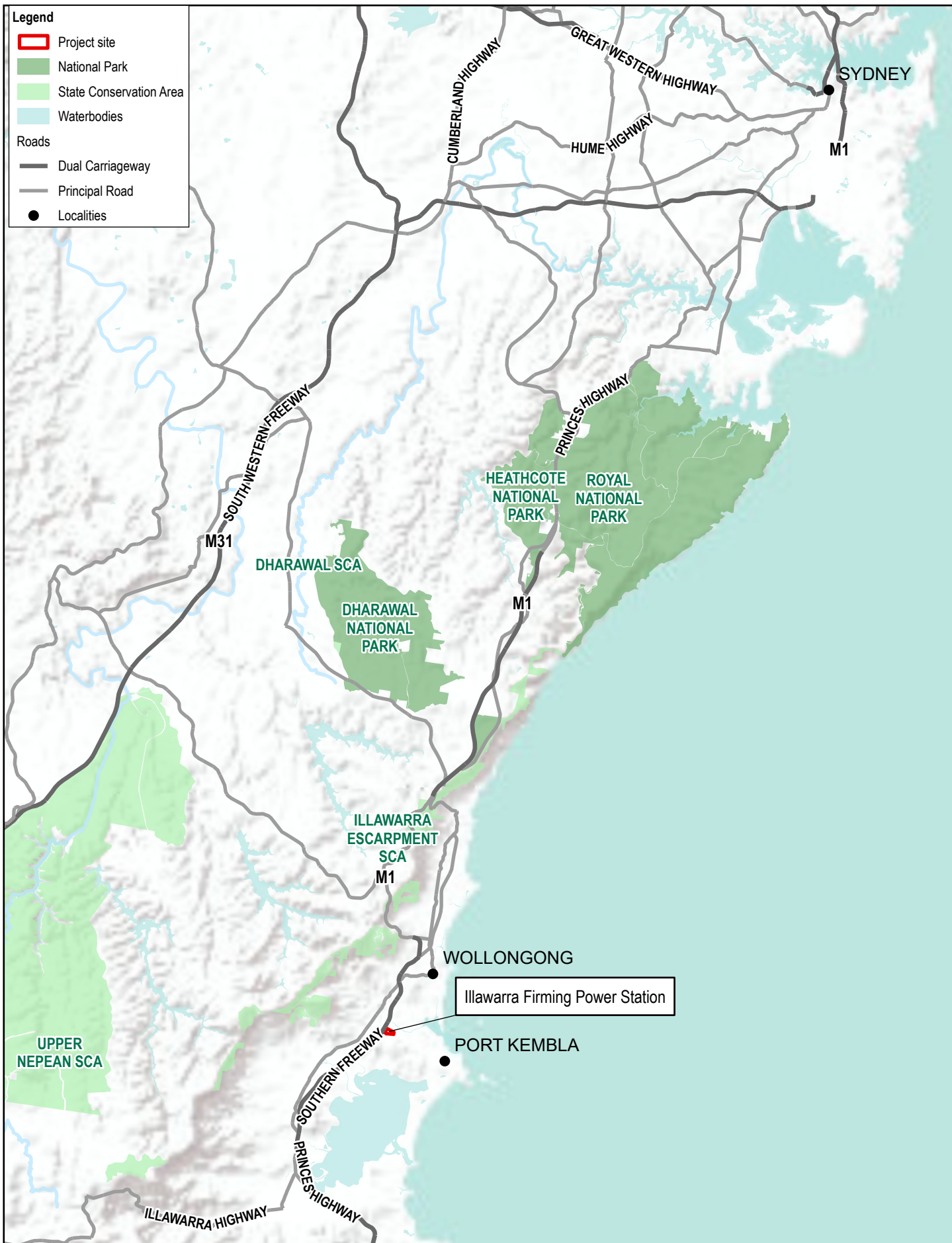
This report: has been prepared by GHD for Squadron Energy and may only be used and relied on by Squadron Energy for the purpose agreed between GHD and Squadron Energy as set out in Section 1.5 of this report.

GHD otherwise disclaims responsibility to any person other than Squadron Energy arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report. This report has been compiled using desktop information from a variety of sources including government databases and mapping which has not been independently verified.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

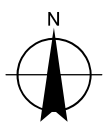
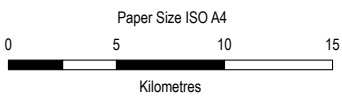


Legend

- Project site
- National Park
- State Conservation Area
- Waterbodies

Roads

- Dual Carriageway
- Principal Road
- Localities



Squadron Energy Pty Ltd
Illawarra Firing
Power Station

Project No. **12649092**
 Revision No. **0**
 Date **26/03/2026**

Map Projection: Transverse Mercator
 Horizontal Datum: GDA2020
 Grid: GDA2020 MGA Zone 56

Regional Context

Figure 1.1

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Data source: Localities, Roads - DCS, 2024; NPWS Reserve, Waterbodies - DFSI, 2024; Project site - GHD, 2024;
 Sources: Esri, USGS, NOAA
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2. Strategic context

2.1 Project justification

The project aims to address increasing pressures on the NSW electricity market due to the phasing out of coal fired power generators and the increasing dependence on renewable alternatives through the introduction of increased firming capacity. Commonwealth and NSW government policy recognises the need to increase firming capacity to ensure electricity remains reliable and secure during the transition to a net zero economy.

2.2 Strategic policy context

2.2.1 National context

AEMO 2025 Gas Statement of Opportunities

The Australian Electricity Market Operator (**AEMO**) 2025 Gas Statement of Opportunities recognises gas-powered electricity generation (**GPG**) as being critical to supporting a reliable and secure electricity network with GPG expected to increase into the 2030s. The project aligns with the Gas Statement of Opportunities in that it would provide firming capacity during periods of low renewable and coal powered generation, particularly as the national electricity market transitions from coal generation to renewable generation.

AEMO Integrated System Plan 2024

The AEMO Integrated System Plan 2024 (**ISP**) outlines the Australian national electricity markets approach to transitioning to a net zero economy. With the retirement of coal powered generation, the ISP recognises renewable energy storage and gas-powered generation as the lowest-cost strategies to supply electricity through Australia's transition to a net zero economy. The ISP outlines a step change scenario through to 2050 which identifies what is considered to be the optimal development pathway to support Australia's transition to net zero. The optimal development pathway provides that firming capacity needs to be quadrupled by 2050, with the inclusion of 15 GW of flexible gas production (see Figure 2.1).

The project would support the ISP's optimal site change scenario by contributing to the need to increased firming capacity and flexible gas production.

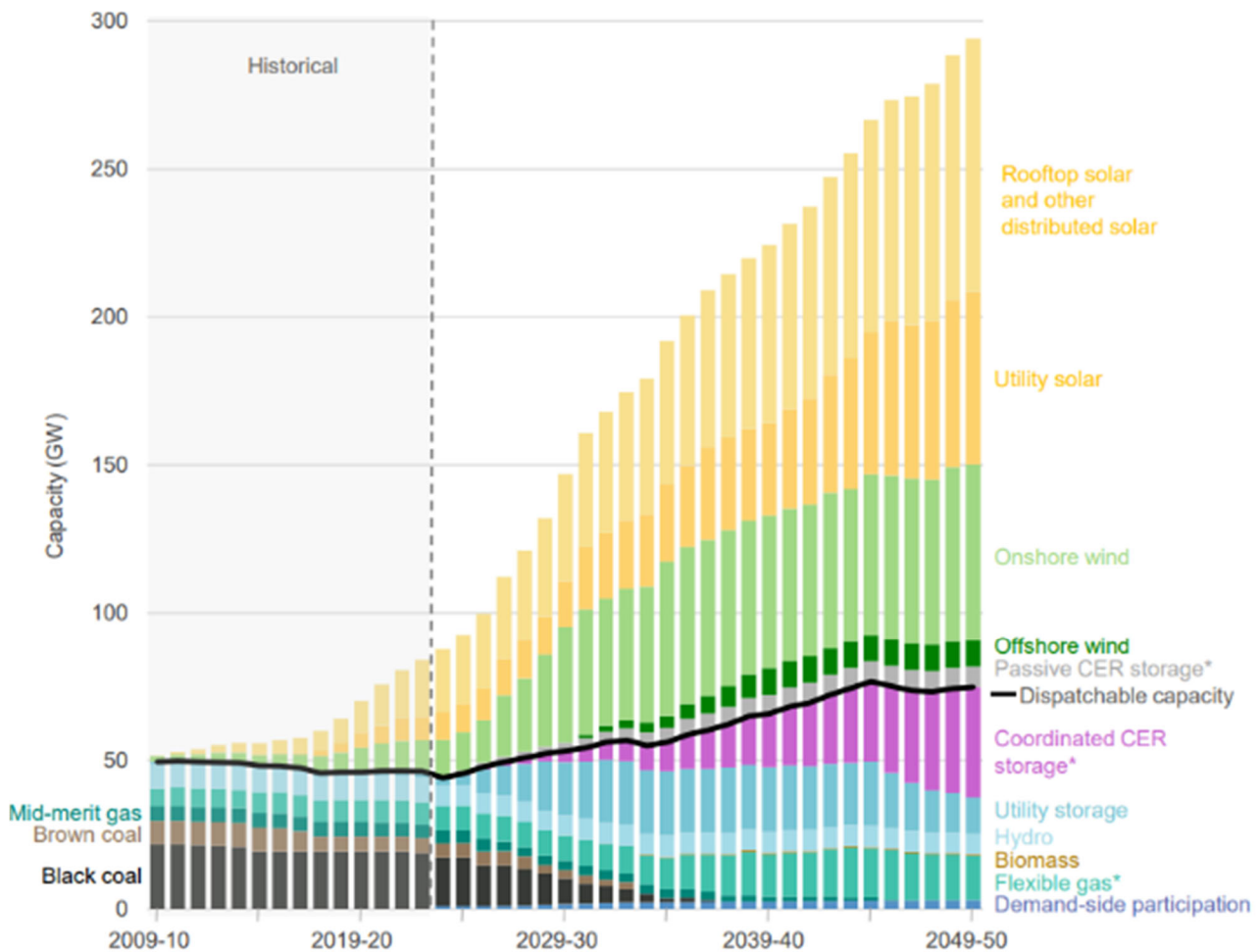


Figure 2.1 NEM optimal step-change scenario through to 2050 (AEMO, 2024)

2.2.2 NSW policy

NSW Electricity Strategy 2019

The NSW Electricity Strategy (DPIE, 2019) is the NSW Government’s plan for a reliable, affordable and sustainable electricity future. Meeting these objectives involves a three-layered approach:

- supporting the market to deliver reliable electricity at the lowest price, while protecting the environment
- setting an Energy Security Target to ensure that NSW has sufficient generation capacity to cope with unexpected generator outages during periods of peak demand, such as during heat waves
- ensuring NSW has sufficient power to deal with an electricity emergency, if one arises.

As traditional coal-fired generators are phased out and replaced by renewable energy generation dependent on sunshine and wind, the electricity system could become unreliable. The strategy acknowledges that renewables, supported by firming capacity from gas and storage are now the most cost competitive form of new generation.

The project is consistent with the objectives of the NSW Electricity Strategy due to its contribution to ensuring a reliable electricity supply able to meet periods of peak demand and with the ability to cope with unexpected generator outages.

NSW Electricity Infrastructure Roadmap 2020

The NSW Electricity Infrastructure Roadmap (DPIE, 2020b) is the NSW Government’s plan to transition the electricity sector and deliver the major infrastructure needed to modernise our electricity system and power the economy. Under the roadmap, consumers would benefit from low cost, clean electricity generation backed up by 24-hour power sources. The roadmap also provides a coordinated framework to modernise the electricity system and deliver new generation, transmission, long duration storage and firming that would also deliver on the ambition of net zero emissions by 2050.

The modernisation of the electricity system would be built on five pillars:

1. Driving investment in regional NSW.
2. Delivering energy storage infrastructure.
3. Delivering Renewable Energy Zones.
4. Keeping the grid secure and reliable.
5. Harnessing opportunities for industry.

As the electricity market moves towards more generation that relies on variable conditions, like weather, renewable energy generation needs to be backed up by firming capacity to ensure power is always available when it is needed. Energy firm and load-following generation, such as gas-fired generation, allows electricity to be generated on demand when it is needed, creating stability and reliability in the electricity system.

The project is consistent with the roadmap as it would contribute to grid security and reliability.

NSW Net Zero Plan Stage 1 2020-2030

The Net Zero Plan (DPIE, 2020a) sets the fundamentals for NSW's action of climate change and achieving emissions reductions targets. The Net Zero Plan outlines the key priorities of how the NSW Government will achieve net zero emissions while creating new jobs, cutting household costs and attracting investment in renewable energy technologies. It has a strong emphasis on community action and everyday choices and is not just government action. The Net Zero Plan includes priority actions to be taken by individuals, communities, businesses, local government and Government. These actions are:

1. Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living.
2. Empower consumers and businesses to make sustainable choices.
3. Invest in the next wave of emissions reduction innovation to ensure economic prosperity from decarbonisation beyond 2030.
4. Ensure the NSW Government leads by example.

The first and third priorities involve uptake and investment in emissions reduction technologies. Gas-fired power generation contributes approximately 50% less emissions compared to traditional coal-fired power generation so would contribute to immediate emissions reductions without compromising grid reliability and security. The project is also being planned with consideration of future green hydrogen compatibility and ease of transition. While this does not form the basis of the project addressed in this scoping report, future modification of the project would contribute to the uptake of the next wave of emission reduction innovation to support continued decarbonisation and economic prosperity into the future.

2.2.3 Regional and local context

Illawarra Shoalhaven Regional Plan 2041

The Illawarra Shoalhaven Regional Plan 2041 (NSW Government, 2021) sets the strategic framework over the next 20 years for the region. It applies to the local government areas of Kiama, Shellharbour, Shoalhaven, and Wollongong. The plan aims to protect and enhance the region's assets and plan for a sustainable future through 30 objectives and related strategies to deliver the vision for the Illawarra-Shoalhaven.

Objective 15 of the plan establishes the regions ambition to become a net zero region by 2050 and includes strategy 15.3 which encourages the promotion of opportunities for clean energy in the region including pumped hydro, hydrogen and biogenic gas.

The project will support the Illawarra-Shoalhaven Regional Plan's objective to become a net zero region by providing a reliable and secure firming capacity as the region transitions to net zero. Planning of the project with consideration of green hydrogen compatibility may also provide future opportunities to contribute to the uptake of hydrogen technologies in alignment with strategy 15.3 and strategy 3.2 which envisages the nearby Port Kembla as a major green hydrogen production hub.

Draft Wollongong Local Strategic Planning Statement 2025-2045

The draft Wollongong Local Strategic Planning Statement outlines priorities for housing, jobs, transport, and the environment over the next 20 years. The draft Local Strategic Planning Statement sets a vision to deliver planning policy that enables a sustainable, liveable and vibrant Wollongong. This vision is supported by 12 planning priorities under three themes; sustainable and resilient, liveable and connected and productive and vibrant.

The Illawarra Firming Power Station project aligns with the with several priorities under these themes. Including protection of natural environments and ecosystems, building resilience to climate risks and environmental hazards and targeting employment generating uses in centres and industrial areas.

2.3 Site setting

2.3.1 Regional context

The project site is located within the Illawarra region about 80 km south of Sydney. The main centre in the region is the city of Wollongong, which is located 6 km north of the project site. Wollongong LGA had an estimated resident population of 219,141 in 2023. The location of the site within the Illawarra region is shown on Figure 2.2.

The region is characterised by urban, commercial and industrial development, with vegetation restricted to relatively small patches in local reserves and disused private landholdings. Waterways include Nudjia Creek, Allans Creek, American Creek, Gurungaty Waterway and Tom Thumb Lagoon, all of which drain into Port Kembla.

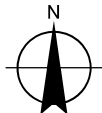
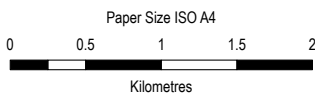
The Eastern Gas Pipeline, operated by Jemena, delivers natural gas supplies to demand centres in Sydney, Canberra and Wollongong and passes through Kembla Grange to the west. A lateral of the Eastern Gas Pipeline runs through the project site and connects to a metering station at Cringila. A second lateral was commissioned in 2025 and runs parallel to the initial Port Kembla lateral and connects to Squadron Energy's Port Kembla Energy Terminal. Gas to the site can be supplied either from the Port Kembla Energy Terminal or from the Eastern Gas Pipeline.

The Endeavour Energy Springhill transmission substation neighbours the project site to the north and several transmission lines and structures are present within easements along the eastern extent of the lot.

Squadron Energy has recently finalised construction of the Port Kembla Energy Terminal at Berth 101 within the Inner Harbour of Port Kembla. The project includes berth and wharf facilities to accommodate a Floating Storage and Regasification Unit (**FSRU**) and landside offloading facilities to transfer natural gas from the FSRU into a natural gas pipeline located on shore. The gas pipeline connects to the recently duplicated Port Kembla lateral from the Eastern Gas Pipeline and will provide an existing pipeline connection to the project site.

Other significant features in the region include BlueScope steelworks to the east, Illawarra Escarpment to the west and Lake Illawarra to the south.

- Legend**
- Project site
 - Lot 210 DP811435
 - State Conservation Area
 - Watercourse



Map Projection: Transverse Mercator
 Horizontal Datum: GDA2020
 Grid: GDA2020 MGA Zone 56

Squadron Energy Pty Ltd
 Illawarra Firing
 Power Station

Project No. 12649092
 Revision No. 0
 Date 26/03/2026

Local Context

Figure 2.2

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2.3.2 Project site

The project site is zoned E5 – Heavy Industrial (E5) under the Wollongong LEP 2009. A 6.8 ha portion of the lot would be leased by Squadron for the purpose of developing the Illawarra Firming Power Station. This lease area would form the project site as shown in Figure 2.3.

Shinagawa Refractories Australasia operations occupy around 7 ha of the 16 ha property with commercial and industrial buildings located along the southern and western extents of the lot. There would be no changes to these operations which would continue as per existing arrangements.

The high pressure lateral of the Eastern Gas Pipeline is located along the southern and eastern portions of the lot within an easement. Several transmission lines and structures are present within easements along the eastern extent of the lot and are associated with the Endeavour Energy Springhill transmission substation. The project would include connections to both these services, via a gas connection point and a switchyard, a key advantage of the site. Drainage and communication easements are also present.

The high pressure lateral of the Eastern Gas Pipeline to Port Kembla passes through the property and has recently been duplicated with a new pipeline to connect Squadron's Port Kembla Energy Terminal. This offers a unique opportunity for Squadron to use existing arrangements to supply gas for the project and will maintain ongoing liaison with Jemena regarding the supply connection and easement restrictions.

One of the major distribution centres in the region, the Endeavour Energy Springhill transmission substation, neighbours the project site to the north. The project would connect to this substation which serves as a bulk energy supply point to most of the zonal substations in the region.

Water and wastewater services, operated by Sydney Water, are available in the locality and new connections would be required for the project. Initial discussions with Sydney Water indicate no additional easements or infrastructure would be required to meet the service requirements.

2.3.3 Development area

The project site area being leased from Shinagawa Refractories Australasia is approximately 6.8 ha (refer to Figure 2.3). The development area would comprise the power station infrastructure, laydown areas, ancillary facilities, connection infrastructure and access points predominantly in the eastern portion of the site. Further refinements to the project layout and development area would be subject to detailed design and would be informed by assessments completed as part of the EIS.

Legend

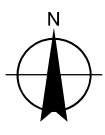
- ▭ Project site
- ▭ Lot 210 DP811435
- ▭ Cadastre
- Roads
- Watercourse



Paper Size ISO A4

0 50 100 150 200
Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 56



Squadron Energy Pty Ltd
Illawarra Firing
Power Station

Project No. 12649092
Revision No. 0
Date 26/03/2026

Project Site

Figure 2.3

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2.3.4 Existing transport network and site access

Key road links include the M1 Princes Motorway, which provides direct connectivity to Sydney, the M31 Hume Motorway via Picton Road and Five Island Road which forms part of the main arterial vehicular connection between Port Kembla and the M1. Both Glastonbury Avenue and Five Islands Road, are approved for Oversize Overmass (**OSOM**) Load Carrying Vehicles in accordance with the NSW OSOM Load Carrying Vehicles Network Map (NHVR, 2025).

The South Coast Rail Line passes through Unanderra, with a branch connecting to Port Kembla, and links the region with Sydney and other regional centres.

Port Kembla harbour, located around four kilometres to the east, is a key economic asset of the Illawarra region. It is the largest motor vehicle importation terminal in NSW, the principal grain export port for southern and southwestern NSW and facilitates the region's significant steel and mining industries.

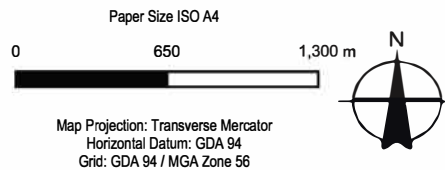
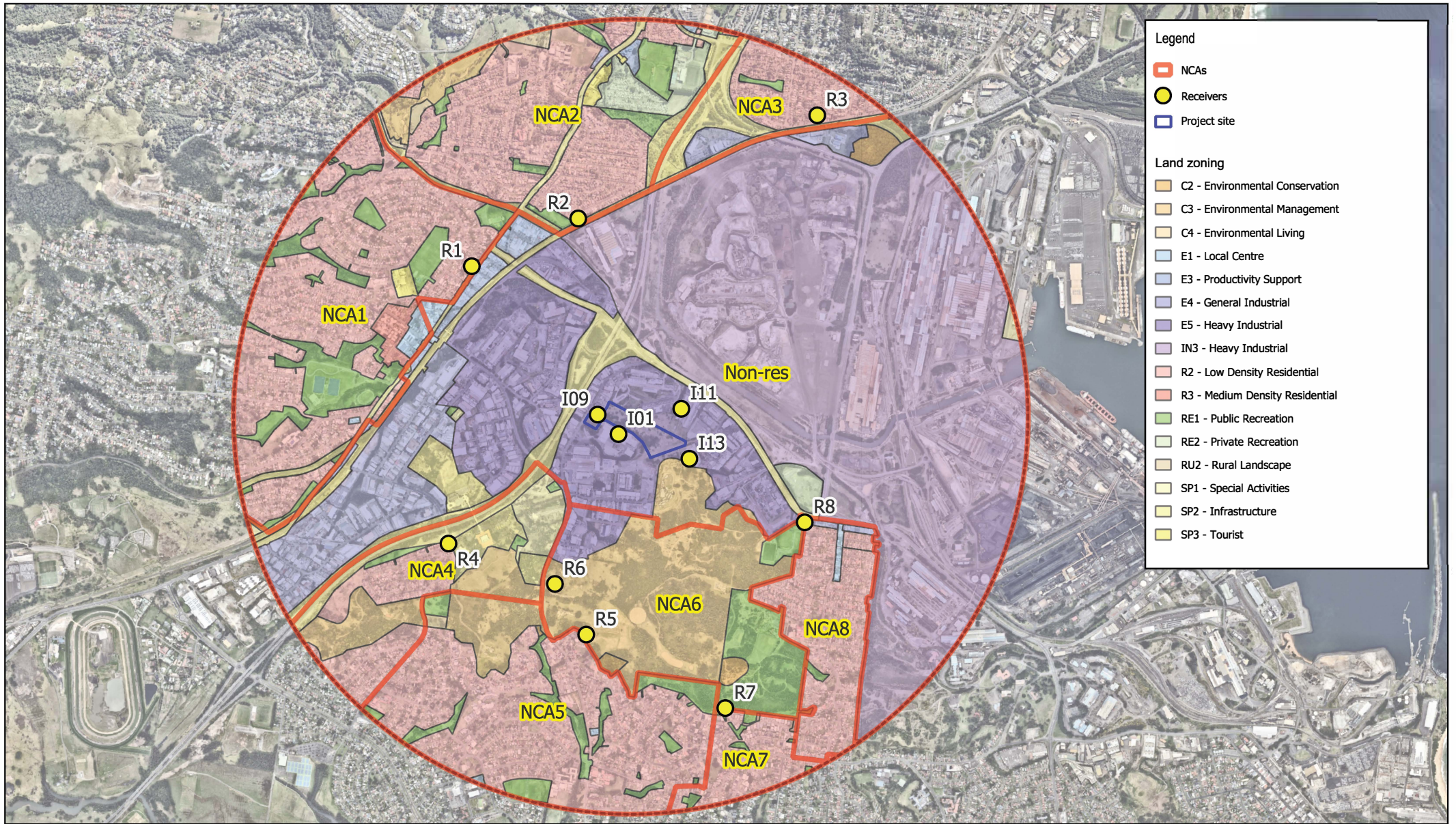
2.3.5 Surrounding land uses and sensitive receivers

Surrounding land uses include E5 – Heavy Industrial to the north, south, east and west. The broader locality includes SP2 – Road Infrastructure located to the north and west, C3 – Environmental Management to the south, RE1 – Public Recreation to the south-west, IN3 – Heavy Industrial to the north, SP1 – Cemetery to the south-west, R2 – Low Density Residential to the north-west and south-west, and E3 Productivity Support to the north west (Figure 2.4).

Sensitive receivers can include residential dwellings, community facilities, places of worship, recreational areas, and accommodation facilities. Beyond the surrounding industrial areas, residential areas zoned Low Density Residential (R2) are present to the north, south and west. Residential areas have been divided into Noise Catchment Areas (**NCAs**) to characterise areas with a similar noise environment as presented in Figure 2.4. A total of eight NCAs have been determined based on the land zoning and statistical boundaries. Table 2.1 provides an overview of the identified key sensitive receivers for each NCA and their respective distance to the site.

Table 2.1 Illawarra Firming Power Station key sensitive receivers

| Receiver ID | NCA | Receiver category | Representative address | Distance to site, metres |
|-------------|----------------|-------------------|--|--------------------------|
| R1 | NCA1 | Residential | 8 Hurt Parade, Unanderra | 1,190 |
| R2 | NCA2 | Residential | 33 O'Donnell Drive, Figtree | 1,170 |
| R3 | NCA3 | Residential | 314 Gladstone Avenue, Mount Saint Thomas | 2,225 |
| R4 | NCA4 | Residential | 2 Warwick Street, Berkeley | 1,145 |
| R5 | NCA5 | Residential | 15 Earl Court, Berkeley | 1,175 |
| R6 | NCA6 | Residential | 131 Berkley Road, Berkeley | 995 |
| R7 | NCA7 | Residential | 122 Shearwater Drive, Lake Heights | 1,665 |
| R8 | NCA8 | Residential | 50 Merrett Avenue, Cringila | 895 |
| I01 | Not applicable | Industrial | 23 Glastonbury Avenue, Unanderra | 30 |
| I09 | | Industrial | 19-21 Glastonbury Avenue, Unanderra | 1 (receiver is adjacent) |
| I11 | | Industrial | 187-189 Five Islands Road, Unanderra | 75 |
| I13 | | Industrial | 16-18 Waynote Place, Unanderra | 30 |



Squadron Enegy
Illawarra Firing Power Station

**Land zoning, sensitive receivers and
noise catchment areas**

Project No. **12614825**
Revision No. **0**
Date. **24/03/2026**

FIGURE 2.4

2.3.6 Site conditions

The topography of the project site is undulating, ranging from 20 to 30 m Australian Height Datum (**AHD**). It is anticipated that areas will be levelled across the development area to ensure the area is compatible with manufacturers requirements for installing and optimising the gas turbines and other equipment.

The project site includes grass and planted native and exotic midstory vegetation. The project site is located on land mapped as Category 3: medium bush fire risk vegetation.

The project site is not located on flood prone land (City of Wollongong, 2025).

2.3.7 Other developments

Other proposed, approved and under construction projects within the vicinity of the project will be considered in the EIS, in accordance with the *Cumulative Impact Assessment Guidelines for Significant Projects* (DPE, 2022b).

Preliminary investigations have included:

- a search of the DPHI Major Projects Hub on the NSW Planning Portal on 15 September 2025
- a search of the City of Wollongong Development Application (DA) tracker on 15 September 2025 which identified relevant proposals in the vicinity of the project site.

The EIS for the project will consider potential cumulative impacts associated with nearby projects (see Section 6.3).

2.3.8 Suitability summary

The project site is considered suitable for the purpose of the project for the following reasons:

- appropriate use of an industrially zoned site
- availability of existing access to the project site via an established road network
- immediate proximity to the existing Endeavour Energy Springhill transmission substation to maximise ease of grid connectivity and minimise the need for easements or new transmission infrastructure
- immediate proximity to the Eastern Gas Pipeline to provide uninterrupted gas supply and remove the need for easements or gas supply infrastructure
- sufficiently sized and shaped portion of land, suitable for the installation and operation of gas firming infrastructure
- the project site is not located on flood prone land
- potential cumulative impacts are expected to be minimal.

3. The Project

3.1 Project description

3.1.1 Overview

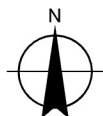
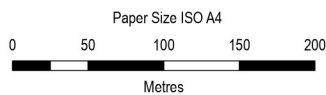
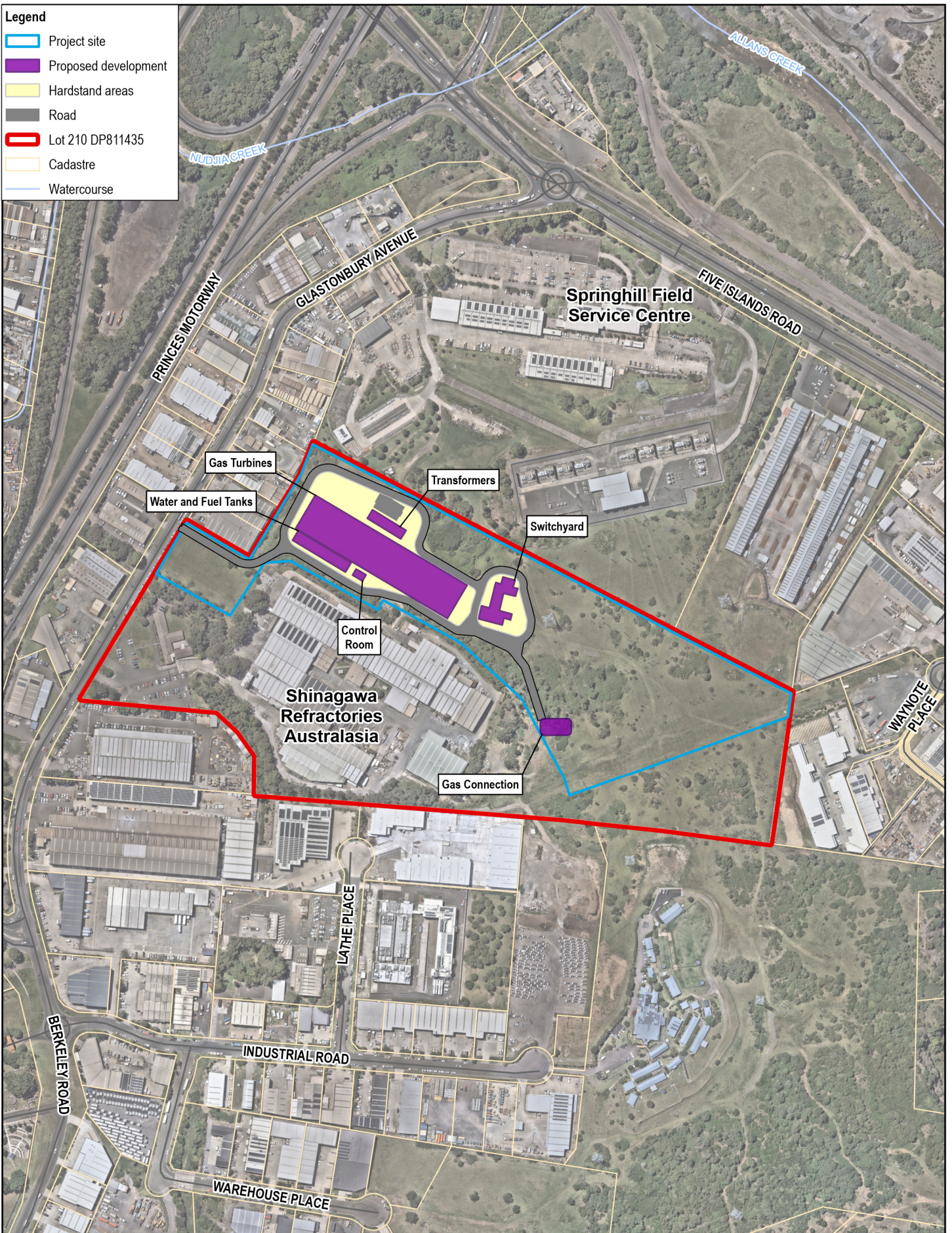
The project would involve construction of a gas-fired firming power station. The power station would be supplied with gas from the lateral of the Eastern Gas Pipeline with generated power delivered to the grid via an on-site switchyard that would connect to the adjacent Endeavour Energy Springhill transmission substation.

The primary elements of the power station would include:

- The main power plant:
 - up to 8 modular Open Cycle Gas Turbines (OCGTs), housed within dedicated enclosures, each with exhaust stacks and control units.
- A gas connection from the lateral of the Eastern Gas Pipeline:
 - a dedicated gas offtake and short pipeline connecting the power station
 - internal gas reticulation network connecting to each individual turbine
 - all required control and safety systems.
- Switchyards, transformers and high voltage plant:
 - 132 kV substation
 - 132 / 33 kV 300 megavolt-amperes (MVA) transformer
 - loop in loop out to existing 132 kV line
 - all required electrical safety equipment and an earthing system.
- Demineralised water plant and storage:
 - raw water tank
 - reverse osmosis (RO) plant to produce demineralised water
 - demineralised water tank.
- Auxiliary power supply with black start generator and onsite diesel storage.
- Additional items:
 - control and automation system and control room
 - amenities, stores, internal roads and car park
 - water and wastewater connections
 - compressed air system, fire system, security system and other required site services
 - civil works, fencing and landscaping
 - a heritage exclusion zone.

The indicative layout of the power station and facilities is shown in Figure 3.1.

- Legend**
- Project site
 - Proposed development
 - Hardstand areas
 - Road
 - Lot 210 DP811435
 - Cadastre
 - Watercourse



Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 56



Squadron Energy Pty Ltd
Illawarra Firing
Power Station

Project No. 12649092
Revision No. 0
Date 25/03/2026

Project Site and Indicative Layout

Figure 3.1

3.1.2 Power generation facility

With a nominal total generation capacity of between 300 and 400 MW, the power station would operate as a firming plant and would assist with maintaining consistent output from intermittent power sources to ensure grid reliability and stability. The power station will be a firming and demand-driven operation and is expected to operate around 10 to 15% of the year to support the renewable energy transition.

Gas turbines are generally driven from the cold end, which allows for a simple and efficient exhaust arrangement. Each unit would be housed within an enclosure for weather and noise protection and equipped with ventilation, main and emergency lighting, washing and cleaning appliances, a lubricating oil system and external stairs and walkways. Exhaust gas would be released via an exhaust stack, notionally 18.5 m high, with the final height to be determined during the design process. Elements of the unit may include silencing features to reduce sound power levels.

The system would be connected to the turbine control system via a serial interface which would include set points and controls to provide operators with all necessary information. The system would include fail-safe provisions connected to the alarm system with a number of built-in checks to detect dangerous malfunctions. An automatic fire detection and extinguishing system would be included.

Fuel turbine units generally consist of a compressor, combustion chamber, turbine and generator. Air is compressed to a high pressure before being admitted into the combustion chamber. Fuel (biofuel, natural gas, hydrogen or blend as required) is injected into the combustion chamber where combustion occurs at very high temperatures and the gases (air and combusted fuel) expand. The resulting hot air is admitted into the turbine causing the turbine to turn, generating power.

In an open cycle configuration, which is the preferred technology solution at this stage, hot exhaust air is vented directly to the atmosphere through an exhaust stack, without heat recovery. The open cycle configuration enables fast start and firming generation for intermittent renewable generation as described in Figure 3.2.

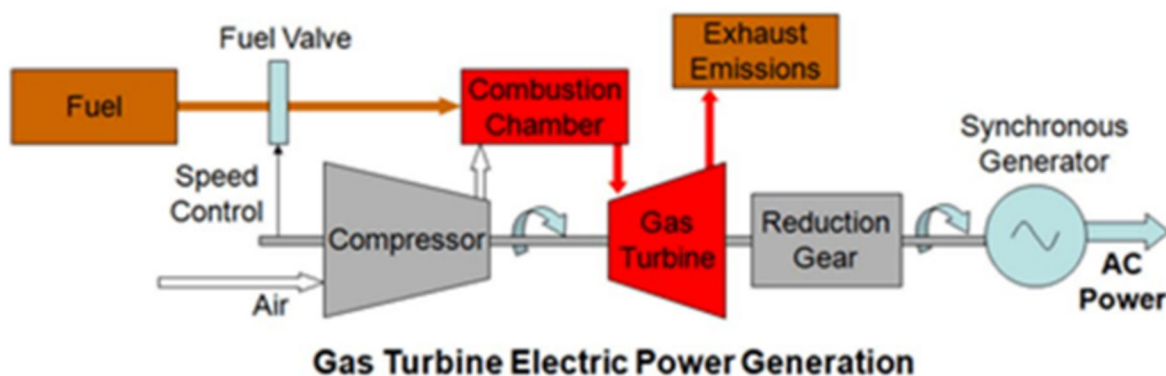


Figure 3.2 Schematic of operation of gas turbine

The total capacity, capacity of each unit, type of unit and operational procedures would be determined as the design is developed and would consider a range of environmental, social, engineering and economic factors, including:

- fuel compatibility and ability to operate on hydrogen blends
- performance characteristics such as thermal efficiency, heat rate and output at different ambient conditions and loading, firing gas/hydrogen
- operational characteristics such as start-up times and operational flexibility, usage rates of consumables such as water and auxiliary power consumption when off-line and in service
- environmental factors such as noise, emissions, air quality and water use
- compliance with applicable legislation, codes and standards
- capital expenditure, operating and maintenance costs.

3.1.3 Gas connection

Gas would be sourced from the high pressure lateral of the Eastern Gas Pipeline that runs through the project site. The lateral has recently been duplicated to increase the amount of gas that can be transported from Squadron's Port Kembla Energy Terminal to the Eastern Gas Pipeline. The offtake would include a hardstand yard, metering point and a pressure reducing and heating unit.

The length of the high-pressure gas connection pipeline would be approximately 200 m. The pipeline would be buried, and the pipeline geometry would be defined as part of the detailed design considering the site layout and environmental, and engineering factors.

3.1.4 Switching station and transmission

Generated power will be delivered to the grid via on-site transformers and a switchyard, comprising:

- a 132 kV substation
- 132 / 33 kV 300 MVA transformer
- loop in loop out to the existing 132 kV line
- overhead lines and support structures
- connection to the adjacent Endeavour Energy Springhill transmission substation.

The infrastructure required would be further determined as part of the detailed design and in conjunction with Endeavour Energy.

3.1.5 Water and wastewater

Water would be supplied by Sydney Water and used for site processes, fire services, washdown and personnel use via a new connection from Glastonbury Avenue.

The main requirement for process water is for the turbine inlet air cooling and emission controls. Water sourced from the local potable water network would likely need to be purified using both reverse osmosis and chemical treatment technology to provide general process and demineralised water requirements. The project includes an onsite demineralisation plant and storage unit for this purpose.

Any wastewater would be directed to the Sydney Water sewerage network in accordance with appropriate trade pretreatment wastewater procedures. Pipework and any on site treatment units associated with these connections would be installed via open trenches and excavations and backfilled. If required, water would be stored in tanks with appropriate elevation and pump arrangements to service the facility.

Actual water consumption would vary with ambient and operating conditions. It is expected that some evaporative cooling water would be required during most summer months when there are higher ambient temperatures. The peak volume of potable water that would need to be reticulated to the power station has initially been estimated at 35 kilolitres per hour (kL/hr). However, water consumption rates would be confirmed through the detailed design phase of the project.

Site stormwater would be captured and directed to an oil and grit interceptor or similar unit to mitigate any risk of spills from entering local waterways.

3.1.6 Ancillary infrastructure

The power station would require the following supporting ancillary facilities:

- new permanent driveway access off Glastonbury Avenue to establish an internal road network including heavy and light vehicle parking and loading and unloading facilities
- closed circuit cooling systems
- control room, office, store / workshop and amenities
- electrical switch rooms
- health and safety systems including an emergency warning and evacuation system
- automated and manual fire system

- communication systems
- compressed air system
- security fence, security lighting, stack aviation warning lights (if required) and surveillance system
- landscaped areas and heritage exclusion zone.

The project site is serviced by an existing road network well suited to heavy haulage vehicles.

A new permanent heavy vehicle access for construction and operation will be required from Glastonbury Avenue, which will also support staff, contractor and visitor access (and parking) through construction and operation. Alternate access from neighbouring properties is also being explored a part of ongoing design development.

All existing easements would remain with access provided to relevant authorities as required as per existing arrangements.

3.1.7 Hydrogen capability

The power station would initially be dual fuel enabled, with the capability to run on a blend of 85 percent natural gas and 15 percent hydrogen. While not the immediate objective of the current project, Squadron would continue to develop the project with consideration to potential options for connection to hydrogen sources and with consideration to designing the power station with capability for later hydrogen transformation. This would include consideration of generating infrastructure capability, and provision for the inclusion of a hydrogen receiving station and storage within the project site.

3.2 Construction

3.2.1 Construction timeframe

The project would be undertaken by several crews working concurrently, personnel requirements will be determined as the design progresses. It is anticipated that construction would take around 18 months and generally in line with the following general stages:

- Mobilisation: month 1
- Site preparation: month 2 to 4
- Construction: month 5 to 14
- Testing and commissioning: month 14 to 18.

3.2.2 Construction method

Initially, site environmental controls would be established to minimise the impact of project activities on the environment and community. This may include a heritage exclusion zone, with appropriate offset, around the site of the former Berkeley House.

To provide a suitable surface for the power station and other elements of the project, earthworks, including, excavation and filling would be required. The extent of earthworks would be determined as part of the design process and following geotechnical investigations. The power station itself would be constructed using conventional methods, with natural surfaces levelled, services installed using open trenches and concrete or gravel hardstands established on which the units would be located. The units, and controllers, would be transported to the site by road.

The transformers, switchyard, demineralised water plant, black start generator and other elements of the project would be constructed using a similar approach. Further detail on construction activities would be developed as part of the detailed design.

The area surrounding the connection point to the high-pressure lateral of the Eastern Gas Pipeline would be carefully excavated in consultation with Jemena. The area would be isolated and gas connection units installed. The internal gas reticulation system would be installed primarily by open trenching from the connection point.

Site water and wastewater, roads, communications and electrical services and amenities would be constructed using standard civil construction techniques.

The general plant and equipment required for the project would include:

Table 3.1 *Indicative plant and equipment*

| Equipment to be used during construction | |
|---|-------------------------------|
| Bulldozers | Compressors |
| Front end loaders | Welding equipment |
| Tipper trucks | Flatbed trucks |
| Dump trucks | Slew cranes or crawler cranes |
| Water carts | Franna cranes |
| Excavators | Telehandlers |
| Graders | Concrete saws and grinders |
| Compactors and vibratory rollers | Scrapers |
| Concrete trucks and pumps | Backhoes |
| Bobcats | Winches |
| Elevated work platforms | Generators |
| Light vehicles | Hand tools |
| Pumps | Vacuum trucks |
| Sand/cement, backfill, road base, hotmix | Conduit, marker tape |
| Pipe strings, pump lines | Cables, cable drums. |

Upon completion all construction equipment, plant and machinery would be demobilised and disturbed areas would be stabilised and landscaped.

3.2.3 Construction workforce

The construction workforce would be sourced from the local area as far as practicable. Accommodation for non-local construction staff is expected to be sourced through the use of available short-term accommodation in surrounding suburbs. During the peak construction period it is expected that approximately 8 full time equivalent (FTE) workers would be required, including an estimated 150 total construction workers throughout the course of construction. Construction workforce numbers would be confirmed during preparation of the EIS.

3.3 Operation and maintenance

Following commissioning, the initial operation of the project would involve receiving gas from the lateral of the Eastern Gas Pipeline, burning the gas in the gas turbines to generate electricity, and transmitting that electricity via the onsite switchyard to the adjacent transmission substation. The power station would be multi-fuel enabled, with the capability to run on a blend of 85% natural gas and 15% green hydrogen by volume should a local source of green hydrogen be available in the short term. The detailed design would consider incorporation of a hydrogen receiving station within the power station footprint to allow the project to be readily adaptable to utilise hydrogen as supply becomes available.

Potable water supply to the power station would also be required for cleaning and fire protection as well as water for amenities and consumption. The peak volume of potable water that would need to be reticulated to the power station has been estimated at 35 kilolitres per operating hour (kL/hr).

The use of potable water would generate a wastewater stream including waste process water, oily wastewater, grey water and sewage. It is planned that the wastewater stream would be sent to the existing sewer system via the wastewater pipeline, subject to trade waste agreements.

Initially, the firming power station is estimated to be operational 1,000 hours per year, representing around 8-12% annual capacity. As NSW transitions to a sustainable electricity production model where retiring coal plants are ultimately replaced with renewable generation through solar and wind the need for firming power supply that offers reliability and affordability will increase. Firming capacity will be required not only when wind and solar generation

are affected by short term weather events but also during longer term climate variations that result in longer term renewable droughts. For these reasons, and with the addition of hydrogen sources, the operational model is likely to change throughout the life of the power station.

3.4 Decommissioning

The project site would be decommissioned at the end of life of the project. The project site would be rehabilitated for alternative uses consistent with the zoning (E5 – Heavy Industrial). Decommissioning would be carried out in accordance with a decommissioning plan and rehabilitation plan. Components would be repurposed or recycled in accordance with relevant regulations.

4. Statutory context

4.1 Summary

The relevant statutory context for the project is provided in the sections below. Detailed consideration of relevant statutory requirements will be provided in the EIS.

The project site is located within land that is zoned E5 – Heavy Industrial. The Illawarra Firing Power Station project is permissible with consent under Section 2.36(1) (b) of State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP), which states that development for the purpose of electricity generating works can be carried out with consent on land in a prescribed non-residential zone.

Further, with an estimated development cost of more than \$30 million, the approval pathway for the project is as per Part 4.36(2) of the EP&A Act, which designates the project a declared SSD.

4.2 Statutory requirements

Table 4.1 Preliminary summary of statutory requirements for the project

| Power to grant approval | |
|-------------------------|--|
| Permissibility | <p>Clause 2.35 Transport & Infrastructure SEPP provides the following relevant definition of electricity generating works:</p> <p><i>electricity generating works means a building or place used for the following purposes, but does not include a solar energy system—</i></p> <p><i>(a) making or generating electricity,</i></p> <p><i>(b) electricity storage.</i></p> <p>Section 2.36(1)(b) of the Transport and Infrastructure SEPP applies to development for the purpose of electricity generating works and provides that development for this purpose is permissible with consent, if carried out on any land in a prescribed non-residential zone.</p> <p>Pursuant to Section 2.35 definitions, E5 is a prescribed non-residential zone. Therefore, the project is permissible with consent.</p> |
| Power to grant consent | <p>The EP&A Act defines the statutory framework for planning approval and environmental assessment in NSW. The EP&A Act is administered by the Minister for Planning and Public Spaces, statutory authorities, and local councils.</p> <p>Section 4.36(2) of the EP&A Act provides that a State Environmental Planning Policy may declare any development to be SSD.</p> <p>Under section 2.6(1) of the Planning Systems SEPP, a development is classified as SSD if:</p> <p><i>(a) 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</i></p> <p><i>(b) the development is specified in Schedule 1 or 2 of the Planning Systems SEPP.</i></p> <p>Schedule 1(20) of the Planning Systems SEPP defines the following as SSD:</p> <p><i>Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that-</i></p> <p><i>(a) has an estimated development cost of more than \$30 million, or</i></p> <p><i>(b) has an estimated development cost of more than \$10 million and is located in an environmentally sensitive area of State significance.</i></p> <p>With an estimated development cost exceeding \$30 million, the project meets the threshold for SSD and is subject to assessment under Part 4 of the EP&A Act. Approval for the project would be sought under Division 4.7 of the EP&A Act.</p> <p>The consent authority for the project is the Minister for Planning and Public Spaces.</p> <p>In accordance with clause 2.7(1) of the Planning Systems SEPP, if any of the criteria identified below are exceeded the NSW Independent Planning Commission becomes the consent authority:</p> <p><i>(a) development in respect of which the council of the area in which the development is to be carried out has duly made a submission by way of objection under the mandatory requirements for community participation in Schedule 1 to the Act,</i></p> |

| | |
|--|---|
| | <p>(b) development in respect of which at least 50 submissions (other than from a council) have duly been made by way of objection under the mandatory requirements for community participation in Schedule 1 to the Act,</p> <p>(c) development the subject of a development application made by a person who has disclosed a reportable political donation under section 10.4 to the Act in connection with the development application.</p> <p>If none of the above criteria are triggered, DPHI would determine the development application on behalf of the Minister for Planning and Public Spaces.</p> <p>Under Section 4.12(8) of the EP&A Act, a development application for a SSD is to be accompanied by an EIS.</p> |
|--|---|

Approvals not required

An authorisation under certain other legislation, as identified in section 4.41 of the EP&A Act, is not required for a SSD:

- (b) a permit under Section 201, 205 or 219 of the Fisheries Management Act 1994
- (c) an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977
- (d) an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974
- (f) a bush fire safety authority under Section 100B of the Rural Fires Act 1997
- (g) a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000.

In relation to legislation where approvals are not required due to the application of section 4.41 of the EP&A Act, the following conclusions are made:

| | |
|---|---|
| <i>Fisheries Management Act 1994</i> | The project would not involve dredging or reclamation of a waterway (s 201), impacts to marine vegetation (s 205), or works in a waterway that would block fish passage (s 219) and would not require a fisheries permit under the <i>Fisheries Management Act 1994</i> . |
| <i>Heritage Act 1977</i> | <p>The project site contains a local heritage item known as “the Site of former “Berkeley House” which is listed under Schedule 5 of the Wollongong LEP 2009 (#6519).</p> <p>The <i>Heritage Act 1977</i> protects and conserves archaeological relics. A relic means any deposit, artefact, object or material evidence that:</p> <ul style="list-style-type: none"> – relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement and – is of State or local heritage significance. <p>Nonetheless, section 139 of the <i>Heritage Act 1977</i> does not apply as per the provisions of section 4.41 of the EP&A Act and an excavation permit would not be required.</p> <p>The project would not impact any item or place listed on the State Heritage Register.</p> |
| <i>National Parks and Wildlife Act 1974</i> | A preliminary desktop search for Aboriginal Heritage Information Management System (undertaken 17 March 2025) did not identify any recorded sites within the project area. A preliminary site inspection has confirmed low potential for the site to contain Aboriginal objects or values due to site location, attributes and the level of previous disturbance. |
| <i>Rural Fires Act 1997</i> | The project would not involve a subdivision within bush fire prone land or development of bush fire prone land for a special fire protection purpose. Therefore, a bush fire safety authority would generally not be required to authorise the development. |
| <i>Water Management Act 2000</i> | The project would not require a water use approval under section 89 of the <i>Water Management Act 2000</i> (WM Act). The project would not involve any water management work under section 90 of the WM Act. The project would not involve work being carried out on waterfront land which means a controlled activity approval would not be required under section 91(2) of the WM Act. No aquifer interference activity would occur, and as such, section 91(3) would generally not apply. |

Consistent approvals

Authorisations specified in section 4.42 of the EP&A Act cannot be refused if it is necessary for carrying out an approved SSD, subject to the approval scope being substantially consistent with the SSD consent, including:

- (a) an aquaculture permit under section 144 of the Fisheries Management Act 1994,
- (b) an approval under the Coal Mine Subsidence Compensation Act 2017, section 22,
- (c) a mining lease under the Mining Act 1992,
- (d) a production lease under the Petroleum (Onshore) Act 1991,
- (e) an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act),
- (f) a consent under section 138 of the Roads Act 1993,
- (g) a licence under the Pipelines Act 1967.

| | |
|--|---|
| In relation to legislation where consistent approvals are required due to the application of section 4.42 of the EP&A Act, the following conclusions are made: | |
| <i>Fisheries Management Act 1994</i> | The project would not involve an aquaculture development, and no aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i> is required. |
| <i>Coal Mine Subsidence Compensation Act 2017</i> | The project would not be undertaken in a mine subsidence district so does not require approval under section 22 of the <i>Coal Mine Subsidence Act 2017</i> . |
| <i>Mining Act 1992</i> | The project does not involve a mining lease so is not relevant to the <i>Mining Act 1992</i> . |
| <i>Petroleum (Onshore) Act 1991</i> | The project would not involve petroleum production and no production lease under the <i>Petroleum (Onshore) Act 1991</i> is required. |
| <i>Protection of the Environment Operations Act 1997</i> | An Environmental Protection Licence (EPL) would be required for the Project as generation of electricity by means of electricity plant with a capacity to generate more than 30 MW of electricity is a scheduled activity listed in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> (POEO Act). Under Chapter 3 of the POEO Act, an EPL cannot be refused if it is necessary for carrying out SSD and is to be substantially consistent with the consent under Division 4 of the EP&A Act. |
| <i>Roads Act 1993</i> | A consent under section 138 of the <i>Roads Act 1993</i> may be required due to the proposed new permanent access driveway from Glastonbury Avenue (refer Section 3.1.6). |
| <i>Pipelines Act 1967</i> | The project will involve a short 200 m gas connection from the Eastern Gas Pipeline which extends through the site operates under Pipeline Licence No 26. The pipeline is to be constructed on land used for commercial or industrial purposes purely for the purpose of the project and is entirely within the boundary of the land. The pipeline is also of a prescribed class that is less than 10 kilometres. A licence under the Pipelines Act is therefore not required in accordance with Section 5 of the Pipelines Act. |
| Pre-conditions to exercising the power to grant approval | |
| In addition to the above-mentioned consent and approvals, additional requirements must be met before the consent authority can approve the project development application, including: | |
| Environmental Planning and Assessment Regulation 2021 | A development application for a SSD is to be accompanied by an EIS prepared by or on behalf of the Applicant in the form prescribed by the <i>Environmental Planning and Assessment Regulation 2021</i> (EP&A Regulation). Section 190 of the EP&A Regulation specifies the form required of the EIS that is required to accompany an application for SSD. Section 191 of the EP&A Regulation identifies that the EIS must comply with the environmental assessment requirements. Section 192 of the EP&A Regulation specifies mandatory content of an EIS. The EIS would be prepared in accordance with these sections and will include a statutory compliance table. |
| <i>Biodiversity Conservation Act 2016</i> | Part 7 of the <i>Biodiversity Conservation Act 2016</i> (BC Act) applies to approvals under the EP&A Act. Section 7.9 of the BC Act requires a development application for a SSD to be accompanied by a Biodiversity Development Assessment Report (BDAR), unless it is determined that the proposed development is not likely to have a significant impact on biodiversity values and that a BDAR waiver is appropriate. Section 7.14 of the BC Act requires the consent authority to take into consideration the likely impact of the proposed development on biodiversity values. A Biodiversity Development Assessment Report would accompany the EIS to evaluate the significance of potential biodiversity impacts. |
| State Environmental Planning Policy (Biodiversity and Conservation) 2021 | Chapter 3 (Koala habitat protection 2020) of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (B&C SEPP) aims to encourage the conservation and management of areas that provide Koala habitat. The project site is located in a LGA listed in Schedule 2 but is not located on land to which the chapter applies (E5). |
| State Environmental Planning Policy (Resilience and Hazards) 2021 | Chapter 3 of the State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) identifies matters to be considered by consent authorities for development applications defined as potentially hazardous industries or potentially offensive industries. The <i>Hazardous and Offensive Development Application Guidelines – Applying SEPP 33</i> (DOP 2011) prescribes the screening tests to be used to determine whether a development is considered a 'potentially hazardous development'. Subject to Section 3.11 of the Resilience and Hazards SEPP, developments considered to be potentially hazardous require the preparation of a preliminary hazard analysis (PHA). A preliminary hazard analysis would be prepared and will accompany the EIS. Section 2.77 of the Resilience and Hazards SEPP must be considered by the consent authority before determining a development application for development adjacent to land in a pipeline |

| | |
|--|---|
| | corridor. As the project would involve connection to a pipeline corridor, consideration to Section 2.77 is required. |
| Mandatory matters for consideration | |
| <i>Environmental Planning and Assessment Act 1979</i> | The following sections of the EP&A Act would be addressed in the EIS and considered by the consent authority prior to granting approval: <ul style="list-style-type: none"> – Section 1.3 – Objects of the Act. – Section 4.15 – Evaluation. – Section 4.38 – Consent for State Significant Development. |
| <i>Wollongong Local Environmental Plan 2009</i> | The project site is located within the Wollongong City Council LGA and is subject to the provisions of the Wollongong LEP 2009. Under the Wollongong LEP 2009, development for the purposes of electricity generating works is not specified on land zoned as E5, however, permissibility for the project is achieved through the application of clause 2.36 of the T&I SEPP. Nonetheless, the EIS would demonstrate consideration of the objectives of the E5 zoned land and additional local provisions detailed in Part 7. |
| Commonwealth approvals | |
| <i>Environment Protection and Biodiversity Conservation Act 1999</i> | <p>The <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) is the Commonwealth’s primary legislation for protection of the environment. It outlines nine protected matters known as ‘matters of national environmental significance’ (MNES), including World Heritage areas, threatened species and ecological communities, and migratory species, among others. Approval from the Commonwealth is required for any action that has, will have or is likely to have a significant impact on a MNES.</p> <p>A biodiversity field survey was undertaken at the site in 2024 and did not identify the presence of any threatened flora or fauna at the site but identified the potential presence of Illawarra-Shoalhaven subtropical rainforest in the Sydney Basin Bioregion ecological community. Further work would be required to determine if this TEC is present and to assess the nature, extent and likely significance of potential impacts.</p> <p>If the project is assessed as having potential to significantly impact on an MNES, a referral to the Commonwealth Department of Climate Change, Energy, the Environment and Water would be undertaken.</p> |
| <i>Native Title Act 1993</i> | <p>The <i>Native Title Act 1993</i> (Native Title Act) establishes provisions to recognise and protect traditional ownership and connection to land by indigenous people. The Native Title Act provides for the establishment of indigenous land use agreements (ILUA) and native title rights on land demonstrated to have had a continuous and substantially uninterrupted use of traditional laws and customs in relation to a connection with that land.</p> <p><i>The Native Title Act</i> gives Indigenous Australians who hold ILUAs or native title, rights and interests in that land, including to be consulted with and, in some cases, to participate in decisions about activities proposed to be undertaken on land subject to native title and ILUAs.</p> <p>A search of the Native Title Claims register undertaken on 25 September 2024 identified that the project site is subject to native title claim NC2017/003 - South Coast People, which was registered on 21 January 2018 and is yet to be determined. The project site is located on freehold land and is not on land subject to native title.</p> |
| <i>Civil Aviation Safety Regulation 1998</i> | The <i>Civil Aviation Safety Regulations 1998</i> primarily govern aviation safety. The potential for the project to interfere with aerodrome standards and obstacle limitation surfaces (OLS) as a result of exhaust plumes would be considered as part of an air quality impact assessment, and if required, consultation or notification to the Civil Aviation Safety Authority would take place. |

5. Engagement

5.1 Community and stakeholder engagement objectives

Squadron is committed to undertaking genuine, robust and meaningful community and stakeholder engagement and consultation to better inform the project. To achieve this, Squadron has implemented the following consultation and engagement objectives:

- Engage with the local community to seek feedback on the proposed project, to be integrated into project planning and design as far as practicable.
- Maintain communication to inform the community about potential impacts and benefits in a continuous, accurate and timely manner.
- Identify key stakeholders early for further engagement and provide various opportunities and mechanisms for Squadron Energy to meaningfully engage with all stakeholders.
- Develop a sound understanding of the potential social impacts of the project to assist in developing and implementing mitigation measures.
- Ensure the development team has a deep understanding of the local context of the project, including any local impacts that it may have or opportunities that the project could provide.
- Build and maintain Squadron Energy's social licence within the community and among all stakeholders.

Squadron's approach to community and stakeholder engagement is multi-faceted, to ensure comprehensive engagement across all groups, utilising the skills of our various teams. Landowners and hosts engage directly with project teams. Broader stakeholder groups may be engaging with a wider group of staff with expertise, including First Nations engagement, government relations, media and communications and community engagement

The Stakeholder Engagement Plan for Illawarra Firming Power Station can be found at squadronenergy.com/our-projects/illawarra-firming-power-station/

5.2 Engagement carried out

Squadron recognises that working closely with local communities to deliver projects contributes to a positive, long-term impact on the region in which it operates. To inform the Scoping Report and project planning, Squadron has undertaken targeted stakeholder mapping and have engaged with a broad range of stakeholders since 2023. The project team have completed a variety of engagement activities with host landowners, surrounding neighbours, local council, and relevant State and Federal Government members.

Key stakeholders and consultation undertaken to date is shown in Table 5.1.

Table 5.1 Early community and stakeholder engagement undertaken by Squadron

| Stakeholder | Activity |
|--------------------------|--|
| Host engagement | – Ongoing engagement and discussions with hosts landowners and immediate neighbours since 2023. |
| Neighbours | <ul style="list-style-type: none"> – Meeting with direct neighbours and sensitive receivers. Invitation via phone call for a face to face or virtual briefing. – ~80 stakeholders engaged or provided with project update letters and website details. – Consultation to date has generally been met with low interest, with interested stakeholders including Equinix Sydney SY7 Data Centre, RSPCA Illawarra and Nan Tien Temple. – Ongoing commitment to deliver project updates to direct neighbours and sensitive receivers. |
| Broader community | <ul style="list-style-type: none"> – Two pop-up community information sessions were carried out: <ol style="list-style-type: none"> 1. Information stall at Warrawong Plaza on 4 March 2026 2. Information stall at Unanderra shopping precinct on 5 March 2026 <p>Across both sessions, the project team engaged with approximately 86 local community members. These interactions provided an opportunity to explain the project, respond to questions, and better understand local perspectives and concerns. Feedback received during the sessions helped inform the project team's understanding of community priorities and will be considered as the project progresses. The sessions also supported broader brand awareness by</p> |

| Stakeholder | Activity |
|--------------------------------|---|
| | <p>increasing the visibility of Squadron Energy and establishing a more approachable, face-to-face presence within the local community.</p> <ul style="list-style-type: none"> – A project specific website on Squadron’s main company website. The project website provided an overview of the project noting the status and location and will include regular updates as the project progresses. |
| Wollongong City Council | <ul style="list-style-type: none"> – Issue of letter and invitation for project briefing to WCC general manager. Followed up with phone call and offer to meet at a future stage of the project. |
| NSW Government | <ul style="list-style-type: none"> – Pre-lodgement online meeting with DPHI on 14 October 2025. – Issue of letter and invitation for project briefing to Ms Alison Byrnes MP – Member for Cunningham. – An in-person briefing was subsequently held with Ms Byrnes on 5 November 2025. – Issue of and invitation for project briefing to letter to Mr Paul Scully MP – Member for Wollongong. |
| Utility operators | <ul style="list-style-type: none"> – Ongoing engagement with Endeavour Energy, Jemena and Sydney Water regarding feasibility of utility connections. |

5.3 Engagement to be carried out

Squadron will continue to undertake stakeholder engagement and consultation with all identified stakeholders throughout the Environmental Impact Statement (EIS) process. Ongoing engagement will be guided by the project’s Stakeholder Engagement Plan (SEP) – [available online](#), in accordance with the following objectives:

- Clearly communicate the objectives (including strategic drivers) of the project.
- Proactively engage with identified stakeholders early and often in the EIS.
- Satisfy the engagement requirements stipulated in the SEARs.
- Effectively and openly consult with stakeholders to inform the EIS.
- Establish rigor to the engagement process through quality systems and protocols that support the community and stakeholder contact and timely follow up.

Feedback received through engagement and consultation activities will be used to inform the assessment of environmental and social impacts for the project. Key issues identified in the associated technical studies will also inform the focus and timing of targeted engagement and consultation activities as the project progresses.

6. Proposed assessment of impacts

6.1 Overview

A preliminary assessment has been carried out to identify the relevant environmental matters and potential impacts for consideration and the appropriate level of assessment in an EIS (Section 6.2). The matters, and potential impacts, have been assigned an appropriate level of assessment, based on the descriptions included in the *State significant development guidelines – preparing a scoping report* (DPE, 2022) (Table 6.1).

Table 6.1 Assessment level – based on State significant development guidelines – preparing a scoping report (DPE, 2022a)

| Assessment | Description |
|-----------------------|---|
| Detailed assessment | The project may result in significant impacts on the matter, including cumulative impacts. The assessment of the impacts of the project on the matter will require detailed studies and investigations to be carried out by technical specialists. |
| Standard assessment: | The project is unlikely to result in significant impacts on the matter, including cumulative impacts. While the assessment of the impacts of the project on the matter will involve technical specialists, the assessment is unlikely to involve any significant uncertainties, or require any detailed cumulative impact assessment. |
| No further assessment | The project will have no impact on the matter, or the impacts of the project on the matter will be so small that they are not worth considering. |

Key matters, and the proposed level and scope of assessments, were documented using the DPE Scoping Worksheet (Appendix A).

The proposed level of assessment was determined considering a range of factors, including:

- the existing environmental context of the project and its surrounding locality
- the proposed project activities
- the regulatory framework applicable to the project
- the outcomes of consultation undertaken to date
- the project team’s experience from previous environmental approvals for projects in NSW.

6.2 Preliminary assessment

The preliminary assessment, including identified issues and the proposed level and scope of assessment, is provided in Table 6.2. The assessment was undertaken using a standard DPHI Scoping Worksheet, and included:

- identification of potential matters of the environment that could be impacted by the project, with consideration given to ‘Appendix B – Categories of assessment’ of the *State significant development guidelines – preparing a scoping report* (DPE, 2022a)
- identification of project activities that could impact upon potential matters of the environment
- consideration of the potential for environmental matters to be impacted by the project with consideration to ‘Appendix C – Key factors to consider during scoping’ of the *State significant development guidelines – preparing a scoping report* (DPE, 2022a), including the scale and nature of the impact, and the sensitivity of the receiving environment.
- consideration of the potential for identified impacts to be mitigated with safeguards.

The assessment was also informed by preliminary investigations for biodiversity, heritage, noise and air quality to better understand the likely scale and nature of potential impact.

Table 6.2 Matters and impacts

| Issue | Sub Issue | Discussion | Assessment level |
|---------|-----------|---|------------------|
| Amenity | Acoustic | <p>A preliminary noise investigation was undertaken by GHD to inform an initial constraints analysis for the project. The project site and its adjacent surrounds are zoned for Heavy Industry (E5). Residential noise catchment areas are present in all directions, except for east of the site. The nearest residential receivers to the project site are located 865 metres (m) to the southeast at 50 Merrett Avenue, Cringila and 965 m to the south at 131 Berkley Road, Berkeley.</p> <p>The nearest non-residential sensitive receivers to the project site include:</p> <ul style="list-style-type: none"> – The Fo Guang Shan Temple 1 km to the southwest. – The Illawarra RSPCA 400 m to the south. <p>Generator configurations and other engineering mitigations are being investigated through ongoing design refinement to minimise noise emissions.</p> <p>A noise and vibration impact assessment will be prepared for the EIS including an assessment of construction noise impacts in accordance with the <i>Interim Construction Noise Guideline</i> (DECCW, 2009) and <i>Assessing vibration: a technical guideline</i> (DECCW, 2006), operational noise impacts in accordance with the <i>NSW Noise Policy for Industry</i> (EPA, 2017) and cumulative noise impacts (considering other developments in the area).</p> | Detailed |
| | Visual | <p>A series of commercial/industrial enterprises are located on the western boundary facing Glastonbury Avenue. The eastern aspect is crossed by numerous high voltage transmission lines feeding to the Spring Hill transmission substation. Further afield to the north and northeast are open-air industrial activities, such as waste disposal and asphalt supply facilities. The Port Kembla transport (truck and rail) and marshalling areas around Tom Thumbs Lagoon lie to the northeast. To the south, the landscape consists of greenspace, known as the Cringila Community Park/Recreation Reserve and the Nan Tien Temple and Wollongong Memorial Gardens.</p> <p>Preliminary Zone of Theoretical Visibility (ZTV) investigations with assumed exhaust stack heights of 18.5 m indicate that the project site is well screened from the majority of surrounding vantage points. However, depending on final stack heights, the project may be visible from adjacent hill slopes and elevated residential communities to the north west, west and southeast.</p> | Standard |

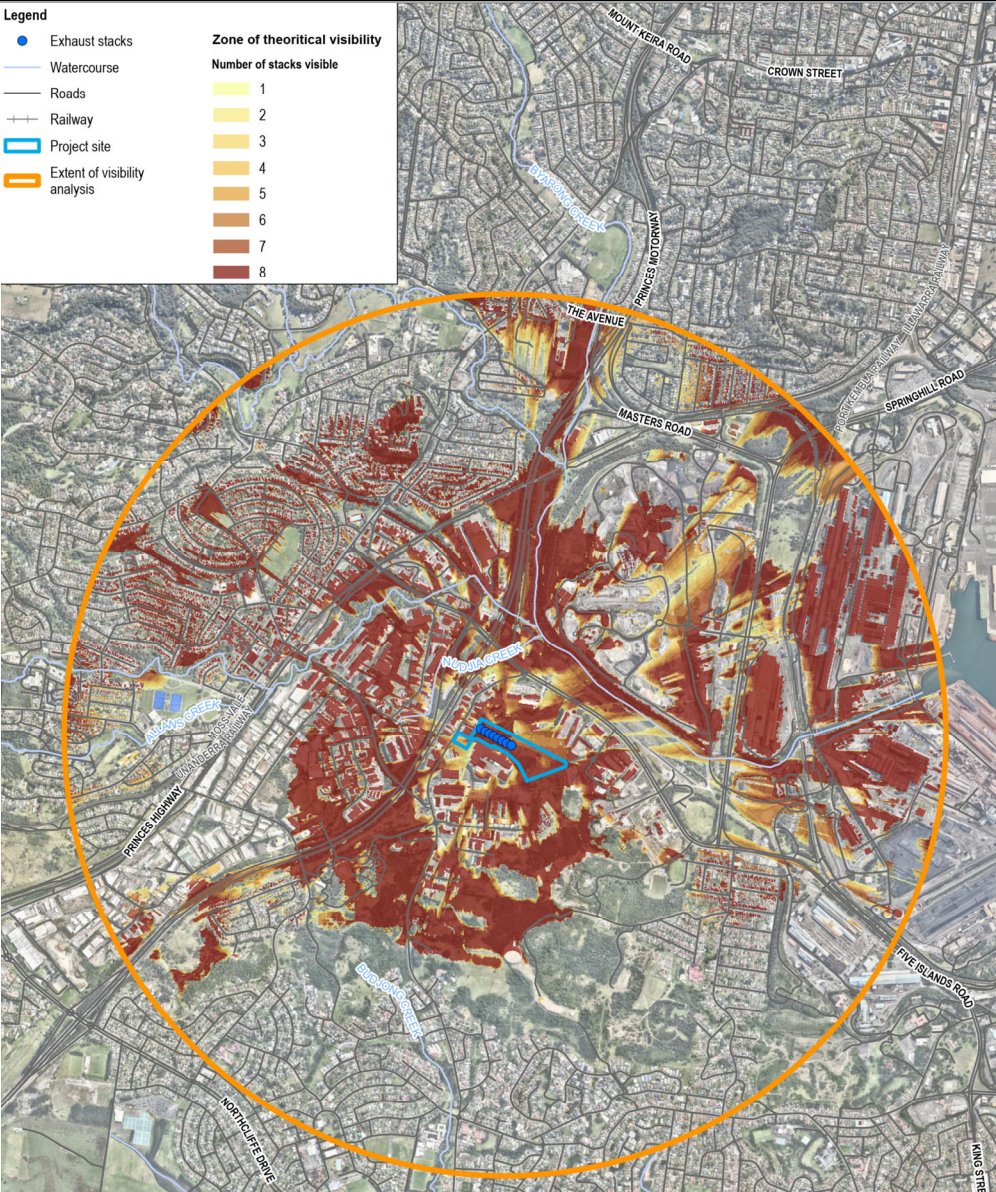
| Issue | Sub Issue | Discussion | Assessment level |
|-------|-----------|--|------------------|
| | | <p>Legend</p> <ul style="list-style-type: none"> ● Exhaust stacks — Watercourse — Roads —+— Railway □ Project site □ Extent of visibility analysis <p>Zone of theoretical visibility</p> <p>Number of stacks visible</p> <ul style="list-style-type: none"> 1 2 3 4 5 6 7 8  | |

Figure 6.1 Preliminary ZTV mapping assuming 18.5 m stack height

| Issue | Sub Issue | Discussion | Assessment level |
|--------|-----------------------|--|------------------|
| | | A visual impact assessment would be prepared for the EIS including updated ZTV mapping and characterisation of visual impacts from different angles and vantage points, including public roads, places of residence, work and recreation. The assessment would consider the surrounding visual character. | |
| | Odour | While there would be some minor odour emissions from construction plant, operational processes are not expected to produce ongoing odour issues. The potential for odour would be included as part of an air quality impact assessment prepared for the EIS. | Standard |
| | Microclimate | The operation of the power station has the potential to generate a thermal plume that would require further assessment including its potential to interact with aviation activities in the region. The potential for thermal plumes would be included as part of an air quality impact / plume rise assessment prepared for the EIS. | Standard |
| Access | Access to property | The project site is currently occupied by the Shinagawa Refractory with access from Glastonbury Avenue, a local road maintained by WCC. Additional direct access to the site would be developed for the project. The project would not impact upon existing access to Shinagawa Refractory. A standard traffic impact assessment will be prepared for the EIS. | Standard |
| | Utilities | Water, gas and power transmission services are located within the project site, and telecommunication services are located adjacent to the project site. Existing utilities will provide ready access to services but will not provide a constraint to development with the proposed footprint. Establishment of new utility connections could cause short term disruptions to utilities during construction. These impacts would be avoided as far as reasonably practicable through the design and construction methodology of the project and in consultation with relevant utility providers. The EIS will consider any impacts to utilities and services as a result of the project and outline mitigation measures to minimise the potential impacts. | Standard |
| | Road and rail network | The project site is located on Glastonbury Avenue, a local road. Glastonbury Avenue provides access to industrial premises and the residential suburb of Berkeley to the south. Glastonbury Avenue is connected to the State Road network via Five Islands Road and the M1 Princes Motorway. A new dedicated access from Glastonbury Avenue to the project site is proposed. Construction of site access from Glastonbury Avenue would have the potential to temporarily affect local operations. Construction traffic would also contribute to short term delays during construction of the new site entry and would contribute to increased vehicle traffic during construction. Construction traffic also has the potential to cause temporary disruptions, particularly during stages of mass resource delivery. Operational traffic would have minimal to negligible impacts on local traffic. The local rail network would not be impacted. A standard traffic impact assessment will be prepared for the EIS and will be prepared with reference to the <i>Draft Guide to Transport Impact Assessment</i> (TfNSW, 2024) and <i>Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments</i> (Austroads, 2020). | Standard |

| Issue | Sub Issue | Discussion | Assessment level |
|-------------------|-----------------------|--|-----------------------|
| | Offsite parking | <p>On street parking is available along Glastonbury Avenue, which is used by staff and visitors of adjoining local businesses.</p> <p>Offsite parking during construction may contribute to temporary disruption of existing parking availability surrounding the project site. Most business provide parking within their premises and there is ample on street parking available. Following construction of the proposed new site access, the development is not expected to affect offsite parking as it would not intersect any dedicated parking areas. It is expected that construction vehicles would be largely contained to the construction site. The operation of the project is unlikely to involve any offsite parking. Consideration of offsite parking would be included in the traffic impact assessment prepared for the EIS.</p> | Standard |
| Built environment | Public domain | The project would have limited potential to impact the public domain. The proposed development would be situated within an industrial precinct. Adjoining properties are also used for industrial purposes and are not areas of public leisure and recreation. Ongoing operation is unlikely to materially impact public domain at the site. | No further assessment |
| | Public infrastructure | <p>Short term construction of site access may potentially disrupt use of Glastonbury Avenue, a public road.</p> <p>Public infrastructure considerations to be included as part of the traffic impact assessment including consideration of utility impacts.</p> | Standard |
| | Other built assets | The project is not expected to affect other built assets. | No further assessment |
| Heritage | Natural | The project site does not comprise or adjoin any listed natural heritage places. | No further assessment |
| | Cultural | <p>A search of the NSW State Heritage Inventory (NSW DCCEEW, 2025) and Commonwealth Heritage Register (Commonwealth DCCEEW, 2025) was conducted on 15 September 2025. The project site overlaps with the 'Site of the former "Berkeley House"' listed under the Wollongong LEP 2009 (#6519). No other historic heritage items are present.</p> <p>The site of the former Berkely House, built in 1839, is of local significance to the Wollongong area for its association with William Jenkins, the original house owner, and Edmund Blacket who designed the building.</p> <p>The house was demolished in 1940, items remaining include levelled areas, excavated avenues, ornamental plantings and a series of timber gate posts and fence lines. Archaeological remains during this period are likely to consist of stone/brick footings, yard boundaries, and occupational related deposits.</p> <p>As part of historic heritage baseline investigations carried out, a site plan was overlain on a series of historical aerial images to develop a plan of predicted historical archaeological features overlain on a modern aerial image. This formed the basis for a site inspection which aimed to inspect the features shown on the plan and identify surface evidence of archaeological remains.</p> <p>Although the general location of the former Berkeley House could be identified, the preliminary site investigation was hindered by overgrown vegetation and was unable to determine whether archaeological material remains at the site.</p> <p>An initial assessment of archaeological potential was carried out with an area within the site of the former Berkely House curtilage identified as having high archaeological potential (see Figure 6.2) based on the site investigation.</p> | Standard |

| Issue | Sub Issue | Discussion | Assessment level |
|-----------|-------------------------|--|-----------------------|
| | | <p>The remains of Berkeley House would yield information about the nature of the building's structures and finish. Given that the architect was Edmund Blacket a noted architect it may be that differences in construction or finishes may tie the fabric into the architectural practices of Blacket. This assessment would be updated during the EIS phase and following further survey.</p> <p>Based on the preliminary site plans, that there would be no direct impact to the area mapped as high archaeological potential. Other elements associated with the heritage listing, including non-extant agricultural infrastructure, would potentially be impacted. These items would have low to nil archaeological potential.</p> <p>A Statement of Heritage Impact would be undertaken to accompany the EIS. Archaeological and heritage impact assessment would consider the following guidelines:</p> <ul style="list-style-type: none"> – Assessing Significance for Historical Archaeological Sites and 'Relics' (DoP, 2009) – NSW Heritage Manual (Heritage Office, 1996) – Historical Archaeology Code of Practice (Heritage Council, 2006). | |
| | Aboriginal cultural | <p>A basic search was undertaken on the Aboriginal Heritage Information Management System (AHIMS) database on 12 November 2025. The search results indicate that there are no cultural heritage items recorded within 1 km of the project site.</p> <p>An Aboriginal Cultural Heritage Assessment Report would be prepared in accordance with <i>Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales</i> (DECCW 2010) and consultation undertaken as per <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW, 2010) to accompany the EIS.</p> | Standard |
| | Built | <p>The project site does not include any built heritage. Note: Berkeley House is no longer extant and would be assessed as an archaeological site and is not understood to comprise built heritage.</p> | No further assessment |
| Community | Health | <p>The main potential health impact of the project would be emissions or particulate matter and potentially harmful gases during construction and operation.</p> <p>The potential for harmful emissions will be considered as part of the air quality assessment.</p> | Standard |
| | Safety | <p>The key safety risks would be mechanical and electrical hazards for site operations, and hazards associated with pressurised gas and the potential for combustion and explosive atmospheres in the event of gas release. The operation of the power transmission line would also have potential safety impacts in relation to potential for fires, electrocution and electromagnetic fields which may present a real or perceived risk to people and property.</p> <p>An initial risk screening will be undertaken using criteria and guidance in DPE's Applying SEPP 33 (DPIE, 2011), to confirm whether the project is classified as potentially hazardous, requiring a preliminary hazard analysis (PHA) and if so, the level of assessment required. The screening criteria relate to factors such as the types and quantities of hazardous materials to be stored on-site, how and where they will be stored, and the anticipated frequency of road movements of this material to and from the site.</p> | Standard |
| | Services and facilities | <p>Based on a preliminary review, there are limited community services and facilities in the vicinity due to the location of the project site in an industrial area. While direct impacts on these facilities are not expected to occur, indirect impacts from noise or air emissions could indirectly impact upon surrounding community services and facilities. These impacts would be considered as part of air and noise impact assessments for the project.</p> | No further assessment |

| Issue | Sub Issue | Discussion | Assessment level |
|----------|----------------------------------|--|------------------|
| | Cohesion, capital and resilience | <p>The project is not expected to cause impacts that would significantly affect social cohesion, capital and resilience.</p> <p>The social impacts of the project would be assessed in a first and second phase social impact assessment prepared in accordance with DPE's <i>Social Impact Assessment Guideline</i> (DPIE, 2023) and <i>Technical Supplement Social Impact Assessment Guideline for State Significant Projects</i> (DPE, 2023). The assessment would be supplemented with a tailored assessment approach guided by the <i>Benefit-Sharing Guideline. NSW Government, November 2024</i>, (DPHI, 2024) and <i>Undertaking Engagement Guidelines for State Significant Projects</i> (DPHI, 2024).</p> | Standard |
| | Housing | <p>The project's accommodation strategy will rely on existing local accommodation. The construction phase of the project would be short term so is unlikely to have a major or sustained impact on local housing availability. Ongoing operation of the project would involve a small permanent workforce that is unlikely to materially impact housing availability.</p> <p>Impacts on housing availability would be assessed as part of the social impact assessment, to demonstrate that there would be minimal social impact and to ensure community benefit and local spend is recognised as an important project value.</p> | Standard |
| Economic | Natural resource use | Ongoing operation of the project would involve combustion of gas, a natural resource. | Standard |
| | Livelihood | <p>The project will contribute to temporary construction jobs and permanent operational jobs. The project will contribute to reliable electricity necessary for supporting industry and livelihoods of thousands of workers across NSW.</p> <p>The project is not expected to limit livelihood prospects in other industries. It would have the potential to support new and emerging industries such as the potential hydrogen hub at Port Kembla.</p> <p>The social impacts of the project would be assessed in a social impact assessment prepared in accordance with DPE's <i>Social Impact Assessment Guideline</i> (DPIE, 2023). The social impact assessment would give consideration to the potential for the project to impact upon livelihoods and local supply chains.</p> | Standard |
| | Opportunity cost | <p>The use of gas for electricity generation would draw gas supply away from other uses, including households and businesses. Australia is transitioning towards increased electrification. The use of gas for electricity supply is anticipated to support electrification without substantially impacting upon gas availability for residential and business use. In addition, the newly constructed Port Kembla Energy Terminal will increase local gas supply.</p> <p>The project is not expected to create significant impacts or otherwise preclude other developments that would create an opportunity cost.</p> | Standard |
| | Waste | <p>The construction, and to a lesser degree, the operation of the project would have the potential to generate waste materials including waste excavated material, waste cleared material, and general construction and demolition waste. All waste generated during the construction and operation of the project would be appropriately classified, transported, and managed by suitably licensed waste contractors and facilities.</p> <p>Waste would be managed through the waste hierarchy established under the <i>Waste Avoidance and Recovery Act 2001</i> (i.e. avoidance of waste, resource recovery, disposal of waste). The EIS will assess the predicted waste generation impact of the project, including classification of wastes in accordance with the <i>Waste Classification Guidelines</i> (EPA, 2016) and an estimate of the quantity of each waste classification and identification of waste handling procedures, management measures and waste minimisation and reuse opportunities.</p> | Standard |

| Issue | Sub Issue | Discussion | Assessment level |
|-------|-----------------------|---|------------------|
| Air | Particulate matter | <p>A preliminary air quality investigation was undertaken to inform scoping of the project. The potential for off-site air quality impacts during the operation of the project were assessed quantitatively through the use of dispersion modelling techniques in accordance with the Approved Methods. Based on initial concept design, dispersion modelling did not predict exceedances of relevant air quality parameters as a result of the operation of the project.</p> <p>Construction activities, particularly earthwork and operation of plant, have the potential to generate dust that could affect sensitive receivers such as residences in surrounding residential areas at Port Kembla, Spring Hill, Unanderra and Kembla Grange. During operation, the main source of particulate matter emissions to air would be from combustion associated with the power station. The large separation distance between the power station and the nearest residential areas would again be a mitigating factor.</p> <p>Further assessment would be required to determine predicted emission concentrations at sensitive receptors. An air quality impact assessment will be prepared for the EIS in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> (EPA, 2022) and <i>Guidance on the Assessment of Dust from Demolition and Construction, Institute of Air Quality Management</i> (IAQM, 2016) to assess potential impacts on nearby sensitive receptors.</p> | Detailed |
| | Gases | <p>As above, a preliminary dispersion modelling study did not predict exceedance of relevant air quality parameters as a result of the operation of the project.</p> <p>The operation of the power station would generate gaseous emissions such as oxides of nitrogen, carbon monoxide and volatile organic compounds as a result of combustion. The day-to-day operation of the project could potentially involve incidental releases of non-combusted gas. Losses of gas would occur rarely, if ever, and would be the result of leaks or similar operations issues and would be resolved if detected. The large separation distance between the power station and the nearest residential areas would again be a mitigating factor.</p> <p>An air quality impact assessment will be prepared for the EIS in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> (EPA, 2016) to determine predicted emission concentrations at sensitive receptors.</p> | Standard |
| | Atmospheric emissions | <p>The emissions to air from the project, and particularly during operation of the power station, would involve the emission of greenhouse gases. A greenhouse gas inventory for the construction and operation of the project would be prepared to quantify this impact.</p> <p>Natural gas is considered to be a transition fuel between emissions intensive fossil fuels and renewables and is required to provide firming power in the transition to renewable energy. Accordingly, the project would support the transition to renewable energy.</p> <p>As discussed in Section 3.1.7, the power station would be dual-fuel enabled with potential capability to run on a combination of natural gas and hydrogen. This would provide capability to transition to zero emissions energy generation.</p> <p>The EIS will include an assessment of greenhouse gas emissions from construction and operational stages of project. Initially this would include scope 1 and 2 emissions to determine if project would exceed threshold for large emitters with provision for expansion to scope 3 assessment.</p> | Standard |

| Issue | Sub Issue | Discussion | Assessment level |
|--------------|-------------------|--|------------------|
| | | <p>This will include undertaking a scope 3 emissions assessment, a more detailed GHG mitigation assessment, an offsets strategy, and expanding the summary report. The assessment of greenhouse gas emissions would consider the <i>National Greenhouse Accounts Factors</i> (Australian Government, 2021), <i>NSW Climate Change Policy Framework</i> (OEH, 2016), <i>NSW Guide for Large Emitters</i> (EPA 2025).</p> | |
| Biodiversity | Native vegetation | <p>The project site has been heavily disturbed by past land uses (dairy farming) and has been previously cleared almost in its entirety. The project site consists of low condition vegetation and degraded riparian corridor. Small areas of remnant native vegetation remain along the south eastern and northern portions of the lot. Two mapped hydro lines drain from the property, one west towards Glastonbury Avenue and the other north towards Allans Creek. Both ultimately drain into Port Kembla.</p> <p>A review of BioNet (State Government of NSW and NSW DCCEEW , 2024) identified the following threatened flora species previously recorded within one - two km of the project site:</p> <ul style="list-style-type: none"> – Magenta Lilly Pilly (<i>Syzygium paniculatum</i>) – Vulnerable (BC Act and EPBC Act) – White-flowered Wax Plant (<i>Cynanchum elegans</i>) – Endangered (BC Act and EPBC Act) – Scrub Turpentine (<i>Rhodamnia rubescens</i>) – Critically Endangered (BC Act and EPBC Act). <p>Preliminary biodiversity field investigations did not identify any threatened flora at the site. The following plant community types (PCT) were identified (see Figure 6.2):</p> <ul style="list-style-type: none"> – PCT 3077 – Illawarra Complex Dry Rainforest (low condition) – PCT 3078 – Illawarra Lowland Wet Vine Forest (low and moderate condition) – PCT 4020 – Coastal Creekflat Layered Grass-Sedge Swamp Forest (moderate condition). <p>PCT 3077 and 3078, which are present throughout the majority of the site, potentially consist of degraded forms of the 'Illawarra Subtropical Rainforest in the Sydney Basin Bioregion' Threatened Ecological Community (TEC) protected under the BC Act.</p> <p>PCT 4020, which occurs at the entrance to the project site from Glastonbury Avenue adjacent to a minor watercourse and at the southern eastern extent of the project site near the lateral of the eastern gas pipeline may be associated with the 'Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions' vegetation community, a TEC under the EPBC Act.</p> <p>Further assessment is required to confirm the presence, condition and extent of these communities and determine the nature, extent and significance of potential impacts.</p> <p>The following Serious and Irreversible Impacts (SII) entities have the potential to occur within the Subject Land:</p> <ul style="list-style-type: none"> – Illawarra Subtropical Rainforest in the Sydney Basin Bioregion – Scrub Turpentine (<i>Rhodamnia rubescens</i>). <p>A Biodiversity Development Assessment Report (BDAR) will be prepared to support an application for approval. The BDAR would use the <i>Biodiversity Assessment Method</i> (DPIE, 2020) to provide a methodology for determining the number and type of credits required to offset unavoidable biodiversity impacts and to determine whether the project will have a SII on identified threatened entities.</p> | Standard |

| Issue | Sub Issue | Discussion | Assessment level |
|-------|----------------------------|--|------------------|
| | Native fauna | <p>The project site has been historically cleared but comprises areas of native vegetation with limited connectivity to broader habitat in Springhill and Cringila.</p> <p>A review of BioNet (State Government of NSW and NSW DCCEEW , 2024) identified the following threatened fauna species previously recorded within one - two km of the project area:</p> <ul style="list-style-type: none"> – Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>) – Vulnerable (BC Act and EPBC Act) – Powerful Owl (<i>Ninox strenua</i>) – Vulnerable (BC Act) – Wedge-tailed Shearwater (<i>Ardenna pacifica</i>) – Marine; Migratory (EPBC Act, Japan Australia Migratory Bird Agreement (JAMBA)) – Short-tailed Shearwater (<i>Ardenna tenuirostris</i>) – Marine; Migratory (EPBC Act, China Australia Migratory Bird Agreement (CAMBA), JAMBA, Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA)) – White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>) – Vulnerable (BC Act); and – Little Lorikeet (<i>Parvipsitta pusilla</i>) – Vulnerable (BC Act) <p>A preliminary biodiversity field investigation was undertaken did not identify any threatened fauna or habitat features likely to support threatened fauna (nest, habitat bearing trees, dreys).</p> <p>A known population of Green and Golden Bell Frog (<i>Litoria aurea</i>) (Endangered BC Act, Vulnerable EPBC Act) is present less than 5 km from the project site, with connecting wildlife corridors. Two locations within the project site, involving a vegetated watercourse and dam, were considered to provide potential habitat. Targeted surveys were carried out which included the deployment of acoustic recorders, night surveys and call detection and playback. Although, no Green and Golden Bell Frog were recorded, several common frog species were detected, and the species is known to be highly mobile and there is potential that the species could be present at the project site.</p> <p>While not detected during initial investigations, potential suitable habitat may be available and several threatened species may have potential to occur at the project site. This includes threatened birds, mammals, and frogs.</p> <p>Further surveys will be undertaken to confirm the presence or absence of threatened and migratory fauna. The impact of the project on threatened fauna habitat will be assessed in a BDAR. If required, the BAM calculator will be used to calculate the number and type of ecosystem and species credits required to offset residual impacts of the project.</p> | Standard |
| Land | Stability and/or structure | <p>The project site is gently sloping with a slight variation in topography. The soil profile erosion potential is mapped as “slight” with a modelled soil erosion “bare” of <20t/ha/year according to eSpade (DPE, 2025). From historic aerial imagery, the site appears to have been extensively cleared of vegetation but not subject to landfill or other reshaping activities.</p> <p>The EIS would consider the potential for soil erosion during construction of the project and ongoing potential for soil erosion and structural degradation in relation to the project’s permanent drainage design.</p> | Standard |
| | Soil chemistry | <p>The project would involve excavation, stockpiling and backfilling of soil with the potential to affect the pre-existing soil chemistry and profile. The project site is included on the Wollongong LEP acid sulfate soil risk map. The EIS would consider risks associated with contamination and Acid Sulfate Soils during construction of the project.</p> | Standard |
| | Capability | <p>Land and soil capability mapping is not available for the whole project site. Adjoining land to the southeast is mapped on eSpade (DPE, 2025) as being low capability land due. This rating is driven by a high mass movement hazard. The project site is not located on the elevated slopes of Springhill / Cringila Hills so may not possess the same hazards as adjoining land.</p> | Standard |

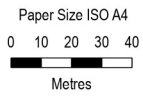
| Issue | Sub Issue | Discussion | Assessment level |
|-------|--------------------|---|------------------|
| | Topography | The project site is gently sloping with a slight variation in topography. The western boundary of the site lies at approximately 20 m AHD steadily increasing to approximately 30 m AHD at the eastern boundary. Part of the site will be levelled to 21 m AHD to establish the building platform. This would affect the sites drainage path but not the overall drainage within the small catchment of Allans Creek that includes other highly modified landforms. | Standard |
| | Contamination | <p>A search of the NSW Environmental Protection Authority (EPA) Contaminated Land Register was undertaken on 15 September 2025 to inform early constraints analysis. No contaminated land records were identified for the project site. The Endeavour Energy Springhill substation, immediately north of the project site and the Veolia Environmental Services site to the east, are both listed as notified sites. However, it has been determined through assessment that regulation under the <i>Contaminated Land Management Act 1997</i> is not required for either site.</p> <p>Construction of the project, and storage of hydrocarbons and other chemicals during operation are potential source of contamination.</p> <p>The EIS would consider risks associated with contamination and Acid Sulfate Soils during construction of the project. This would be prepared in accordance with the <i>National Environment Protection (Assessment of Site contamination) Measure</i> (NEPC, 2011).</p> | Standard |
| Water | Water quality | <p>The project site is within the Allans Creek catchment. Two mapped hydro lines drain from the property, one west towards Glastonbury Avenue and the other north towards Allans Creek. Both ultimately drain into Allans Creek and Port Kembla.</p> <p>The project has potential to impact on downstream surface water quality from overland flows from the project site during high rainfall events during construction. Potential water quality impacts could occur as a result of turbidity and sedimentation, mobilisation of soils and chemical spills. Potential for ongoing water quality impacts during operation would be limited to chemical spills and stormwater management.</p> <p>The EIS would include an assessment of risk to surface water and potential impacts associated with stormwater and flooding from local catchments including Allans Creek. This would also include an assessment of impacts associated with any discharges to Allans Creek / Port Kembla during construction and operations and consideration of any impacts to groundwater.</p> | Standard |
| | Water availability | <p>The project would involve the use of water for activities such as dust suppression during construction, as necessary, and potable water for the operation of power station cooling systems.</p> <p>A Sydney Water water main is present along Glastonbury Avenue with an existing connection to the site (via Shinagawa Refractories Australasia's current operation). Preliminary discussions held with Sydney Water indicate that this connection could be extended to the project site and that it is of adequate size to cater for the additional water needed. Depending on final design and construction methodology, construction is expected to require an initial 60 ML/year while operations would require around 30 ML/year.</p> <p>While the project is not expected to substantially affect the availability of water, it would be considered in the water quality and hydrology impact assessment prepared to accompany the EIS.</p> | Standard |
| | Hydrological flows | <p>The project site is within the Allans Creek catchment. Two mapped hydro lines drain from the property, one west towards Glastonbury Avenue and the other north towards Allans Creek. Both ultimately drain into Allans Creek and Port Kembla.</p> <p>Overland flows have the potential to influence natural drainage within the project sites catchment area through modifications to natural surface runoff and infiltration.</p> | Standard |

| Issue | Sub Issue | Discussion | Assessment level |
|-------------------|-------------------|---|-----------------------|
| | | While the project is not expected to substantially affect existing hydrological, it would be considered in the water quality and hydrology impact assessment prepared to accompany the EIS. | |
| Hazards and risks | Coastal hazards | The project site property intersects land included on the Coastal Environment area map under the Resilience and Hazards SEPP, but would not involve any works in this area. Therefore, the project is unlikely to impact the coastal environment, or to be impacted by coastal hazards. | No further assessment |
| | Airspace | Illawarra Regional Airport (Shellharbour Airport) is located approximately 13 km southwest of the project site in the suburb of Albion Park Rail. The project site is not within the Obstacle Limitation Surfaces (OLS) area for the airport as determined from Section 6.7 of the <i>Shellharbour Airport Master Plan</i> (Shellharbour City Council, 2024). While outside of the determined OLS, the project has the potential to generate thermal plumes which have some potential to impact upon the OLS of Illawarra Regional Airport. Modelling of thermal plumes and the potential to impact upon airspace would be considered in an aviation plume rise assessment as part of the EIS. The following guidelines will inform the plume rise assessment: <ul style="list-style-type: none"> – Civil Aviation Safety Authority (CASA) in the Advice Circular AC 139.E-02v1.0. – CASA Form 1247 (July 2024) | Standard |
| | Flood waters | The project site is within the Allans Creek catchment. Constraints mapping information from the WCC Planning and Environment Map demonstrates the project site has a low risk of flooding. Modelled 1% Annual Exceedance Probability (AEP) climate change scenario (+20% increase in rainfall, +0.4 m sea level rise) (WCC, 2019) for the Allans Creek catchment shows that the proposed Glastonbury Avenue access point is likely to be inundated. However, the project site is not predicted to be inundated. While the project is not expected to materially affect flood risk, or to be impacted by flooding, flood risks would be considered as part of project design and the water quality and hydrology impact assessment prepared to accompany the EIS based on existing flood information. | Standard |
| | Bushfire | The project site is mapped on land classified as 'Vegetation Category 3' (medium bush fire risk vegetation). The nearest Category 1 (high bush fire risk vegetation) land is located 900 m to the southeast of the project site. Construction would potentially involve hot works that could lead to bushfire ignition if poorly managed, while uncontained pressurised gas and fires could be a source of bushfire ignition during operation. The potential for bushfire would be considered as part of the EIS | Standard |
| | Undermining | The project would not involve any undermining of existing developments. | No further assessment |
| | Steep slopes | The project site is gently sloping with a slight variation in topography. | No further assessment |
| | Industrial hazard | The project would have the potential to represent an industrial hazard. The key hazards would potentially include mechanical and electrical failure of equipment within the power station, and explosive atmospheres related to high pressure gas release potentially resulting in projectile debris or combustion. Hazards and risks posed by the project would be assessed in a preliminary hazard analysis in accordance with the requirements of the <i>Hazardous and Offensive Development Application Guidelines Applying SEPP 33</i> (NSW Government 2011) and <i>Assessment Guideline: Multi-Level Risk Assessment</i> (DPI, 2011). The EIS will include a Preliminary Hazard Analysis (PHA) prepared in accordance with the requirements of the <i>Hazardous and Offensive Development Application Guidelines Applying SEPP 33</i> (NSW Government, 2011). | Standard |



- Legend**
- Project site
 - Proposed development
 - Hardstand areas
 - Road
 - Site of former "Berkeley House" (Wollongong LEP #6519)
 - High archaeological potential - Site of former Berkeley House (Artefact, 2023)
 - Watercourse
- Plant Community Types (Niche 2024)**
- PCT 3077 - Illawarra Complex Dry Rainforest (Low Condition) (TEC)
 - PCT 3078 - Illawarra Lowland Wet Vine Forest (Low Condition) (TEC)
 - PCT 3078 - Illawarra Lowland Wet Vine Forest (Moderate Condition) (TEC)
 - PCT 4020 - Coastal Creekflat Layered Grass-Sedge Swamp Forest (Moderate Condition) (TEC)

Shinagawa Refractories Australasia



Squadron Energy Pty Ltd
Illawarra Firing
Power Station

Project No. **12649092**
 Revision No. **0**
 Date **22/01/2026**

Map Projection: Transverse Mercator
 Horizontal Datum: GDA2020
 Grid: GDA2020 MGA Zone 56

Environmental constraints

FIGURE 6.2

6.3 Cumulative impacts

As detailed in Section 2.3.7, the project may result in cumulative impacts in conjunction with surrounding projects and existing developments. A scoping summary cumulative impact assessment has been prepared in accordance with the *Cumulative Impact Assessment Guidelines for Significant Projects* (DPE, 2022b).

Future projects considered for inclusion comprised State significant projects as well as developments identified through the City of Wollongong DA Tracker. A 2 km search radius was used to identify projects, which were then assessed for their relevance to the project from both a timing and scale perspective. The assessment approach for cumulative impact assessments is defined as either detailed, standard or not applicable, see Table 6.3. The preliminary cumulative impact assessment scoping summary is provided in Table 6.4.

The closest development is the Springhill Battery Energy Storage System (BESS), a State Significant Development located to the north of the project site within the neighbouring Endeavour Energy Springhill transmission substation lot. SEARs for this project were issued on 10 September 2025, and the EIS is currently being prepared.

The preliminary assessment has identified several key matters with potential for cumulative impacts:

- Traffic and access: The project would utilise existing heavy vehicle haulage routes, particularly Five Islands Road and Glastonbury Avenue.
- Social and economic: An influx of staff across multiple concurrent projects is likely to bring trade and benefit to local businesses while also potentially placing pressure on short-term accommodation and other community services.
- Noise: The assessment would need to consider cumulative noise emissions from the power station in combination with existing industrial sources, including the adjacent Springhill Substation and the proposed Springhill BESS.
- Visual: The project's contribution to the broader visual landscape would need to be considered in combination with other existing and proposed developments
- Air quality: The air quality assessment would need to account for cumulative emissions from the power station alongside background industrial emissions. This includes particulate matter, gases and other atmospheric pollutants.
- Biodiversity: Consideration would be required for the potential cumulative loss of TECs and threatened species habitat from project and other developments.
- Historic heritage: the curtilage of the Site of former "Berkeley House" extends north into the proposed Springhill BESS development area. Cumulative impacts relating to archaeological material and relics would be considered.
- Hazards and risk: consideration would need to be given the potential for interaction with the adjoining Springhill substation and proposed Springhill BESS, and surrounding industries.

While the potential overlap in impacts between the project and future projects will be the subject of a cumulative impact assessment in the EIS, the preliminary assessment did not identify any significant uncertainties that indicate a requirement for a detailed assessment approach.

An updated project list would be developed during the EIS phase in order to identify relevant future projects and a cumulative impact assessment conducted in accordance with the *Cumulative Impact Assessment Guidelines for Significant Projects* (DPE, 2022b). Particular consideration will be given to potential cumulative impacts associated with the Springhill BESS (SSD-91409709) given its proximity to the project site. Outcomes of the cumulative impact assessment will be used to create environmental mitigation measures to minimise any potential cumulative impacts as a result of the project. The combined effects of other developments currently in operation will also be considered.

Table 6.3 Cumulative impact assessment approach

| Assessment approach | Description |
|---------------------|--|
| Detailed Assessment | <p>The project may result in significant impacts on the matter, including cumulative impacts. Detailed assessment is characterised by:</p> <ul style="list-style-type: none"> – potential overlap in impacts between a future project and the project – potential for significant cumulative impacts as a result of the overlap, requiring detailed technical studies to assess the impacts – sufficient data is available on the future project to allow a detailed assessment of cumulative impacts with the proposed project for the relevant matter – uncertainties exist with respect to data, mitigation, assessment methods and criteria. |
| Standard assessment | <p>The project is unlikely to result in significant impacts on the matter, including cumulative impacts. Standard assessments are characterised by:</p> <ul style="list-style-type: none"> – impacts are well understood – impacts are relatively easy to predict using standard methods – impacts are capable of being mitigated to comply with relevant standards or performance measures – the assessment is unlikely to involve any significant uncertainties or require any detailed cumulative impact assessment. |
| N/A | <p>No potential overlap in impacts between a future project and the proposed project that would warrant any consideration in the cumulative impact assessment.</p> |

Table 6.4 Preliminary cumulative impact assessment scoping summary table

| Nearby development (future projects) | Approximate distance to project and key features | Project status / timing | Potential overlap between impact of project with nearby development | | | | | | |
|---|---|---|---|---|---|---|--|--|---|
| | | | Relevant assessment matters | | | | | | |
| | | | Traffic (incl. access) | Noise | Hazards and risks | Social / economic | Visual impact | Biodiversity | Historic heritage |
| Major projects | | | | | | | | | |
| Springhill Battery Energy Storage System (SSD-91409709) | 60 m north of the project site. Development of a 100 MW / 200 MWh BESS and ancillary infrastructure. | <ul style="list-style-type: none"> Prepare EIS Potential for construction overlap | <p>Standard assessment</p> <p>Potential traffic, transport and access impact overlap.</p> | <p>Standard assessment</p> <p>Potential noise impact overlap.</p> | <p>Standard assessment</p> <p>Potential hazard and risks overlap.</p> | <p>Standard assessment</p> <p>Potential social and economic impact overlap.</p> | <p>Standard assessment</p> <p>Potential visual impact overlap.</p> | <p>Standard assessment</p> <p>Potential biodiversity impact overlap.</p> | <p>Standard assessment</p> <p>Potential historic heritage impact overlap.</p> |
| Unanderra Liquid Waste Treatment Facility (SSD-8304) | 0.8 km north west of the project site. Development of liquid waste treatment plant that will treat 56,500 tonnes of liquid waste per year | <ul style="list-style-type: none"> Approved 31 August 2022 Mod-1 relating to floor level of a building Approved 31 January 2024 Potential for construction overlap | <p>Standard assessment</p> <p>Potential traffic, transport and access impact overlap.</p> | N/A | N/A | <p>Standard assessment</p> <p>Potential social and economic impact overlap.</p> | N/A | N/A | N/A |
| Illawarra Hydrogen Hub (SSD-67677709) | 1.1 km south-east of the project site. Development of the Illawarra Hydrogen Technology Hub which would produce renewable hydrogen. | <ul style="list-style-type: none"> Prepare EIS Potential for construction overlap | <p>Standard assessment</p> <p>Potential traffic, transport and access impact overlap.</p> | N/A | N/A | <p>Standard assessment</p> <p>Potential social and economic impact overlap.</p> | N/A | N/A | N/A |

| Nearby development (future projects) | Approximate distance to project and key features | Project status / timing | Potential overlap between impact of project with nearby development | | | | | | |
|---|---|--|---|-------|-------------------|---|---------------|--------------|-------------------|
| | | | Relevant assessment matters | | | | | | |
| | | | Traffic (incl. access) | Noise | Hazards and risks | Social / economic | Visual impact | Biodiversity | Historic heritage |
| Bluescope Steel – HyKembla Project (SSD-45936713) | 2.1 km east of the project site. Establishment of a hydrogen electrolyser plant for use within steel works. Includes Hydrogen refuelling station for hydrogen powered heavy vehicles. | <ul style="list-style-type: none"> – Prepare EIS – Potential for construction overlap | <p>Standard assessment</p> <p>Potential traffic, transport and access impact overlap.</p> | N/A | N/A | <p>Standard assessment</p> <p>Potential social and economic impact overlap.</p> | N/A | N/A | N/A |
| Relevant development applications | | | | | | | | | |
| 18-24 Glastonbury Avenue CD-2025/211 | 0.2 km west of project site. Construction of 3 industrial buildings containing 25 industrial units. | <ul style="list-style-type: none"> – Construction. – Construction completion expected. | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 20 Lathe Place CD-2025/32 | 0.3 km south east of project site. Industrial Development of 12 industrial units. | <ul style="list-style-type: none"> – Approved – Potential for construction overlap | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2 Glastonbury Avenue DA-2018/1449/C | 0.4 km north west of project site. Construction of service station with shop and cafe. | <ul style="list-style-type: none"> – Notification – Potential for construction overlap | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 37 Glastonbury Avenue DA-2019/602/B | 0.4 km south west of project site. Light industrial unit complex and alterations and additions to existing industrial warehouse. | <ul style="list-style-type: none"> – Review – Potential for construction overlap | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

| Nearby development (future projects) | Approximate distance to project and key features | Project status / timing | Potential overlap between impact of project with nearby development | | | | | | |
|--------------------------------------|---|--|---|-------|-------------------|-------------------|---------------|--------------|-------------------|
| | | | Relevant assessment matters | | | | | | |
| | | | Traffic (incl. access) | Noise | Hazards and risks | Social / economic | Visual impact | Biodiversity | Historic heritage |
| 52-54 Industrial Road DA-2025/601 | 0.5 km south east of project site. Storage shed and associated parking and parking area | <ul style="list-style-type: none"> – Review – Potential for construction overlap | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 48 Industrial Road CD-2023/770 | 0.5 km south east of project site. Industrial development with associated parking landscaping and signage. | <ul style="list-style-type: none"> – Approved – Potential for construction overlap | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 15 Brady St CD-2024/625 | 0.8 km south of project site. New industrial development. | <ul style="list-style-type: none"> – Notification – Potential for construction overlap | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

7. Conclusion

Squadron is seeking development consent for the project as SSD under Division 4.7 of the EP&A Act in order to construct and operate a gas turbine firming power station with a capacity of 300 – 400 MW at Unanderra. This scoping report provides an overview of the project, the site context and the scope of anticipated assessments to support a request for SEARs under the EP&A Act.

The key considerations identified in this scoping report for the project are summarised Table 7.1.

Table 7.1 Illawarra Firming Power Station key considerations

| Level of assessment | Matter |
|---------------------|-----------------------------|
| Detailed assessment | Noise and vibration |
| | Air quality |
| Standard assessment | Visual |
| | Traffic and access |
| | Social and economic |
| | Historic heritage |
| | Aboriginal culture heritage |
| | Waste |
| | Greenhouse gas emissions |
| | Land use |
| | Contamination |
| | Water and hydrology |
| | Hazards and risks |

A key focus for the project would be avoidance and minimisation of potential impacts on the environment and local communities, where practicable and feasible, when taking into consideration engineering constraints and cost implications. The next steps will include:

- refinement and implementation of a community and stakeholder engagement plan
- design development including confirmation of the quantity, capacity and type of turbines
- commencement of baseline and design studies
- preparation of the project EIS and associated technical studies.

The EIS will be prepared in accordance with the *State significant development guidelines – preparing an environmental impact statement* (DPE, 2022c) and will include:

- a detailed description of the project including construction activities, and ancillary sites and components.
- a comprehensive assessment of the potential impacts on the key issues including a description of the existing environment and assessment of potential direct and indirect impacts of construction, operation, and decommissioning
- descriptions of measures to be implemented to avoid, minimise, manage, mitigate, offset, and/or monitor the potential impacts
- identify and address issues raised by stakeholders and community members.

It is requested that DPHI confirm the project as SSD and issue SEARs to enable an EIS to be prepared.

The final EIS assessment approach will be further informed by the project-specific SEARs and the requirements of the relevant agencies and stakeholders through the engagement process.

8. References

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Appendix A

Scoping summary table

| Environmental Impact Statement (EIS) scoping worksheet for: | | | Illawarra Firing Power Station | | | | | | Date: | | Nov-25 | | | | | |
|--|-------------------|----------------------------------|--|--|--|---|---|-----------|-----------|---------------------------------|---|--|--|--|---|--|
| What matters might be impacted? | | | What activities might cause an impact? | | | What are the characteristics of the impact? | | | | How will the impact be managed? | What are the community and other stakeholder views? | What level of assessment and engagement is required in the EIS preparation phase? | | | | |
| Social and environmental matters i.e. natural or human assets or values aggregated at the level most appropriate for informing management and assessment requirements Click on the matter for a description, or the link above for full glossary | | | Without any mitigation, is the proposal likely to impact on the matter? (Select from list) | If there is a 'likely' Impact: 1. list the activities expected to cause the impact; and 2. if applicable, list the receptor being impacted and its status. E.g. construction noise will be heard at nearby school If 'unlikely', briefly explain why. Has the impact been actively avoided through project design or site location? (Manual entry) | | | Is the impact, without mitigation, expected to cause a material effect with regard to its... (Answer 'Y', 'N' or '?') Click on characteristic for description, or the link above for further detail | | | | Does the impact need assessment in the EIS? (Auto fills) | Is the impact, without mitigation, expected to have a material cumulative effect with other impacts (including from other projects)? (Select from list) | What safeguards and management measures are expected to be required to address the impact? (Select from list) | Are there community or other stakeholder concerns regarding the impact or activity? (Based on engagement with community and other stakeholders) (Select from list) | Expected level of assessment and/or engagement required (Auto fills) | Relevant section in Scoping Report (Manual entry) |
| | | | | | | | extent? | duration? | severity? | sensitivity? | | | | | | |
| What does the proposal mean for people? | AMENITY | acoustic | Likely | Construction noise will be generated by the proposal. Located within an industrial precinct, the proposal would contribute cumulative impacts to the existing industrial noise environment. As a firing development, operational noise impacts would occur intermittently while the facility is operating. | | | Y | Y | Y | Y | Yes | Yes | Project Specific | Yes | Detailed | Table 6.2 |
| | | visual | Likely | Temporary and limited visual impacts during construction, with limited visibility from public spaces. Operational visual impacts would include vent stacks and exhaust plumes which would be visible from surrounding elevated view points. | | | Y | Y | Y | N | Yes | No | Project Specific | Yes | Detailed | Table 6.2 |
| | | odour | Likely | While there would be some minor odour emissions from construction plant, ongoing odour is not expected to be generated during operation. | | | N | Y | Y | N | Yes | No | Standard | No | Standard | Table 6.2 |
| | | microclimate | Likely | Potential for thermal plumes from combustion during operation. With potential impacts on airspace. | | | Y | Y | Y | Y | Yes | No | Project Specific | No | Standard | Table 6.2 |
| | ACCESS | access to property | Likely | The proposal is located on private property that has an existing industrial facility. The proposal would involve the construction of a new access road so would not impact upon existing access. | | | Y | N | Y | N | Yes | No | Standard | No | Standard | Table 6.2 |
| | | utilities | Likely | Establishment of new utility connections could cause short term disruptions to utilities during construction. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | road and rail network | Likely | Construction traffic would contribute to short term delays during construction of new site entry and would contribute to increased vehicle traffic during construction. Operational traffic would be minimal to negligible. | | | Y | Y | Y | Y | Yes | No | Project Specific | No | Standard | Table 6.2 |
| | | offsite parking | Likely | Offsite parking during construction of site access may contribute to disruption of existing parking availability surrounding the proposal site. Ample offsite and on street parking is likely to be available. Following construction of site access, parking will be confined to the project site during construction and operation. | | | N | N | N | N | No | No | Project Specific | No | Standard | Table 6.2 |
| | BUILT ENVIRONMENT | public domain | Likely | Short term construction of site access will occur in the public domain. The public domain is industrial and not used for recreational purposes. Ongoing construction and operational impacts will be confined to proposal site. | | | N | N | N | N | No | No | Standard | No | No further assessment | Table 6.2 |
| | | public infrastructure | Likely | Short term construction of site access may potentially disrupt use of Glastonbury Avenue, a public road, and local services and utilities. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | other built assets | Unlikely | Impacts to built assets are likely to be restricted to utilities and public roads, which is already captured in other rows. No further impacts to built assets are anticipated. | | | | | | | | | | No | No further assessment | Table 6.2 |
| | HERITAGE | natural | Unlikely | The project site does not comprise any listed natural heritage places. | | | | | | | | | | No | No further assessment | Table 6.2 |
| | | cultural | Likely | The project site overlaps the site of the former "Berkeley House" listed under the Wollongong Local Environmental Plan 2009. It is not expected that the project would necessitate any material impact to the heritage place, however, there is potential for unexpected archaeological finds. | | | Y | Y | Y | Y | Yes | No | Project Specific | Yes | Standard | Table 6.2 |
| | | Aboriginal cultural | Likely | There are no known Aboriginal cultural heritage sites at the proposal site. There remains potential for unanticipated impacts to Aboriginal cultural heritage objects or places. | | | N | N | N | N | Yes | No | Standard | No | Standard | Table 6.2 |
| | | built | Unlikely | The project site does not include any built heritage. The site of former "Berkeley House" is an archaeological site and is not understood to comprise extant built heritage. | | | | | | | | | | No | No further assessment | Table 6.2 |
| | COMMUNITY | health | Likely | Emissions from construction and operation have the potential to impact upon health. The spatial separation and likely time of operation (night time) of residential receivers are mitigating factors. | | | Y | Y | N | N | Yes | No | Project Specific | No | Standard | Table 6.2 |
| | | safety | Likely | The proposal has potential safety issues associated with release or combustion of gas, fires, electrocution and generation of electromagnetic fields. | | | Y | Y | Y | Y | Yes | No | Project Specific | Yes | Standard | Table 6.2 |
| | | services and facilities | Unlikely | No impacts to community services / facilities are likely. | | | | | | | | | | No | No further assessment | Table 6.2 |
| | | cohesion, capital and resilience | Likely | Potential community impacts on workforce and resilience to otherwise intermittent electricity supply. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | ECONOMIC | housing | Unlikely | Temporary housing would be required during the construction phase. | | | N | N | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | natural resource use | Likely | The proposal would involve combustion of gas a natural resource, during operation. | | | Y | Y | Y | Y | Yes | Yes | Standard | No | Standard | Table 6.2 |
| livelihood | | Likely | The proposal will contribute to temporary construction jobs and permanent operational jobs. The proposal will contribute to reliable electricity necessary for supporting industry and livelihoods. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 | |
| opportunity cost | | Likely | The use of gas for electricity generation would draw gas supply away from households and businesses. Australia is transitioning towards increased electrification. The use of gas for electricity supply is anticipated to support electrification without substantially impacting upon gas availability for residential and business use. | | | Y | Y | N | N | Yes | Yes | Unknown | No | Standard | Table 6.2 | |
| waste | | Likely | The proposal would contribute to the generation of waste during construction and decommissioning which would contribute to increasing demand for waste disposal. | | | Y | N | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 | |
| What does the proposal mean for the natural environment? | AIR | particulate matter | Likely | The proposal would contribute to dust and particulate matter generation during construction. Combustion of gas during operation would contribute to ongoing contributions to particulate matter emissions. | | | Y | Y | Y | Y | Yes | Yes | Standard | Yes | Detailed | Table 6.2 |
| | | gases | Likely | The proposal would contribute to gas generation during construction. Combustion of gas during operation would contribute to ongoing contributions to gas emissions. | | | Y | Y | Y | Y | Yes | Yes | Standard | Yes | Detailed | Table 6.2 |
| | | atmospheric emissions | Likely | The proposal would contribute to greenhouse gas emissions during construction. Combustion of gas during operation would contribute to ongoing contributions to greenhouse gas emissions. | | | Y | Y | Y | Y | Yes | Yes | Standard | Yes | Detailed | Table 6.2 |
| | BIODIVERSITY | native vegetation | Likely | The proposal would involve clearance of native vegetation which potentially consists of threatened ecological community. | | | Y | Y | Y | Y | Yes | Yes | Project Specific | No | Detailed | Table 6.2 |
| | | native fauna | Likely | The proposal would involve clearance of potential habitat to native fauna, potentially including threatened species. | | | Y | Y | Y | Y | Yes | No | Project Specific | No | Standard | Table 6.2 |
| | LAND | stability and/or structure | Likely | Potential for increased erosion and soil instability for permanent structures | | | Y | Y | Y | N | Yes | No | Standard | No | Standard | Table 6.2 |
| | | soil chemistry | Likely | Potential acid sulfate soil risk could impact downstream waterways. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | capability | Likely | The project site would require levelling of slight slopes | | | N | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | topography | Likely | The project site is gently sloping with a slight variation in topography. Construction of the project would require levelling to accommodate hardstands. | | | Y | Y | N | N | Yes | No | Standard | No | Standard | Table 6.2 |
| | | contamination | Likely | The proposal site has no known contamination present but is located within an industrial area that may possess unknown contamination that could be mobilised in soil and water. Construction activities also have the potential to be a source of contamination. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | WATER | water quality | Likely | The project has potential to impact on downstream surface water quality from overland flows from the project site during high rainfall events during construction. Potential water quality impacts could occur as a result of turbidity and sedimentation, mobilisation of contaminated soils and chemical spills. Potential for ongoing water quality impacts during operation would be limited to chemical spills. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | water availability | Likely | The project would involve the use of water for activities such as dust suppression during construction, as necessary, and potable water for the operation of power station cooling systems. | | | Y | Y | N | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | hydrological flows | Likely | Overland flows have the potential to influence natural drainage within the proposal sites catchment area through modifications to natural surface runoff and infiltration. | | | N | Y | N | Y | Yes | No | Standard | No | Standard | Table 6.2 |

| Environmental Impact Statement (EIS) scoping worksheet for: | | Illawarra Firing Power Station | | | | | | | Date: | | Nov-25 | | | | | |
|---|-----------|--|---|---|---|---|---|--|---|--|--|--|---|-----------------------|-----------------------|-----------|
| What matters might be impacted? | | What activities might cause an impact? | | | What are the characteristics of the impact? | | | | How will the impact be managed? | What are the community and other stakeholder views? | What level of assessment and engagement is required in the EIS preparation phase? | | | | | |
| Social and environmental matters i.e. natural or human assets or values aggregated at the level most appropriate for informing management and assessment requirements <i>Click on the matter for a description, or the link above for full glossary</i> | | Without any mitigation, is the proposal likely to impact on the matter? <i>(Select from list)</i> | If there is a 'likely' Impact: 1. list the activities expected to cause the impact; and 2. if applicable, list the receptor being impacted and its status. <i>E.g. construction noise will be heard at nearby school</i> If 'unlikely', briefly explain why. Has the impact been actively avoided through project design or site location? <i>(Manual entry)</i> | | | Is the impact, without mitigation, expected to cause a material effect with regard to its... <i>(Answer 'Y', 'N' or '?')</i> <i>Click on characteristic for description, or the link above for further detail</i> | | Does the impact need assessment in the EIS? <i>(Auto fills)</i> | Is the impact, without mitigation, expected to have a material cumulative effect with other impacts (including from other projects)? <i>(Select from list)</i> | What safeguards and management measures are expected to address the impact? <i>(Select from list)</i> | Are there community or other stakeholder concerns regarding the impact or activity? <i>(Based on engagement with community and other stakeholders)</i> <i>(Select from list)</i> | Expected level of assessment and/or engagement required <i>(Auto fills)</i> | Relevant section in Scoping Report <i>(Manual entry)</i> | | | |
| extent? | duration? | severity? | sensitivity? | | | | | | | | | | | | | |
| What risks does the proposal face? | RISKS | coastal hazards | Unlikely | No changes to the coastal zone | | | | | | | No | No further assessment | Table 6.2 | | | |
| | | Airspace | Likely | The project has the potential to generate thermal plumes which have some potential to impact upon flight paths from Illawarra Regional Airport | | | Y | Y | Y | Y | Yes | No | Standard | Yes | Standard | Table 6.2 |
| | | flood waters | Unlikely | Impact to flood duration or severity unlikely, or impacts from floods is unlikely. | | | | | | | | | No | Standard | Table 6.2 | |
| | | bushfire | Likely | No bushfire prone land, but potential to contribute to bushfire ignition during construction and operation. | | | Y | Y | Y | Y | Yes | No | Standard | No | Standard | Table 6.2 |
| | | undermining | Unlikely | No undermining required for project or present under project site. | | | | | | | | | No | No further assessment | Table 6.2 | |
| | | steep slopes | Likely | Site has flat topography | | | N | N | N | N | No | | | No | No further assessment | Table 6.2 |
| | | Industrial hazard | Likely | The construction, and to a greater degree, operation of the project would have the potential to represent an industrial hazard. The key hazards would potentially include mechanical and electrical failure of equipment within the power station, and explosive atmospheres related to high pressure gas release potentially resulting in projectile debris or combustion. | | | Y | Y | Y | Y | Yes | Yes | Project Specific | Yes | Detailed | Table 6.2 |



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