



**Premise**

FIRM POWER

# **Scoping Report**

BERESFIELD BATTERY ENERGY STORAGE SYSTEM

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# 1. INTRODUCTION

## 1.1 Overview

Firm Power (the Applicant) is proposing to develop an approximately 100-Megawatt AC (MW<sub>AC</sub>) Battery Energy Storage System (BESS) on land adjacent to the Beresfield substation. The proposal is located in the Newcastle City Council (NCC) Local Government Area (LGA), approximately 1.2 kilometres (km) west of the town of Beresfield (refer to **Figure 1**). The project is to be known as the Beresfield BESS.

The subject site is known as 53 Weakleys Drive, Beresfield (Lot 630 DP1180006; hereafter referred to as 'the site'). The site has an area of approximately 5.9 hectares and the proposed project has a development area of approximately 1.35 hectares.

This scoping report has been prepared by Premise to support a request to Department Planning, Industry and Environment (DPIE) for the Secretary's Environmental Assessment Requirements (SEARs).

The Beresfield BESS includes:

- Installation of containerised lithium-ion batteries with a capacity of up to 100 MW<sub>AC</sub> and 400 MW-hours, with associated power conversion systems, switchgear and a control building;
- Underground or overhead 33kV or 132 kV sub-transmission lines to connect the BESS to the Beresfield substation;
- Cabling and collector units, site office, storage area, internal access tracks, on-site parking, security fencing, lighting and temporary construction laydown area; and
- Utilisation of existing site access arrangements via Whites Road.

The proposed BESS, associated infrastructure and development footprint will align with, and be contained within, the development area shown in **Figure 5**. The layout of the BESS and associated infrastructure will be detailed in the Environmental Impact Statement (EIS) for the project.

While the street address of the property is Weakleys Drive, access to the site is via Whites Road – refer **Figure 5**. The site is occupied and operated by Ausgrid and includes storage areas, sheds, hardstand areas and a substation occupying the central portion of the site. Four (4) 132 kV powerlines running within a south-west to north-east alignment in an easement in the south-eastern corner of the site connect to the substation.

The proposed development area would be either leased from Ausgrid via a lease of premises or would be subdivided from the host lot to provide for a long-term lease of land. If required, the subdivision would form part of this development application.

It is expected that augmentation work within the substation would be required to facilitate connection of the BESS. Whether these would be managed as an ancillary component of the project and addressed in the EIS, or managed directly by Ausgrid via Part 5 of the *Environmental Planning and Assessment Act 1979* is to be confirmed as the project progresses.

The project is State Significant Development (SSD) under the *State Environmental Planning Policy (State and Regional Development) 2011* and the applicable consent authority for the proposal is the NSW Minister for Planning or the Minister's delegate.

The SEARs will inform the preparation of an Environmental Impact Statement (EIS) in support of a State Significant Development (SSD) application submitted under Part 4 of the *Environmental Planning and Assessment Act 1979* (the Act).

## 1.2 Applicant

Firm Power is an Australian owned grid flexibility company dedicated to delivering solutions that provide stability to a clean energy driven power system.

Firm Power's address is Suite 203, 213 Miller St, North Sydney NSW, 2060 and ABN is 18 631 500 519.

Firm Power is committed to using advanced technology to ensure energy supply and demand can be dynamically balanced, creating a more flexible electricity grid and allowing for continued renewable energy integration and power price reduction.

As expert project developers, Firm Power collaborates with project investors and vigorously screens technology, integration, and delivery partners to ensure that the solutions provided are of the highest quality.

Firm Power has recently received approval from the Western Sydney Regional Planning Panel for the Western Sydney Smart Battery, a 20MW to be located adjacent to the Penrith Zone Substation.

## 1.3 Planning Framework

The proposed BESS is defined as *electricity generating works* under the *Newcastle Local Environmental Plan (NLEP) 2013*, being

*a building or place used for the purpose of—*

- (a) making or generating electricity, or*
- (b) electricity storage.*

The proposed development is SSD on the following grounds:

1. Section 4.36(2) of the *Environmental Planning and Assessment Act 1979* (the Act) provides that a State Environmental Planning Policy may declare any development, or any class or description of development, to be State significant development.
2. Section 8(1) of *State Environmental Planning Policy (State and Regional Development) 2011* (the State and Regional Development SEPP) provides that development is declared to be State significant for the purposes of the Act if:
  - 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 Act:*

**Comment:** The proposed development satisfies Section 8(1)(a) of the State and Regional Development SEPP on the grounds that it is permitted with consent under Section 34(1)(b) of *State Environmental Planning Policy (Infrastructure) 2007* (the Infrastructure SEPP). The proposed BESS is located on land wholly zoned IN2 Light Industrial under the NLEP and under section 34(1)(b) of the Infrastructure SEPP, electricity generating works are permitted with consent.

- b. *The development is specified in Schedule 1 or 2 of the SEPP.*

**Comment:** The proposed development satisfies Section 8(1)(b) of the State and Regional Development SEPP on the grounds that it is for the purposes of electricity generating works that has a capital investment value of more than \$30 million in accordance with Section 20 of Schedule 1 of the SEPP.

## 1.4 Report Structure

The report is structured as follows:

- **Section 1** provides an introduction to the development site, its location, the proposed project, and the planning framework.
- **Section 2** details the development's strategic and local context and provides an analysis of the site.
- **Section 3** provides a description of the proposed development and alternative options considered.
- **Section 4** provides an assessment of the proposed development against the planning framework.
- **Section 5** provides details of completed and proposed engagement.
- **Section 6** provides a summary of the assessment of project impacts.

Figure 1 – Regional Context



## 2. STRATEGIC CONTEXT

### 2.1 Policy

#### 2.1.1 NSW 2021 PLAN (NSW GOVERNMENT 2011) AND RENEWABLE ENERGY ACTION PLAN (NSW GOVERNMENT 2013)

The NSW 2021 plan, released in 2011, sets state-wide priorities for action and guides resource allocation. Goal 22 of this plan seeks to protect the natural environment and includes a specific target to increase renewable energy. The plan states:

*We will contribute to the national renewable energy target by promoting energy security through a more diverse energy mix, reducing coal dependence, increasing energy efficiency and moving to lower emission energy sources. Specific initiatives include:*

- *Building the Moree solar power plant in partnership with the Commonwealth Government under the Solar Flagship Program*
- *Establishing a Joint Industry Government Taskforce to develop a Renewable Energy Action Plan for NSW to identify opportunities for investment in renewable energy sources.*

Since release of the 2021 plan, the NSW Government has overseen the development of the NSW Renewable Energy Action Plan (REAP). The vision of the plan is a 'secure, affordable and clean future for NSW'. Goal 1 of the REAP is to attract renewable energy investment, including to 'support mid-scale solar PV to enable an uptake of solar technologies where they are most cost effective'.

The proposed BESS sits comfortably within this state-led objective and is consistent with the goal and intent of the REAP. Large scale battery systems represent a fundamental component of the REAP, facilitating greater flexibility in electrical generation and stabilising the grid such that further deployment of renewables can be made possible.

Through assisting the expansion of renewable forms of electrical generation, the proposed BESS further supports the *NSW Government's Climate Change Policy Framework* (NSW, 2016). This framework is committed to effective action on climate change, outlining long term objectives to achieve net-zero emissions by 2050 and to make New South Wales more resilient to a changing climate. The achievement of net zero emissions by 2050 is reliant on transitions towards more sustainable and renewable forms of electrical production.

The project supports this objective by improving the reliability and stability of the electrical grid. The ability of the proposed BESS system to balance electrical demand and supply assists the management of variations in electrical demand and supply which are expected to increase with transitions to more sustainable and renewable forms of electrical production. The proposed development is consequently consistent with the objective of the *NSW Government's Climate Change Policy Framework* (NSW, 2016), supporting transitions toward lower emissions and improving the resilience of NSW to a changing climate.

#### 2.1.2 NSW ELECTRICITY STRATEGY (NSW GOVERNMENT 2019)

The NSW Electricity Strategy 2019 is a state-wide plan to ensure a reliable, affordable and sustainable electricity future. The purpose of the NSW Electricity Strategy is to:

*Improve the efficiency and competitiveness of the NSW electricity market and encourage investment in new price reducing generation and energy saving technology.*

The strategy is underpinned by the following four important principles:

- *New market-driven electricity generation should drive down prices and help protect the environment. This is because firmed renewables are the cheapest form of new reliable generation and cheaper than the current wholesale price*
- *As electricity is an essential service, state and Commonwealth governments are ultimately responsible for reliable electricity*
- *Government action should limit costs to households, businesses and taxpayers*
- *Government action should be consistent with the nature of the national electricity system and NSW policy objectives.*

In relevance to meeting the State's Energy Security Target the Electricity Strategy also states that:

*NSW is projected to experience its tightest reserve conditions in 2023-2024 after the Liddell power station closes in April 2023.*

The proposed BESS project supports the objectives of NSW Electricity Strategy, improving the reliability and affordability of electricity through its ability to balance electrical supply and demand. Large-scale energy storage is a core component of the NSW Electricity Strategy due to its ability to enhance the dispatchability of renewable energy generation and provide firming capacity to the broader NSW market.

### **2.1.3 NSW ELECTRICITY INFRASTRUCTURE ROADMAP (DPIE 2020)**

The NSW Electricity Infrastructure Roadmap 2020 is a state-wide plan to transition the existing electricity sector to be cheaper, cleaner and more reliable. Enabled by the Electricity Infrastructure Investment Act 2020 (NSW) the roadmap compliments the objectives of the NSW Electricity Strategy 2019 through planning a reliable affordable and sustainable electricity future. The roadmap builds on the NSW Transmission Infrastructure Strategy 2018 and supports the implementation of the Australian Energy Market Operators Integrated System Plan, setting out a plan to deliver five Renewable Energy Zones (REZ) in the Central-West Orana, New England, South-West, Hunter-Central Coast and Illawarra regions. Establishing REZ's will be vital for delivering affordable and reliable energy generation, helping to replace the states existing power stations as they reach the end of their operation and scheduled closure.

The roadmap identifies five foundational pillars:

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

The NSW government is still in the early stages of planning REZs in the Hunter Central Coast and Illawarra regions. These areas have some of the best natural energy resources, strong investor interest and are close to existing high voltage power lines

The proposed BESS development, however, is expected to support the implementation of Renewable Energy zones in NSW and within the Hunter Central Coast region.

Through providing large-energy storage with the ability to balance electrical supply and demand, the development aligns with the objectives of the roadmap, enhancing the dispatchability of renewable energy generation in NSW and improving the affordability and reliability of the NSW market.

#### **2.1.4 ENERGY SECURITY SAFEGUARD (NSW GOVERNMENT 2020)**

The Energy Security Safeguard is part of the NSW Electricity Strategy and legislation to establish the Safeguard was passed by Parliament in May 2020 with an objective to improve the affordability, reliability and sustainability of energy through the creation of financial incentives for energy activities.

Under the *Electricity Supply Amendment (Peak Demand Reduction Scheme) Regulation 2021*, the Government will establish a new Peak Demand Reduction Scheme (PDRS) to support activities that reduce demand at peak times, including flexible demand response.

Coupled with the Energy Saving Scheme (ESS), the PDRS is expected to deliver a net economic benefit for New South Wales of \$1.2 billion.

The proposed BESS project supports the objectives of the Energy Security Safeguard by providing capacity to reduce peak demand during summer periods and assists NSW in meeting its peak demand reduction targets, especially with the scheduled closure of Liddell Power Station in 2023.

#### **2.1.5 HUNTER REGIONAL PLAN 2036 (DPE 2016)**

The Hunter Regional Plan 2036 is the NSW Government's strategy for guiding land use planning decisions for the Hunter Region for the next 20 years. The plan has acknowledged the growing importance of Greater Newcastle and set the following core vision for the region as '*The leading regional economy in Australia with a vibrant new metropolitan city at its heart*', supported by four regionally focussed goals and associated directions. The following directions are relevant to the proposed development:

- *Goal 1 – The leading regional economy in Australia*
  - *Direction 12 – Diversify and grow the energy sector*
  - *Direction 13 – Plan for greater land use compatibility*
- *Goal 2 – A biodiversity rich natural environment*
  - *Direction 14 – Protect and connect natural areas*
  - *Direction 15 – Sustain water quality and security*
  - *Direction 16 – Increase resilience to hazards and climate change*
- *Goal 3 – Thriving communities*
  - *Direction 19 – Identify and protect the region's heritage*

- *Goal 4 – Greater housing choice and jobs*
  - *Direction 26 – Deliver infrastructure to support growth and communities*

The project supports renewable energy generation in the region and is considered to be generally consistent with Goal 1, and particularly Direction 12, of the Regional Plan.

## **2.1.6 NEWCASTLE LOCAL STRATEGIC PLANNING STATEMENT**

The *Newcastle Local Strategic Planning Statement* (LSPS) sets the following vision for Newcastle to 2040:

*In 2040 Newcastle will be a smart, liveable and sustainable global city.*

The vision is supported by the following themes:

- *An efficient and integrated transport network.*
- *A green, liveable city*
- *A people orientated city*
- *A creative and innovative economy*

The LSPS sets 16 planning priorities for the LGA, being:

1. *Prioritise active transport in our city*
2. *Support emerging transport opportunities and public transport improvements with continued integration of land use and transport planning.*
3. *Protect freight movement from incompatible land uses*
4. *Green our neighbourhoods*
5. *Protect and enhance our bushland, waterways and wetlands.*
6. *Reduce carbon emissions and resource consumption*
7. *Plan for climate change and build resilience*
8. *Plan for growth and change in Catalyst Areas, Strategic Centres and Urban Renewal Corridors*
9. *Create inclusive streets and spaces in our neighbourhoods and local centres*
10. *Development responds to the desired local character of our communities*
11. *Protect and celebrate our heritage*
12. *Sustainable, accessible and inclusive housing*
13. *Grow our key health and education sectors*
14. *Enable the transition to new economy jobs and grow creative industries*
15. *Plan for the expansion and diversification of Newcastle Port*
16. *Grow our tourism and night-time economies*

The project is consistent with and supports planning priorities 6, 7 and 14 through the provision of improved resilience and reliability within the energy network.

### 2.1.7 THE NEWCASTLE COMMUNITY STRATEGIC PLAN 2018-2028

The *Newcastle Community Strategic Plan 2018-2028* (CSP) identifies the community's main priorities and aspirations for the future. It contains the vision for the Newcastle region being:

*In 2030, Newcastle will be a smart, liveable and sustainable global city*

The vision is supported by a range of strategic directions, being:

1. *Integrated and Accessible Transport: Transport networks and services will be well connected and convenient. Walking, cycling and public transport will be viable options for the majority of our trips*
2. *Protected Environment: Our unique environment will be understood, maintained and protected.*
3. *Vibrant, Safe and Active Public Places: A city of great public places and neighbourhoods promoting people's health, happiness and wellbeing.*
4. *Inclusive Community: A thriving community where diversity is embraced, everyone is valued and has the opportunity to contribute and belong.*
5. *Liveable Built Environment: An attractive city that is built around people and reflects our sense of identity.*
6. *Smart and Innovative: A leader in smart innovations with a prosperous, diverse and resilient economy.*
7. *Open and Collaborative Leadership: A strong local democracy with an actively engaged community and effective partnerships.*

A central community objective of achieving Directive 5 Liveable Built Environment explicitly mentions the need to establish:

*5.4. Sustainable infrastructure to support a liveable environment;*

With Strategies to:

*5.4a. Advocate for implementation of energy and resource efficiency in new developments*

*5.4b. Plan, provide and manage infrastructure that continues to meet community needs*

The project supports the vision of the CSP (particularly strategic directions 5) through the development of innovative technology that addresses pressure in the electricity supply space and ensures liveability of the region.

### 2.1.8 NEWCASTLE CLIMATE ACTION PLAN 2021-2025

The Newcastle Climate Action Plan (CAP) 2021-25 seeks to take the city of Newcastle on a pathway to achieving net zero emissions. This will be achieved through a combination of technology adoption and change management. To achieve the net zero goal, the development of (ideally) locally based storage solutions will be critical. This project supports the intent of the CAP through the delivery of a local supply of dispatchable energy.

## 2.2 Local Context

As shown in **Figure 2**, the town of Beresfield is located approximately 1.2 km to the east of the site, Newcastle is located about 20 km southeast of the site and Maitland is located about 11 km to the northwest.

The site is located on Weakleys Drive and accessed via Whites Road in a predominantly industrial area bordered by the New England Highway to the north and east, John Renshaw Drive to the south and densely vegetated land to the west.

Weakleys Drive forms the north-south spine of the industrial precinct, linking Raymond Terrace Road to the north (enabling connections to Raymond Terrace, RAAF Base Williamtown/Newcastle Airport and towns and villages surrounding Port Stephens to the east) to the Pacific Motorway to the south via Thornton, the New England Highway and John Renshaw Drive.

The Pacific Motorway facilitates access to Sydney approximately 145 kilometres to the south whilst the New England Highway and John Renshaw Drive connect to Newcastle approximately 20 kilometres to the south-east and the Pacific Highway which connects to Brisbane approximately 780 kilometres to the north via Port Macquarie, Coffs Harbour, Grafton, Byron Bay and the Gold Coast. The New England Highway also forms the spine of a corridor of development between the towns of Beresfield/Taro and Rutherford and including Maitland and Thornton, whilst John Renshaw Drive connects to Kurri Kurri and Cessnock via the Hunter Expressway.

The Main Northern Railway line is located approximately 1.2 km to the north of the site. The Main Northern Railway line connects from Sydney in the south (via Newcastle) to Maitland in the north-west. At Maitland, the Main Northern Railway line connects with the North Coast Line, connecting to Brisbane in the north.

As shown in **Figure 4**, the site and immediate surrounding land is zoned IN2 – Light Industrial. Weakleys Drive, to the west, and the New England Highway, to the north, are zoned SP2 – Infrastructure. Land to the west is zoned RE1 – Public Recreation (Beresfield Golf Club) whilst land to the north of the highway is zoned a mixture of business and environmental zones. The proposed development is wholly contained within IN2 zoned land.

The surrounding locality is characterised by predominantly industrial land uses, including logistics companies, wholesale businesses, kitchen and joinery businesses and engineering firms.

Whilst the locality is predominantly industrial, there are eight (8) residential dwellings within 500 m of the site and located southwest of the New England Highway – refer **Figure 3**. The western extent of the Beresfield residential area is located between 500 m and 1 km from the site, with intervening land features including the New England Highway, the Beresfield Golf Course and a thick stand of vegetation.

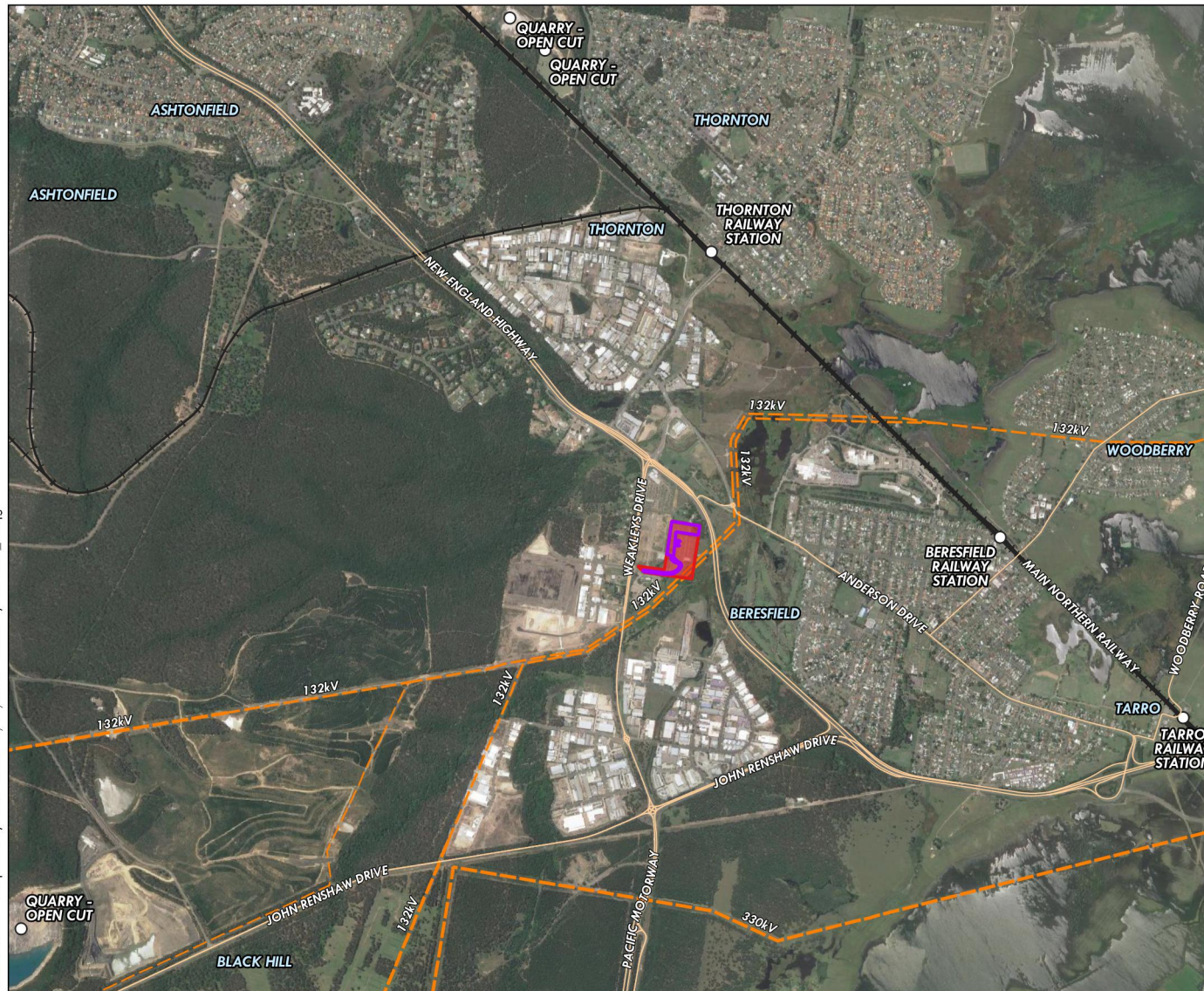
There are also a number of non-industrial uses in proximity including a landscaping business at 179 New England Highway (on the land immediately north of the site) and a Sikh Temple at 167 New England Highway (90 m northwest of the site).

As shown in **Figure 2**, numerous high voltage transmission lines traverse the landscape. These transmission lines form part of the transmission and distribution networks. The project would connect to the distribution network via the Beresfield Substation.

Approximately 6 km to the west of the site is the former Donaldson Coal Mine, closed and remediated in 2013. The Tomago Aluminium Smelter is located approximately 7 km to the east of the site.

National Parks in the vicinity of the site include Hunter Wetlands National Park and Pambalong Nature Reserve, both located approximately 4.5 kilometres to the south-east of the site.

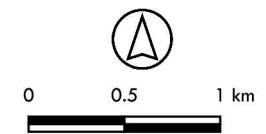
Figure 2 – Local context



**FIRM POWER**  
**Beresfield Battery Energy Storage System**

**LEGEND**

- Subject Site
- Development Area
- Road
- Railway
- Transmission Line
- 330kV
- 132kV



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Figure 3 – Development Site

LEGEND

- DEVELOPMENT SITE
- DEVELOPMENT AREA
- 500m BUFFER
- 1km BUFFER
- ✦ PROPERTY ACCESS
- NON ASSOCIATED RECEIVERS
- INDUSTRIAL/COMMERCIAL
- RESIDENTIAL
- RAILWAY
- ROADS
- WATERCOURSE
- DAMS
- ELECTRICITY TRANSMISSION LINES
- 132kV
- 330kV
- BERESFIELD SUBSTATION

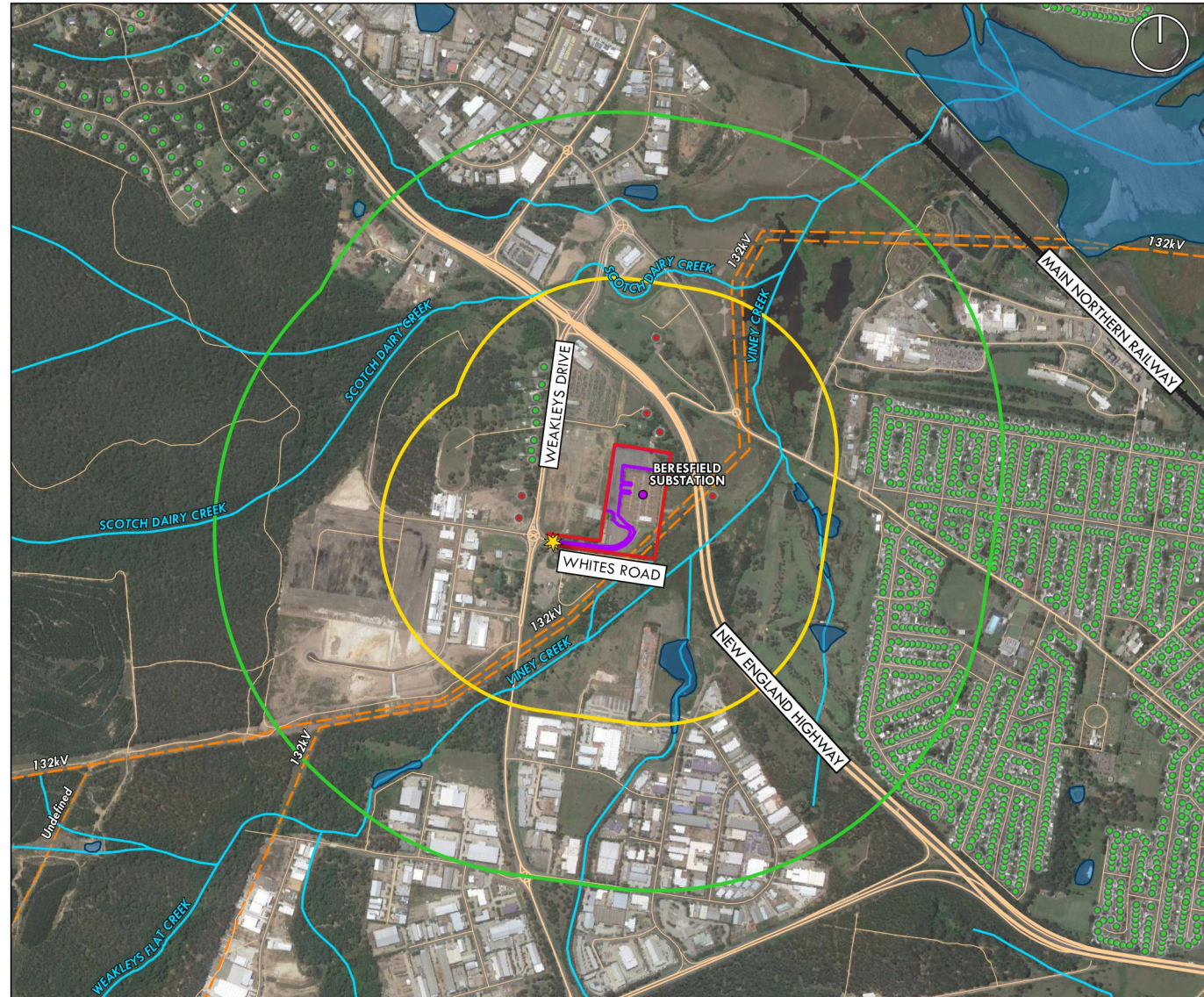
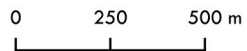
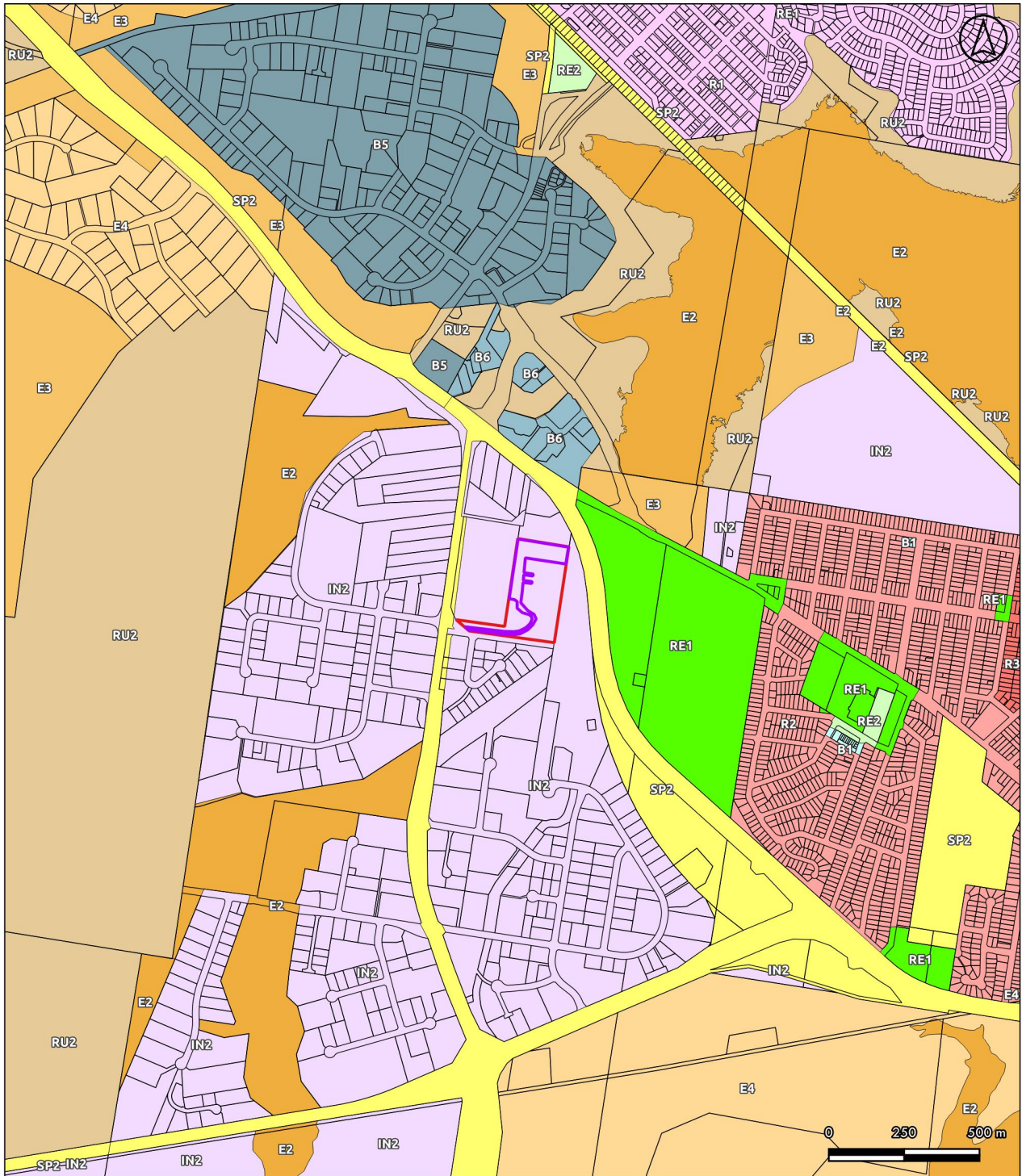

















Figure 4 – Land Zoning



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**LEGEND**

 Subject Site	 B6	 R2
 Development Area	 E2	 R3
 Cadastre	 E3	 RE1
<b>EPI Land Zoning (LZN)</b>	 E4	 RE2
 B1	 IN2	 RU2
 B5	 R1	 SP2

## 2.3 Site Description

### 2.3.1 OVERVIEW

The subject site has an area of 5.974 hectares. The eastern portion of the site features the Beresfield substation, which occupies an area of approximately 1.54 ha. The western and northern portion the site is use as an Ausgrid construction storage depot, which occupies an area of approximately 1.7 ha. Four (4) 132 kV powerlines running within a south-west to north-east alignment in an easement in the south-eastern corner of the site connect to the substation.

The site features a developed hard stand and therefore largely devoid of vegetation with only a small area of residual vegetation remaining in the north-east of the site (refer **Figure 3**).

The site falls from its north-western corner (RL 15 metres) to its south-eastern corner (RL 3 metres).

The portion of the site proposed to be used as the development footprint has an area of approximately 1.35 hectares (see in **Figure 5**).

There are no mapped waterways within the site, however Viney Creek is located approximately 60 metres to the south-east of the site. An unnamed tributary to Viney Creek is located close to the south-eastern corner of the site, draining in a south-westerly direction to join Viney Creek.

### 2.3.2 ACCESS

As shown in **Figure 5**, vehicular access to the site is provided from Whites Road in the south, which connects to Weakleys Drive (Classified Road No. 9). Whites Road is a local, two lane, road with a posted speed limit of 50 km/hr. Weakleys Drive is a divided arterial road with two lanes in each direction, running between the New England Highway (north) and John Renshaw Drive/Pacific Motorway (south), with a sign-posted speed limit of 60 km/hr near the site.

Whites Road and Weakleys Drive are local roads for which NCC is the roads authority. New England Highway is a classified road for which NCC is also the roads authority, noting that some of the maintenance functions of the roads authority are adopted by Transport for NSW (TfNSW) for Weakleys Drive and New England Highway due to their classified road status. Transport for NSW is the roads authority for the Pacific Highway.

### 2.3.3 EXISTING IMPROVEMENTS

As shown in **Figure 5**, existing improvements within the site include:

- A 135-metre-long access handle that connects to Whites Road, and gated entry to the eastern portion of the site. Driveways mid-way along the access handle also provide access to industrial premises at 53 Weakleys Drive;
- The Beresfield substation, which occupies an area of approximately 1.54 ha;
- Ausgrid construction storage depot (in the western and northern portion the site), which occupies an area of approximately 1.7 ha; and
- Four (4) 132 kV powerlines running within a south-west to north-east alignment in an easement in the south-eastern corner of the site connect to the substation.

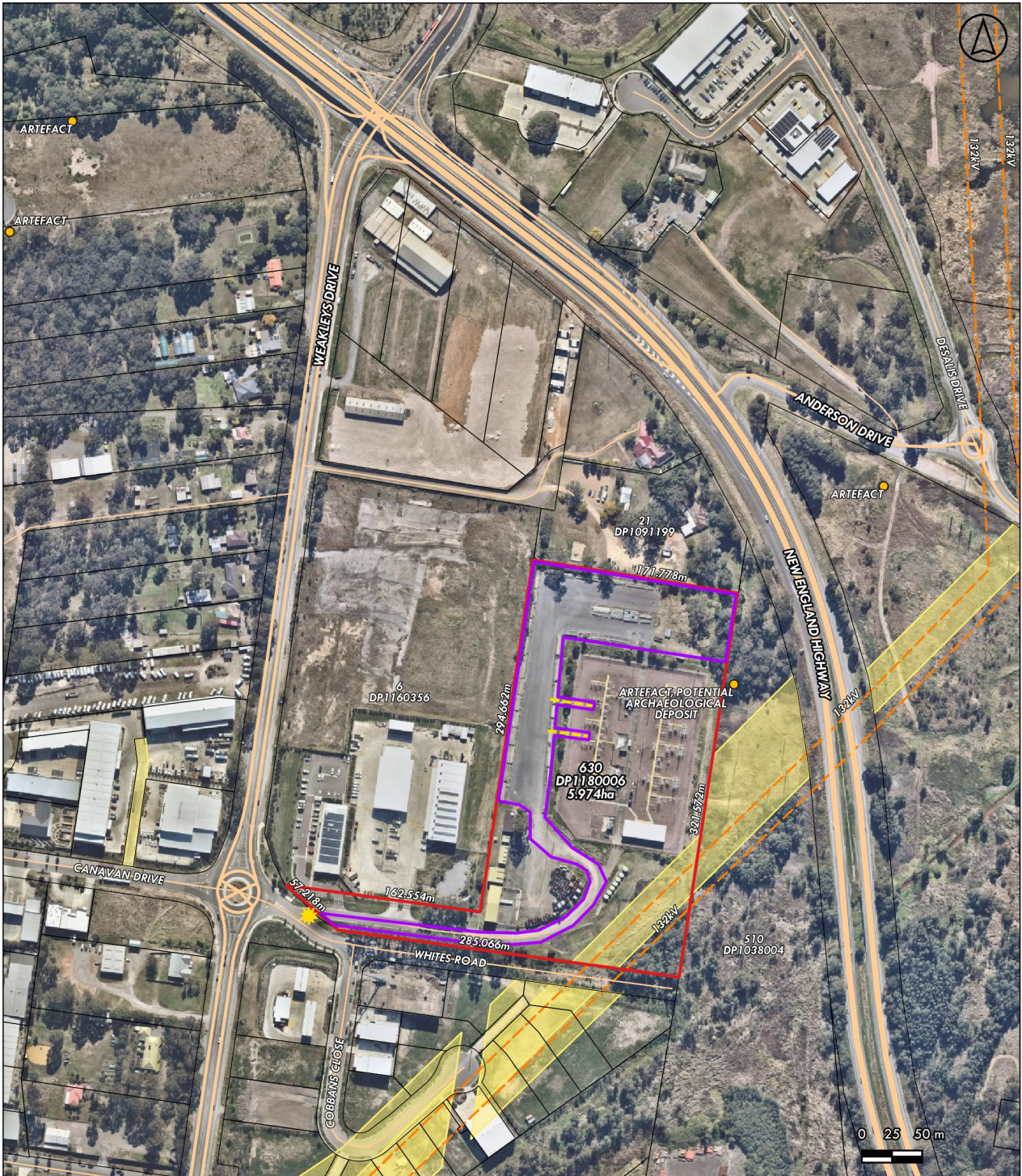
### 2.3.4 MINING

There are no existing exploration or mining titles or applications applying to the site. Historic titles applying to the site include:

- AUTH134, held by R W Miller and Co Pty Ltd between 1978 and 1991;

- PEL267, held by AGL Upstream Investments Pty Limited between 1993 and 2015; and
- EL5328, held by Monier PGH Holdings Limited between 1997 and 2001.

Figure 5 – Site analysis and development proposal



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**LEGEND**

- |                                  |  |
|----------------------------------|--|
| Subject Site                     | Easement                                 |
| Development Area                 | Connecting Electricity Transmission Line |
| Cadastre                         | <b>Transmission Lines</b>                |
| Road                             | 132kV                                    |
| Property Access                  |  |
| Mapped Aboriginal Heritage Sites |  |

### 2.3.5 HERITAGE

Whilst the site is not identified as being or adjoining an item of Aboriginal or European heritage significance or within a heritage conservation area under the NLEP, AHIMS Basic Search on 23 August 2021 (**Appendix B**) identified an Aboriginal site at 100A Enterprise Drive (Lot 510 in DP 1038004), approximately 10 metres from the eastern boundary (refer to **Figure 6**). There are no other mapped sites of Aboriginal significance within 100 metres but a total of five (5) mapped sites within 500 metres of the site.

### 2.3.6 HYDROGEOLOGY

#### 2.3.6.1 Groundwater

Three groundwater boreholes are located at the end of the cul-de-sac 60 metres to the north of the site:

- GW202985 with a standing water level of 10.3 metres;
- GW202986 with a standing water level of 9.9 metres; and
- GW202987 with a standing water level of 8.6 metres.

#### 2.3.6.2 Soil Landscapes

As shown in **Figure 7**, three mapped soil landscapes occur within the site:

- Beresfield soil landscape in the north-western portion of the site;
- Cockle Creek soil landscape through the central portion of the site; and
- Hexham Swamp soil landscape in the south-eastern corner of the site.

#### 2.3.6.3 Acid Sulfate Soils

As shown in **Figure 8**, three classes of acid sulfate soils are mapped under NLEP as occurring within the site, aligned with the soil landscape mapping in **Figure 7**:

- Class 5 Acid Sulfate Soils occur in the north-western portion of the site;
- Class 3 Acid Sulfate Soils occur through the central portion of the site; and
- Class 2 Acid Sulfate Soils occur in the south-eastern portion of the site.

Works described in **Table 1** trigger the requirement for an Acid Sulfate Soils Management Plan under Clause 6.1 of NLEP in areas identified as Class 4 and 5.

**Table 1 – Works triggering the requirement for an acid sulfate soils management plan**

Class of land	Works
2	Works below the natural ground surface. Works by which the watertable is likely to be lowered.
3	Works more than 1 metre below the natural ground surface. Works by which the watertable is likely to be lowered more than 1 metre below the natural ground surface.
5	Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.

#### 2.3.6.4 Contamination

A search of the NSW EPA Contaminated Land Record was undertaken for contaminated sites within the Newcastle City LGA on 20/07/2021. 134 notices relating to 22 sites were identified but none of these are within the suburb of Beresfield or relate to the subject site.

The online List of NSW contaminated sites notified to the EPA as of 20/07/2021 was searched for Beresfield. 2 sites were identified, the BP Beresfield Truckstop and Former Koppers Timber Treatment Site. The BP Beresfield Truckstop is situated approximately 1.2km south of the development at 2 Kinta Drive, Beresfield. The Former Kopper Timber Treatment Site is situated at 53 Weakleys Drive and is directly adjacent to the western boundary of the proposed development.

#### 2.3.6.5 Surface Water and Flooding

As shown in **Figure 9**:

- A fourth order Strahler Stream (Viney Creek) is located 42 metres to the south of the site at its nearest point, transitioning from the south-west to north-east and passing under the New England Highway as it drains generally eastward towards the Hunter River; and
- Low Risk (1% Annual Exceedance Probability) and Very Low Risk (PMF) flood prone land is located in the south-eastern corner of the site (although clear of the development area).

Given that the topography generally slopes towards the east and south-east any potential runoff is expected to coincide with this mapped waterway.

### 2.3.7 VEGETATION

As shown in **Figure 10**, the following vegetation occurs within the site:

- Vegetation occurring in the north-eastern portion of the site is identified as Alluvial Tall Moist Forest and Lower Hunter Spotted Gum – Ironbark Forest; and
- Vegetation in the south-eastern portion of the site is identified as Swamp Oak Rushland Forest.

Vegetation occurring within the site is not identified under the Biodiversity Values Map given effect under Section 7.1(1)(b) of the *Biodiversity Conservation Regulation 2017* (the BC Regulation) via Section 7.4(1) of the *Biodiversity Conservation Act 2016* (the BC Act).

### 2.3.8 BUSHFIRE

As shown in **Figure 11**:

- Vegetation in the south-eastern corner of the site identified as Vegetation Category 1;
- Vegetation Buffer extends from the Vegetation Category 1 lands in the south-eastern portion of the site and along the eastern and southern edges of the site in response to vegetation in adjoining lands to the east and south identified as Vegetation Category 3.

Figure 6 – Heritage

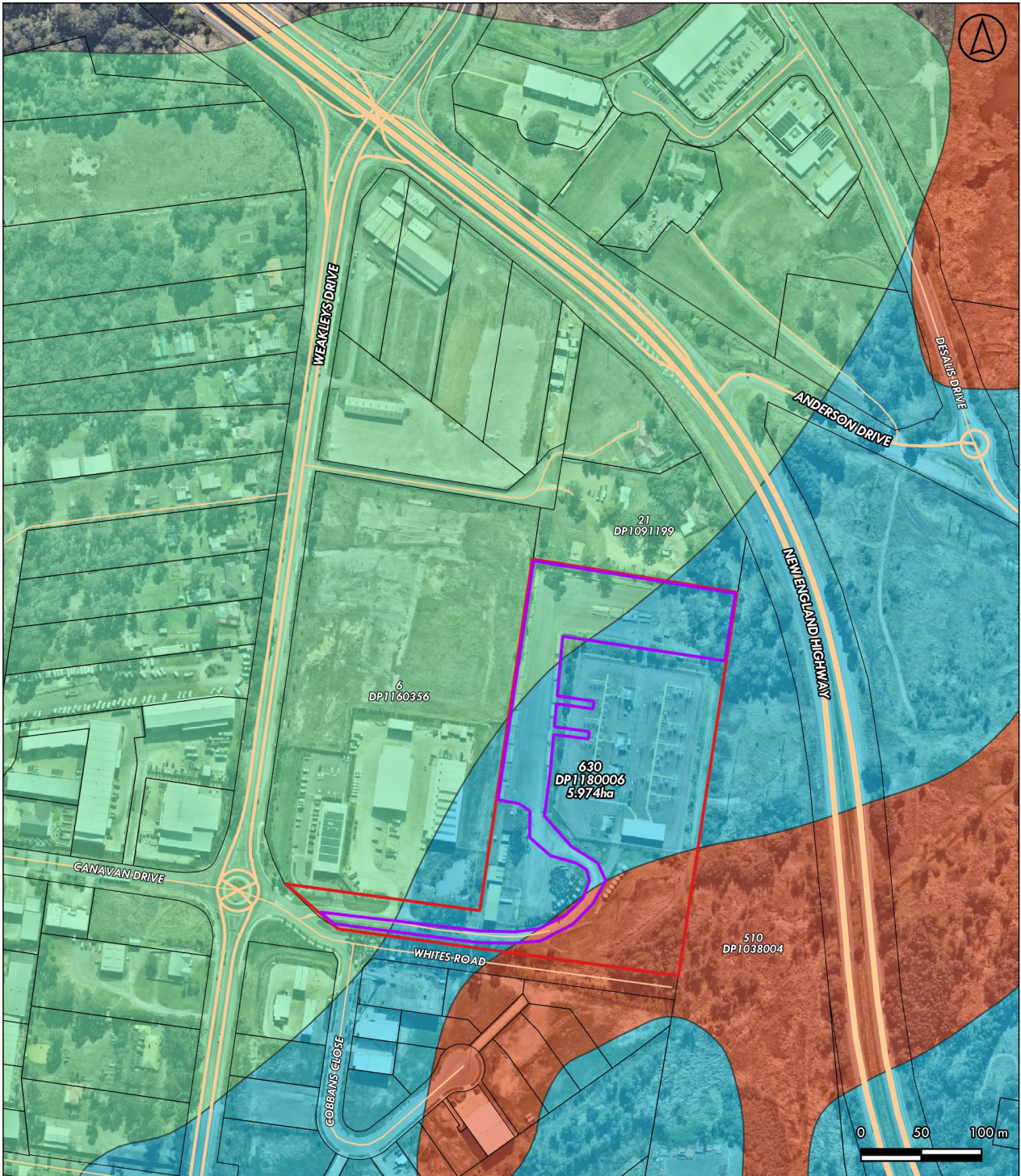


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**LEGEND**

- Subject Site
- Development Area
- Cadastre
- Road
- Mapped Aboriginal Heritage Sites

Figure 7 – Soil landscapes

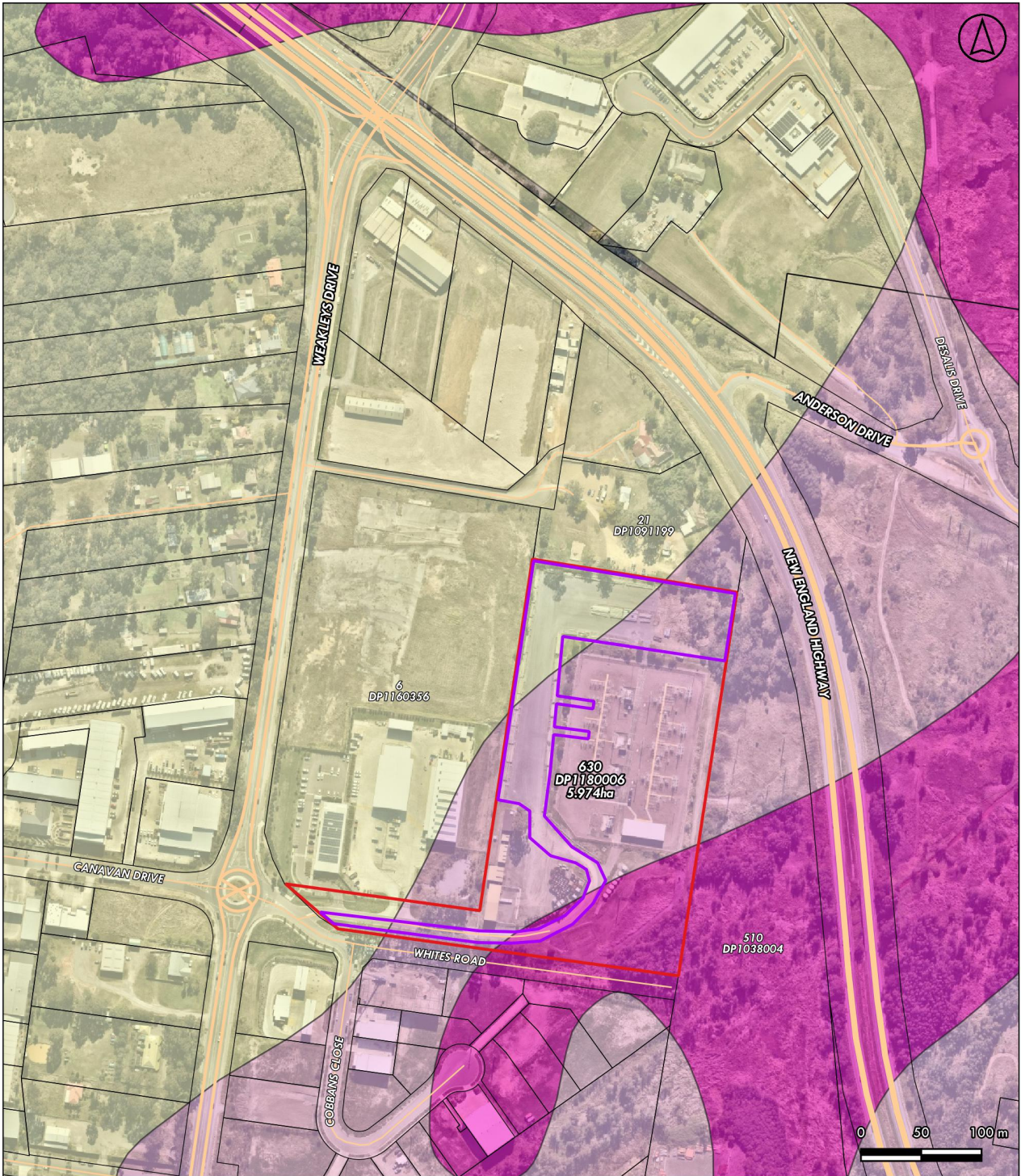


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**LEGEND**

- |                  |              |
|------------------|--------------|
| Subject Site     | BERESFIELD   |
| Development Area | COCKLE CREEK |
| Cadastre         | HEXHAM SWAMP |
| Road             |              |

Figure 8 – Acid sulfate soils

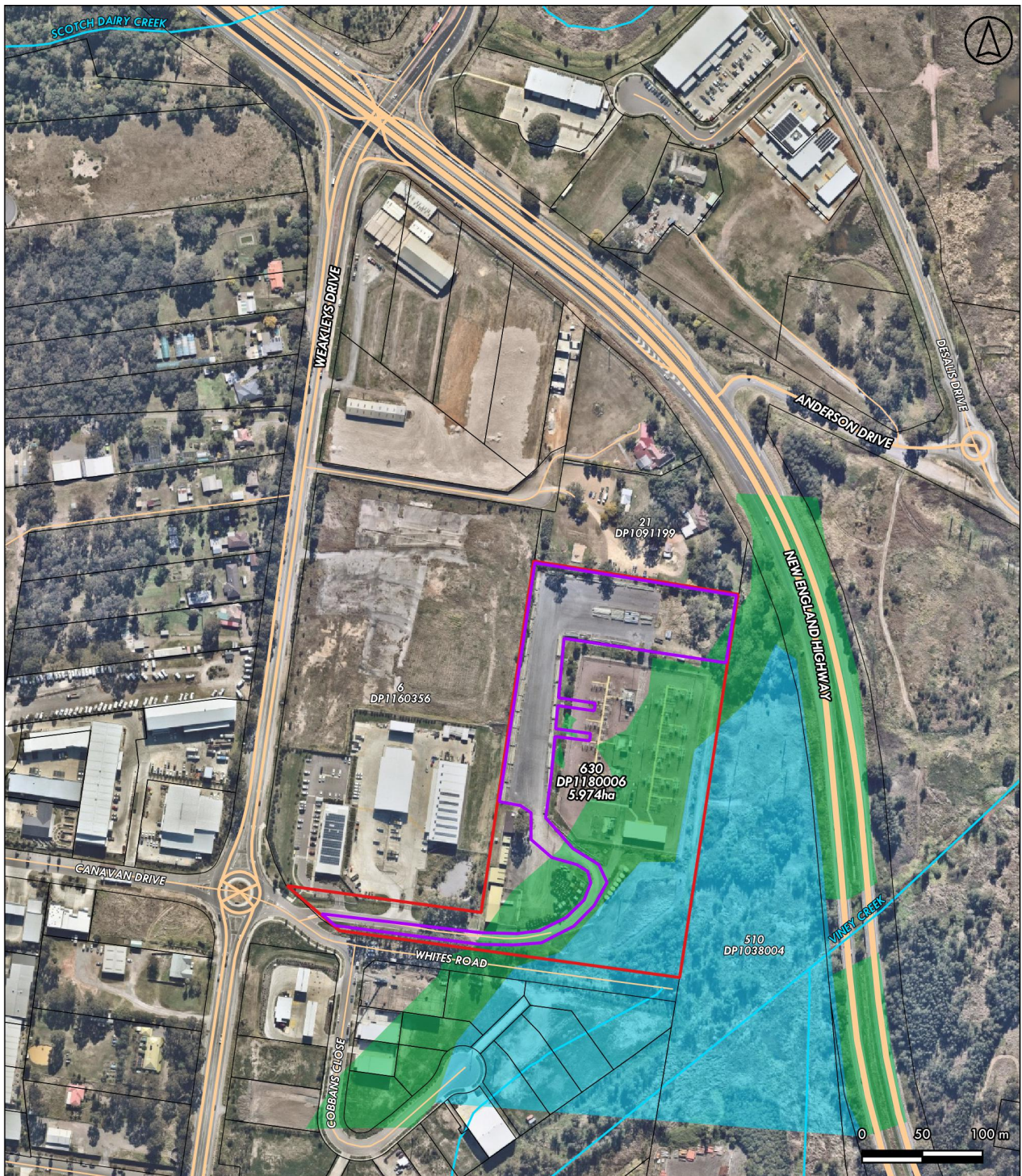


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**LEGEND**

- |                  |                    |
|------------------|--------------------|
| Subject Site     | Acid Sulfate Soils |
| Development Area | Class 2            |
| Cadastre         | Class 3            |
| Road             | Class 5            |

Figure 9 – Flooding and stormwater

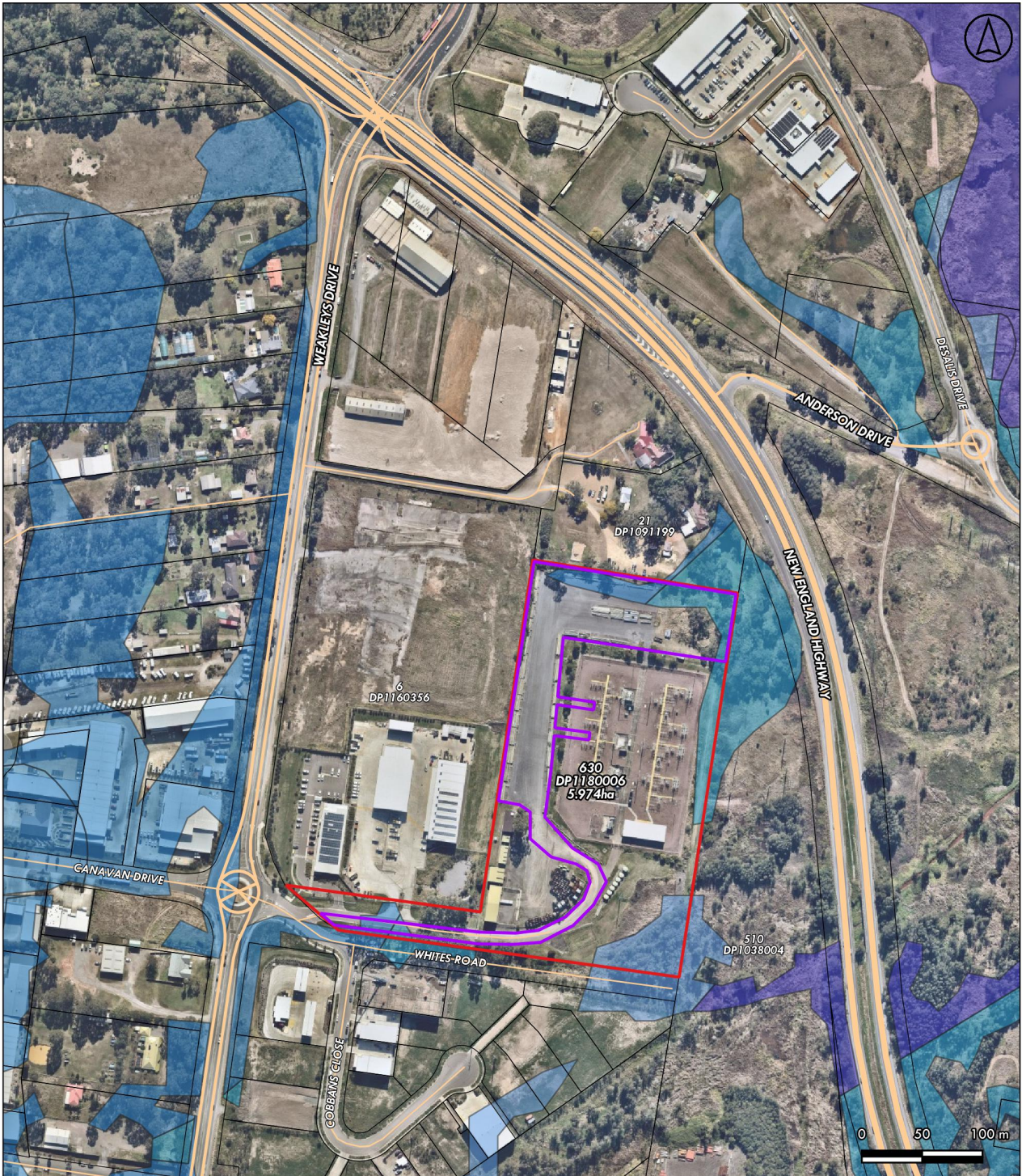


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**LEGEND**

- |  |  |
|--|--|
|  Subject Site     |  Flood Prone Land (Low Risk)      |
|  Development Area |  Flood Prone Land (Very Low Risk) |
|  Cadastre         |  Watercourse                      |
|  Road             |  |

Figure 10 – Existing vegetation



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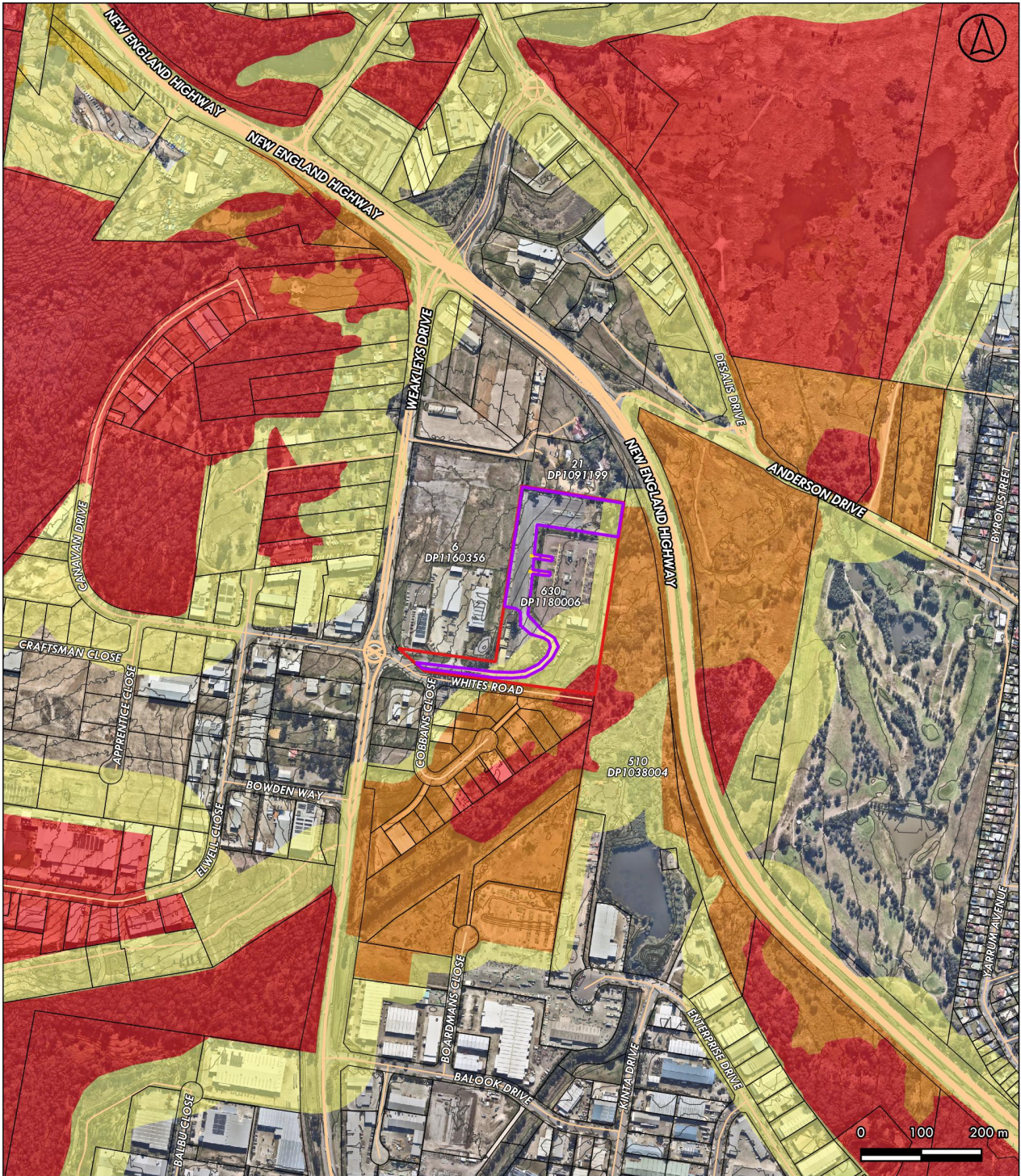
**LEGEND**

- Subject Site
- Development Area
- Cadastre
- Road

**Vegetation**

- Alluvial Tall Moist Forest
- Freshwater Wetland Complex
- Lower Hunter Spotted Gum - Ironbark Forest
- Swamp Oak Rushland Forest

Figure 11 – Bushfire prone land



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LEGEND

- |  |                        |  |                       |
|--|------------------------|--|-----------------------|
|  | Subject Site           |  | Bush Fire Prone Land  |
|  | Development Area       |  | Vegetation Category 1 |
|  | Cadastre               |  | Vegetation Category 2 |
|  | Road                   |  | Vegetation Category 3 |
|  | Contours (1m Interval) |  |                       |

## 3. PROJECT DESCRIPTION

### 3.1 Project Objectives

The Beresfield BESS will be designed to provide grid flexibility services and will support the efficiency of the existing electrical network. The BESS would function to purchase power from the grid while prices are low and sell back while prices are higher. Through regulating the availability of energy, the development will have the capacity to store unutilised energy during low demand and enhance the total supply of energy during high demand. This will benefit the existing electrical grid, improving the efficiency of electrical generation and providing consumers with a more consistent and reliable supply of energy.

The BESS facility will utilise lithium-ion technology batteries installed in prefabricated enclosures similar in size to standard shipping containers. During periods of low demand, power will generally flow from the Ausgrid substation to the BESS facility via up to two new 33kV or 132 kV sub-transmission lines. The power conversion systems rectify the power into a form that is suitable for storage in the facility's batteries. During periods of high demand, the stored energy in the batteries will generally flow back through these systems to the Ausgrid substation and ultimately the broader grid.

The BESS, through its connection to the substation, would possess the ability to store power and release it to the network at times of peak demand or critical need. It would also have the capacity to charge or discharge when power system services are required to maintain the stability of the broader electricity grid. The BESS strengthens the power network by providing greater flexibility in grid management.

### 3.2 Proposed Development Overview

The project comprises a BESS and associated infrastructure that will occupy an area of approximately 1.35 ha. The BESS will have a capacity of up to 100 MW and 400 MWh. The BESS will connect to the adjacent Beresfield substation via a new underground or overhead transmission line and will store energy from the grid.

The key project infrastructure includes:

- containerised lithium-ion type batteries with associated power conversion systems, switchgear and a control building;
- underground or overhead 33 kV or 132 kV sub-transmission lines to connect the BESS to the Beresfield substation; and
- cabling and collector units, site office, storage area, internal access tracks, on-site parking, security fencing, lighting and temporary construction laydown area.

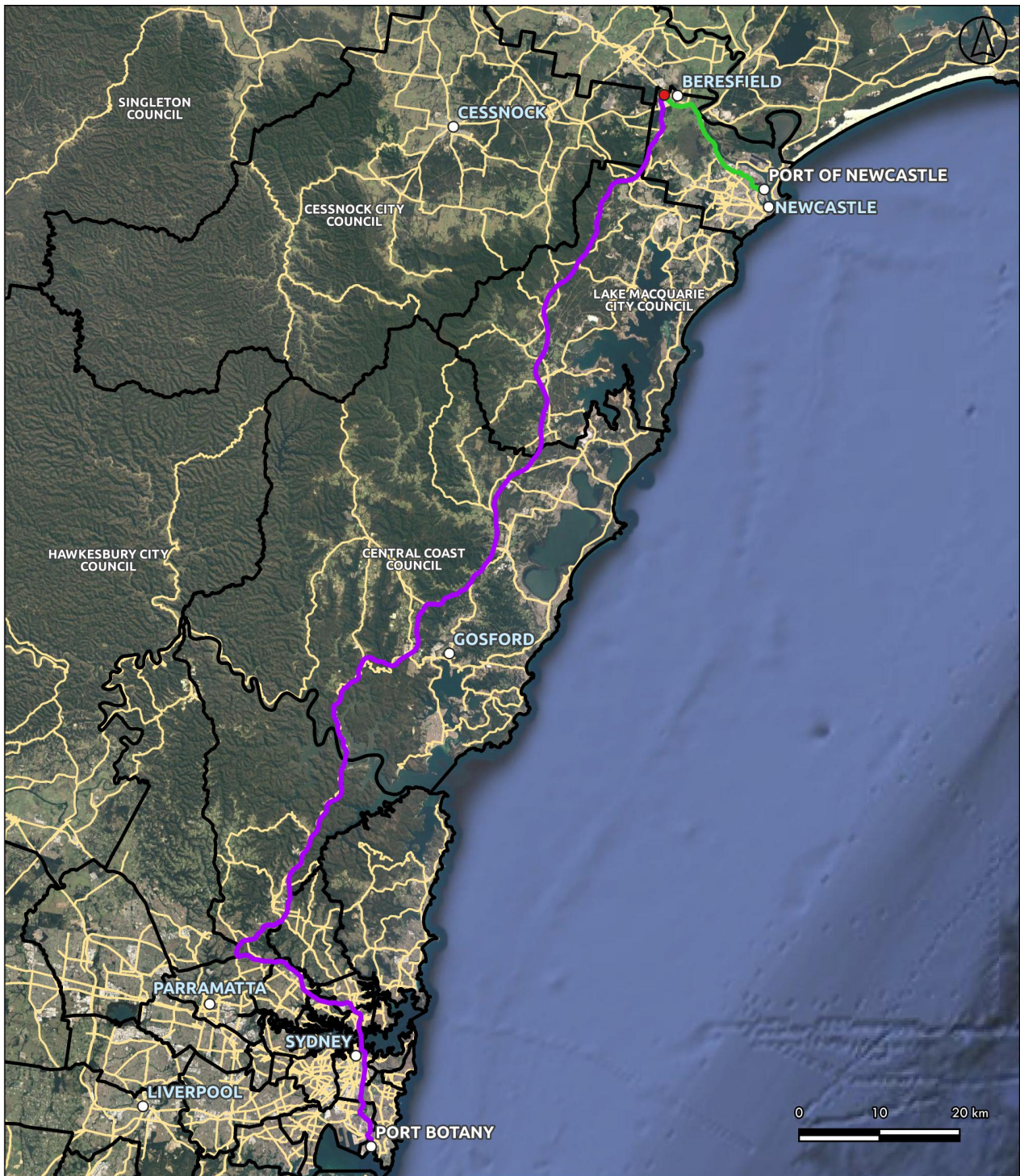
The proposed BESS, associated infrastructure and development footprint will align with, and be contained within, the development area shown in in **Figure 5**. The layout of the BESS and associated infrastructure will be detailed in the Environmental Impact Statement (EIS) for the project.

No external transmission lines or off-site connection works are proposed by this development. The development will include 30 m to 50 m long 33 kV or 132 kV underground or overhead sub-transmission lines to connect to Ausgrid's Beresfield Substation and utilise its existing grid connection.

The project would utilise the existing site access from Whites Road via Weakleys Drive.







The construction period is expected to take up to 10 months. The batteries would be manufactured offsite and delivered ready for installation following completion of site preparation, including levelling the site and constructing a bench on which to install the BESS. It is anticipated that infrastructure would be delivered to the site via the Port of Newcastle or Port Botany, with vehicles accessing the site via the routes shown in **Figure 12**.

Figure 12 – Proposed materials transport route



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LEGEND

-  LGA Boundary
-  Site Locality
-  Locality
-  Road
-  Materials Transport Route Option 1 (From Port of Newcastle)
-  Materials Transport Route Option 2 (From Port Botany)

It is anticipated the BESS would be operational for a period of approximately 20 years after which time the BESS would be removed and the site would be decommissioned, including the removal of all above ground infrastructure and the remediation of the site. It is conceivable that the infrastructure may be upgraded rather than decommissioned and the lifespan extended. The BESS would operate 24 hours a day, seven days a week.

The project is expected to generate up to 60 Full time Equivalent (FTE) jobs during construction and up to 1-2 FTE jobs during operation.

The area of the BESS would be leased for the duration of the development from Ausgrid, either via a long-term lease managed via a subdivision of the land, or through a lease of premises, subject to the limits in place at the time of commissioned. If subdivision is required to facilitate the leasing arrangements, this would be addressed by the SSD application.

### 3.3 Proposed Development Details

The primary components associated with the installation of the BESS are as follows:

- Off-site manufacture of the BESS equipment;
- Vegetation clearing to provide a developable site;
- Levelling the development site and constructing a bench on which to install the BESS unit;
- Installation of the BESS;
- Connecting the BESS to the substation via 33 kV or 132 kV circuits/sub-transmission line;
- Constructing an earthing system for the BESS within the subject property;
- Ancillary high voltage equipment, such as circuit breakers, switching equipment, filters, transformers and other electrical protection equipment;
- Auxiliary power, protection, indication and control systems;
- Fencing and gates as required to provide security around the BESS facility;
- Outdoor sensor lighting to provide illumination, when needed, at night;
- Storage enclosures for storing equipment;
- Communication room for housing communication equipment;
- HVAC equipment for providing cooling and ventilation;
- Commissioning;

Upon decommissioning of the BESS, the following indicative steps would occur:

- The above ground equipment would un-bolted from the concrete slab and removed by crane onto transporters and taken away from site to an appropriate recycling or waste facility;
- Underground services would be cut back to below ground level and capped;
- The site would then be landscaped to a safe, clean and stable state;
- A decommissioning arrangement has been established with Ausgrid to provide assurance for the decommissioning components described above.

As noted, the project is expected to remain operational for approximately twenty years. Although the project will be monitored and controlled remotely during operation, some routine maintenance will be periodically performed on-site. On-site maintenance activities will only require limited personnel. Ongoing site maintenance will generally involve:

- Monitoring, testing and maintenance of onsite equipment
- Receipt of goods,

- Removal of waste and;
- Other general site maintenance (e.g., care of groundcover).

### 3.4 Justification for the Preferred Option

Development options considered as part of this Scoping Report and to be considered in greater detail in the EIS are described in **Table 2** below.

**Table 2 – Development options**

<b>Alternatives:</b>		<b>Description:</b>
Option 1	Base Case, 'Do Nothing'	Option 1 would involve not installing and operating a BESS at the site or elsewhere.
Option 2	Alternative Site	Option 2 would involve installing and operating a BESS at an alternative site.
Option 3	BESS Technology and Provider Alternatives	Option 3 would involve using alternative technology at the site.
Option 4	BESS at 53 Weakleys Drive, Beresfield, 'Preferred Option'	Option 4 would involve the installation and operation of a BESS at the site.

Of the above, Option 4 is the preferred option, and this is discussed in further detail in the following sections.

#### 3.4.1 OPTION 1

Option 4 is preferred over Option 1 on the grounds that the latter is:

- Inconsistent with the strategic context set by State and local policy, including:
  - Goal 22 of the *NSW 2021 Plan* (NSW Government 2011) which seeks to “*promote energy security through a more diverse energy mix, reduce coal dependence, increase energy efficiency and move to lower emission energy sources*”;
  - Goal 1 of the *NSW REAP* (NSW Government 2013) which seeks to attract renewable energy investment;
  - Objectives of the Energy Security Safeguard legislation to improve the affordability, reliability and sustainability of energy by addressing the shortfall in firm capacity during times of peak demand;
  - Investment in the preparation of the Hunter REZ in accordance with the *NSW Electricity Strategy and Electricity Infrastructure Roadmap* (DPIE 2020) as a critical region for renewable energy due to strong investor interest and availability of existing infrastructure due to the area’s history of supplying electricity for the network;
  - Direction 12 of the *Hunter Regional Plan* (DPE 2016) which seeks to “*diversify and grow the energy sector*”;
  - Planning Priority 7 of the *Lake Macquarie LSPS* (LMC 2020) which seeks to improve Lake Macquarie’s energy resilience, investigate renewable energy opportunities, address current and emerging climate change risks and “*explore opportunities for alternative energy production to make use of existing electricity infrastructure onsite and provide ongoing energy generation for the City and State*”.
- Fails to enable the regulation of electricity supply which improves its efficiency, consistency and reliability for consumers as it becomes increasingly variable due to the transition from traditional to more sustainable, renewable sources in the region.

### 3.4.2 OPTION 2

Option 4 is preferred over Option 2 as the latter would result in increased costs and environmental impacts associated with the acquisition of a suitable property (Firm Power has entered into an agreement to lease the development site of the proposed BESS from Ausgrid) and construction of increased lengths of connecting infrastructure (likely to include earthworks and vegetation removal), as compared to the site of the proposed development in which the length of connecting infrastructure is expected to be minimal due to the proximity to the existing Ausgrid substation.

By locating the BESS project adjacent to Ausgrid’s substation, the project is also sympathetic to the existing power infrastructure setting and the industrial use of the current land.

### 3.4.3 OPTION 3

Option 4 is preferred over Option 3 as:

- The former provides the most reliable way, using current technology, to regulate electricity supply in a network which is expected to become increasingly variable due to the transition from traditional to more sustainable, renewable sources in the region; and
- The latter may not be suitable to the site due to its limited area or other reasons, requiring the seeking out and acquisition of an alternative site and construction of connecting infrastructure.

## 4. STATUTORY CONTEXT

The key statutory requirements for the project are set out in **Table 3**.

**Table 3 – Statutory requirements for a project**

Matter:	Guidance:	Comment:
Power to grant consent	Identify the legal pathway under which consent is to be sought, why the pathway applies, and who the consent authority is likely to be.	<p>Section 4.5 of the EP&amp;A Act provides that the consent authority is the Independent Planning Commission (if the development is of a kind for which the Commission is declared the consent authority by an environmental planning instrument) or the Minister (if the development is not of that kind).</p> <p>Section 4.36(2) of the EP&amp;A Act provides that a State Environmental Planning Policy may declare any development, or any class or description of development, to be State significant development.</p> <p>Section 8(1) of the State and Regional Development SEPP provides that development is declared to be State significant for the purposes of the EP&amp;A Act if:</p> <ul style="list-style-type: none"> <li>• the development on the land concerned is, by the operation of an environmental planning instrument, not permissible</li> </ul>

		<p>without development consent under Part 4 of the EP&amp;A Act; and</p> <ul style="list-style-type: none"> <li>• The development is specified in Schedule 1 or 2 of the SEPP.</li> </ul> <p>The consent authority for the proposed development is likely to be the Minister:</p> <ul style="list-style-type: none"> <li>• On the grounds that the proposed development satisfies:             <ul style="list-style-type: none"> <li>– Section 8(1)(a) of the State and Regional Development SEPP on the grounds that it is permitted with consent under Section 34(1)(b) of the Infrastructure SEPP; and</li> <li>– Section 8(1)(b) of the State and Regional Development SEPP on the grounds that it is for the purposes of electricity generating works that has a capital investment value of more than \$30 million in accordance with Section 20 of Schedule 1 of the SEPP.</li> </ul> </li> <li>• Unless, in accordance with Section 8A of the State and Regional Development SEPP in which case the consent authority is the Independent Planning Commission:             <ul style="list-style-type: none"> <li>– The council of the area in which the development is to be carried out (NCC) has duly made a submission by way of objection under the mandatory requirements for community participation in Schedule 1 of the EP&amp;A Act;</li> <li>– At least 50 unique 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; and</li> <li>– The development application is made by a person who has disclosed a reportable political donation under section 10.4 to the Act in connection with the development application.</li> </ul> </li> </ul>
<p>Permissibility</p>	<p>Identify the relevant provisions affecting the permissibility of the project, including any land use zones. If there are inconsistencies in these provisions, identify the inconsistencies and explain</p>	<p>Electricity generating works are prohibited in the IN2 Light Industrial zone applying to the site under the relevant local environmental plan, the <i>Newcastle Local Environmental Plan (NLEP) 2012</i>.</p>

	<p>which provisions prevail to the extent of any inconsistency.</p> <p>If the project is partly or wholly prohibited, identify any provisions or actions being taken that would allow the project to be considered on its merits (e.g., making a concurrent amendment to the relevant)17.</p>	<p>Notwithstanding the above, the development is permitted with consent on the following grounds:</p> <ul style="list-style-type: none"> <li>• Under Section 8 of the Infrastructure SEPP, where there is an inconsistency between the Infrastructure SEPP and another environmental planning instrument, the Infrastructure SEPP prevails (with few exceptions, none of which are relevant to this application);</li> <li>• Section 34(1)(b) of the Infrastructure SEPP provides that electricity generating works may be carried out by any person with consent in a prescribed rural, industrial or special use zone (the RU1 Primary Production zone is a prescribed rural zone).</li> </ul>
<p>Other approvals</p>	<p>Identify any other approvals that are required to carry out the project and why they are required. These approvals should be grouped into the following categories:</p> <ul style="list-style-type: none"> <li>• Consistent approvals: approvals that cannot be refused if the project is approved and must be substantially consistent with the approval</li> <li>• EPBC Act approval, and whether a bilateral agreement applies</li> <li>• Other approvals: approvals that are not expressly integrated into the SSD assessment under the EP&amp;A Act (e.g., water access licenses under the Water Management Act 2000, leases under the National Parks and Wildlife Act 1974).</li> </ul> <p>Also identify the approvals that would have been required if the project was not an SSD project.</p>	<p>The following consistent approvals are required:</p> <ul style="list-style-type: none"> <li>• A licence under Section 48 of the <i>Protection of the Environment Operations Act 1997</i> (the POEO Act) to perform an activity listed under Schedule 1 of the POEO Act, including the general electricity works with capacity to generate more than 30 megawatts of electrical power as specified in Section 17, Schedule 1 of the POEO Act.</li> </ul> <p>Commonwealth approvals are not required for the following reasons:</p> <ul style="list-style-type: none"> <li>• A search for potential matters of national environmental significance (MNES) that may trigger the need for referral to the Australian Department of Agriculture, Water and the Environment (DAWE) via the online Protected Matters Search Tool (PMST), conducted with a 10-kilometre buffer of the site on 19/10/2021 (refer <b>Appendix B</b>):</li> </ul>
<p>Pre-conditions to exercising the power to grant consent</p>	<p>Identify pre-conditions to exercising the power to grant consent for the project that may be relevant to setting the SEARs. These will include mandatory conditions that must be satisfied before the consent authority may grant consent (e.g., under the Sydney Drinking Water SEPP, a consent authority must be satisfied before granting consent that the carrying out of the proposed development would</p>	<ul style="list-style-type: none"> <li>– Did not identify any World Heritage Properties or National Heritage places protected by the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act);</li> <li>– Identified one Wetland of International Importance, the Hunter Estuary Wetlands Ramsar Wetland, approximately 8.5 km southeast of the site;</li> </ul>

	<p>have a neutral or beneficial effect on water quality).</p>	<ul style="list-style-type: none"> <li>– Identified Six listed threatened ecological communities, 78 listed threatened species and 62 migratory species with the potential to occur in proximity to the site but are unlikely to occur due to the substantially altered landscape and lack of extant vegetation.</li> <li>• A review of National Native Title Tribunal’s Native Title Register did not identify any Native Title claims or applications, or Indigenous Land Use Agreements at or near the site under the <i>Native Title Act</i> 1993 (the Native Title Act).</li> </ul>
<p>Mandatory matters for consideration</p>	<p>Identify matters that the consent authority is required to consider in deciding whether to grant consent to any development application for the project that may be relevant to setting the SEARs.</p>	<p>Pursuant to Section 1.7 of the EP&amp;A Act, the <i>Biodiversity Conservation Act</i> 2016 (the BC Act) is a mandatory matter for consideration. Section 7.9 of the BC Act provides that any application under Part of the EP&amp;A Act for State significant development must be accompanied by a biodiversity development assessment report (BDAR) unless the Planning Agency Head and Environment Agency Head determine that the development is not likely to have any significant impact on biodiversity values. Pursuant to Section 4.15 of the EP&amp;A Act, the following mandatory matters for consideration apply:</p> <ul style="list-style-type: none"> <li>• Relevant environmental planning instruments, including:           <ul style="list-style-type: none"> <li>– <i>State Environmental Planning Policy No 33 – Hazardous and Offensive Development</i>,</li> <li>– <i>State Environmental Planning Policy No. 55 Remediation of Land</i>,</li> <li>– <i>State Environmental Planning Policy (Infrastructure) 2007</i>,</li> <li>– <i>State Environmental Planning Policy (State and Regional Development) 2011</i>;</li> <li>– <i>State Environmental Planning Policy (Koala Habitat Protection) 2021</i>;</li> <li>– <i>State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017</i>, and</li> </ul> </li> </ul>

– *Newcastle Local Environmental Plan 2012.*

- The relevant development control plan, being the *Newcastle Development Control Plan 2012* (noting that the application of development control plans is excluded from SSD under Section 11 of the State and Regional Development SEPP);
- The likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality;
- The suitability of the site for the development; and
- The public interest.

## 5. ENGAGEMENT

### 5.1 Scoping Stage Engagement

To inform preparation of the scoping report, Firm Power has carried out preliminary engagement with surrounding landowners, community groups and regulatory bodies.

Preliminary engagement strategies have aimed to:

- Build an awareness of the project and proposed development
- Establish communication channels with the local community
- Respond to any questions or concerns the community may have and ensure these are considered during development of the project.

Firm Power has implemented the following forms of engagement:

- Letters and notification issued to landowners surrounding the development, community groups and regulatory bodies.
- A project Infoline and mailbox
- A project website.
- Doorknocking.

Non associated residential receivers close to the site were identified through analysis of mapping utilising GIS software. In total, the letter introducing the project was mailed to the eight (8) non-associated residential receivers located within 500 metres of the proposed development and west of the New England Highway. The introduction letter provided initial details of the project, including outlining the planning assessment process and provided contact details for a dedicated 1800 number, project email address and website. Engagement letters were posted to identified receivers on the 22 September 2021. A copy of this letter is provided in **Appendix E**.

Firm Power has also been in contact with a number of the non-residential receivers within the immediate vicinity of the site, including the Sheikh Temple and the landscaping business directly adjacent to the north.

A summary of the outcome of engagement is provided in **Table 4**.

**Table 4 – Engagement summary**

Stakeholder Group	Method	Purpose of Engagement and Consideration within EIS Assessment.
Department Planning, Industry and Environment	Pre-scoping meeting on the 2 September 2021	<p>Firm Power introduced the project to the Department and sought advice on areas of critical assessment. DPIE staff identified the following expectations:</p> <ul style="list-style-type: none"> <li>• Targeted consultation with receivers within 500 metres; agreed that this was not necessary outside of this range, but that general consultation with groups will be required in place of targeted efforts;</li> <li>• Ensure the broader area is familiar with the project;</li> <li>• Provide details on required leasing/subdivision arrangements;</li> <li>• Confirm whether EPBC referral required;</li> <li>• Provide mapping in scoping reports confirming any constraints such as sensitive biodiversity, Aboriginal heritage sites etc</li> <li>• Provide details of engagement with Ausgrid, TfNSW, Council, non-associated receivers;</li> </ul> <p>Include details of engagement advice to non-associated receivers.</p>
AusGrid	Web based portal	<p>Connection enquiry including advice regarding preliminary design of the BESS facility and preliminary response in accordance with chapter 5 of the National Electricity Rules.</p> <p>To confirm there is thermal capacity in the system to facilitate the transfer of power to and from the BESS, preliminary review of system strength, available connection points and determine next steps.</p> <p>Ausgrid confirmed there is sufficient thermal capacity for the BESS to operate at proposed transfer limits under normal operating conditions, no adverse system strength issues identified and connection points are available. Projects can progress to detailed response to enquiry.</p>
	<ul style="list-style-type: none"> <li>• In Person meetings</li> <li>• Phone/VC</li> <li>• Emails</li> </ul>	<p>Ongoing discussions with respect to the lease agreement to confirm that an option could be secured by Firm Power to develop on the land and to identify potential need to subdivide</p> <p>Ausgrid confirmed the option had been issued to Firm Power to secure the land to develop the proposed project.</p>
	Web based portal	<p>System planning advice (Ausgrid terminology for investigate works) was sought from Ausgrid to investigate connection options further and to determine preferred arrangement and understand scope of works, cost and program to facilitate the connection.</p> <p>Ausgrid confirmed that upgrades to the substation will be required and preliminary scope determined. This will be further refined through the connection process.</p>

Stakeholder Group	Method	Purpose of Engagement and Consideration within EIS Assessment.
	Web based portal	<p>Detailed response to connection enquiry in accordance with chapter 5 of the National Electricity Rules. The purpose of the engagement was to seek information from Ausgrid to allow appropriate modelling and studies to be performed to allow an application to connect to be lodged.</p> <p>Ausgrid provided information as requested and in accordance with the National Electricity rules.</p>
City of Newcastle Council	Via Email	<p>Firm Power has carried out initial engagement with City of Newcastle Council Mayors office and planning team to determine Council's view of the project and identify any issues that would need to be addressed in preparation of the EIS. As a result of the enquiry, a phone meeting was held with Council staff – refer below.</p>
	Phone meeting	<p>Meeting held between Firm Power and Council staff on the 12 August 2021 to determine Council's initial view of the project and identify any issues to be addressed. The following keys points were discussed:</p> <ol style="list-style-type: none"> <li>1. NCC have a few projects they are working on regarding energy transition and felt the Beresfield Big Battery was complementary to this activity and in line with council's sustainability direction</li> <li>2. Other than Steele River most of the battery activity council has been involved with to date is community battery projects</li> <li>3. NCC are eager to get learnings out of the construction phase of the project</li> <li>4. Council did not expect significant community resistance given the location and industrial nature of the site</li> <li>5. As requested, Firm Power have forwarded site layout and a few project key points for NCC to share internally</li> </ol>
Subsidence Advisory NSW	Via Email	<p>Engagement with the Subsidence Advisory NSW dated the 13 September 2021 to determine any approval or assessment requirements associated with the project. SA_NSW provided comment on the mapping of the site as undermined by the Big Ben Seam (<b>Appendix H</b>). Although the development is mapped inside the zone of influence of historical mining activities (mid to late 1800s), it is not within a Mine Subsidence District. While approval from Subsidence Advisory NSW is therefore not required it is recommended that potential mine subsidence impacts be assessed and mitigated or eliminated with appropriate building design or remediation. A consideration of potential mine subsidence impacts and mitigation is to be addressed as part of the EIS.</p>
Regulatory Bodies <ul style="list-style-type: none"> <li>• The Local Aboriginal Land Council;</li> </ul>	Via email	<p>Engagement advice was issued via email to regulatory bodies between the 27 and 29 September, inviting comments to be sent to the project's email address with respect to the project, to</p>

Stakeholder Group	Method	Purpose of Engagement and Consideration within EIS Assessment.
<ul style="list-style-type: none"> <li>• NSW Rural Fire Service;</li> <li>• Fire and Rescue NSW;</li> <li>• Transport for NSW;</li> <li>• Natural Resource Access Regulator;</li> <li>• Department Primary Industries (Fisheries)</li> <li>• Environment Protection Authority</li> </ul>		<p>inform them of the project and to inform preparation of this scoping report.</p> <p>At the time of writing, no response from these organisations has been received.</p>
<p>Local Community</p> <ul style="list-style-type: none"> <li>• Landcare;</li> <li>• Hunter Community Environment Centre;</li> <li>• Wilderness Society;</li> <li>• Hunter Environmental Institute (HEI); and</li> <li>• Transition Newcastle</li> </ul>	Via Email	<p>Engagement advice was issued via email to 8 community groups between the 27 and 29 September, inviting comments to be sent to the project's email address; to inform them of the project and to inform preparation of this scoping report.</p> <p>At the time of writing, no response from these organisations has been received.</p>
Community and interested parties	Dedicated Project website: <a href="https://www.firmpower.com.au/beresfield">https://www.firmpower.com.au/beresfield</a>	<p>The project website was launched in September 2021. The website provides an overview of the project and Firm Power, detailing the development application process and providing a form allowing visitors encouraging visitors to leave feedback.</p> <p>At the time of writing no feedback or responses have been received via this online form.</p>
Nearby receivers	Notification Letter	<p>A notification letter outlining the project was posted to nearby landholders on 22 September 2021. The purpose of the letter was to introduce the project. The letter outlined the development application process and invited recipients to provide feedback regarding the project. Contact details for a dedicated 1800 number, project email address and website were provided. A copy of this notification is provided in <b>Appendix E</b>.</p> <p>At the time of writing this report, no emails or phone calls have been received.</p>
	Doorknocking	<p>On behalf of Firm Power, a Premise staff member travelled to the site on the 26 October 2021 to discuss the project with available surrounding non-associated landowners. A brief outline of the project and likely impacts were discussed. A second information letter, summarising the details of the project, was hand delivered to identified receiver locations during this visit.</p> <p>Of the 13 residential and non-residential receivers in proximity of the site, Premise was able to speak to eight (8) of these. Letters were left at those properties where direct discussion did not occur. Of the residents spoken to, seven (7) confirmed no fundamental objections and confirmed they understood the details of the</p>

Stakeholder Group	Method	Purpose of Engagement and Consideration within EIS Assessment.
		project and how to engage. One non-residential receiver raised a number of questions - discussed in the cell below.
Non-associated receiver	Response to Doorknocking	<p>Concerns/queries:</p> <ol style="list-style-type: none"> <li>1. noise impacts during operation of the batteries (during prayer services or 'hot summer')</li> <li>2. noise and dust during construction.</li> <li>3. Interested to know what the project looks like</li> <li>4. Will their driveway be used during construction?</li> </ol> <p>Response provided by email:</p> <ol style="list-style-type: none"> <li>1. <i>There is the potential for noise during operation of the batteries. As part of development application for the project, we'll prepare a detailed noise assessment to determine what (if any) noise from the batteries may be audible offsite. Any noise from the batteries would then be minimised and managed to ensure that the project is consistent with the relevant noise guidelines. We'd be happy to keep you informed about the outcomes our noise assessment as we prepare our development application, and to talk with you to get a better understanding of when prayer services are held.</i></li> <li>2. <i>There will be some noise and dust during construction of the project, mostly during site preparation and delivery and assembly of the batteries. Management measures during construction would ensure that noise and dust is minimised consistent with relevant guidelines.</i></li> <li>3. <i>The batteries would be housed in fully enclosed containers, similar to standard shipping containers. In the coming months we'll complete a range of studies that will feed into the project layout. As we progress the project design, we'd be happy to provide you with more information about what the project will look like.</i></li> <li>4. <i>No vehicles would access the battery site via the Sikh Temple access driveway. Site access during construction and operation of the project would be via the public road network</i></li> </ol>

A record of engagement is provided in **Appendix F**.

Those matters raised will be further addressed through ongoing engagement throughout the EIS process and addressed through detailed analysis in the preparation of the EIS.

## 5.2 EIS Engagement

Engagement will continue to be undertaken in accordance with the following guidelines:

- *Community and Stakeholder Engagement Draft Environmental Impact Assessment Guidance Series (DP&E, 2017)*
- *Community Consultative Committee Guidelines State Significant Projects (DP&E, 2019)* – if a Community Consultative Committee is required.

Proposed engagement purpose and method during preparation of the EIS stage is outlined in **Table 5**.

**Table 5 – Proposed EIS consultation**

<b>Stakeholder</b>	<b>Purpose</b>	<b>Method</b>
Ausgrid	<ul style="list-style-type: none"> <li>To confirm project details, potential subdivision and substation upgrade requirements</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Briefing letters/emails</li> </ul>
Federal Member for Paterson, Meryl Swanson MP;	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Consultation to inform social impact assessment (SIA)</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Briefing letters/emails</li> </ul>
State Member for Wallsend, Sonia Hornery MP;	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Consultation to inform social impact assessment (SIA)</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Briefing letters/emails</li> </ul>
Mindaribba Local Aboriginal Land Council	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Identify cultural values and connection to place</li> </ul>	<ul style="list-style-type: none"> <li>Consultation in accordance with <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW, 2010)</li> <li>Newsletters/fact sheets</li> <li>Website feedback form or 1800 number</li> </ul>
Department of Planning, Infrastructure and Environment	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Engagement during EIS preparation</li> <li>Respond to matters arising throughout assessment</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Email and phone</li> <li>Briefing letters/emails</li> </ul>
Heritage Council of NSW	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Engagement during EIS preparation</li> <li>Respond to matters arising throughout assessment</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Email and phone</li> <li>Briefing letters/emails</li> </ul>
Subsidence Advisory NSW	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Engagement during EIS preparation</li> <li>Respond to matters arising throughout assessment</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Email and phone</li> <li>Briefing letters/emails</li> </ul>
Rural Fire Service	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Engagement during EIS preparation</li> <li>Respond to matters arising throughout assessment</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Email and phone</li> <li>Briefing letters/emails</li> </ul>
Transport for NSW	<ul style="list-style-type: none"> <li>Project details/progress</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> </ul>

Stakeholder	Purpose	Method
	<ul style="list-style-type: none"> <li>Engagement during EIS preparation</li> <li>Discuss site access requirements</li> <li>Respond to matters arising throughout assessment</li> </ul>	<ul style="list-style-type: none"> <li>Email and phone</li> <li>Briefing letters/emails</li> </ul>
City of Newcastle Council	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Consultation to inform social impact assessment (SIA)</li> <li>Updates on outcomes of assessment reporting</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Email and phone</li> <li>Briefing letters/emails</li> </ul>
Beresfield community groups	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Consultation to inform social impact assessment (SIA)</li> <li>Updates on outcomes of assessment reporting</li> <li>Opportunities to provide feedback during application preparation</li> <li>Details of how residual impacts would be mitigated</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Email and phone</li> <li>Newsletters and factsheets</li> <li>Website information/forms</li> <li>1800 number</li> </ul>
Ongoing engagement with nearby unassociated receivers	<ul style="list-style-type: none"> <li>Project details/progress</li> <li>Consultation to inform social impact assessment (SIA)</li> <li>Updates on outcomes of assessment reporting</li> <li>Opportunities to provide feedback during application preparation</li> <li>Details of how residual impacts would be mitigated</li> </ul>	<ul style="list-style-type: none"> <li>Face to face/videoconference</li> <li>Email and phone</li> <li>Newsletters and factsheets</li> <li>Website information/forms</li> <li>1800 number</li> </ul>

## 6. PROPOSED ASSESSMENT OF IMPACTS

### 6.1 Introduction

An initial review of information has been completed to provide a summary of matters requiring assessment at EIS preparation stage and the level of assessment required for each issue. By reference to the DPIE Scoping Report Guidelines (DPIE 2021), a number of factors have been considered through this process, including:

- the scale and nature of the likely impact of the project and the sensitivity of the receiving environment;
- whether the project is likely to generate cumulative impacts with other relevant future projects in the area; and

- the ability to avoid, minimise and/or offset the impacts of the project, to the extent known at the scoping phase.

The following sections provide details on specific assessment areas. A summary table is provided at **Appendix A** categorising these areas as per the Scoping Report Guidelines. The level of assessment identified for each impact is summarised as follows:

- Detailed:
  - Social impacts
- Standard
  - Land Use
  - Heritage
  - Hydrogeology
  - Biodiversity
  - Bushfire
  - Access and traffic
  - Visual impacts
  - Noise and Vibration
  - Air quality
  - Waste
  - Hazard

## 6.2 Social Impact

The site is located within the NCC LGA which has a population of 164,104 as at 2016. The LGA has an unemployment rate of 5.3%, marginally greater than the 2016 NSW average of 4.99%. The largest employer is the health care and social assistance sector which supports 20,293 jobs. The largest number of businesses are in the health care and social assistance sector, followed by education and training and retail trade.

The Beresfield-Tarro statistical area has a population of 4,831 people and an unemployment rate of 10.2%. The majority of residents work in manufacturing (reflecting the significant industrial area), followed by health care and social assistance, retail trade and construction.

A Social Impact Assessment will be provided as part of the EIS in accordance with the *Social Impact Assessment Guidelines for State Significant Precincts 2021* (DPIE 2021). The Social Impact Assessment will be proportionate with the scale, complexity and likely impacts and benefits of the project. A Social Impact Assessment Scoping Worksheet has been prepared in accordance with the Guideline and is provided in **Appendix I**.

## 6.3 Land Use

### 6.3.1 MINING

There are no existing exploration or mining titles or applications applying to the site. Details and implications of any work conducted as part of the historic titles applying to the site are to be considered as part of the EIS.

### 6.3.2 OTHER USES

The compatibility of the proposed project with the surrounding land uses, including consideration of the surrounding land uses zones and existing uses would be completed, including a Land Use Conflict Risk Assessment in accordance with the Department of Industry's *Land Use Conflict Risk Assessment Guide*.

## 6.4 Heritage

The site is not identified as containing any items of Aboriginal or European heritage significance and is not located within a heritage conservation area under the NLEP. However, AHIMS Basic Search on 23 August 2021 (**Appendix B**) identified a single Aboriginal site recorded a single Aboriginal site in 100A Enterprise Drive (Lot 510 in DP 1038004), approximately 10 metres from the site's eastern boundary (refer to **Figure 6**).

Accordingly, an Aboriginal Cultural Heritage Assessment is expected to be needed to support the EIS, identifying potential impacts and necessary management and mitigation measures.

Consideration of the potential for impacts to historic heritage would be incorporated within the body of the EIS.

## 6.5 Hydrogeology

The proposed development is unlikely to impact groundwater due to not proposing or requiring the extraction of groundwater, the recorded depth to groundwater at the nearest groundwater borehole (8.6-10.3 metre standing water level at the nearest groundwater borehole 60 metres to the north of the site) and the minimal anticipated depth of construction. Methods by which stormwater would be managed would be outlined as part of the EIS.

The suitability of the ground conditions for the proposed development and any potential for contamination are to be addressed in a Geotechnical Report, Acid Sulfate Soils Management Plan and Preliminary (Site) Contamination Investigation to be provided as part of the EIS. Management of soil and water impacts during construction would be addressed in a Construction Management Plan.

The proposed development is to occur outside of the portion of the site identified as being within the Low Risk (1% Annual Exceedance Probability) and Very Low Risk (PMF) flood prone land in the south-eastern corner of the site. Nevertheless, an assessment of the potential for flood impacts would be provided in the body of the EIS.

## 6.6 Biodiversity

Firm Power has engaged with EMM Consulting Pty Ltd to undertake early ecological surveys and assessments to inform the Biodiversity Development Assessment Report (BDAR) and assess EPBC Act requirements in relation to the Beresfield Project.

The project will require a Biodiversity Development Assessment Report (BDAR) assessing impacts to biodiversity in accordance with the NSW *Biodiversity Conservation Act 2016*.

If deemed appropriate, a streamlined assessment-small area module BDAR will be prepared, in accordance with the BAM, to accompany the development assessment application. Under this assessment method targeted surveys will only be performed for species listed as at risk of Serious and irreversible Impact (SAII) under the BAM.

## 6.7 Bushfire

The south east portion of the site is identified as containing a mixture of Category 1, 2 and 3 mapped bushfire prone land. The remainder of the site, including the proposed development footprint, is not mapped as bushfire prone.

The proposed BESS has the potential to generate radiant heat and may have the potential to result in impacts to bushfire threat levels.

An assessment of impacts would be addressed within the body of the EIS and would ensure that project parameters and the requirements of RFS and F&RNSW are clearly understood, and that appropriate mitigation measures are put in place.

A bushfire assessment would be incorporated into the EIS.

## 6.8 Access and Traffic

Anticipated vehicular movements generated during the installation phase and subsequent operation phase of the proposed BESS and the capacity of the surrounding road network to accommodate those movements are to be addressed in the Traffic Impact Assessment to be provided as part of the EIS.

Materials are anticipated to be transported to the site from Port Botany or the Port of Newcastle via the routes shown in **Figure 12**. The construction vehicle haulage route would be considered further in the Traffic Impact Assessment to be provided as part of the EIS.

## 6.9 Visual Impact

Surrounding vegetation and the arrangement of the BESS facility within the site allows for the proposal to be developed in a generally visually protected location. The visibility of the development site is restricted, with limited residential receivers in close proximity or with a view of the development site.

Preliminary observations of the proposed development from the New England Highway, noting that this is a high-speed traffic environment, indicate that visibility of the site is generally shielded by existing vegetation. Existing vegetation to the east restrict visibility of the development site from the north and east. Although the existing substation is visible further south along the New England Highway, the proposed development site is situated behind the existing substation such that any significant visual impact is unlikely. While land to the west is cleared it is anticipated that the topography around the site is likely to further assist in obscuring the visibility of the proposed development from Weakleys Drive.

Minor potential impacts to surrounding sensitive receptors may include changes to existing views. An assessment of visual impacts would form part of the EIS identifying potential impacts along with necessary management and mitigation measures, and consideration of potential cumulative impacts with the Beresfield substation.

## 6.10 Noise and Vibration

Given the project's industrial setting, background noise at nearby sensitive receivers is likely to be characterised by industrial activities associated with surrounding industry including manufacturing, logistics, automotive and warehouses, as well as vehicular movements along Weakleys Drive.

Noise and vibration impacts are expected to occur during both construction and operation of the project. In relation to construction activities this would include preparatory earthworks, delivery, and assembly of the BESS infrastructure. During operation this would include operation of the BESS and noise from associated vehicles.

The potential noise and vibration impact of the construction and operation BESS on nearby sensitive receivers would be considered in a Noise and Vibration Impact Assessment to be provided as part of the EIS. The Noise and Vibration Impact Assessment will be prepared in accordance with the:

- NSW Interim Construction Noise Guideline (DECC 2009);
- NSW Noise Policy for Industry (EPA 2017);
- NSW Road Noise Policy (DECCW 2011); and
- Assessing Vibration: A Technical Guideline (DECC 2006).

## 6.11 Air Quality

Air quality impacts arising from dust generation and vehicle emissions during construction are to be assessed as part of the Air Quality Impact Assessment to be provided as part of the EIS and managed in accordance with a Construction Management Plan.

## 6.12 Waste

The likely waste generation associated with the proposed BESS, to be assessed as part of the Waste Management Plan and managed in accordance with a Construction Management Plan to be provided as part of the EIS, would mainly occur during the construction stage and may include green waste from cleared vegetation, construction materials, general waste from site personnel and spoil. Waste generated during the operation of the proposed BESS is expected to be minimal. Most battery components are expected to be readily recyclable at end of life.

## 6.13 Hazard

Lithium batteries are identified as Class 9 under the *Australian Dangerous Goods Code* (National Transport Commission 2020). Under the *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* (Department of Planning 2011) given effect under Section 8 of *State Environmental Planning Policy No 33 – Hazardous and Offensive Development*, Class 9 goods do not exceed the screening thresholds as they “pose little threat to people or property” (Department of Planning 2011, p. 33). Nevertheless, a perception exists that a BESS may alter the EMF within a locality and thereby cause harm to residents and the environment. Accordingly, a Preliminary Hazard Analysis (PHA) is to be provided as part of the EIS.

## 6.14 Cumulative Impact

A review of public record information for large scale projects with the potential to generate cumulative impacts within 10 kilometres of the site identifies:

- There are no known existing BESS developments;
- Nearest major project developments at various stages of approval are set out in **Table 6**.

The proposed development is sufficiently separated from the nearest proposed BESS developments and non-BESS SSD developments as to not result in any cumulative impacts. There is the potential for cumulative visual and noise impacts of the project and the Beresfield substation.

Further analysis of the potential for cumulative impacts would be addressed in detail in the EIS in accordance with *Guidelines for State Significant Projects* (DPIE 2021), including the potential for cumulative impacts associated with the adjacent substation.

**Table 6 – Nearest major projects within 10 kilometres of the site**

<b>Projects:</b>	<b>Stage:</b>	<b>Distance (Direction) from Site:</b>
M1 Pacific Motorway Extension to Raymond Terrace	Respond to submissions	1 kilometre (south-east) at nearest point
Kurri Kurri Lateral Pipeline	Prepare EIS	2.6 kilometres (south) at nearest point
Bloomfield Coal Mine – Modification to extend lifespan	Determined – 2018	4 kilometres (west)
New Maitland Hospital	Determined – 2018	4.4 kilometres (north-west)
Enviroking Waste Facility – Modification to increase processing limit from 20,000 to 30,000 tonnes per year	Preparing Modification Report	4.9 kilometres (south-west)
Newcastle Gas Fired Power Station	Determined – 2021	6 kilometres (east)
Tomago Aluminium Smelter – Modification to monitoring conditions	Determined – 2020	7.2 kilometres (west)
Remondis Resource Recovery Facility Tomago	Determined – 2021	8.8 kilometres (east)

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Table 7 – References

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NSW Office of Environment and Heritage (OEH). (n.d.). <i>State Heritage Register</i> . Retrieved from: <a href="http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx#amapsearch">http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx#amapsearch</a> [Accessed 23 August 2021].



# **APPENDIX A**

## **SCOPING REPORT SUMMARY TABLE**

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Detailed	Social Impact	Y	Specific	Social Impact Assessment Guidelines for State Significant Projects (Department of Planning Industry and Environment, 2021) Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (Roads and Maritime Services, 2013).	6.2
Standard	Land Use	N	Specific	Surface Development Guideline 5 – Active Mining Areas – Moderate Predicted Subsidence Impact (Subsidence Advisory NSW, 2018) Development Application – Merit Assessment Policy (Subsidence Advisory NSW, 2018) <i>Department of Industry's Land Use Conflict Risk Assessment Guide</i>	6.3
Standard	Heritage	N	Specific	NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998) Criteria for the Assessment of Excavation Directors (NSW Heritage Council, 2011).	6.4
Standard	Hydrogeology	Y	Specific	Acid Sulphate Soils Assessment Guidelines (Department of Planning, 2008) Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land (Department of Urban Affairs and Planning and Environment Protection Authority, 1998) Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) Managing Urban Stormwater: Soils and Construction Volume 2 (Department of Environment and Climate Change, 2008) Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (Department of Environment and Climate Change, 2008) Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC / ARMCANZ, 2000) Using the ANZECC Guidelines and Water Quality Objectives in NSW (Department of Environment and Conservation, 2006)	6.5

				Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC 2008) NSW Government's Floodplain Development Manual (2005)	
Standard	Biodiversity	Y	Specific	Refer to <b>Section 6.6</b> of the Scoping Report.	6.6
Standard	Bushfire	N	Specific	Planning for Bushfire Protection 2019	6.7
Standard	Access and Traffic	Y	Specific	Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2013) Guide to Traffic Generating Developments Version 2.2 (RTA, 2002)	6.8
Standard	Visual Impact	Y	General	Refer to <b>Section 6.9</b> of the Scoping Report.	6.9
Standard	Noise and Vibration	Y	General	Construction Noise Strategy (Transport for NSW, 2012) Interim Construction Noise Guideline (Department of Environment, Climate Change and Water, 2009) NSW Industrial Noise Policy (Environment Protection Authority, 2000) NSW Road Noise Policy (Environment Protection Authority, 2011) Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006) German Standard DIN 4150-3: Structural Vibration – Effects of Vibration on Structures Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006) Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (Australian and New Zealand Environment Council, 1990).	6.10
Standard	Air Quality	Y	General	The Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA 2016) NSW's Sustainable Design Guidelines (Version 3.0) (Transport for NSW, 2013) Greenhouse Gas Inventory Guide for Construction Projects (Transport for NSW, 2012).	6.11

Standard	Waste	N	General	Waste Classification Guidelines (DECCW, 2009)	6.12
Standard	Hazard	N	General	<p>Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (DoP 2011)</p> <p>International Standard (ISO / IEC 31010) Risk Management – Risk Assessment Technique</p> <p>Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) (National Transport Commission, 2007)</p> <p>Storage and Handling of Dangerous Goods Code of Practice (WorkCover, 2005).</p>	6.13



# **APPENDIX B**

## **PROTECTED MATTERS SEARCH TOOL (PMST) RESULTS**



# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 19/07/21 17:32:56

[Summary](#)

[Details](#)

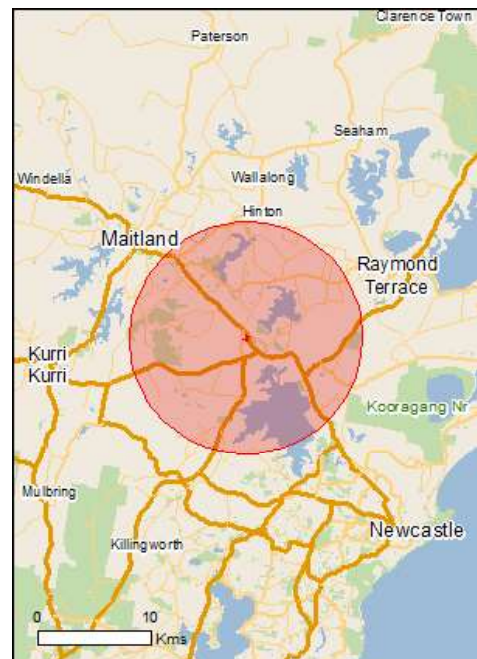
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are  
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(Geoscience Australia), ©PSMA 2015

[Coordinates](#)

Buffer: 10.0Km



# Summary

## Matters of National Environmental Significance

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

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance:</a>	1
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	6
<a href="#">Listed Threatened Species:</a>	79
<a href="#">Listed Migratory Species:</a>	63

## Other Matters Protected by the EPBC Act

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

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

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

<a href="#">Commonwealth Land:</a>	6
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	70
<a href="#">Whales and Other Cetaceans:</a>	1
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	4
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Invasive Species:</a>	45
<a href="#">Nationally Important Wetlands:</a>	3
<a href="#">Key Ecological Features (Marine)</a>	None

# Details

## Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[ Resource Information ]
Name	Proximity
<a href="#">Hunter estuary wetlands</a>	Within Ramsar site

## Listed Threatened Ecological Communities [ Resource Information ]

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

Name	Status	Type of Presence
<a href="#">Central Hunter Valley eucalypt forest and woodland</a>	Critically Endangered	Community may occur within area
<a href="#">Coastal Swamp Oak (<i>Casuarina glauca</i>) Forest of New South Wales and South East Queensland ecological community</a>	Endangered	Community likely to occur within area
<a href="#">Lowland Rainforest of Subtropical Australia</a>	Critically Endangered	Community may occur within area
<a href="#">River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria</a>	Critically Endangered	Community likely to occur within area
<a href="#">Subtropical and Temperate Coastal Saltmarsh</a>	Vulnerable	Community likely to occur within area
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community may occur within area

## Listed Threatened Species [ Resource Information ]

Name	Status	Type of Presence
Birds		
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Status	Type of Presence
<a href="#">Diomedea antipodensis gibsoni</a> Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Limosa lapponica baueri</a> Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Pachyptila turtur subantarctica</a> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
<a href="#">Sternula nereis nereis</a> Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche bulleri</a> Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche bulleri platei</a> Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche eremita</a> Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thinornis cucullatus cucullatus</a> Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat may occur within area
<b>Fish</b>		
<a href="#">Epinephelus daemeli</a> Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area
<b>Frogs</b>		
<a href="#">Heleioporus australiacus</a> Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat may occur within area
<a href="#">Litoria aurea</a> Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Mixophyes balbus</a> Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Mixophyes iteratus</a> Giant Barred Frog, Southern Barred Frog [1944]	Endangered	Species or species habitat likely to occur within area
<a href="#">Uperoleia mahonyi</a> Mahony's Toadlet [89189]	Endangered	Species or species habitat may occur within area
<b>Mammals</b>		
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
<a href="#">Petauroides volans</a> Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Petrogale penicillata</a> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New	Vulnerable	Species or species

Name	Status	Type of Presence
South Wales and the Australian Capital Territory) [85104] <a href="#">Potorous tridactylus tridactylus</a>		habitat known to occur within area
Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat may occur within area
<a href="#">Pseudomys novaehollandiae</a>		
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Pteropus poliocephalus</a>		
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<b>Plants</b>		
<a href="#">Acacia bynoeana</a>		
Bynoe's Wattle, Tiny Wattle [8575]	Vulnerable	Species or species habitat may occur within area
<a href="#">Angophora inopina</a>		
Charmhaven Apple [64832]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Asperula asthenes</a>		
Trailing Woodruff [14004]	Vulnerable	Species or species habitat may occur within area
<a href="#">Caladenia tessellata</a>		
Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Commersonia prostrata</a>		
Dwarf Kerrawang [87152]	Endangered	Species or species habitat likely to occur within area
<a href="#">Cryptostylis hunteriana</a>		
Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Cynanchum elegans</a>		
White-flowered Wax Plant [12533]	Endangered	Species or species habitat known to occur within area
<a href="#">Dichanthium setosum</a>		
bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Diuris praecox</a>		
Newcastle Doubletail [55086]	Vulnerable	Species or species habitat may occur within area
<a href="#">Eucalyptus camfieldii</a>		
Camfield's Stringybark [15460]	Vulnerable	Species or species habitat may occur within area
<a href="#">Eucalyptus glaucina</a>		
Slaty Red Gum [5670]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Eucalyptus parramattensis subsp. decadens</a>		
Earp's Gum, Earp's Dirty Gum [56148]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Euphrasia arguta</a>		
[4325]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Grevillea parviflora subsp. parviflora</a>		
Small-flower Grevillea [64910]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Melaleuca biconvexa</a>		
Biconvex Paperbark [5583]	Vulnerable	Species or species

Name	Status	Type of Presence
<a href="#">Persicaria elatior</a> Knotweed, Tall Knotweed [5831]	Vulnerable	habitat may occur within area Species or species habitat likely to occur within area
<a href="#">Phaius australis</a> Lesser Swamp-orchid [5872]	Endangered	Species or species habitat may occur within area
<a href="#">Pomaderris brunnea</a> Rufous Pomaderris, Brown Pomaderris [16845]	Vulnerable	Species or species habitat may occur within area
<a href="#">Prasophyllum sp. Wybong (C.Phelps ORG 5269)</a> a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pterostylis gibbosa</a> Illawarra Greenhood, Rufa Greenhood, Pouched Greenhood [4562]	Endangered	Species or species habitat may occur within area
<a href="#">Rhizanthella slateri</a> Eastern Underground Orchid [11768]	Endangered	Species or species habitat may occur within area
<a href="#">Rhodamnia rubescens</a> Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Rhodomyrtus psidioides</a> Native Guava [19162]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Rutidosis heterogama</a> Heath Wrinklewort [13132]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Syzygium paniculatum</a> Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Tetraloche juncea</a> Black-eyed Susan [21407]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area
<b>Reptiles</b>		
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Listed Migratory Species	[ Resource Information ]	
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\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
<b>Migratory Marine Birds</b>		
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat likely to occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardenna grisea</a> Sooty Shearwater [82651]		Species or species habitat likely to occur within area
<a href="#">Calonectris leucomelas</a> Streaked Shearwater [1077]		Species or species habitat known to occur within area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche bulleri</a> Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche eremita</a> Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area

Name	Threatened	Type of Presence
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<b>Migratory Marine Species</b>		
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Lamna nasus</a> Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
<a href="#">Manta alfredi</a> Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
<a href="#">Manta birostris</a> Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Sousa chinensis</a> Indo-Pacific Humpback Dolphin [50]		Species or species habitat likely to occur within area
<b>Migratory Terrestrial Species</b>		
<a href="#">Cuculus optatus</a> Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Monarcha trivirgatus</a> Spectacled Monarch [610]		Species or species habitat known to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat known to occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur

Name	Threatened	Type of Presence within area
<b>Migratory Wetlands Species</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]		Roosting known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Roosting known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Charadrius bicinctus</a> Double-banded Plover [895]		Roosting known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area
<a href="#">Limicola falcinellus</a> Broad-billed Sandpiper [842]		Roosting known to occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<a href="#">Limosa limosa</a> Black-tailed Godwit [845]		Roosting known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur

Name	Threatened	Type of Presence
<a href="#">Philomachus pugnax</a> Ruff (Reeve) [850]		Roosting known to occur within area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area
<a href="#">Pluvialis squatarola</a> Grey Plover [865]		Roosting known to occur within area
<a href="#">Tringa brevipes</a> Grey-tailed Tattler [851]		Roosting known to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]		Roosting known to occur within area

## Other Matters Protected by the EPBC Act

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

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

Name
Commonwealth Land -
Commonwealth Land - Australian Postal Commission
Commonwealth Land - Australian Telecommunications Commission
Commonwealth Land - Defence Housing Authority
Commonwealth Land - Director of Defence Service Homes
Commonwealth Land - Director of War Service Homes

### Listed Marine Species [\[ Resource Information \]](#)

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat likely to occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]		Breeding likely to occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]		Roosting known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Roosting known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Calonectris leucomelas</a> Streaked Shearwater [1077]		Species or species habitat known to occur within area
<a href="#">Charadrius bicinctus</a> Double-banded Plover [895]		Roosting known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Charadrius ruficapillus</a> Red-capped Plover [881]		Roosting known to occur within area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea gibsoni</a> Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
<a href="#">Heteroscelus brevipes</a> Grey-tailed Tattler [59311]		Roosting known to occur within area
<a href="#">Himantopus himantopus</a> Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Limicola falcinellus</a> Broad-billed Sandpiper [842]		Roosting known to occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<a href="#">Limosa limosa</a> Black-tailed Godwit [845]		Roosting known to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Monarcha trivirgatus</a> Spectacled Monarch [610]		Species or species habitat known to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat known to occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area
<a href="#">Pachyptila turtur</a> Fairy Prion [1066]		Species or species habitat likely to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur within area
<a href="#">Philomachus pugnax</a> Ruff (Reeve) [850]		Roosting known to occur within area

Name	Threatened	Type of Presence
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area
<a href="#">Pluvialis squatarola</a> Grey Plover [865]		Roosting known to occur within area
<a href="#">Puffinus griseus</a> Sooty Shearwater [1024]		Species or species habitat likely to occur within area
<a href="#">Recurvirostra novaehollandiae</a> Red-necked Avocet [871]		Roosting known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<a href="#">Rostratula benghalensis (sensu lato)</a> Painted Snipe [889]	Endangered*	Species or species habitat known to occur within area
<a href="#">Thalassarche bulleri</a> Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche eremita</a> Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche sp. nov.</a> Pacific Albatross [66511]	Vulnerable*	Species or species habitat may occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thinornis rubricollis rubricollis</a> Hooded Plover (eastern) [66726]	Vulnerable*	Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]		Roosting known to occur within area
<b>Reptiles</b>		
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

### Whales and other Cetaceans [\[ Resource Information \]](#)

Name	Status	Type of Presence
<b>Mammals</b>		
<a href="#">Sousa chinensis</a> Indo-Pacific Humpback Dolphin [50]		Species or species habitat likely to occur within area

## Extra Information

### State and Territory Reserves [\[ Resource Information \]](#)

Name	State
Blue Gum Hills	NSW
Hexham Swamp	NSW
Hunter Wetlands	NSW
Pambalong	NSW

### Regional Forest Agreements [\[ Resource Information \]](#)

Note that all areas with completed RFAs have been included.

Name	State
<a href="#">North East NSW RFA</a>	New South Wales

### Invasive Species [\[ Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
<b>Birds</b>		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Pycnonotus jocosus Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
<b>Frogs</b>		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
<b>Mammals</b>		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur

Name	Status	Type of Presence
Vulpes vulpes Red Fox, Fox [18]		within area  Species or species habitat likely to occur within area
<b>Plants</b>		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Dolichandra unguis-cati Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species

Name	Status	Type of Presence
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		habitat likely to occur within area  Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[ Resource Information ]
Name		State
<a href="#">Hexham Swamp</a>		NSW
<a href="#">Kooragang Nature Reserve</a>		NSW
<a href="#">Shortland Wetlands Centre</a>		NSW

# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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

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

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

## Coordinates

-32.80063 151.634947,-32.800628 151.634944,-32.800608 151.634915,-32.800806 151.636567,-32.798072 151.637146,-32.798362 151.638959,-32.801163 151.638259,-32.800869 151.635381,-32.800804 151.635177,-32.80063 151.634947

# Acknowledgements

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

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

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

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



# **APPENDIX C**

## **AHIMS SEARCH RESULTS**

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
38-4-0463	Site 4;Beresfield;	AGD	56	373000	6368200	Open site	Valid	Artefact : -	Open Camp Site	4211,102222,102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0465	Site 6;Beresfield;	AGD	56	372300	6368250	Open site	Partially Destroyed	Artefact : -	Open Camp Site	4211,102222,102568,103090,103619
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie,Mr.John Simpson						<b>Permits</b>
									3432	
38-4-0466	Site 7;Beresfield;	AGD	56	372590	6368300	Open site	Valid	Artefact : -	Isolated Find	4211,102222,102568,103619
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0467	Site 8;Beresfield;	AGD	56	372970	6368360	Open site	Valid	Artefact : -	Isolated Find	4211,102222,102568,103619
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0468	Site 9;Beresfield;	AGD	56	373420	6368440	Open site	Valid	Artefact : -	Open Camp Site	4211,102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
									3761	
38-4-0469	Site 11;Beresfield;	AGD	56	372700	6368520	Open site	Valid	Artefact : -	Open Camp Site	4211,102222,102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0470	Site 12;Beresfield;	AGD	56	372870	6368600	Open site	Valid	Artefact : -	Open Camp Site	4211,102222,102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0471	Site 10;Beresfield;	AGD	56	373650	6368400	Open site	Valid	Artefact : -	Open Camp Site	4211,102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0473	Site 2;Beresfield;	AGD	56	372650	6367770	Open site	Valid	Artefact : -	Isolated Find	4211,102222,102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0476	TT 1;Thornton;	AGD	56	372400	6371000	Open site	Valid	Artefact : -	Open Camp Site	102568,102615
	<b>Contact</b>									
	<b>Recorders</b>			Liam Dagg,Paul Rheinberger						<b>Permits</b>
38-4-0347	Thornton 3;	AGD	56	373450	6371700	Open site	Valid	Artefact : -	Open Camp Site	102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
									718,887	
38-4-0348	Thornton 4;	AGD	56	373200	6371670	Open site	Valid	Artefact : -	Open Camp Site	102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
									718	
38-4-0360	Thornton 12;	AGD	56	373750	6371400	Open site	Valid	Artefact : -	Open Camp Site	102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
38-4-0366	Thornton 11;	AGD	56	373750	6371400	Open site	Valid	Artefact : -	Open Camp Site	102568
	<b>Contact</b>									
	<b>Recorders</b>			Mr.Peter Kuskie						<b>Permits</b>
									718,887	
38-4-0329	MB2;	AGD	56	373605	6368789	Open site	Destroyed	Artefact : -	Open Camp Site	2410,102568
	<b>Contact</b>									
	<b>Recorders</b>			N Steel						<b>Permits</b>



SiteID	SiteName	Datum	Zone	Eastng	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
38-4-0671	WFC1 Donaldson Mine	AGD	56	371200	6369200	Open site	Valid	Artefact : 3		98344
	<b>Contact</b>		Sue Effenberger						<b>Permits</b>	
38-4-0673	ISF4 Donaldson Mine	AGD	56	370550	6368625	Open site	Valid	Artefact : 1	1902	98344,102222
	<b>Contact</b>		Umwelt (Australia) Pty Limited - Individual users					Modified Tree (Carved or Scarred) :	<b>Permits</b>	
38-4-0638	Donaldson Monitoring Site 6 (DMS6)	AGD	56	370809	6369721	Open site	Valid	1		
	<b>Contact</b>		Umwelt (Australia) Pty Limited - Individual users						<b>Permits</b>	
38-4-0621	Donaldson Monitoring Site 2 (DMS2)	AGD	56	370966	6368184	Open site	Destroyed	Artefact : 1		102222,10239 8
	<b>Contact</b>		Umwelt (Australia) Pty Limited - Individual users,RPS Australia East Pty Ltd - Ham					Artefact : 55	<b>Permits</b>	102568,10261 5
38-4-0709	BGC 1	AGD	56	372572	6370148	Open site	Valid		1788,2141,2952	
	<b>Contact</b>		Mrs.Angela Besant					Artefact : 100	<b>Permits</b>	102568,10261 5
38-4-0697	Beresfield/Thornton Link Road 1	AGD	56	372410	6370880	Open site	Valid		1775,1776	102568
	<b>Contact</b>		Mr.Stephen Tailbott					Artefact : 1	<b>Permits</b>	
38-4-0868	MB1.	AGD	56	373300	6368600	Open site	Valid			
	<b>Contact</b>		Noeleen Steel					Artefact : 1, Potential Archaeological Deposit (PAD) : -	<b>Permits</b>	102568
38-4-0798	Beresfield Substation 1 (BSS1)	AGD	56	372448	6369984	Open site	Valid			
	<b>Contact</b>		Umwelt (Australia) Pty Limited - Individual users					Artefact : -	<b>Permits</b>	102568
38-4-0835	Beresfield 2	AGD	56	373742	6370444	Open site	Valid		2141	
	<b>Contact</b>		AECOM Australia Pty Ltd - Sydney					Artefact : -	<b>Permits</b>	
38-4-0836	Berefield 3	AGD	56	372561	6370813	Open site	Valid			102568,10261 5
	<b>Contact</b>		AECOM Australia Pty Ltd - Sydney					Artefact : 1	<b>Permits</b>	102222,10239 8
38-4-0901	Weakleys 1 Locus A (W1/A)	AGD	56	370990	6368270	Open site	Partially Destroyed	Artefact : 1	3144,3431	
	<b>Contact</b>		Mr.Peter Kuskie,RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol					Artefact : 2	<b>Permits</b>	102222,10239 8
38-4-0902	Weakleys 1 Locus B (W1/B)	AGD	56	371070	6368470	Open site	Destroyed	Artefact : 2		
	<b>Contact</b>		Mr.Peter Kuskie,RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol					Artefact : 3	<b>Permits</b>	102222,10239 8
38-4-0903	Weakleys 1 Locus C (W1/C)	AGD	56	371140	6368690	Open site	Destroyed	Artefact : 2	3144,3431	
	<b>Contact</b>		Mr.Peter Kuskie,RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol					Artefact : 2	<b>Permits</b>	102222,10239 8
38-4-0904	Weakleys 1 Locus D (W1/D)	AGD	56	371180	6368740	Open site	Destroyed	Artefact : 2	3144,3431	
	<b>Contact</b>		Mr.Peter Kuskie,RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol					Artefact : 2	<b>Permits</b>	102222,10239 8

# AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : 221313  
Client Service ID : 610309

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Eastng</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status**</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
38-4-0905	Weakleys 2 Locus A (W2/A)	AGD	56	371230	6368850	Open site	Destroyed	Artefact : 5		102222,10239 8
38-4-0906	<b>Contact</b> T Russell Weakleys 4 Locus A (W4/A)	<b>Recorders</b> AGD	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol	56	371270	6368510	Open site	Artefact : 1	Permits 3144,3431	102222,10239 8
38-4-0907	<b>Contact</b> T Russell Weakleys 4 Locus B (W4/B)	<b>Recorders</b> AGD	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol	56	371310	6368600	Open site	Artefact : 1	Permits 3144,3431	102222,10239 8
38-4-0908	<b>Contact</b> T Russell Weakleys 4 Locus C (W4/C)	<b>Recorders</b> AGD	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol	56	371300	6368710	Open site	Artefact : 1	Permits 3144,3431	102222,10239 8
38-4-0909	<b>Contact</b> T Russell Weakleys 7 Locus A (W7/A)	<b>Recorders</b> AGD	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol	56	371340	6368240	Open site	Artefact : 1	Permits 3144,3431	102398
38-4-0910	<b>Contact</b> T Russell Weakleys 15 Locus A (W15/A)	<b>Recorders</b> AGD	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Miss, Philippa Sokol	56	371900	6370450	Open site	Artefact : 8	Permits 3144,3431	102568
38-4-0911	<b>Contact</b> T Russell W15/B	<b>Recorders</b> GDA	Mr. Peter Kuskie	56	371954	6370549	Open site	Artefact : 2	Permits 102568	
38-4-0912	<b>Contact</b> T Russell W15/C	<b>Recorders</b> GDA	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Mr. Ben Slack	56	371854	6370489	Open site	Artefact : 7	Permits	
38-4-0913	<b>Contact</b> T Russell W15/D	<b>Recorders</b> GDA	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Mr. Ben Slack	56	371704	6370409	Open site	Artefact : 3	Permits	
38-4-0914	<b>Contact</b> T Russell W15/E	<b>Recorders</b> GDA	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Mr. Ben Slack	56	371704	6370369	Open site	Artefact : 9	Permits	
38-4-0915	<b>Contact</b> T Russell W15/F	<b>Recorders</b> GDA	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Mr. Ben Slack	56	371674	6370279	Open site	Artefact : 8	Permits	
38-4-0916	<b>Contact</b> T Russell Weakleys 15 Locus G (W15/G)	<b>Recorders</b> AGD	Mr. Peter Kuskie, RPS Australia East Pty Ltd - Hamilton, Mr. Ben Slack	56	371350	6369930	Open site	Artefact : 19	Permits	
38-4-0917	<b>Contact</b> T Russell Weakleys 18 Locus A (W15/A)	<b>Recorders</b> AGD	Mr. Peter Kuskie	56	371820	6369600	Open site	Artefact : 1	Permits	
38-4-0918	<b>Contact</b> T Russell Weakleys 20 Locus A (W20/A)	<b>Recorders</b> AGD	Mr. Peter Kuskie	56	372030	6369420	Open site	Artefact : 98	Permits	102568
38-4-0919	<b>Contact</b> T Russell Weakleys 20 Locus B (W20/B)	<b>Recorders</b> AGD	Mr. Peter Kuskie	56	371750	6369320	Open site	Artefact : 6	Permits	
38-4-0920	<b>Contact</b> T Russell Weakleys 21 Locus A (W21/A)	<b>Recorders</b> AGD	Mr. Peter Kuskie	56	371640	6369300	Open site	Artefact : 4	Permits	
38-4-0921	<b>Contact</b> T Russell Weakleys 22 Locus A (W22/A)	<b>Recorders</b> AGD	Mr. Peter Kuskie	56	371560	6369290	Open site	Artefact : 22	Permits	
	<b>Contact</b> T Russell	<b>Recorders</b>	Mr. Peter Kuskie						Permits	

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
38-4-0922	Weakleys 23 Locus A (W23/A)	AGD	56	371490	6369290	Open site	Valid	Artefact : 1		
	<b>Contact</b> T Russell	<b>Recorders</b> Mr.Peter Kuskie								<b>Permits</b>
38-4-0923	Weakleys 23 Locus B (W23/B)	AGD	56	371430	6369260	Open site	Valid	Artefact : 1		
	<b>Contact</b> T Russell	<b>Recorders</b> Mr.Peter Kuskie								<b>Permits</b>
38-4-0924	Weakleys 23 Locus D (W23/D)	AGD	56	371300	6369200	Open site	Valid	Artefact : 1		
	<b>Contact</b> T Russell	<b>Recorders</b> Mr.Peter Kuskie								<b>Permits</b>
38-4-0925	Weakleys 23 Locus E (W23/E)	AGD	56	371350	6369160	Open site	Valid	Artefact : 2		
	<b>Contact</b> T Russell	<b>Recorders</b> Mr.Peter Kuskie								<b>Permits</b>
38-4-0926	Weakleys 23 Locus F (W23/F)	AGD	56	371340	6369110	Open site	Valid	Artefact : 1		
	<b>Contact</b> T Russell	<b>Recorders</b> Mr.Peter Kuskie								<b>Permits</b>
38-4-0982	Weakleys Drive Interchange 1	AGD	56	372250	6370700	Open site	Valid	Potential Archaeological Deposit (PAD) : -		100257,10181 4,102568
	<b>Contact</b> Searle	<b>Recorders</b> Umwelt (Australia) Pty Limited - Individual users								<b>Permits</b> 2605,2606
38-4-0464	Site 5,Beresfield;	AGD	56	372350	6368170	Open site	Valid	Artefact : -	Open Camp Site	4211,102222,1 02568
	<b>Contact</b> BS6;	<b>Recorders</b> Mr.Peter Kuskie								<b>Permits</b>
38-4-0391		AGD	56	372360	6369050	Open site	Partially Destroyed	Artefact : -	Open Camp Site	
	<b>Contact</b> CTGM1 AT1	<b>Recorders</b> Noeleen Curran								<b>Permits</b> 1066
38-4-1287		GDA	56	371995	6368278	Open site	Partially Destroyed	Artefact : 1		103089
	<b>Contact</b> Beresfield WP IP 1	<b>Recorders</b> ERM Australia Pty Ltd- Sydney CBD,Doctor,Diana Neuweger,Mr,John Simpson								<b>Permits</b> 3374
38-4-1210		GDA	56	372577	6368477	Open site	Destroyed	Artefact : 1		101939,10256 8,103090
	<b>Contact</b> Mindaribba Local Aboriginal L.	<b>Recorders</b> Doctor:Tim Owen,Kelleher Nightingale Consulting Pty Ltd,Ms,Cristiany Milicich,Mr,J								<b>Permits</b> 3432
38-4-1211		GDA	56	372697	6368494	Open site	Destroyed	Artefact : 1		101939,10256 8,103090
	<b>Contact</b> Mindaribba Local Aboriginal L.	<b>Recorders</b> Doctor:Tim Owen,Kelleher Nightingale Consulting Pty Ltd,Ms,Cristiany Milicich,Mr,J								<b>Permits</b> 3432
38-4-1212		GDA	56	372992	6368543	Open site	Destroyed	Artefact : 1		101939,10309 0
	<b>Contact</b> Mindaribba Local Aboriginal L.	<b>Recorders</b> Doctor:Tim Owen,Kelleher Nightingale Consulting Pty Ltd,Ms,Cristiany Milicich,Mr,J								<b>Permits</b> 3432
38-4-1213		GDA	56	372505	6368467	Open site	Destroyed	Artefact : 1		101939,10309 0
	<b>Contact</b> Mindaribba Local Aboriginal L.	<b>Recorders</b> Doctor:Tim Owen,Kelleher Nightingale Consulting Pty Ltd,Ms,Cristiany Milicich,Mr,J								<b>Permits</b> 3432
38-4-1214		GDA	56	372802	6368511	Open site	Partially Destroyed	Artefact : 1		101939,10256 8,103090
	<b>Contact</b> Mindaribba Local Aboriginal L.	<b>Recorders</b> Doctor:Tim Owen,Kelleher Nightingale Consulting Pty Ltd,Ms,Cristiany Milicich,Mr,J								<b>Permits</b> 3432
38-4-1216		GDA	56	371146	6368548	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) : 1		101939,10308 9
	<b>Contact</b> CTGM PAD1	<b>Recorders</b> Doctor:Tim Owen,Kelleher Nightingale Consulting Pty Ltd,Ms,Cristiany Milicich,Mr,J								<b>Permits</b>

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
38-4-1217	<u>Contact</u> CTGM PAD2	GDA	Doctor:Tim Owen,Mr,John Simpson	56 372680	6368493	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) : 1	3374	101939,10256 8,103090,1036 19
38-4-1336	<u>Contact</u> Black Hill 1	GDA	Doctor:Tim Owen,Mr,John Simpson	56 372098	6368010	Open site	Valid	Artefact : 1		
38-4-1292	<u>Contact</u> Thornton Bridge 1	GDA	Doctor:Tim Owen,ERM Australia Pty Ltd- Sydney CBD	56 372595	6371690	Open site	Partially Destroyed	Artefact : -		102615,10339 1
38-4-1385	<u>Contact</u> RPS Glenwood ST 1	GDA	Umwelt (Australia) Pty Limited - Individual users,Niche Environment and Heritage	56 372698	6371313	Open site	Valid	Modified Tree (Carved or Scarred) : 1	3398,3944	102615
38-4-1689	<u>Contact</u> CTGM-Beresfield East artefacts	GDA	RPS Australia East Pty Ltd - Hamilton,Ms.Alexandra Byrne	56 373020	6368608	Open site	Valid	Artefact : -		
38-4-1718	<u>Contact</u> RPS WD1	GDA	Mr,John Simpson	56 371729	6369585	Open site	Valid	Artefact : -		
38-4-1709	<u>Contact</u> TB IF1	GDA	Ms.Laraine Nelson	56 373393	6368616	Open site	Valid	Artefact : -		103896
38-4-1784	<u>Contact</u> CTGM-Beresfield East artefacts	GDA	Ms.Lisa Murray	56 373020	6368608	Open site	Valid	Artefact : -		
38-4-1738	<u>Contact</u> RPS BERESFIELD AS1	GDA	Mr,John Simpson	56 371672	6369070	Open site	Valid	Artefact : -		
38-4-1745	<u>Contact</u> BLACK HILL M12RT 1	GDA	RPS Australia East Pty Ltd - Hamilton	56 373519	6368274	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : -		
38-4-1746	<u>Contact</u> BLACK HILL M12RT 2	GDA	Andrew Roberts,Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andrew Costello	56 373131	6368424	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
38-4-1747	<u>Contact</u> BLACK HILL M1RT 3	GDA	Mr.Andrew Costello	56 373698	6368400	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : -		103619
38-4-1833	<u>Contact</u> Black Hill M12RT 4	GDA	Mr.Andrew Costello	56 372643	6368470	Open site	Valid	Artefact : 1		
38-4-1834	<u>Contact</u> Black Hill Power Artefact 1	GDA	Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts	56 372538	6367984	Open site	Valid	Artefact : 1		
	<u>Contact</u>		Jacobs Group (Australia) Pty Ltd - Newcastle,Mr.Andy Roberts							

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Eastng</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status**</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
38-4-1961	TB1	GDA	56	373280	6368626	Open site	Valid	Artefact :-		103896
38-4-1962	TB2	<b>Recorders</b>	Archaeological and Heritage Management Solutions, Miss. Stacey Kennedy					<b>Permits</b>		
38-4-1952	Beresfield JR East 1	GDA	56	373757	6368692	Open site	Valid	Artefact :-		103896
38-4-1953	Beresfield M1 South 1	<b>Recorders</b>	Archaeological and Heritage Management Solutions, Miss. Stacey Kennedy					<b>Permits</b>		
38-4-1954	RMS Thornton Bridge Excavation Reburial	GDA	56	372741	6368709	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		104012
38-4-1950	CTGM/M12RT Artefact reburial	<b>Recorders</b>	Niche Environment and Heritage, Kelleher Nightingale Consulting Pty Ltd, Ms. Crista					<b>Permits</b>		
38-4-2042	Renshaw-DR-IF1	GDA	56	372268	6368381	Open site	Destroyed	Artefact : 1		4366
		<b>Recorders</b>	Niche Environment and Heritage, Kelleher Nightingale Consulting Pty Ltd, Ms. Vikl G					<b>Permits</b>		
		GDA	56	372511	6371531	Open site	Valid	Artefact :-		
		<b>Recorders</b>	Umwelt (Australia) Pty Limited - Individual users, Umwelt (Australia) Pty Limited -					<b>Permits</b>		
		GDA	56	373230	6368637	Open site	Valid	Artefact :-		
		<b>Recorders</b>	Umwelt (Australia) Pty Limited - Individual users, Miss. Nicola Roche					<b>Permits</b>		
		GDA	56	372636	6368663	Open site	Valid	Artefact :-		
		<b>Recorders</b>	Biosis Pty Ltd - Wollongong, Mrs. Samantha Keats					<b>Permits</b>		

**\*\* Site Status**

**Valid** - The site has been recorded and accepted onto the system as valid

**Destroyed** - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

**Partially Destroyed** - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

**Not a site** - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

**Report generated by AHIMS Web Service on 03/08/2021 for Adam Davis for the following area at Search using shape-file 221313 Subject Lot Buffered with a buffer of 0 meters. Additional Info**  
: **Environmental Impact Assessment/ Development Application. Number of Aboriginal sites and Aboriginal objects found is 97**

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

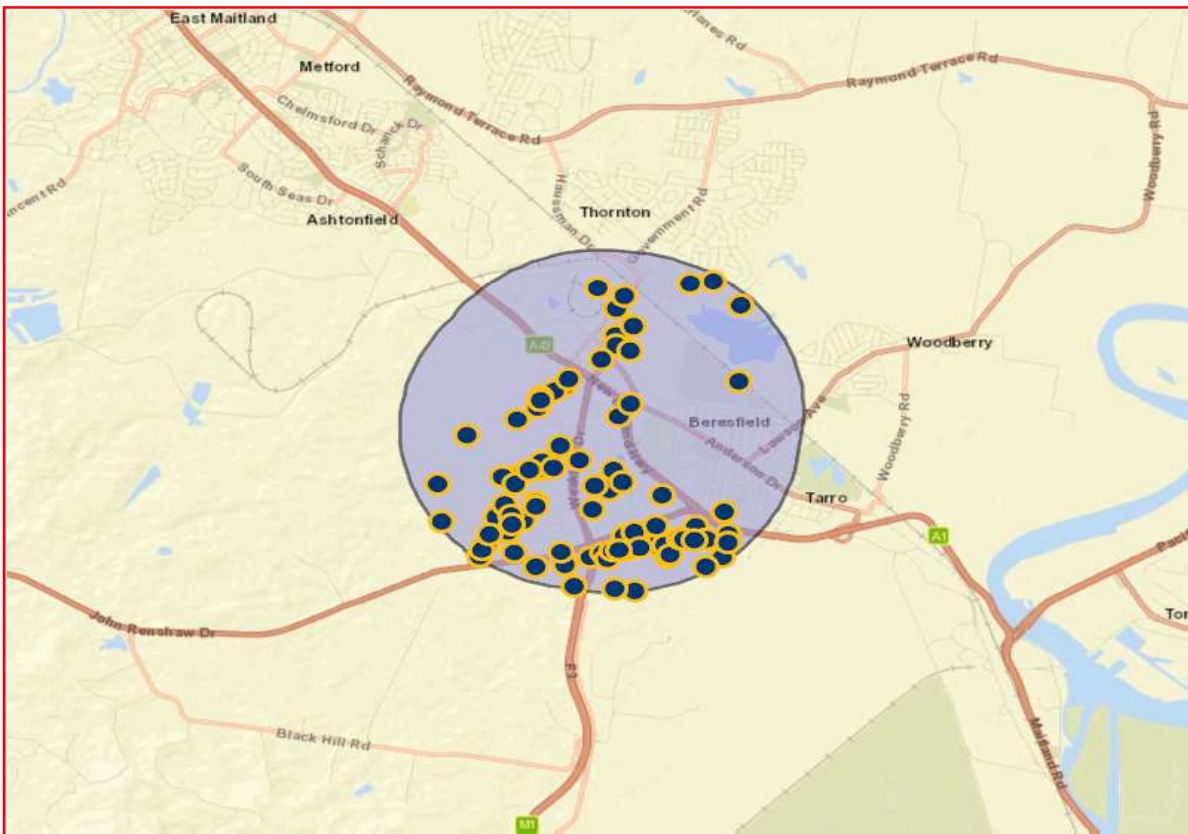
Premise Australia Pty Ltd  
 154 Peisley Street  
 Orange New South Wales 2800  
 Attention: Adam Davis  
 Email: adam.davis@premise.com.au

Date: 03 August 2021

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Search using shape-file 221313 Subject Lot Buffered with a buffer of 0 meters. Additional Info : Environmental Impact Assessment/ Development Application, conducted by Adam Davis on 03 August 2021.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

<b>97</b>	<b>Aboriginal sites are recorded in or near the above location.</b>
<b>0</b>	<b>Aboriginal places have been declared in or near the above location.*</b>

### **If your search shows Aboriginal sites or places what should you do?**

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

### **Important information about your AHIMS search**

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Premise Australia Pty Ltd  
154 Peisley Street  
Orange New South Wales 2800  
Attention: Latisha Ryall  
Email: latisha.ryall@premise.com.au

Date: 21 July 2021

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 630, DP:DP1180006 with a Buffer of 50 meters, conducted by Latisha Ryall on 21 July 2021.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

<b>1</b>	<b>Aboriginal sites are recorded in or near the above location.</b>
<b>0</b>	<b>Aboriginal places have been declared in or near the above location. *</b>

### **If your search shows Aboriginal sites or places what should you do?**

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

### **Important information about your AHIMS search**

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Premise Australia Pty Ltd  
154 Peisley Street  
Orange New South Wales 2800  
Attention: Latisha Ryall  
Email: latisha.ryall@premise.com.au

Date: 21 July 2021

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 630, DP:DP1180006 with a Buffer of 0 meters, conducted by Latisha Ryall on 21 July 2021.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

<b>0</b> Aboriginal sites are recorded in or near the above location.
<b>0</b> Aboriginal places have been declared in or near the above location. *

### **If your search shows Aboriginal sites or places what should you do?**

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

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- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
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- This search can form part of your due diligence and remains valid for 12 months.



# **APPENDIX D**

## **COUNCIL FEEDBACK**

**TO/**

Ms Nutali Nelmes  
Lord Mayor, City of Newcastle  
Level 1, City Administration Centre  
PO Box 489  
Newcastle NSW, 2300

Thursday, September 23, 2021

**RE: Beresfield Big Battery**

Dear Lord Mayor,

I would like to introduce you to an exciting project Firm Power are developing in the Newcastle City Council area. The Beresfield Battery Energy System is a proposed 100MW stand-alone battery, covering approximately 1.3 hectares of land located at 55 Weakleys Drive - adjacent to the existing Ausgrid Beresfield Substation. The battery is designed to help smooth the energy profile of the grid and provide stabilising services when needed. Energy storage is a key part of the energy transition and ultimately will aid the deployment of more renewable energy projects in the electricity grid.

Firm Power is an Australian owned grid flexibility company dedicated to delivering solutions that provide stability to a clean energy driven power system. Firm Power is committed to ensuring that energy supply and demand can be dynamically balanced, creating a more flexible electricity grid and allowing for continued renewable energy integration and power price reduction. Firm Power aim to ensure that their projects benefit the community, the environment and the economy.

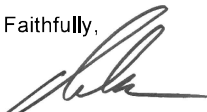
Firm Power was recently awarded a grant under the NSW Emerging Energy Program to develop a battery energy storage system in Western Sydney as a way of deferring network investment to meet peak summer loads (see here for further details: <https://energy.nsw.gov.au/renewables/clean-energy-initiatives/emerging-energy-program>).

Due to the capital investment value of the project we will be following the State Significant Planning Pathway, under which we will soon be making a request to the Department of Planning, Industry and Environment for the Secretary's Environmental Assessment Requirements (SEARs), which will specify what approvals are required for this proposal.

Firm Power have been utilising local Newcastle consultants in the early stages of our projects and are committed to using local labour where possible. This project will support your 5 year Climate Plan by increasing battery storage in the area and will support sustainable infrastructure and renewable energy.

I can see you have a proud history in delivering renewable energy solutions to the city of Newcastle with the Summerhill Solar Farm and are actively involved in a number of sustainability bodies. Given your passion, we hope the Beresfield Battery Energy System project will resonate with you and the local community. As you are a key stakeholder in this project, we are committed to keeping you informed as we progress our development. Please do not hesitate to contact me directly if you would like to know more or would like to profile the project in any way.

Yours Faithfully,



**Nick Rose**  
GENERAL MANAGER

Suite 6, Level 6, 201 Kent St Sydney NSW 2000

W [www.firmpower.com.au](http://www.firmpower.com.au)

E [info@firmpower.com.au](mailto:info@firmpower.com.au)

M 02 9000 2000

Hi Nick,

Nice to hear from you. Thanks for reaching out to Council. I look after both the economy and sustainability teams for the City of Newcastle.

This project sounds exciting and we'd be very keen to meet and hear more about the project and associated opportunities.

Please let me know when might be a good chance to jump on a call and meet.

Regards  
Nathaniel

## **Nathaniel Bavinton | Innovation & Futures Manager**

**City of Newcastle | Strategy & Engagement**

Community Strategy & Innovation | Innovation & futures

T: [+61249742878](tel:+61249742878) | M: [+61406150780](tel:+61406150780) | E: [nbavinton@ncc.nsw.gov.au](mailto:nbavinton@ncc.nsw.gov.au)



*Newcastle - a smart, liveable, sustainable global city.  
Cooperation | Respect | Excellence | Wellbeing*

**From:** Official Mail <[officialmail@ncc.nsw.gov.au](mailto:officialmail@ncc.nsw.gov.au)>  
**Sent:** Friday, 6 August 2021 3:11 PM  
**To:** Brandon McIntosh <[bmcintosh@ncc.nsw.gov.au](mailto:bmcintosh@ncc.nsw.gov.au)>  
**Cc:** Nathaniel Bavinton <[nbavinton@ncc.nsw.gov.au](mailto:nbavinton@ncc.nsw.gov.au)>  
**Subject:** FW: Beresfield Big Battery Project

Hi Brandon and Nathaniel,

Please see email below.

Regards, Records

**From:** [nick@firmpower.com.au](mailto:nick@firmpower.com.au) <[nick@firmpower.com.au](mailto:nick@firmpower.com.au)>  
**Sent:** Friday, 6 August 2021 1:54 PM  
**To:** Official Mail <[officialmail@ncc.nsw.gov.au](mailto:officialmail@ncc.nsw.gov.au)>  
**Subject:** Beresfield Big Battery Project

Attn: Economic Development Team and Sustainability Team

I have made phone contact with council and have been advised to send this email to start the right introductions.

Firm Power are in the early stages of developing a big battery project at Beresfield. The battery will be located within the Ausgrid Substation land area on Weakleys Drive and will be used for energy trading and grid stabilisation. The project value is circa \$100m and, as such, planning will be governed by the State Significant Development pathway. However, we are

eager to have some early engagement with council to ensure NCC is well informed of our plans at this early stage.

We would welcome the opportunity to discuss this further with the right people at council.

Regards,  
Nick

**Nick Rose**  
General Manager  
Firm Power Pty Ltd

M: +61 (0) 418 259 692  
E: [nick@firmpower.com.au](mailto:nick@firmpower.com.au)  
W: [www.firmpower.com.au](http://www.firmpower.com.au)



# **APPENDIX E**

## **LOCAL COMMUNITY ENGAGEMENT LETTER**

Wednesday, September 22, 2021

Dear Resident,

**A BATTERY ENERGY STORAGE SYSTEM PROPOSAL FOR BERESFIELD**

We are writing to tell you about a proposal for a Battery Energy Storage System (BESS) in your local area that is being developed by Firm Power.

Firm Power is an Australian owned grid flexibility company dedicated to delivering solutions that provide stability to a clean energy driven power system. Firm Power is committed to ensuring that energy supply and demand can be dynamically balanced, creating a more flexible electricity grid and allowing for continued renewable energy integration and power price reduction. Firm Power aim to ensure that their projects benefit the community, the environment and the economy.

Firm Power is proposing to build a Battery Energy Storage System BESS in Beresfield, on approximately 1.3 hectares of land located at 55 Weakleys Drive adjacent to the existing Ausgrid Beresfield Substation. The proposed BESS System includes a 100-megawatt (MW) stand-alone battery that will be used to store and provide power to the local energy grid.

The proposal is in the early stages and we want to work closely with the community as we develop this important project. As we progress through each stage of local and state government approval processes, we will provide more detailed information about the project and invite you to ask questions and provide feedback on the proposal.

We will soon be making a request to the Department of Planning, Industry and Environment for the Secretary's Environmental Assessment Requirements (SEARs), which will specify what approvals are required for this proposal. The Department will publish the SEARs on their website once they have reviewed our request.

When the SEARs have been received, we will hold information sessions for the local community where you will be able to talk to members of our team, ask questions and provide your feedback.

In the meantime, you can contact us on 1800 224 273, by email at [beresfield@firmpower.com.au](mailto:beresfield@firmpower.com.au) or visit our website at <https://www.firmpower.com.au/beresfield>.

We understand the importance of keeping the local community informed and we look forward to talking to you more about this exciting project.

Kind Regards,

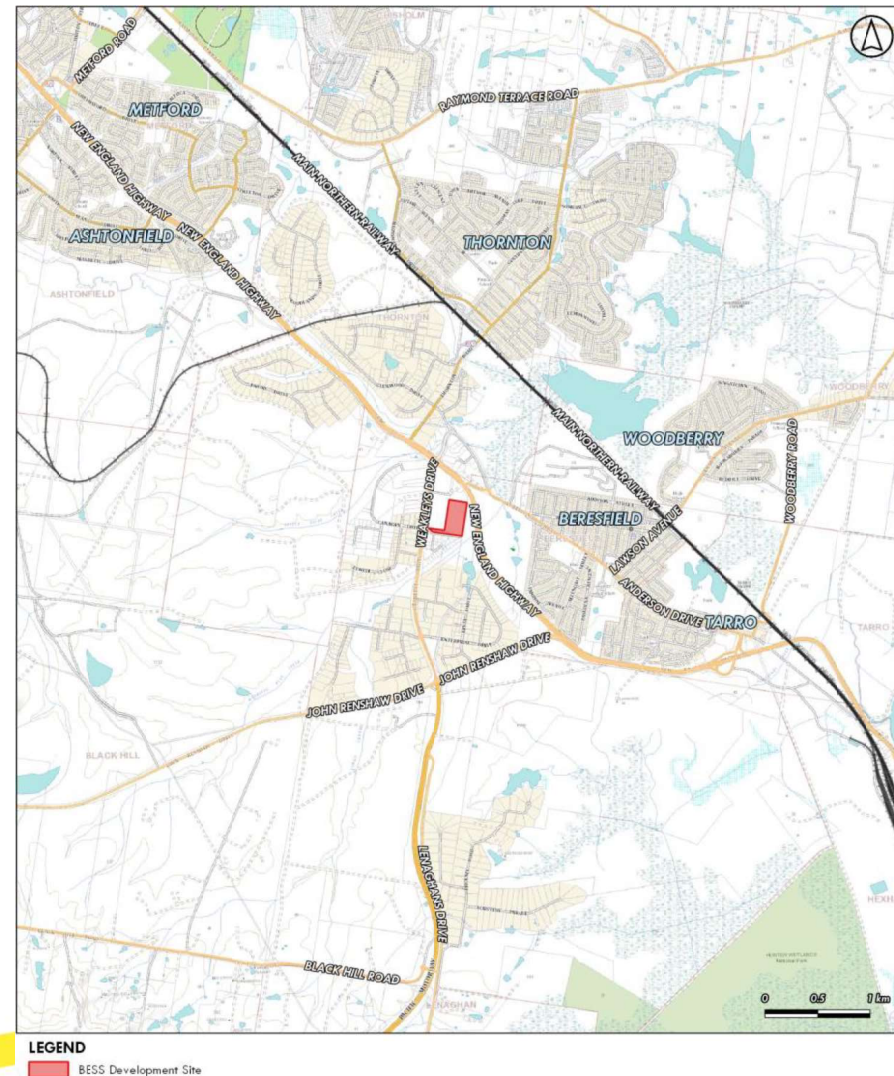


**Nick Rose**  
GENERAL MANAGER

Suite 6, Level 6, 201 Kent St Sydney NSW 2000

W [www.firmpower.com.au](http://www.firmpower.com.au)

E [info@firmpower.com.au](mailto:info@firmpower.com.au)



Tuesday, October 26, 2021

Dear Resident,

**A BATTERY ENERGY STORAGE SYSTEM PROPOSAL FOR BERESFIELD**

We last wrote to you on 22 September 2021 about the above proposed project.

Firm Power is planning to build a Battery Energy Storage System BESS in Beresfield, on approximately 1.3 hectares of land located at 55 Weakleys Drive adjacent to the existing Ausgrid Beresfield Substation. The proposed BESS System includes a 100-megawatt (MW) stand-alone battery that will be used to store and provide power to the local energy grid.

A representative of Firm Power visited today to discuss the project with you; sorry we missed you.

We visited to make sure that you received our first letter and to confirm that you understand how to get in touch with us about the project.

Since we last wrote to you, we have met with the Department Planning, Industry and Environment have agreed that the project is a State Significant Project and that we can proceed to prepare a scoping report.

We are targeting issuing the scoping report to the Department in early November. The scoping report supports a request for the Secretary's Environmental Assessment Requirements (SEARs), which will specify what approvals are required for this proposal. The Department will publish the SEARs on their website once they have reviewed our request.

When the SEARs have been received, we will hold information sessions for the local community where you will be able to talk to members of our team, ask questions and provide your feedback.

In the meantime, if you have any questions or wish to provide feedback, please do not hesitate to contact us. You can contact us on 1800 224 273, by email at [beresfield@firmpower.com.au](mailto:beresfield@firmpower.com.au) or visit our website at <https://www.firmpower.com.au/beresfield>.

We understand the importance of keeping the local community informed and we look forward to talking to you more about this exciting project.

Kind Regards,

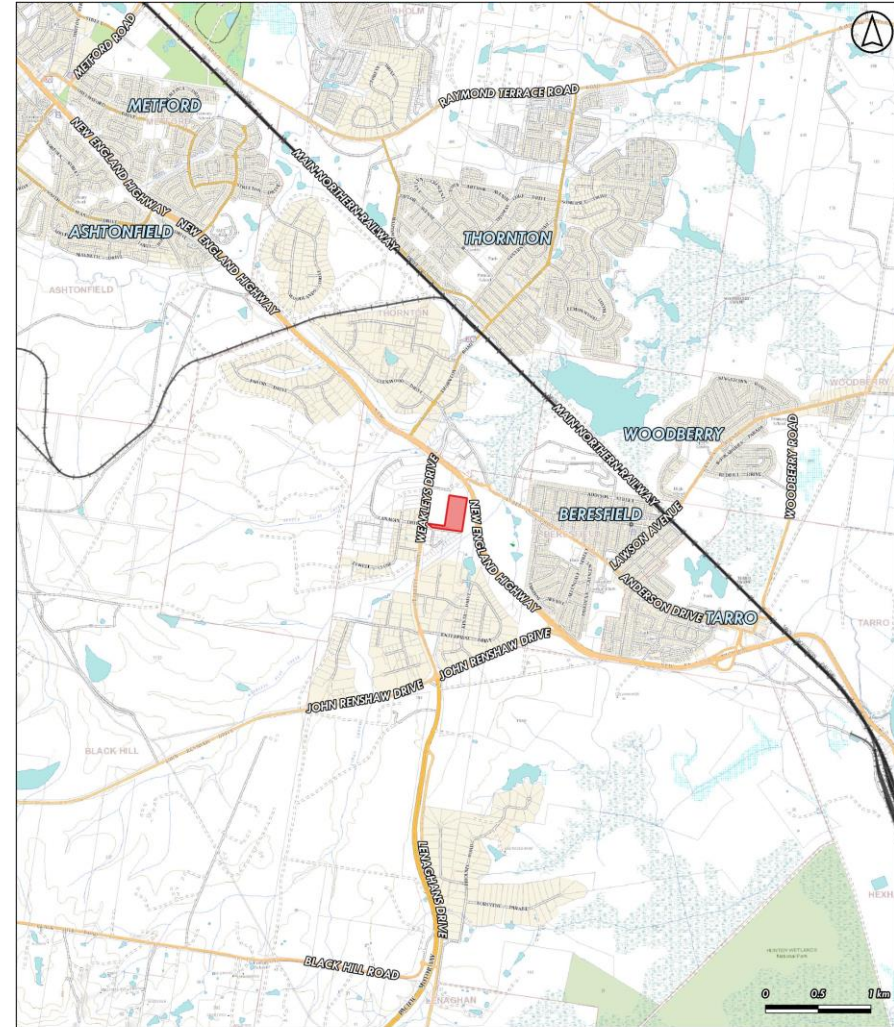


**Nick Rose**  
GENERAL MANAGER

Suite 6, Level 6, 201 Kent St Sydney NSW 2000

W [www.firmpower.com.au](http://www.firmpower.com.au)

E [info@firmpower.com.au](mailto:info@firmpower.com.au)





# **APPENDIX F**

## **ENGAGEMENT REGISTER**

### Community Groups and Regulators

Name	Type	Email	Reason For Engagement	Send Date	Format
Head OFFICE NSW ALC	NSW ALC	<a href="mailto:workplace@alc.org.au">workplace@alc.org.au</a>	Within LALC area	27/09/2021	Email
Mindaribba Local Aboriginal Land Council	LALC	(Left message 24/09. No answer 27/09 and 28/09)	Within LALC area	-	-
RFS NSW (General Enquiries)	RFS	<a href="mailto:webmaster@rfs.nsw.gov.au">webmaster@rfs.nsw.gov.au</a>	Proximity to bushfire prone land.	27/09/2021	Email
RFS NSW (Planning and Environment Services Service)	RFS	<a href="mailto:customerservice.centre@rfs.nsw.gov.au">customerservice.centre@rfs.nsw.gov.au</a>	Proximity to bushfire prone land.	27/09/2021	Email
Fire and Rescue NSW (General enquiries)	Fire and Rescue NSW	<a href="mailto:info@fire.nsw.gov.au">info@fire.nsw.gov.au</a>	Proximity to bushfire prone land.	27/09/2021	Email
Fire and Rescue NSW Advised Department	Fire and Rescue NSW	<a href="mailto:firesafety@fire.nsw.gov.au">firesafety@fire.nsw.gov.au</a>	Proximity to bushfire prone land.	27/09/2021	Email
TfNSW Advised Department	Regulator	<a href="mailto:development.sydney@transport.nsw.gov.au">development.sydney@transport.nsw.gov.au</a>	Potential to impact transport Network.	27/09/2021	Email
Natural Resource Access Regulator (NRAR)	Regulator	<a href="mailto:landuse.enquiries@dpie.nsw.gov.au">landuse.enquiries@dpie.nsw.gov.au</a>	Proximity to waterfront land.	28/09/2021	Email
DPI (Fisheries) (General Enquiries)	Regulator	<a href="mailto:information-advisory@dpi.nsw.gov.au">information-advisory@dpi.nsw.gov.au</a>	Proximity of mapped key fish habitat.	27/09/2021	Email
DPI (Fisheries) 2 (Port Stephens Fisheries Institute)	Regulator	(called 24/09,27/09 and 28/09)	Proximity of mapped key fish habitat.	-	-
Environmental Protection Authority (EPA) NSW	Regulator	<a href="mailto:info@epa.nsw.gov.au">info@epa.nsw.gov.au</a>	Due Diligence. No real requirements. BESS projects do not constitute licensed works.	27/09/2021	Email
Landcare groups	Community	<a href="mailto:hunterregionlandcare@gmail.com">hunterregionlandcare@gmail.com</a>	Local Group with interest in environment	27/09/2021	Email
Hunter Community Environment Centre	Community	<a href="mailto:coordinator@hcec.org.au">coordinator@hcec.org.au</a>	Local Community Identified via Nature Conservation Council	27/09/2021	Email
Wilderness Society	Community	<a href="mailto:info@wilderness.org.au">info@wilderness.org.au</a>	Local Community Identified via Nature Conservation Council	27/09/2021	Email
Hunter Environmental Institute (HEI)	Community	<a href="mailto:hunterenviroinstitute@gmail.com">hunterenviroinstitute@gmail.com</a>	Regional Group with interest in environment	29/09/2021	Email
Hunter Environmental Institute (HEI) 2 cc'd	Community	<a href="mailto:huntercentralcoast@environment.nsw.gov.au">huntercentralcoast@environment.nsw.gov.au</a>	Regional Group with interest in environment	29/09/2021	Email
Transition Newcastle	Community	<a href="mailto:info@transitionnewcastle.org.au">info@transitionnewcastle.org.au</a>	Local Community Identified via Nature Conservation Council	29/09/2021	Email

### Local non-associated landowners

Receptor	Type	Direction	Distance from Site (m)	Address	Locality	Send Date	Format
1	Dwelling	West	250	60 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
2	Dwelling	West	250	54 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
3	Dwelling	West	250	48 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
4	Dwelling	North West	250	40 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
5	Dwelling	North West	260	36 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
6	Dwelling	North West	280	30 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
7	Dwelling	North West	290	24 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
8	Dwelling	North West	310	20 WEAKLEYS DRIVE	BERESFIELD	22/09/2021	Post
9	Landscaping Business	North	0	179 NEW ENGLAND HIGHWAY	BERESFIELD	22/09/2021	Post
10	Sikh Temple	North	80	167 NEW ENGLAND HIGHWAY	BERESFIELD	22/09/2021	Post
11	Golf Course	East	140	3/260 ANDERSON DRIVE	BERESFIELD	22/09/2021	Post
12	TruckSmart	East	250	4 CANAVAN DRIVE	BERESFIELD	22/09/2021	Post
13	CBC Beresfield	East	250	2 CANAVAN DRIVE	BERESFIELD	22/09/2021	Post



# **APPENDIX G**

## **REGULATORY BODY AND COMMUNITY GROUP ENGAGEMENT LETTERS**

Friday, September 24, 2021

To whom it may concern,

**A BATTERY ENERGY STORAGE SYSTEM PROPOSAL FOR BERESFIELD**

We are writing to tell you about a proposal for a Battery Energy Storage System (BESS) in your local area that is being developed by Firm Power.

Firm Power is an Australian owned grid flexibility company dedicated to delivering solutions that provide stability to a clean energy driven power system. Firm Power is committed to ensuring that energy supply and demand can be dynamically balanced, creating a more flexible electricity grid and allowing for continued renewable energy integration and power price reduction. Firm Power aim to ensure that their projects benefit the community, the environment and the economy.

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The proposal is in the early stages and we want to work closely with you as we develop this important project.

We will soon be making a request to the Department of Planning, Industry and Environment for the Secretary's Environmental Assessment Requirements (SEARs), which will specify what approvals are required for this proposal. The Department will publish the SEARs on their website once they have reviewed our request.

When the SEARs have been received, further engagement with key stakeholders will occur.

If you have any comments regarding this project, please respond in writing to [beresfield@firmpower.com.au](mailto:beresfield@firmpower.com.au).

Kind Regards,

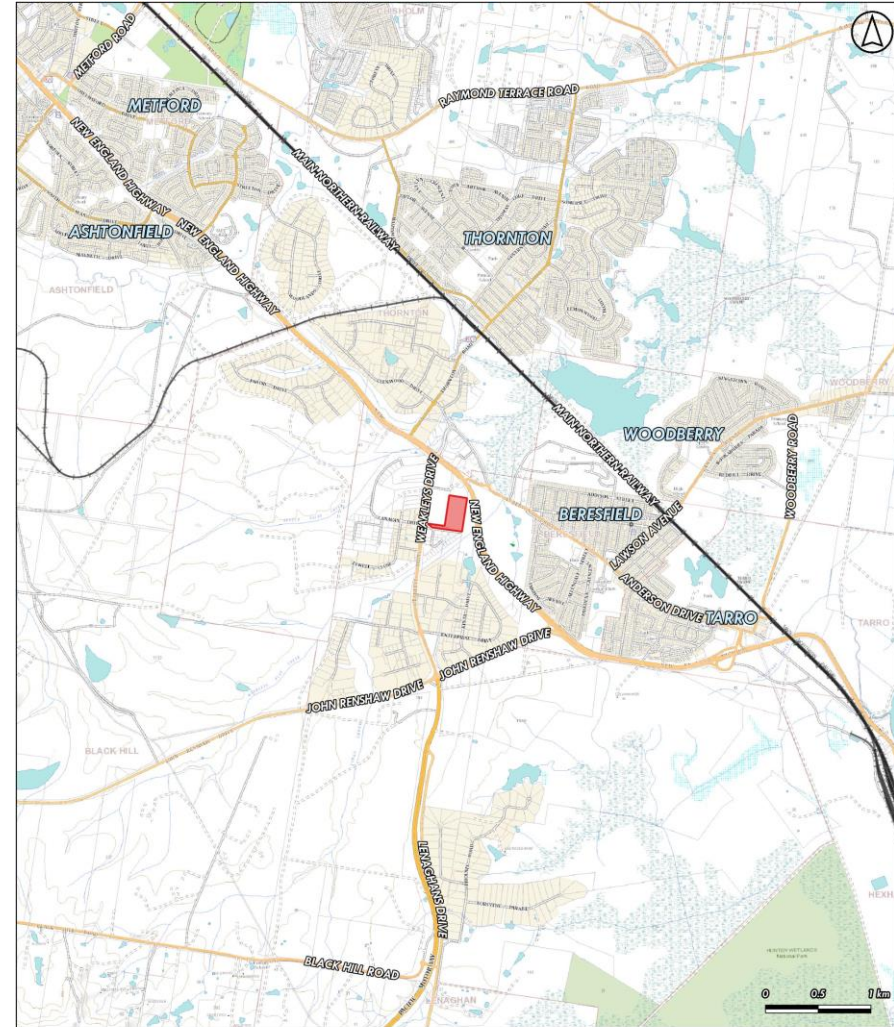


**Nick Rose**  
GENERAL MANAGER

Suite 6, Level 6, 201 Kent St Sydney NSW 2000

**W** [www.firmpower.com.au](http://www.firmpower.com.au)

**E** [info@firmpower.com.au](mailto:info@firmpower.com.au)



Friday, September 24, 2021

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Kind Regards,

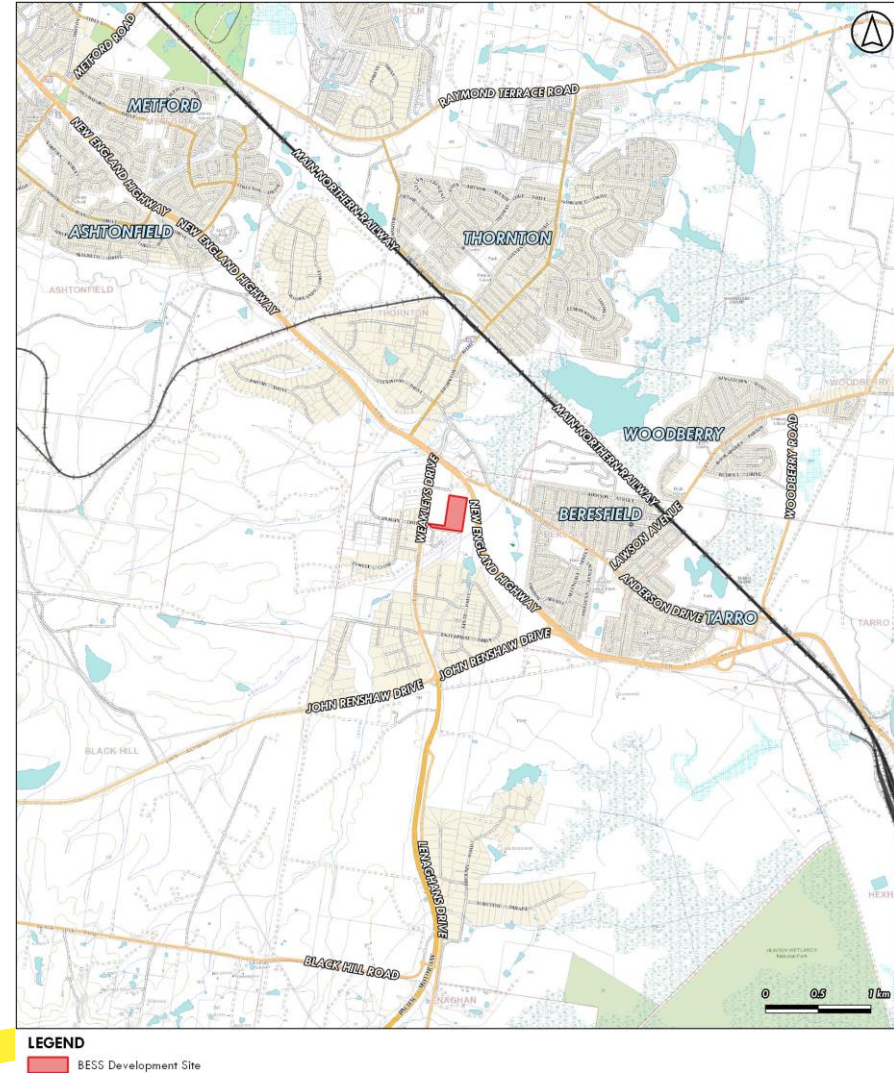


**Nick Rose**  
GENERAL MANAGER

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**E** [info@firmpower.com.au](mailto:info@firmpower.com.au)

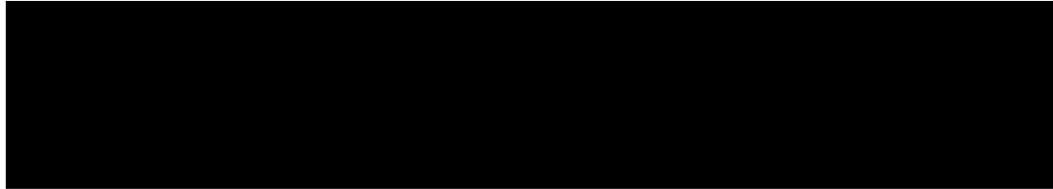




# **APPENDIX H**

## **SUBSIDENCE ADVISORY NSW FEEDBACK**

Hi David, see advice below:



Lot 630 DP118006, 55 Weakleys Drive, Beresfield - **EOTH21-00239**

This site is not in a Mine Subsidence District but is undermined in the Big Ben seam.

When was the substation there built?

Would you have any records of grouting the mine workings there?

I feel we should have a File, but can't locate it at present.

Battery bank within existing substation. No additional requirements likely.

Kind Regards,

**Paul Gray** | Senior Building Assessment Officer

**Subsidence Advisory NSW**

Better Regulation Division | Department of Customer Service

P: 4908 4300

E: [subsidencedevelopment@customerservice.nsw.gov.au](mailto:subsidencedevelopment@customerservice.nsw.gov.au) | [www.subsidenceadvisory.nsw.gov.au](http://www.subsidenceadvisory.nsw.gov.au)



Please consider the environment before printing this email

**From:** subsidenceadvisory <[subsidenceadvisory@customerservice.nsw.gov.au](mailto:subsidenceadvisory@customerservice.nsw.gov.au)>

**Sent:** Friday, 6 August 2021 2:55 PM

**To:** Paul Gray

**Cc:** subsidenceadvisory <[subsidenceadvisory@customerservice.nsw.gov.au](mailto:subsidenceadvisory@customerservice.nsw.gov.au)>

**Subject:** FW: [#221313] Pre-lodgement advice - 3 x SSD battery energy storage system projects

Hi Paul,

Please see the below email and the attached. I have created enquiries and assigned to you, details below.



[REDACTED]  
Lot 630 DP118006, 55 Weakleys Drive, Beresfield - EOTH21-00239

Please Cc Advisory in your response and we will save it against each enquiry.

Regards,  
Soma

**From:** David Walker <[David.Walker@premise.com.au](mailto:David.Walker@premise.com.au)>

**Sent:** Friday, 6 August 2021 9:17 AM

**To:** subsidenceadvisory <[subsidenceadvisory@customerservice.nsw.gov.au](mailto:subsidenceadvisory@customerservice.nsw.gov.au)>

**Subject:** [#221313] Pre-lodgement advice - 3 x SSD battery energy storage system projects

Good morning

Premise acts for Firm Power who are in the process of commencing the process of seeking approval for three proposed battery energy storage systems, to be located at the following locations:

- [REDACTED]
3. Beresfield BESS – 100 MW/200 MWh – Lot 630 DP118006, 55 Weakleys Drive, Beresfield

We note that:

- [REDACTED]
3. The Beresfield site is located within an area identified as having been the subject of underground mining (based on confidential information provided to Subsidence Advisory provided by the Resource Regulator)

The three applications will each be lodged with Dept Planning, Industry and Environment as State Significant Development and will be supported by preparation of individual site specific EIS's.

Prior to preparing EIS's for site, the applicant will seek the Secretary's Environmental Assessment Requirements and engage with DPIE via a pre scoping meeting.

The purpose of this email is to be confirm the requirements of Subsidence Advisory NSW in the making of the applications.

Please confirm whether specific information with respect to potential impacts around subsidence are required to be provided in the preparation of the initial SEARs request and scoping report.

Please contact the undersigned with any questions.

Kind regards



**DAVID WALKER**  
**Town Planning Discipline Lead**

**T** 02 6393 5000 | **M** 0437 621 057  
**E** [David.Walker@premise.com.au](mailto:David.Walker@premise.com.au)  
**A** 154 Peisley St, Orange NSW 2800



\*\*\*\*\*

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# **APPENDIX I**

## **SOCIAL IMPACT SCOPING WORKSHEET**

Social Impact Assessment (SIA) Worksheet			Project name: Apsley Battery Energy Storage System					Date: Nov-21									
CATEGORIES OF SOCIAL IMPACTS	POTENTIAL IMPACTS ON PEOPLE		PREVIOUS INVESTIGATION OF IMPACT	CUMULATIVE IMPACTS	ELEMENTS OF IMPACTS - Based on preliminary investigation	ASSESSMENT LEVEL FOR EACH IMPACT	PROJECT REFINEMENT			MITIGATION / ENHANCEMENT MEASURES							
	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.	Is the impact expected to be positive or negative					Has this impact previously been investigated (on this or other project/s)?	If "yes - this project," briefly describe the previous investigation. If "yes - other project," identify the other project and investigation	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?		If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics	Level of assessment for each social impact	What methods and data sources will be used to investigate this impact?			Has the project been refined in response to preliminary impact evaluation or stakeholder feedback?
							extent i.e. number of people potentially affected?	duration of expected impacts? (i.e. construction vs operational phase)	intensity of expected impacts i.e. scale or degree of change?	sensitivity or vulnerability of people potentially affected?	level of concern/interest of people potentially affected?		Secondary data	Primary Data - Consultation	Primary Data - Research		
surroundings	Increased noise to receivers	negative	Yes - other project	Broken Hill and Hume BESS projects	No		Yes	Yes	Yes	Yes	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	Management through appropriate on site controls during construction
surroundings	Increased noise to receivers	negative	Yes - other project	Broken Hill and Hume BESS projects	No		Unknown	Unknown	Unknown	Unknown	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	Adopt standard measures (working within standard hours etc). Conduct noise impact assessment and adopt suitable mitigation/management measures.
surroundings	Changes to the landscape and visual amenity	negative	Yes - other project	Broken Hill and Hume BESS projects	No		No	Yes	Unknown	Unknown	Yes	Detailed	Required	Broad engagement	Targeted engagement	Yes	Visibility of site and context of receiving environment considered in site selection. Visual impacts to be assessed in detail in assessment and the need for, or extent of, visual mitigation measures identified
health and wellbeing	Changes in air quality during construction	negative	Yes - other project	Broken Hill and Hume BESS projects	No		Yes	Yes	Yes	Yes	Unknown	Standard	Required	Broad engagement	Targeted engagement	No	To be determined during assessment
access	Increased traffic during construction causing short term disruption	negative	Yes - other project	Broken Hill and Hume BESS projects	Unknown		No	No	No	No	Unknown	Standard	Required	Limited	Not required	No	Management through appropriate on site controls during construction
access	Increased traffic during operation causing disruption	negative	Yes - other project	Broken Hill and Hume BESS projects	No		No	No	No	No	Unknown	Standard	Required	Limited	Not required	No	Management through appropriate on site controls during construction
health and wellbeing	Changes to landscape and visual amenity	Negative	Yes - other project	Broken Hill and Hume BESS projects	Yes	Awaba BESS	Yes	Yes	Yes	Yes	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	Project refinement as required to avoid impact where possible
culture	Potential for impacts to unknown items or sites of Aboriginal heritage	negative	Yes - other project	Broken Hill and Hume BESS projects	Yes	Awaba BESS	Yes	Yes	Yes	Yes	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	Project refinement as required to avoid impact where possible
way of life	Reduction in power prices in the locality	Positive	Yes - other project	Broken Hill and Hume BESS projects	Yes	Awaba BESS	Yes	Yes	Yes	Yes	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	None required
livelihoods	Increased employment opportunities during construction phase	Positive	Yes - other project	Broken Hill and Hume BESS projects	Yes	Awaba BESS	Yes	Yes	Yes	Yes	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	Buy/use local resources where possible
livelihoods	Increased employment opportunities during operational phase	Positive	Yes - other project	Broken Hill and Hume BESS projects	Yes	Awaba BESS	Yes	Yes	Yes	Yes	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	Buy/use local resources where possible
way of life	Concern about introduction of project into locality and nature of changes	negative	Yes - other project	Broken Hill and Hume BESS projects	No		Yes	Yes	Yes	Yes	Unknown	Detailed	Required	Broad engagement	Targeted engagement	No	To be determined during assessment



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