



**MAIZEWOOD**

## SCOPING REPORT

### UPPER HUNTER BATTERY ENERGY STORAGE SYSTEM

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# 1. INTRODUCTION

## 1.1 OVERVIEW

Maizewood Pty Ltd (Maizewood), (the applicant) is proposing to develop a battery energy storage system (BESS) with a capacity of 400 megawatts (MW), in the town of Aberdeen, NSW 2236 (the 'Project'). The project is located within the Upper Hunter Shire Council local government area (LGA) and borders the Muswellbrook Shire Council LGA (refer to **Figure 1**). The Project is known as the Upper Hunter BESS.

The subject site is on Campbell St, Aberdeen, NSW 2236, comprising lots 35,36,37,38,39 & 56 of deposited plan (DP) 752485 and a paper road (hereafter referred to as the 'project site' or 'site') (refer to **Figure 2**). The project will include:

- An upgrade to the project site entry located on Campbell St, Aberdeen
- Fencing and landscaping to the site perimeter
- Installation of lithium-ion batteries with an aggregated capacity of up to 400MW and 800 megawatt hours (MWh)
- Overhead or underground cables to connect the Project to the electricity grid to the east of the project site
- Installation of a switching station and associated infrastructure, including cabling, transformers, carpark, storage area, site fencing, lighting, temporary construction site office and amenities.

The Project is classified as State Significant Development (SSD) under section 4.36 of the Environmental Planning and Assessment Act 1979 (EP&A Act) as it has a capital investment value (CIV) greater than \$30 million and meets the criteria in section 20 of Schedule 1 of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP). Consequently, the Project will require development consent from the Minister for Planning (or delegate) or the Independent Planning Commission (IPC) under Division 4.7 of the EP&A Act.

This Scoping Report has been prepared to identify the project site, describe the proposed development, confirm the planning approval pathway, and identify the key environmental considerations. The purpose of the scoping report is to provide enough information to enable the Department of Planning and Environment (DPE) to issue targeted and site-specific Secretary's Environmental Assessment Requirements (SEARs) for the Environmental Impact Statement (EIS).

## 1.2 APPLICANT

The applicant for the Upper Hunter BESS is Maizewood Pty Ltd (ABN: 45 640 912 036). The address of Maizewood is Suite 7, Level 1, Condamine St, Manly Vale, NSW 2093.

Maizewood is an Australian renewable energy and energy storage development company that specialises in the planning, project management and delivery of renewable energy assets in Australia. Maizewood's objectives are aligned with the NSW Electricity Infrastructure Roadmap to transform the NSW electricity grid into one that is cheap, clean, and reliable. Maizewood collaborates with landowners and local communities to ensure that our projects have a positive impact and deliver the wanted outcomes for the local communities.

## 1.3 PURPOSE OF THIS REPORT

This document provides a description of the Project and presents the strategic context of the Project. It presents a preliminary risk-based assessment to identify key and other matters that will be addressed in the EIS. The purpose of this report is to present the findings of the risk-based assessment to DPE in order to receive SEARs for the Project.

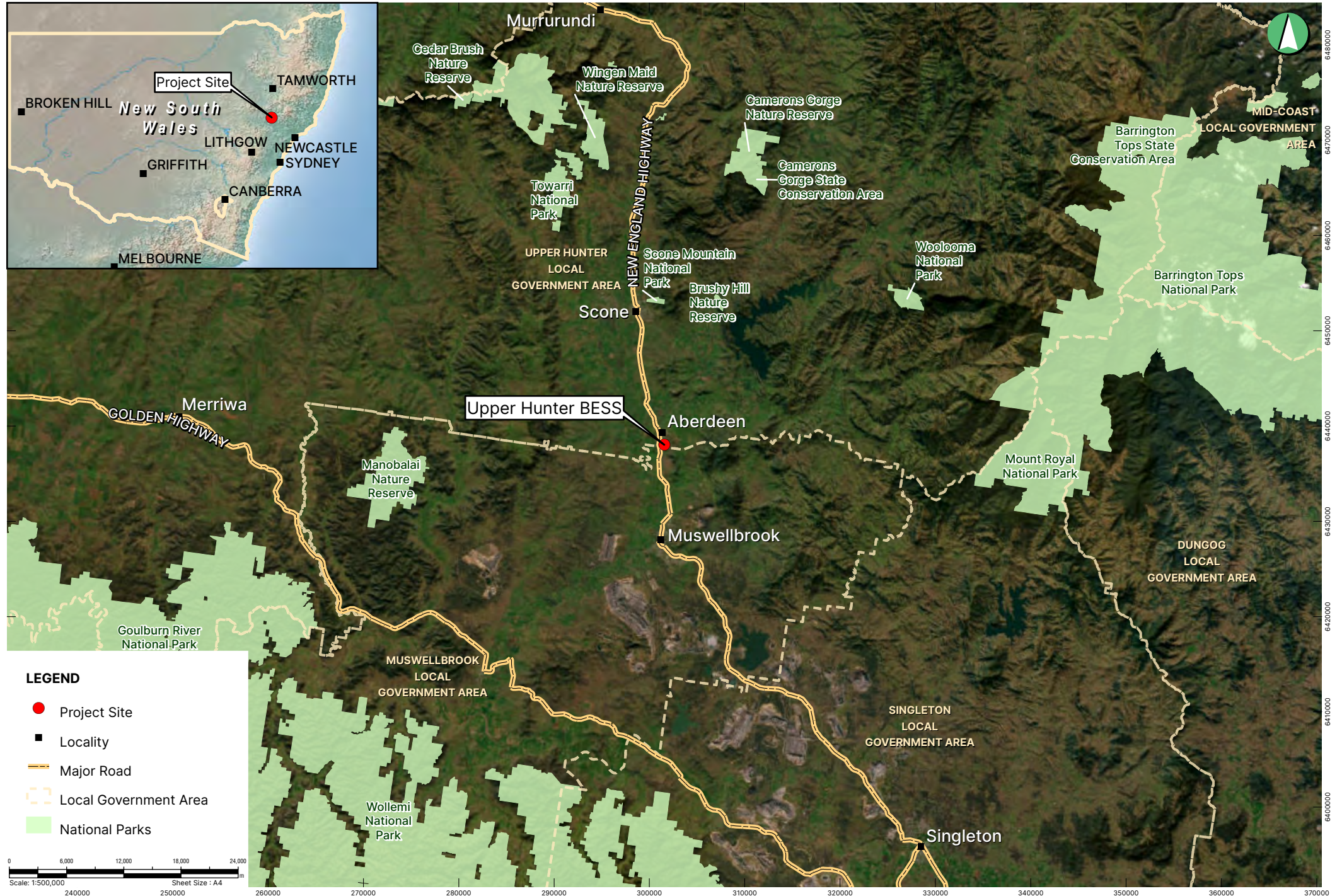
## 1.4 DOCUMENT STRUCTURE

This Scoping Report has been prepared in accordance with the State Significant Development Guidelines (Department of Planning, Industry and Environment [DPIE] 2021) and the State significant development guidelines – preparing a scoping report (DPIE 2021). This Scoping Report includes the following chapters:

- Chapter 1: Introduction to the Project
- Chapter 2: Strategic context for the Project, identifying the key strategic issues that are likely to be relevant to the Project
- Chapter 3: Description of the Project
- Chapter 4: Overview of the statutory requirements for the Project
- Chapter 5: Summary of the community engagement that has been undertaken, and a description of the activities that will be carried out during the preparation of the EIS
- Chapter 6: Identification of the matters that will require further assessment within the EIS, and the approach to assessing each of these matters
- Chapter 7: Conclusion
- Chapter 8: References

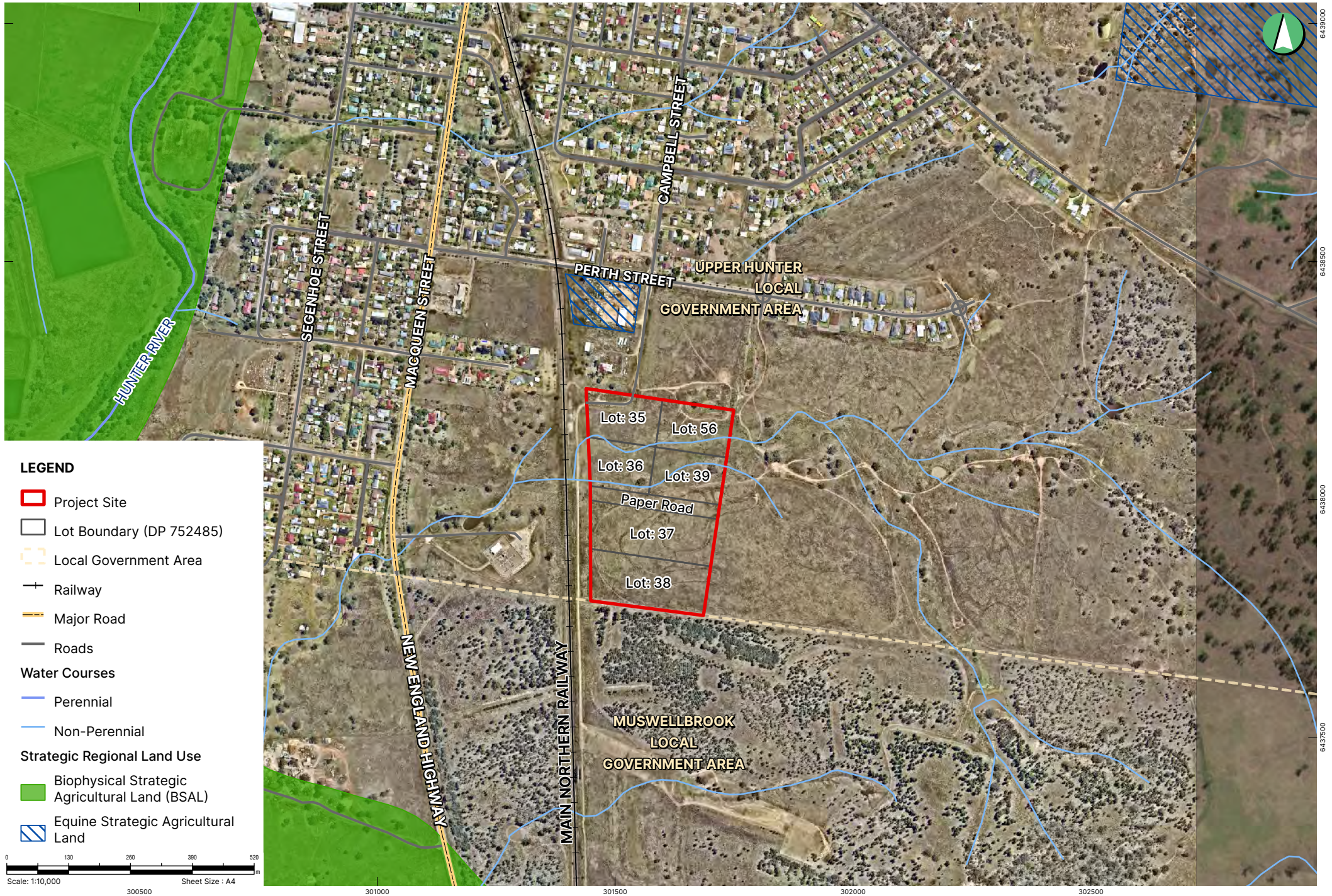


**FIGURE 1 - Regional Context**





**FIGURE 2 - Site Locality**





## 2. STRATEGIC CONTEXT

### 2.1 POLICY

#### 2.1.1 NSW ELECTRICITY INFRASTRUCTURE ROADMAP (DPIE 2020)

The NSW Electricity Infrastructure Roadmap (DPIE 2020) outlines a plan to transition the electricity grid into one that provides cheap, clean, and reliable electricity. The roadmap sets out a plan to deliver multiple Renewable Energy Zones (REZ) in the Central-West Orana, New England, South-West, Hunter-Central Coast, and Illawarra regions. The plan recognises the requirement for a large capacity of new renewable energy and storage systems in preparation for the planned retirement of the existing coal fired power stations. The roadmap outlines five foundational pillars being:

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

The Project is located within the Hunter-Central Coast REZ and will support the goals of the roadmap. The selected site is within proximity to existing high-voltage electricity assets and intends to connect to the network at a strong area of the grid. With several new renewable energy assets expected to come online over coming years, the Project is well positioned to assist with the transition to renewable generation.

#### 2.1.2 ENERGY SECURITY SAFEGUARD (NSW GOVERNMENT 2020)

The Energy Security Safeguard (NSW Government 2020) outlines that it will establish a new Peak Demand Reduction Scheme (PDRS), which will support activities that reduce electricity demand at peak time. It is expected that the PDRS will reduce energy costs in NSW.

The proposed energy storage project has the technical capability to bid into frequency control ancillary service (FCAS) markets, which may assist the reduction of electricity demand shortfalls at peak times, as such, the project is aligned with the objectives set out in the Energy Security Safeguard.

#### 2.1.3 NSW ELECTRICITY STRATEGY (DPIE 2019)

The NSW Electricity Strategy (DPIE 2019) sets out to ensure reliable, sustainable, and affordable electricity in NSW that supports a growing economy. The strategy outlines the known challenges the energy market faces in the near future and sets out the below plan to overcome these challenges:

- Delivering Australia's first coordinated REZ in the Central-West Orana region
- Saving energy, especially at times of peak demand via the Energy Security Safeguard
- Supporting the development of new electricity generators
- Setting a target to bolster the state's energy resilience
- making it easier to do energy business in NSW

The proposed energy storage project supports the objectives of the NSW Electricity Strategy by:

- Being located within the Hunter-Central Coast REZ
- Providing new electricity generation development
- Improving peak demand (balancing energy from non-peak times to peak times)
- Improve grid reliability
- Enhancing the dispatchability of new renewable energy generation



#### 2.1.4 AUSTRALIA'S LONG TERM EMISSIONS REDUCTION PLAN

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

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

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

The current LETS (2021) include energy storage as an existing priority technology for government investment. Specifically, the LETS indicates that broad deployment of electrical energy storage will facilitate further integration of low-cost solar and wind electricity in the grid. The LETS states that energy storage will provide network security services and a source of reliable, dispatchable electricity. This should help reduce pressure on electricity prices by meeting peaks in consumer demands.

The Project would be consistent with the principles of the high priority technologies outlined in the Long-Term Emissions Reduction Plan, as stated above.

#### 2.1.5 HUNTER REGIONAL PLAN 2041 (HRP)

The Hunter Regional Plan 2041 (the Regional Plan) is a 20-year land use plan prepared under the EP&A Act. The Regional Plan applies to the nine Local Government Areas (LGAs) of the lower Hunter (including Port Stephens), as well as the Councils within the Upper Hunter. The Regional Plan sets the strategic land use framework for continued economic growth and diversification in one of Australia's most diverse and liveable regions. The plan aims to unlock sustainable growth opportunities and investments, as well as housing choice and lifestyle opportunities to retain the Hunter's position as a leading regional economy in Australia. The Regional Plan includes four principles, which include:

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

To support the delivery of these core principles, the Regional Plan contains nine objectives, which are enforced through several strategies. Of relevance to this Project is Objective 1 and Objective 7, being:

##### **Objective 1: Diversify the Hunter's mining, energy, and industrial capacity:**

The objective refers leveraging opportunities created by the completion of the Hunter-Central coast Renewable Energy Zone (REZ) such as new employment in related manufacturing and energy intense industries that benefit from the proximity to the energy infrastructure within the REZ. The project will contribute to the outcomes of the Hunter - Central Coast REZ

##### **Objective 7: Reach net zero and increase resilience and sustainable infrastructure:**

The objective refers to reducing emissions, achieving the goal of net zero by 2050, and supporting the NSW Electricity Infrastructure Roadmap. The project aligns with these goals by supporting new renewable energy

generation projects in the region, which in turn will contribute to the outcome of achieving the goal of net zero by 2050 and support the objectives set out in the NSW Electricity Infrastructure Roadmap.

The EIS will address the project's performance in supporting the relevant objectives and strategies of the HRP.

### 2.1.6 LOCAL STRATEGIC PLANNING STATEMENT 2020

The Draft Upper Hunter Shire Council Local Strategic Planning Statement 2020 (LSPS) (UHSC 2020) is Council's vision for land use planning over a 20-year period. The LSPS gives effect to the HRP, outlining Planning Priorities for the LGA. Planning priorities under the LSPS relevant to the Project include:

- The development of land and infrastructure is orderly and economical,
- Facilitate the use of renewable energy, and
- Encourage economic diversification

The EIS will address the Project's performance in supporting the relevant planning priorities and actions of the LSPS.

## 2.2 LOCAL CONTEXT

The town of Aberdeen is located approximately 2km north of project site and contains a mix of residential, industrial, commercial, and rural properties. Aberdeen is in the Hunter Region of NSW and is located on the New England Highway. The population of Aberdeen is circa 2,000. Aberdeen is located 190km North of Sydney, 120km Northwest of Newcastle and 9km north of Muswellbrook.

The local area has been subject to extensive historical mining. There are nine historic mining and exploration titles within the surrounding area of the project site. One active coal mining licence (CL0386) exists within the surrounding area of the project site, however this active coal licence does not intersect with the project site.

## 2.3 SITE AND SURROUNDS

### 2.3.1 OVERVIEW

The project site is located approximately 2km south of the township of Aberdeen with access to the site from Campbell St, as shown in **Figure 3**. The project site is located in the Upper Hunter LGA, bordering the Muswellbrook Shire LGA. The project site is situated on undeveloped land that has been historically cleared. Review of historical aerial imagery from 1930 to 2021 suggests that the project site has predominantly remained unoccupied.

The project site is located in close proximity to critical electricity transmission infrastructure including TransGrid's 330kv feeder no 88 located approximately 2km to the east of the site and local TransGrid 330kv substation located to the southwest of the site (refer to **Figure 14**). The project site is also located within the Hunter Central-Coast Renewable Energy Zone as shown in **Figure 15**.

The site is zoned E4 – General Industrial under the Upper Hunter Local Environmental Plan 2013 (Upper Hunter LEP) (refer to **Figure 4**). Surrounding land use zones include MU1 – Mixed Use to the west, R1 – General Residential to the north and east, E4 – General Industrial to the north and C3 – Environmental Management to the south. Land uses surrounding the project site include:

- West - The Australian Rail Track Corporation (ARTC) owned main Northern Line rail corridor, with the Ausgrid Aberdeen distribution zone substation and associated infrastructure further to the west,
- North – minor structures, Campbell Street, a landscape supplies and earthmoving business and unoccupied land,
- East – Unoccupied land,
- South – Vegetated area and rifle range immediately adjacent, situated further south is the Dartbrook coal operations.

Low-density residential areas are located further north and west of the project site, with evidence of further

residential development to the northeast of the project site. The nearest residential receptor to the Project is location approximately 160m to the west. **Table 1** below provides an overview of key project site details.

TABLE 1 - PROJECT SITE SUMMARY

Address	Campbell Street, Aberdeen, NSW
Real Property Description	Lots 35, 36, 37, 38, 39 and 56 of DP752485 and a paper road.
Land	Landowner consent has been obtained
Site Area	12 hectares
Local Government Area	Upper Hunter Shire Council
Regional Plan	Hunter Regional Plan 2041
Zoning	E4 – General Industrial
Proximity to receptors	Nearest residential receptor is located approximately 160 m to the west.
Local Aboriginal Land Council	Wanaruah Local Aboriginal Land Council

### 2.3.2 ACCESS

As shown in **Figure 3**, the project site access is via Campbell St, Aberdeen, which is located to the south of Perth St, and a short distance (approximately 0.5km) from New England Highway. An existing gravel road is present along the west of the project site between the site boundary and the rail line. The project site is currently fenced on the north and west boundaries.

### 2.3.3 MINING & EXPLORATION

As shown in **Figure 5**, the project site is not located within a mine subsidence district, however the project site is bordered to the south by the Muswellbrook mining subsidence district. There are nine historic mining and exploitation titles within the surrounding areas of the site. One active coal mining license (CL386) existing within the surrounding areas of the site, however this active coal mining license does not intersect with the project site.

### 2.3.4 HERITAGE

Review of the State Heritage Register, Upper Hunter LEP, and a search of the Aboriginal Heritage Information Management System (AHIMS) has identified that the project site does not contain any items, objects, or artefacts of Aboriginal or European heritage significance. Heritage items identified in the surrounding area include the following (as shown in **Figure 6**):

- ‘The Grange’ (I89) listed under the LEP, is the nearest European heritage item located 250m to the west of the project site.
- An AHIMS Extensive Search (**Appendix D**) conducted on 9 August 2023 has identified six (6) Aboriginal sites located within a 1 km buffer of the project site.

### 2.3.5 HYDROGEOLOGY

#### 2.3.5.1 GROUNDWATER

As shown on **Figure 8**, there are 2 groundwater boreholes located within a 1 km radius of the Project, as listed below:

- GW059213 – approx. 600m to the west of the project site



- GW064250 – approx. 800m to the northwest of the project site

None of these groundwater boreholes includes a known standing water level. Expanding the search radius, the nearest groundwater bore with a standing water level provided is GW080585 with a standing water level of 10.0m. GW080585 is located approximately 1.2 km west of the project site in close proximity to Hunter River. Given the location of the borehole to Hunter River, groundwater levels are expected to be higher at the project site.

### 2.3.5.2 SURFACE WATER

As shown in **Figure 8**, there are 2 watercourses present towards the North of the project site (lots 35, 36, 39 and 56) which drain towards the Hunter River, potentially a seasonal stream, which bifurcates across the site generally flowing from the east to the west.

Flood prone land is identified to the west of the project site, along the Hunter River. The site is not identified as flood prone in the 1 in a 100-year flood event (1% AEP) or probably maximum flood (PMF) under the Aberdeen Flood Study (Council 2013).

### 2.3.5.3 SOIL LANDSCAPE

As shown in **Figure 7**, the Donalds Gully soil landscape runs through the northern portion of the project site and the southern portions of the project site are mapped as the Cresfield Road soil landscape.

The Donalds Gully soil landscape comprises a landscape of gently undulating plains to undulating rises and soils that are moderately deep to deep, imperfectly to poorly drained Sodosols and Natric Kurosols. Donalds Gully soil landscape has moderate to high limitations to urban land uses.

The Cresfield Road soil landscape comprises a landscape of undulating low hills and often complex soil variations including Sodosols, Chromosols and Kurosols on simple side slope areas. The Cresfield Road soil landscape has slight to moderate limitations to urban land uses.

### 2.3.5.4 CONTAMINATION

A search of the NSW EPA Contaminated Land Record on 8 August 2023 identified one contaminated site within the suburb of Aberdeen, being:

- A former transport depot located at 87-89 St Andrews Street, Aberdeen, located approximately 400m to the north of the project site.

### 2.3.6 LAND RESOURCES

As shown in **Figure 9** the project site contains a mixture of Class 4 and Class 5 land soil capability classes.

To the west of the project site there is land mapped as Strategic Agricultural Land – Biophysical (BSAL). There is a small area of land at the corner of Perth Street and Campbell Street mapped as Strategic Agricultural Land – Equine (ESAL), with a larger area mapped further north of the project site. The project site does not contain any mapped BSAL or ESAL land.

### 2.3.7 VEGETATION

As shown in **Figure 10**, the project site does not contain any mapped vegetation aligning to a native plant community type. During a site survey, limited isolated remnant trees were identified on the site. Native PCTs are mapped as present further west, east and south of the project site.

### 2.3.8 BUSHFIRE

The project site is mapped in a bush fire prone area under the NSW Rural Fire Service (RFS) Bush Fire Prone Land Mapping Tool, as illustrated on **Figure 11**. Most of the site is mapped as Vegetation Category 3, with adjacent land



**FIGURE 3 - Site Context**



**LEGEND**

- Project Site
- Lot Boundary
- Major Road
- Roads
- Railway
- Site Access
- Transmission Infrastructure
- Electricity Transmission Line

**Water Courses**

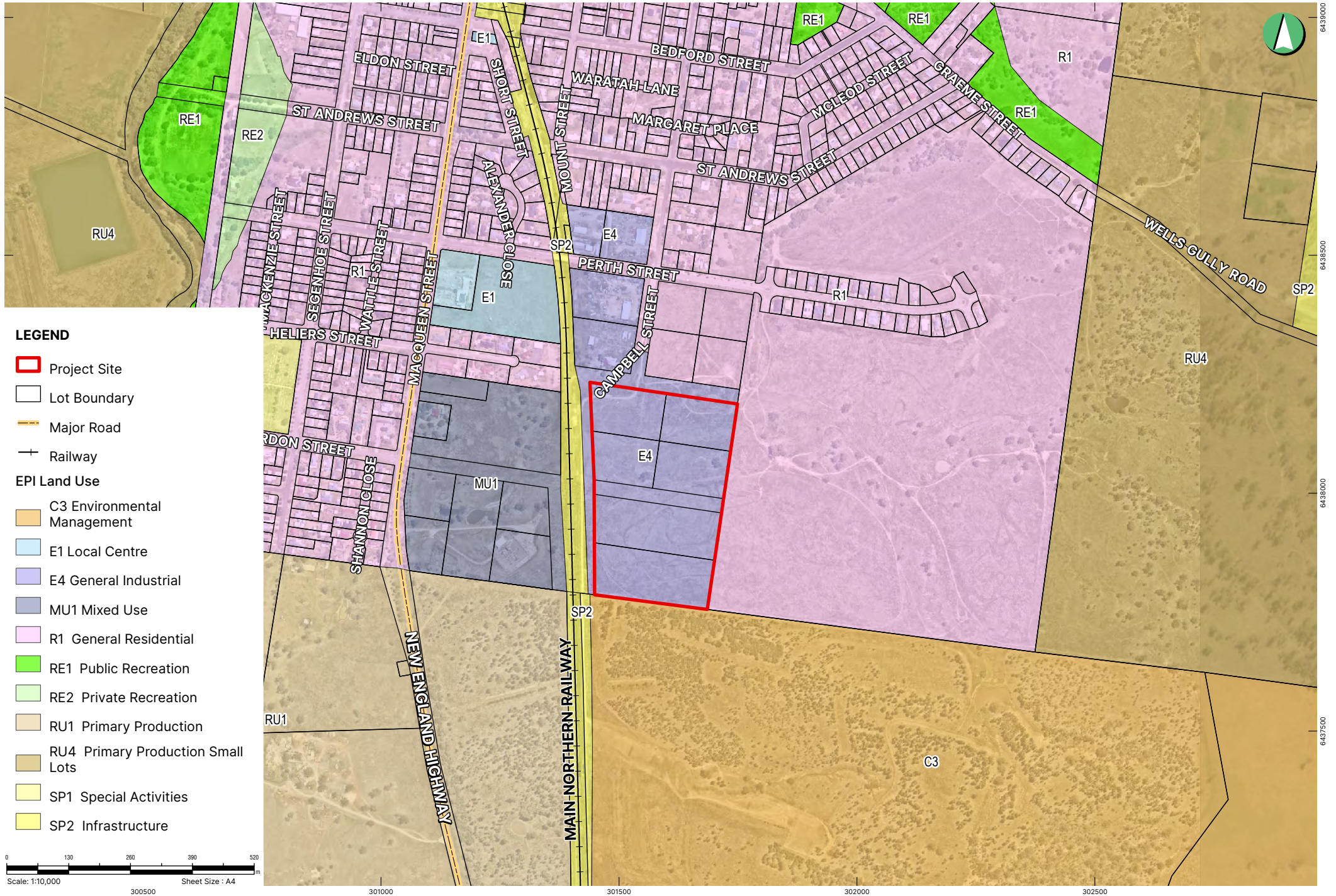
- Perennial
- Non-Perennial

0 130 260 390 520  
 Scale: 1:10,000 Sheet Size : A4  
 300500 301000 301500 302000 302500





**FIGURE 4 - Land Use Zoning**



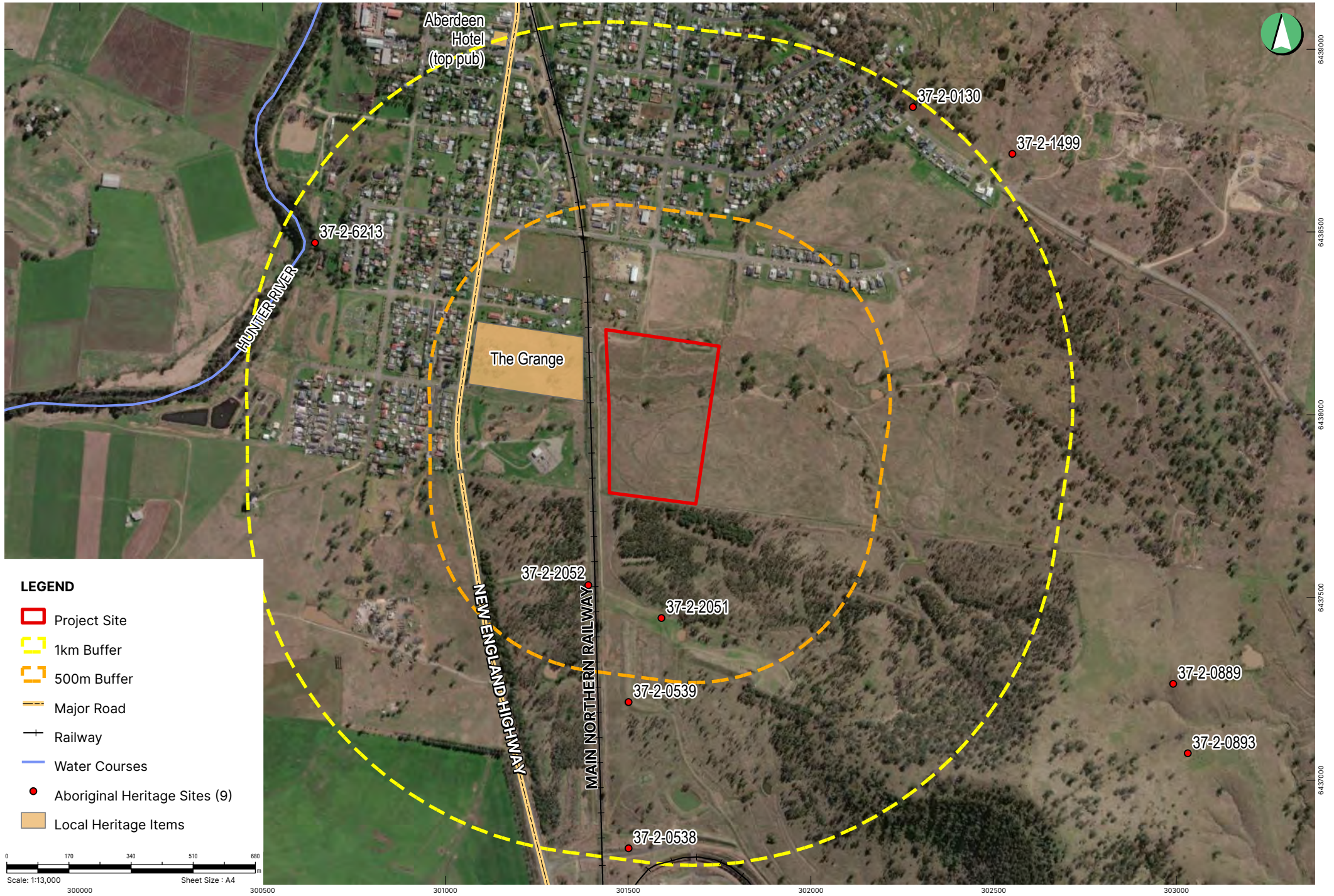


**FIGURE 5 - Exploration and Mining Titles**



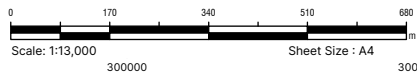


**FIGURE 6 - Heritage**



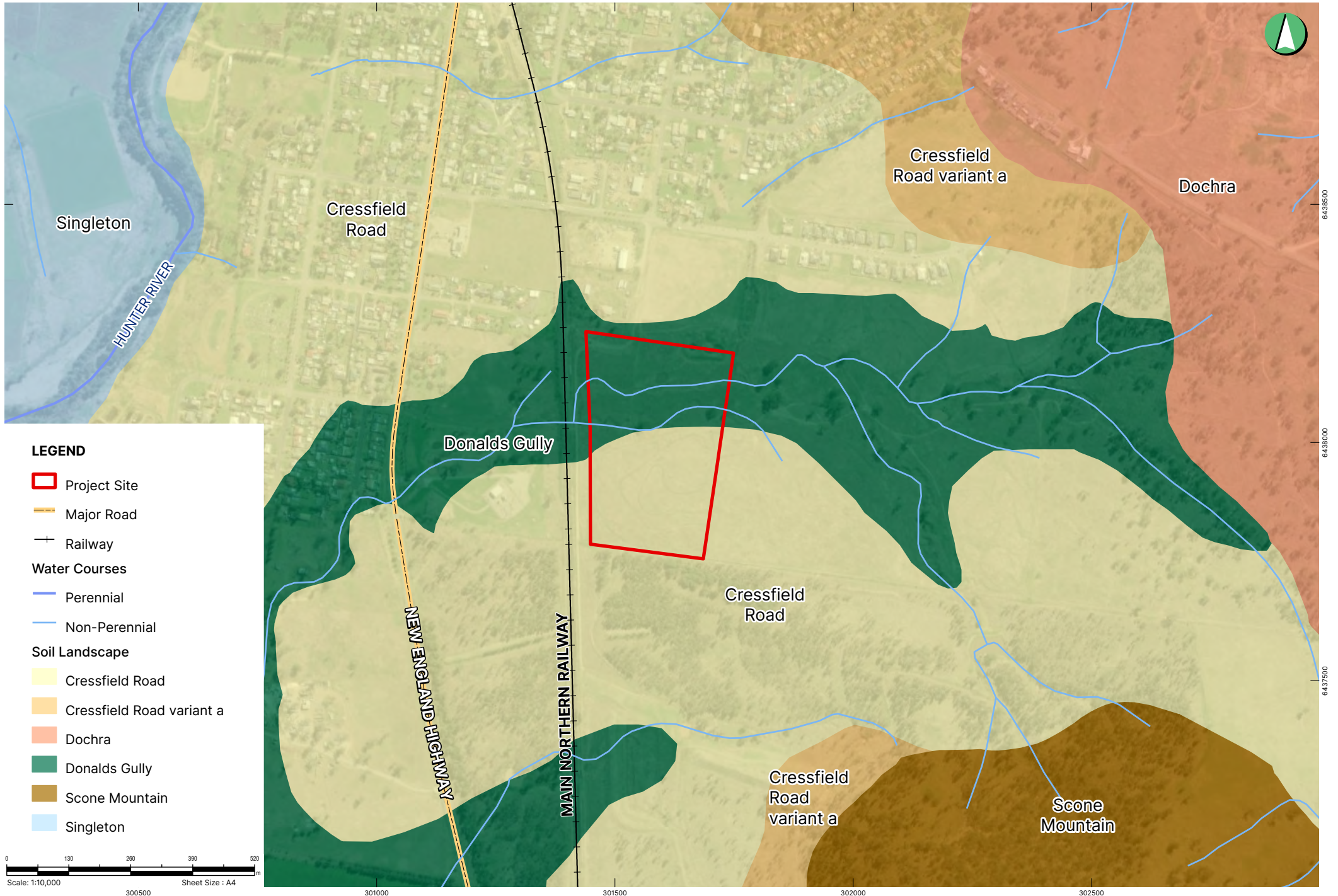
**LEGEND**

- Project Site
- 1km Buffer
- 500m Buffer
- Major Road
- Railway
- Water Courses
- Aboriginal Heritage Sites (9)
- Local Heritage Items



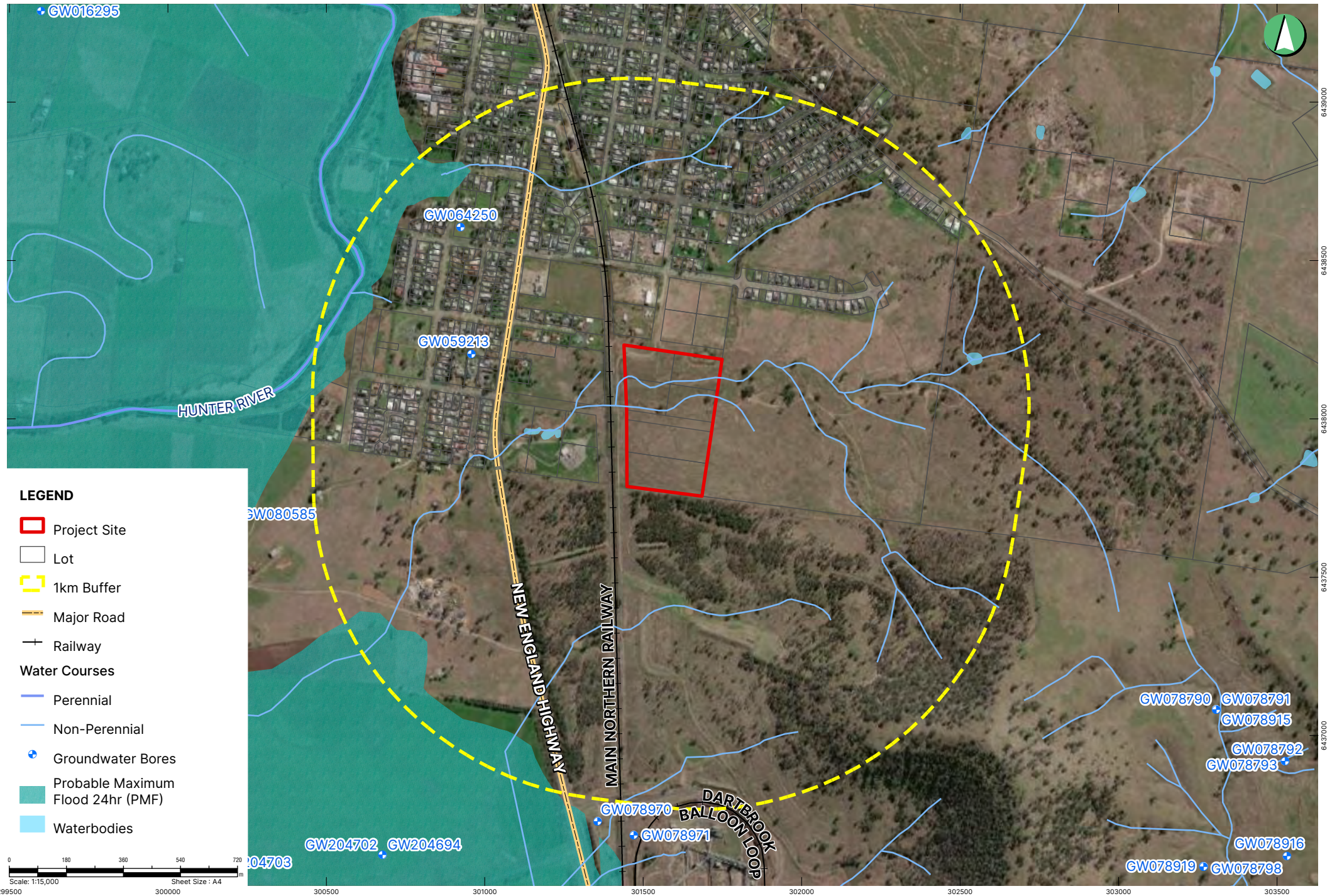


**FIGURE 7 - Soil Landscapes**



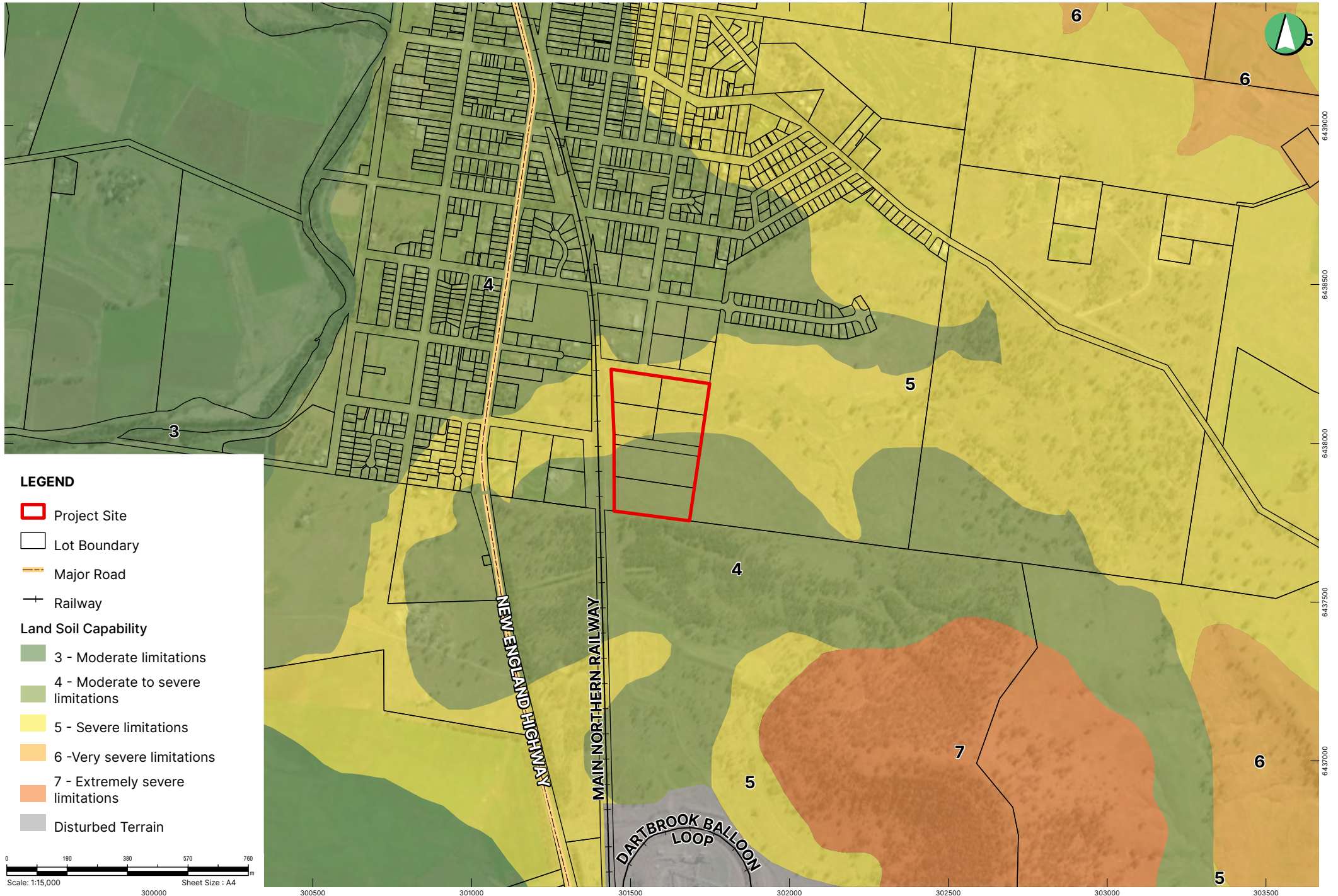


**FIGURE 8 - Groundwater and Surface Water**



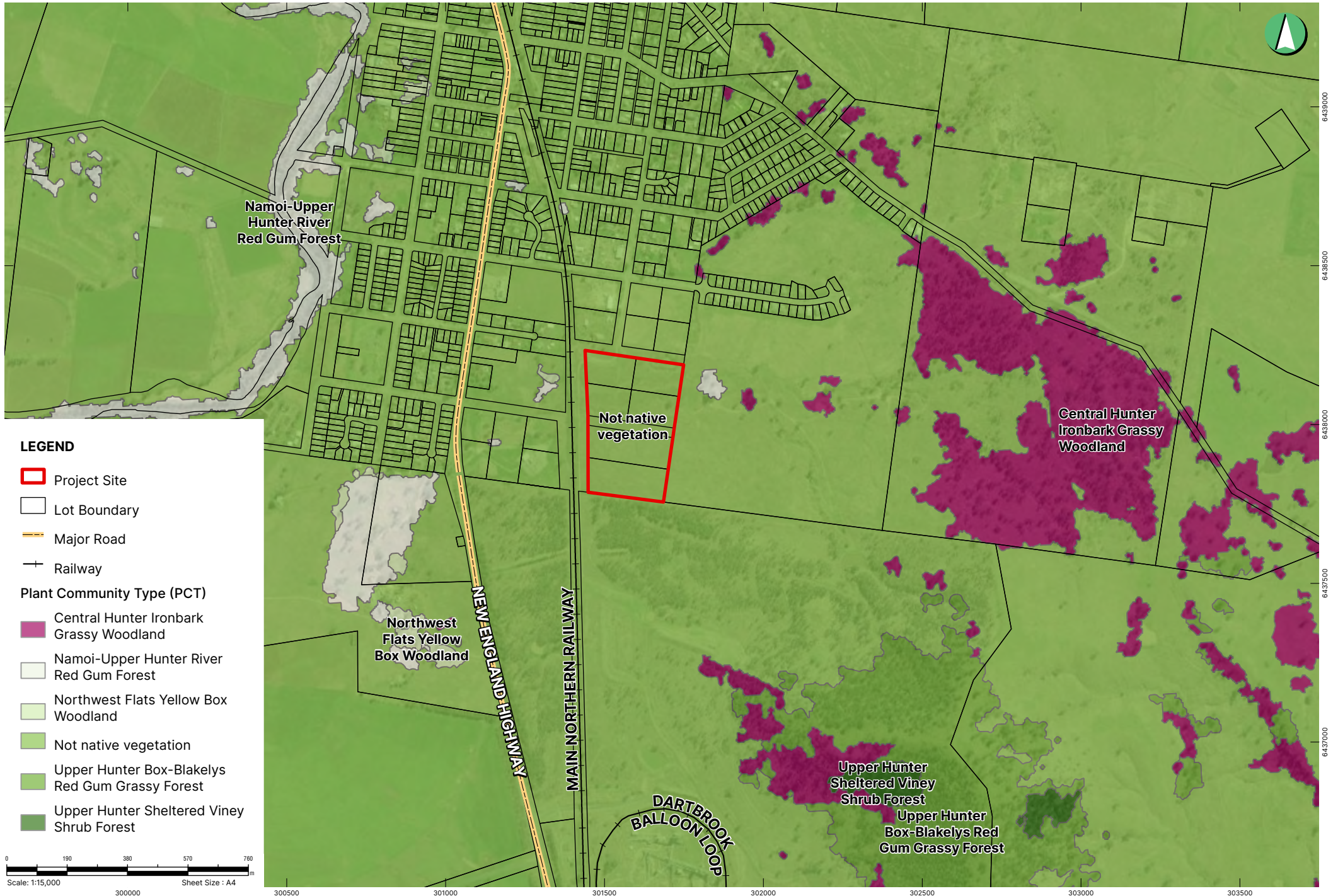


**FIGURE 9 - Land Soil Capability**



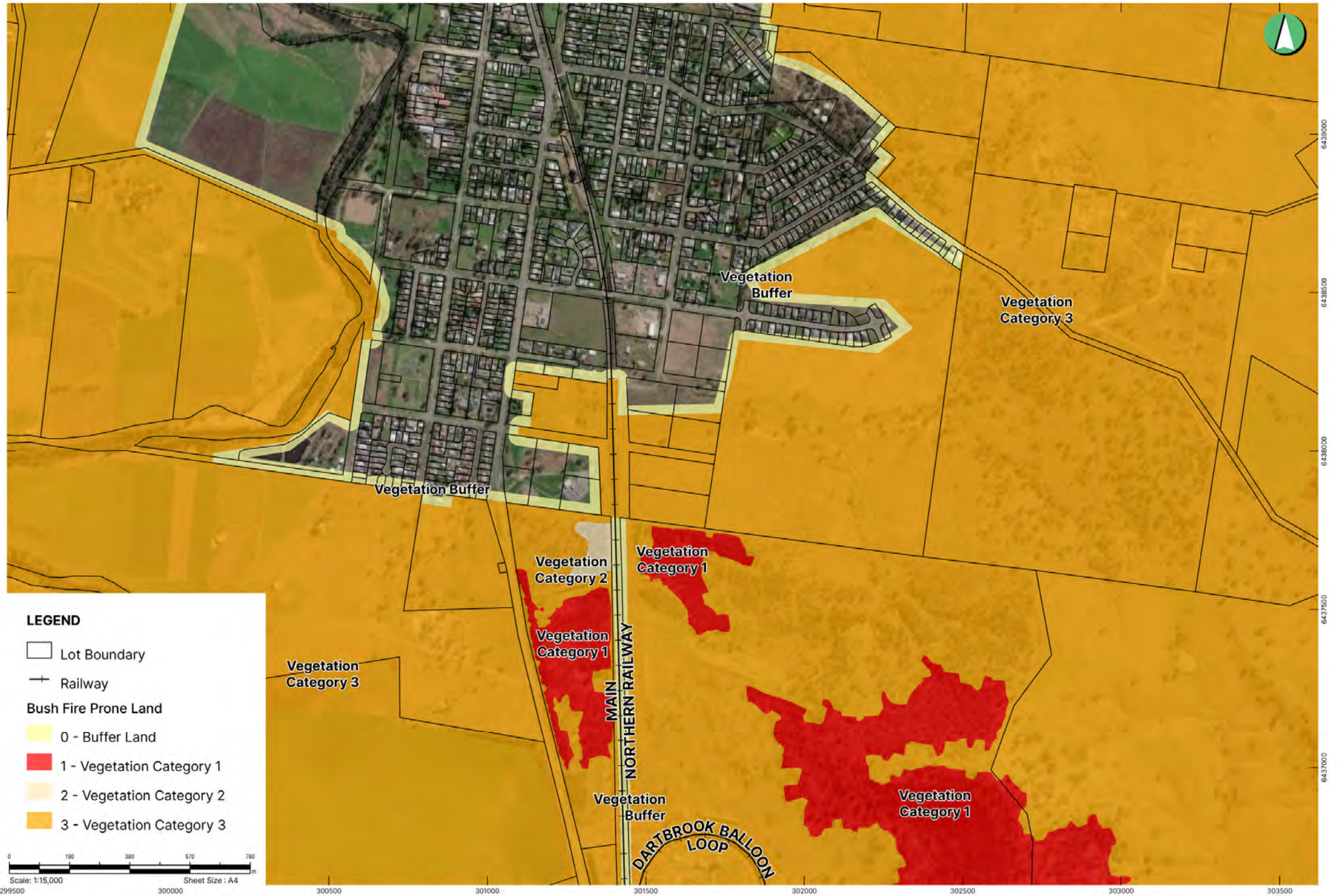


**FIGURE 10 - Native Vegetation – Native PCT's**





**FIGURE 11 - Bush Fire Prone Land**



**LEGEND**

□ Lot Boundary

+ Railway

**Bush Fire Prone Land**

■ 0 - Buffer Land

■ 1 - Vegetation Category 1

■ 2 - Vegetation Category 2

■ 3 - Vegetation Category 3



## 3. PROJECT DESCRIPTION

### 3.1 PROJECT OVERVIEW

The Project will comprise a Battery Energy Storage System (BESS) and associated infrastructure with a nameplate capacity of 400MW/ 800MWh. It is estimated that the proposed BESS will require a development footprint of approximately 9 hectares. Key Project infrastructure would include:

- Construction and operation of a BESS with a nominal capacity of up to 400MW and up to 800MWh
- Overhead or underground cables to enable a connection to the transmission electricity network
- New site access entry and road upgrade connecting to Campbell St, Aberdeen,
- Installation of a switching station and associated infrastructure, including cabling, transformers, carpark, storage area, site fencing, lighting, temporary construction site office and amenities.

Grid connection for the BESS is still to be determined and is subject to further analysis and consultation with TransGrid, however two potential options are being considered/

- Connection via TransGrid's existing 330kv feeder no 88 located approximately 2km to the east of the site,
- Connection via a local TransGrid 330kv substation located to the southwest of the site.

The indicative project development footprint is shown in **Figure 12**. The proposed layout of the BESS and associated infrastructure will be detailed in the EIS. The locations of the potential grid connection options summarised above is shown in **Figure 14**.

### 3.2 CONSTRUCTION ACTIVITIES

#### 3.2.1 CONSTRUCTION OVERVIEW

The construction period is expected to take 18-24 months, including associated infrastructure, grid connection and commissioning. The Project is expected to generate up to 100 full time equivalent (FTE) jobs during the construction period.

The batteries will be manufactured offsite and delivered to the project site following the completion of construction works to enable the installation of the batteries. The primary on site construction activities are as follows:

- Groundcover clearing and levelling
- Construction of a concrete base on which the batteries will be installed on
- Construction of new access road from Campbell St
- Security fencing and landscaping
- Construction of a permanent carpark and temporary construction loading area
- Installation of battery containers and associated electrical equipment
- Installation of 330kv transformers and switching station
- Installation of high voltage electrical equipment such as circuit breakers, switching equipment, auxiliary power equipment and control systems
- Installation of earthing system
- Installation of lighting
- Commissioning

#### 3.2.2 MATERIALS TRANSPORT ROUTE

Batteries would be manufactured offsite and transport to the site for installation. It is expected that materials will be transport to the project site via either the Port of Newcastle (approx. 130km route), or Port Botany (approx. 280km route). These ports are the closest major ports to the project site. **Table 2** provides an overview of the two transportation routes available to support the delivery of materials to the site **Figure 13** provides a visual representation of the materials transportation routes.



TABLE 2 - TRANSPORTATION ROUTE OPTIONS

Option	Port	Transportation Route
A	Port of Newcastle	From the Port of Newcastle, via Selwyn Street, George Street, Industrial Drive, Pacific Highway (Maitland Road), New England Highway at Hexham Bridge, Perth Street at Aberdeen, Campbell Street, and to the new site access point.
B	Port Botany	From Port Botany, via Friendship Road, Denison Street and Wentworth Avenue to M1 at Eastlakes, onto the Pacific Motorway, Hunter Expressway, New England Highway, Perth Street at Aberdeen, Campbell Street, and to the new site access point.

### 3.2.3 CONSTRUCTION ACCOMMODATION

The Project is expected to require 100 FTE workers during the 18–24-month construction period. Employment of local workers is preferred, however certain roles may need to be fulfilled by outsourcing skilled workers. For the purpose of this assessment, we have assumed the requirement for temporary accommodation for 100 workers

Scone (approx. 14km north of the project site), Aberdeen (adjacent to the project site) and Muswellbrook (approx. 10km to the South of the project site) are the primary areas identified to support the increased demand for temporary accommodation during the construction period due to their proximity to the project site. Singleton (approx. 60km from the project site) has also been considered as a potential option to support the increased demand for temporary accommodation.

An initial assessment has been completed on the temporary accommodation capacity of the surrounding areas of the Project in August 2023. Online search results for temporary rental accommodation are shown in **Table 3** below.

TABLE 3 - TEMPORARY ACCOMMODATION

Location	Rental Accommodation Available	Hotel & Motel Accommodation available
Scone	15 Properties with a total of 32 bedrooms	<ul style="list-style-type: none"> <li>- Airlie House Motor Inn</li> <li>- Colonial Motor Lodge</li> <li>- Portman House</li> <li>- Royal Motel</li> </ul>
Aberdeen	6 Properties with a total of 18 bedrooms	<ul style="list-style-type: none"> <li>- Aberdeen Motel</li> </ul>
Muswellbrook	22 Properties with a total of 72 bedrooms	<ul style="list-style-type: none"> <li>- The Royal Hotel</li> <li>- The Remington</li> <li>- The Grapevine Motel</li> </ul>

Location	Rental Accommodation Available	Hotel & Motel Accommodation available
Singleton	28 properties with a total of 75 bedrooms	<ul style="list-style-type: none"> <li>- Francis Philip Motor Inn</li> <li>- Royal Hotel Singleton</li> <li>- Imperial Hotel Country Motor Inn</li> <li>- Gowrie Apartments</li> </ul>

The initial assessment indicates that there is sufficient available residential accommodation available to support 100 workers. In the unlikely event that there are shortfalls in available residential accommodation, a mix of residential accommodation and hotel/motel accommodation could be relied upon to accommodate the construction workforce.

During the EIS phase, temporary accommodation will be addressed further to minimise the impact on surrounding communities. The social impact assessment will seek to fully understand the current housing and accommodation availability, and requirements of the workforce during construction and sustained future operations. Accommodation sharing options for workers and support staff will be explored to reduce demand impacts on local housing, including liaison with local real estate providers to seek further advice. Early consultation will be carried out with other local industry activities and businesses and significant construction projects in the area, to discuss overlapping periods of peak employment.

### 3.2.4 VEHICULAR ACCESS

The project site is located approx. 500m from New England Highway (via Perth St and Campbell St), which is suitable for construction and heavy haulage vehicles. During the construction period, vehicular access to the site would be via a newly established site entry point off Campbell St. Parking and laydown areas would be provided on site.

### 3.3 GRID CONNECTION

Maizewood has received preliminary technical advice from TransGrid in November 2022 in response to a pre-feasibility enquiry submitted by Maizewood for a potential connection to the TransGrid transmission network at the below 2x areas:

- Line 88 – Muswellbrook to Tamworth (330kV) approx. 2km east of the project site
- Muswellbrook 330kv substation (330kV busbar) approx. 6km southeast of the project site.

Both of the above connection points are shown in **Figure 14**, however the exact connection route is yet to be determined as is subject to a formal connection process and design which will be carried out with TransGrid.

### 3.4 OPERATIONAL ACTIVITIES

Once operational it is anticipated that the BESS would be operational for approximately 25 years and would be operational 24 hours per day, seven days per week. It is anticipated that the BESS will require up to 5 FTE jobs during operation which would be required on an intermittent basis. The BESS would typically be managed remotely and staffed as required during both planned and unplanned maintenance periods.

### 3.5 DECOMMISSIONING

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



### 3.6 PROJECT OBJECTIVES

The objectives of the Project are as follows:

- Provide firming capability to support existing and new renewable energy projects in the newly established Hunter and Central Coast REZ, and throughout the NEM.
- Support the transition of the existing coal power stations to an Integrated Energy Hub for the Hunter region
- Support economic development within NSW, through the creation of up to approximately 100 FTE direct jobs during the construction phase, and up to approximately 5 FTE jobs during operation
- Where applicable, participate in frequency control ancillary services to help stabilise the wider transmission network

### 3.7 PROJECT BENEFITS

Batteries are becoming an important part of the electricity market’s response to the withdrawal of coal fired power stations from the market and as such are playing an increasingly important role by providing firm capacity to support intermittent renewable generation, whilst improving the strength of the network.

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

- Improved network security and diversified energy generation and storage offering within NSW
- Alignment with Commonwealth and NSW policy positions (discussed in **Section 2**)
- Support for increased renewable power generation during daytime peak periods, placing downward pressure on wholesale electricity prices
- Creation of up to approximately 100 FTE direct jobs during Project construction phase, and up to approximately 5 FTE jobs during operation
- Diversification of skills and employment which helps to promote growth and transition of the local community during the construction and operational phases.

### 3.8 JUSTIFICATION OF PREFERRED OPTION

A number of alternative development options have been considered and are summarised in **Table 4** below.

TABLE 4 - ALTERNATIVE DEVELOPMENT OPTIONS

Alternative Option	Description
Option 1 – Do nothing	Do not proceed with the proposed development on the proposed project site or an alternative site.
Option 2 – Select Alternative Site	Proceed with the project on an alternative site
Option 3 – Alternative Technology, Wind/Solar	Install alternative renewable energy technology on project site
Option 4 – BESS at the proposed site “Preferred Option”	Proceed with the project on the project site

Option 4 is the preferred option which is discussed in the following sections.

### 3.8.1 OPTION 1 – DO NOTHING

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

1. Inconsistent with the directions and policies in the Hunter Regional Plan 2041 (HRP) as discussed in **Section 2.1.5** including:
  - Objective 1: Diversify the Hunter’s mining, energy, and industrial capacity
  - Objective 7: Reach net zero and increase resilience and sustainable infrastructure
2. Inconsistent with the objectives of the Upper Hunter LEP including:
  - To encourage employment opportunities
  - To minimise any adverse effect of industry on other land uses
  - To support and protect industrial land for industrial uses
3. Inconsistent with the five foundational pillars and objectives set out in the NSW Electricity Infrastructure Roadmap (DPIE 2020) as discussed in **Section 2.1.1** being:
  - Driving investment in regional NSW: supporting our regions as the State’s economic and energy powerhouse
  - Delivering energy storage infrastructure: supporting stable, long-term energy storage in NSW
  - Delivering Renewable Energy Zones: coordinating regional transmission and renewable generation in the right places for local communities
  - Keeping the grid secure and reliable: backing the system with gas, batteries or other reliable sources as needed
  - Harnessing opportunities for industry: empowering new and revitalised industries with cheap, reliable, and low emissions electricity
4. Inconsistent with policies and objectives set out in the Energy Security Safeguard (NSW Government 2020) and NSW Electricity Strategy (NSW Government 2019) as discussed in **Section 2.1.2** being:
  - Saving energy, especially at times of peak demand via the Energy Security Safeguard
  - Supporting the development of new electricity generators
  - Setting a target to bolster the state’s energy resilience
  - Making it easier to do energy business in NSW

### 3.8.2 OPTION 2 – SELECT ALTERNATIVE SITE

Option 4 is preferred over option 2 on the below grounds:

- Desktop assessment of the project site has revealed the site does not contain any major environmental constraints, with limited native vegetation, no known heritage items and not being located in flood prone land. Further discussion of environmental matters is provided in **Section 6** below
- The selected site is currently unoccupied. The Project provides a viable, economical use of the land
- The project site is separated from nearby sensitive receptors, being located on the fringes of the Aberdeen township
- Maizewood has entered into a long-term lease agreement for the project site, which will provide economic benefits to the landowner
- Potential for increased costs and unknown environmental impact risk assessing alternative properties
- Technical analysis completed by Maizewood suggests a robust existing network and lower risk to achieve a grid connection
- The project site is close to the proposed 330kv connection point (approx. 2km to the East of the site) and initial studies indicate only 3 easements would need to be negotiated to achieve the most direct route to grid connection. This will minimise disruption, construction, social and environmental impacts when compared to a site with a longer distance to the grid connection point
- The project site has good access and is located in close proximity to the New England Highway, providing



ease of access to the wider road network with limited local disruptions

### 3.8.3 OPTION 3 – ALTERNATIVE TECHNOLOGY

Option 4 is preferred over option 3 on the grounds that the proposed energy storage technology is Lithium-Ion batteries which is suitable for the size of the project site. By nature, Lithium-Ion batteries consume a much smaller footprint (per MWh) than other forms of renewable energy technology. For example, when compared to solar generation:

- The project site is approx. 12 hectares, and it is expected that the proposed development (400MW/800MWh) will utilise approx. 9 hectares
- The total annual storage capacity of the Project is approx. 250,000 MWh
- In comparison, 9 hectares of land would be sufficient for a solar farm with a maximum capacity of approximately 5MW and a total annual generation of approx. 12,000 MWh

In addition, given the proximity of the project site to the Aberdeen township, a solar farm would introduce greater amenity impacts associated with visual and glare impacts. A solar farm would also involve larger areas of land clearing and consequently increase the scale of biodiversity and other environmental impacts.

Based on the above, the Project will efficiently utilise the site and have a larger positive impact on the electricity grid when compared with alternative technologies.



**FIGURE 12 - Project Development Footprint**



**LEGEND**

- Project Site
- Lot Boundary
- Development Footprint**
- Substation and Switching Station
- BESS
- Site Access
- Electricity
- Railway
- Road
- Creek Bank
- Contour (5m)

0 30 60 90 120 150  
 Scale: 1:3,000 Sheet Size : A4  
 301250 301500 301750 302000



**Figure 13 - Available Material Transportation Routes**

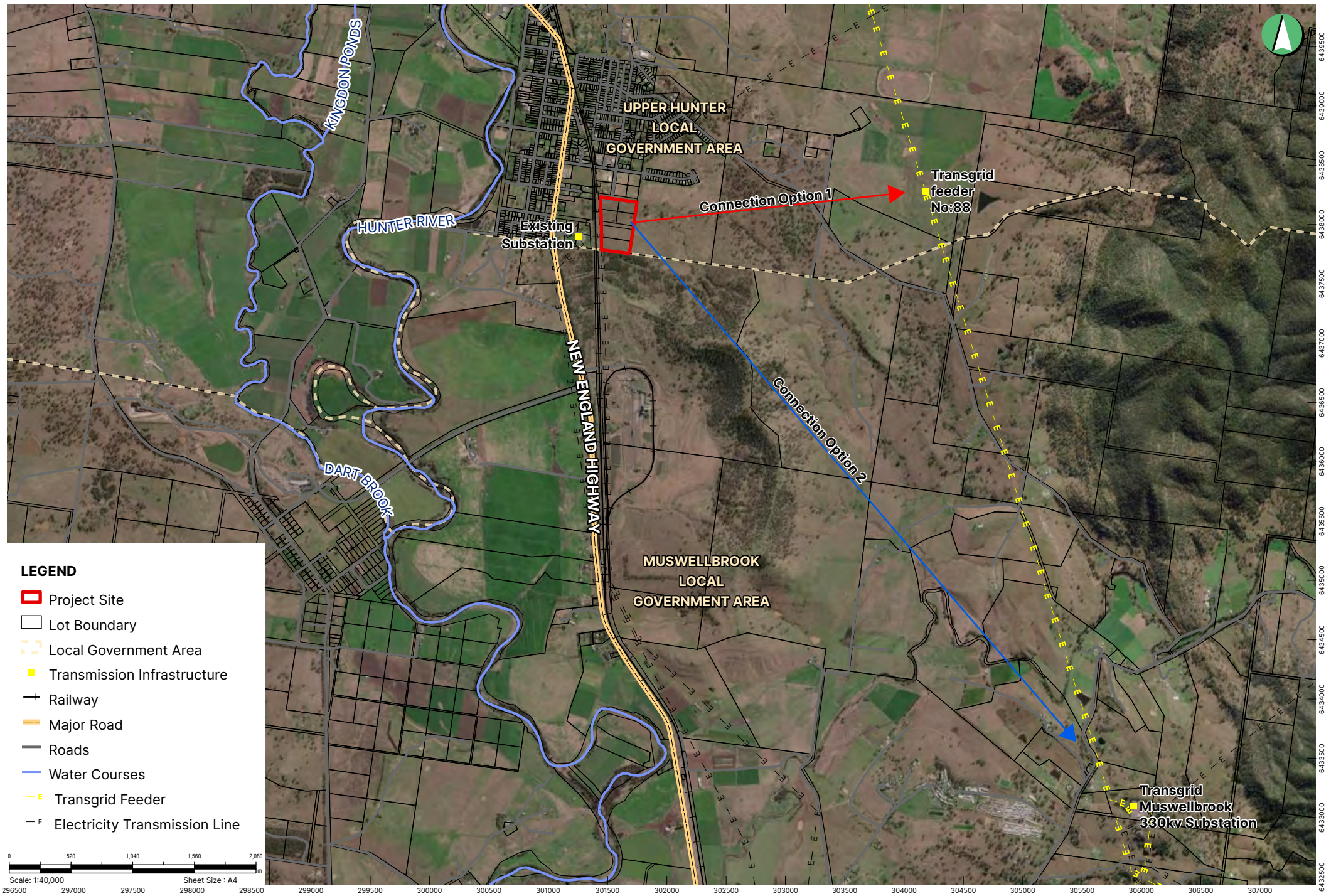


Source: NSW Spatial Services, ESRI Imagery Hybrid

GDA2020 MGA Zone 56  
 23/08/2023

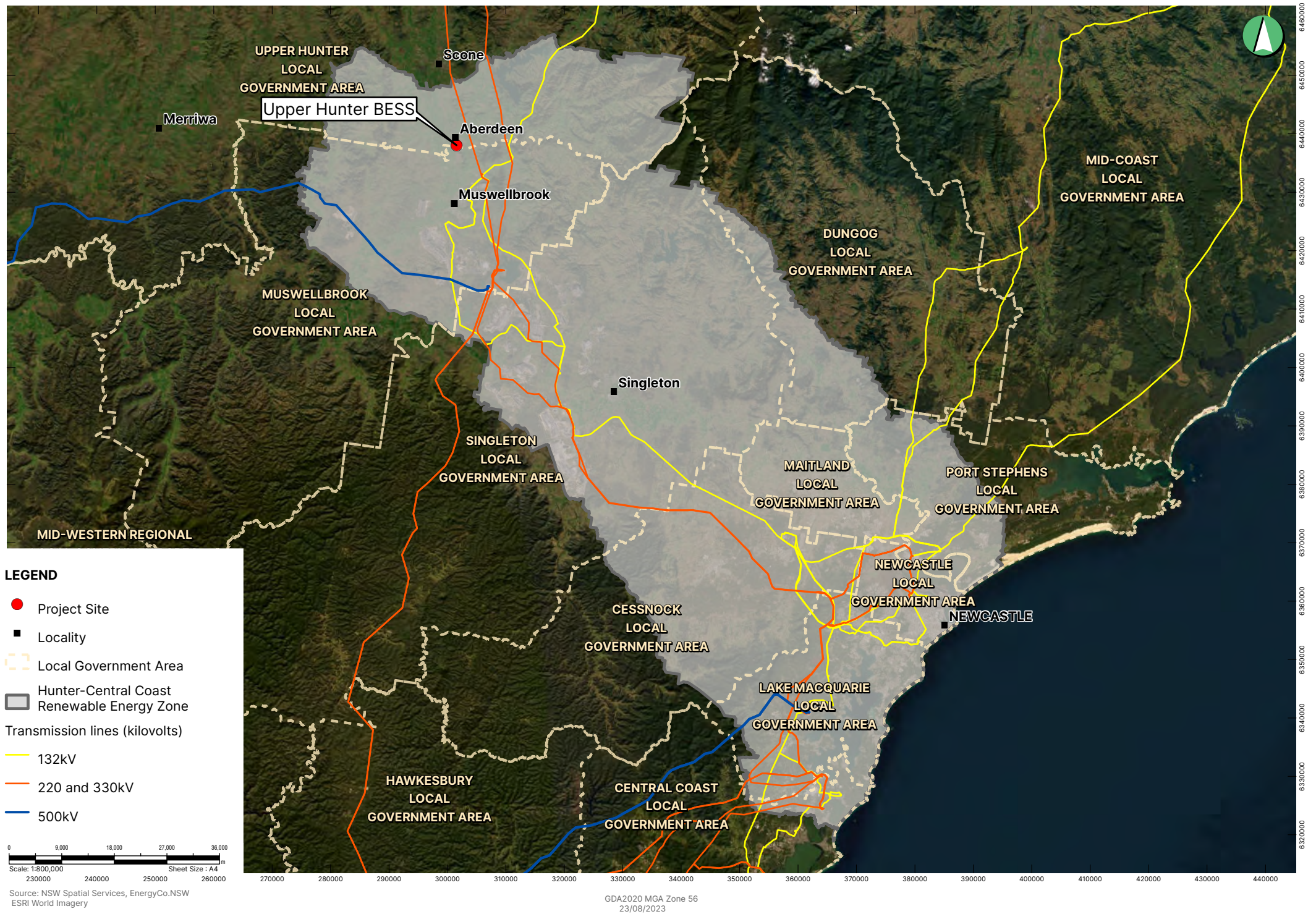


**FIGURE 14 - Connection**





**FIGURE 15 - Site locality within the Hunter - Central Coast REZ**



**LEGEND**

- Project Site
- Locality
- Local Government Area
- Hunter-Central Coast Renewable Energy Zone
- Transmission lines (kilovolts)
- 132kV
- 220 and 330kV
- 500kV

0 9,000 18,000 27,000 36,000  
 Scale: 1:800,000 Sheet Size: A4  
 230000 240000 250000 260000

Source: NSW Spatial Services, EnergyCo.NSW  
 ESRI World Imagery

GDA2020 MGA Zone 56  
 23/08/2023

## 4. STATUTORY CONTEXT

### 4.1 PERMISSIBILITY

The Project is characterised as an ‘electricity generating works’ defined in the Standard Instrument – Principal Local Environmental Plan (Planning Instrument) as:

“Electricity generating works” means a building or place used for the purpose of

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

The project site is located on land zoned E4 – General Industrial in the Upper Hunter LEP (refer to **Figure 4**). The State Environmental Planning Policy (Infrastructure and Transport) 2021 (Transport and Infrastructure SEPP) provides that development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed non-residential zone. Section 2.35 of the Transport and Infrastructure SEPP confirms that the E4 – General Industrial zone is listed as a prescribed non-residential zone. Therefore, pursuant to sub-section 2.36(1) of the Transport and Infrastructure SEPP, the Project is permissible with development consent.

### 4.2 POWER TO GRANT APPROVAL

The Project is classified as SSD in accordance with the categories and threshold listed under section 20 of Schedule 1 of the Planning Systems SEPP, being:

Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that has a capital investment value of more than \$30 million.

The Project will require development consent from the Minister (or delegate) or the IPC under Division 4.7 of Part 4 of the EP&A Act. In addition, an application is required under section 138 of the Roads Act 1993 associated with the connection to Campbell Street.

### 4.3 RELEVANT COMMONWEALTH AND STATE LEGISLATION

**Table 5** outlines the other relevant legislation that may be applicable to the development.

TABLE 5 - LEGISLATIVE CONSIDERATIONS

Legislation	Description
<b>Commonwealth</b>	
Environmental Protection and Biodiversity Act 1999 (EPBC Act)	<p>The EPBC Act is the Australian Government’s central piece of environmental legislation. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities, and heritage places— defined in the EPBC Act as matters of national environmental significance (MNES).</p> <p>A search of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) online Protected Matters Search Tool for the Project Site (including a 2 km buffer) was conducted in August 2023 (refer to Appendix B). The results indicate that the Project is not likely to impact upon any MNES or impact Commonwealth land. As such, a referral to the Commonwealth Minister for an EPBC approval is not anticipated. This will be investigated further and confirmed during the preparation of the EIS.</p>



Legislation	Description
Native Title Act 1993	<p>Native title recognises the traditional rights and interests to land and waters Of Aboriginal and Torres Strait Islander people. Under the Native Title Act 1993, native title claimants can make an application to the Federal Court to have their native title recognised by Australian law.</p> <p>A search of the National Native Title Register did not identify any determined native titles in the Upper Hunter or Muswellbrook LGA. A search of the register of Native Title Claims identified two active native title claims in both the Upper Hunter and Muswellbrook LGAs:</p> <ul style="list-style-type: none"> <li>• NC2018/2017 (Warrabinga-Wiradjuri #7)</li> <li>• NC2011/006 (Gomeroy People)</li> </ul> <p>Any native title matters will be considered further during the preparation of the EIS.</p>
Biosecurity Act 2015	<p>Under the Biosecurity Act 2015, all landowners have a responsibility to control noxious weeds on their property, otherwise known as a General Biosecurity Duty. The General Biosecurity Duty states “Any person who deals with biosecurity matter or a carrier and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised.” The general biosecurity duty applies to all weeds listed in Schedule 3 of the Biosecurity Act 2015 (also included as Weeds of National Significance (WoNS)).</p>
<b>State</b>	
Biodiversity Conservation Act 2016 (BC Act)	<p>The BC Act establishes mechanisms for:</p> <p>The management and protection of listed threatened species of native flora and fauna (excluding fish and marine vegetation) and threatened ecological communities (TECs).</p> <ul style="list-style-type: none"> <li>- The listing of threatened species, TECs and key threatening processes.</li> <li>- The development and implementation of recovery and threat abatement plans.</li> <li>- The declaration of critical habitat.</li> <li>- The consideration and assessment of threatened species impacts in the development assessment process.</li> </ul> <p>Biodiversity Offsets Scheme, including the Biodiversity Values Map and method to identify serious and irreversible impacts.</p> <p>The BC Act requires that an SSD application must be accompanied by a Biodiversity Development Assessment Report (BDAR), unless the Planning Agency Head (or delegate) and the Environment Agency Head (or delegate) accept a BDAR waiver. BDAR waivers are only issued in limited circumstances where it can be clearly demonstrated based on information provided by the proponent that the proposed development will not have a significant impact on biodiversity values (including consideration of direct and prescribed impacts on and off-site).</p> <p>Accordingly, an assessment of the project’s biodiversity impacts will be undertaken in accordance with the BC Act. The EIS will be accompanied by a BDAR.</p>
Heritage Act 1977	<p>The Heritage Act 1977 is administered by Heritage NSW and aims to protect the natural and cultural heritage of NSW. It provides blanket protection for surface and sub- surface relics and for heritage items of state significance listed on the State Heritage Register. The Act defers to local planning instruments under the EP&amp;A Act for the protection of items of local significance.</p> <p>The project site does not contain any listed heritage items or form part of any heritage conservation area.</p>

Legislation	Description
National Parks and Wildlife Act 1974	<p>The objective of the National Parks and Wildlife Act 1974 (NPW Act) is to consolidate and amend the law relating to the establishment, preservation and management of national parks, historic sites, certain other area, and the protection of certain fauna, native plants, and Aboriginal objects. Any proposed development would have to assess and consider Aboriginal cultural heritage values of the site location. Under the provisions of Section 4.4.1 of the EP&amp;A Act, a Section 90 Aboriginal heritage impact permit is not required for SSD projects.</p> <p>A Basic Search of the Aboriginal Heritage Information Management System was undertaken on 3 August 2023. The search revealed there are four (4) Aboriginal sites located within a 1 km buffer of the project site.</p> <p>The EIS will be supported by an Aboriginal Cultural Heritage Assessment Report to consider any potential impacts to Aboriginal heritage.</p>
Roads Act 1993	<p>The Roads Act 1993 addresses authorities, function and regulation of activities relating to the use and type of roads. Approval under section 138 of the Roads Act is required to impact or carry out work on or over a public road and cannot be refused for SSD projects in accordance with Section 4.42 of the EP&amp;A Act.</p> <p>A section 138 approval will be required for construction of the site access connection to Campbell Street.</p>
Water Management Act 2000	<p>The Water Management Act 2000 (WM Act) regulates the use and interference with surface and groundwater where a water sharing plan has been implemented. For areas outside the limits of water sharing plans, licensing provisions of the Water Act 1912 are still in force. Any proposed development would need to consider water use approvals (Section 89), water management work approvals (Section 90) and controlled activity approvals near waterfront land (Section 91) as part of the WM Act. Controlled activity approvals are not required for state significant projects, in accordance with the Part.4.41 of the EP&amp;A Act.</p>
Protection of the Environment Operations Act 1997 (POEO Act)	<p>The POEO Act is the primary piece of legislation regulating pollution control and waste disposal in NSW. Schedule 1 of the POEO Act defines scheduled activities for which an Environmental Protection Licence (EPL) is required.</p> <p>An EPL is required under Section 48 of the POEO Act to perform an activity listed under Schedule 1 of the POEO Act.</p> <p>Energy storage is not listed as a scheduled a scheduled activity under the POEO Act. Therefore, the Project will not require an EPL.</p> <p>There is an existing EPL (EPL 11677) that applies to the project site, held by the Upper Hunter County Council for miscellaneous licenced discharge to waters.</p>
Rural Fires Act 1997 (RF Act)	<p>The RF Act aims to prevent, mitigate, and suppress bush and other fires in local government areas of NSW. Section 63(2) of the RF Act requires the owners of land to prevent the ignition and spread of bushfires on their land. Under Part 4.41 of the EP&amp;A Act, a bush fire safety authority under Section 100B of the RF Act is not required for SSD that is authorised by a development consent.</p>

## 4.4 RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

### 4.4.1 STATE ENVIRONMENTAL PLANNING POLICY (PLANNING SYSTEMS) 2021

One of the aims of Chapter 2 of the Planning Systems SEPP is to identify development to which the SSD assessment and determination process under Division 4.7 of Part 4 of the EP&A Act applies. As outlined in **Section 4.2**, the Project is classified as SSD pursuant to section 20 of Schedule 1 of the Planning Systems SEPP.

### 4.4.2 STATE ENVIRONMENTAL PLANNING POLICY (BIODIVERSITY AND CONSERVATION) 2021

The State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP)



aims, among other things, to protect the biodiversity values of trees and other vegetation in the State. Chapter 4 relates to koala habitat protection. Upper Hunter is listed as an applicable LGA which forms part of the Northwest slopes koala management area (KMA). Therefore Chapter 4 of the Biodiversity and Conservation SEPP applies to the project site.

The EIS will consider threatened fauna predicted to occur in the locality, including koalas (*Phascolarctos cinereus*) and the presence of any vegetation that provides habitat for koalas.

#### **4.4.3 STATE ENVIRONMENTAL PLANNING POLICY (RESILIENCE AND HAZARDS) 2021**

Chapter 3 of the State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) regulates hazardous and offensive development and aims, amongst other things, to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact. Section 3.2 of the SEPP defines “potentially hazardous industry” and “potentially offensive industry”.

The Project involves battery energy storage involving lithium-ion batteries, which may subsequently categorise the Project as being a ‘potentially hazardous industry’. The EIS will be supported by a preliminary risk screening assessment, prepared in accordance with the document Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (Department of Planning [DoP] 2011). Should the preliminary risk screening indicate that the project is potentially hazardous, a preliminary hazard analysis (PHA) will subsequently be prepared in accordance with relevant Hazardous Industry Planning Advisory Papers.

#### **4.4.4 UPPER HUNTER LOCAL ENVIRONMENTAL PLAN 2013**

The project site is zoned E4 – General Industrial in the Upper Hunter LEP. The objectives of this land zone are:

- To provide a range of industrial, warehouse, logistics and related land uses.
- To ensure the efficient and viable use of land for industrial uses.
- To minimise any adverse effect of industry on other land uses.
- To encourage employment opportunities.
- To enable limited non-industrial land uses that provide facilities and services to meet the needs of businesses and workers.

The Project aligns with the objectives of the land use zone as it provides employment opportunities and will ensure the efficient and viable use of land for industrial areas. Relevant matters under Parts 4, 5 and 7 of the Upper Hunter LEP, will be addressed in the EIS.

## **5. ENGAGEMENT**

### **5.1 SCOPING STAGE CONSULTATION**

To inform preparation of the scoping report, Maizewood has carried out preliminary engagement with the project site landowner, surrounding landowners, Upper Hunter Shire Council, community groups and regulatory bodies. The preliminary engagement carried out has aimed to:

- Engage early with Upper Hunter Shire Council and have transparent discussions about the proposed development
- Identify the local community groups, interested parties, utility providers and nearby receivers
- Build awareness of the Project in the community
- Establish and communicate the applicants point of contact
- Inform the local community and local regulatory bodies of the project and request initial feedback
- Respond to any feedback in a timely, concise, and clear manner
- Consider feedback in the EIS phase of the project

Maizewood has implemented the following forms of engagement:

- Letters issued to landowners surrounding the development
- Emails to regulatory bodies
- Meetings with Upper Hunter Shire Council and DPE
- Establishing a project website and dedicated project email address

Potential residential receivers were identified through mapping analysis utilising GIS software which is shown in **Figure 16**. Details of engagement are summarised in **Table 6** below and provided in **Appendix C**. All feedback provided will be addressed further during the EIS phase of the Project.

TABLE 6 - STAKEHOLDER AND COMMUNITY ENGAGEMENT SUMMARY

Stakeholder	Engagement Description	Method
Department of Planning & Environment (DPE)	<ul style="list-style-type: none"> <li>- First Pre scoping report meeting on 31st May 2023</li> <li>- Second pre scoping report meeting 18th July 2023</li> <li>- Third pre scoping report meeting on 21 August 2023</li> </ul>	<ul style="list-style-type: none"> <li>- Video Call</li> <li>- Email</li> </ul>
Upper Hunter Shire Council	<ul style="list-style-type: none"> <li>- Early-stage project briefing meeting on 9th March 2022</li> <li>- Community engagement strategy meeting on 19th May 2023</li> <li>- Additional project briefing meeting on 4th August 2023</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Muswellbrook Shire Council	<ul style="list-style-type: none"> <li>- Letter issued via email on 21<sup>st</sup> August 2023 providing some details about the proposed development and inviting feedback/ questions.</li> </ul>	<ul style="list-style-type: none"> <li>- Email</li> </ul>
Aberdeen Council Advisory Committee (ACAC)	<ul style="list-style-type: none"> <li>- Email issued on 19th May 2023 providing some details about the proposed development and inviting feedback/ questions.</li> <li>- Meeting with ACAC on 19th May 2023 to discuss community engagement plan</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Wanaruah Local Aboriginal Land Council	<ul style="list-style-type: none"> <li>- Email issued on 22nd May 2023 providing some information about the potential development, in particular the heritage studies carried out to date and inviting feedback/ questions.</li> <li>- An introduction to MaizeWood and an invitation to meet to discuss the potential project in person or via VC/ Phone was provided.</li> <li>- No response has been received to date.</li> </ul>	<ul style="list-style-type: none"> <li>- Email</li> </ul>
Aboriginal Community Advisory Group (ACAG)	<ul style="list-style-type: none"> <li>- Email issued on 22nd May 2023 providing some information about the potential development, in particular the heritage studies carried out to date and inviting feedback/ questions.</li> <li>- An introduction to MaizeWood and an invitation to meet to discuss the potential project in person or via VC/ Phone was provided.</li> <li>- No response has been received to date.</li> </ul>	<ul style="list-style-type: none"> <li>- Email</li> </ul>
TransGrid	<ul style="list-style-type: none"> <li>- Initial connection enquiry issued to TransGrid in October 2022. Response received from TransGrid in November 2022.</li> </ul>	<ul style="list-style-type: none"> <li>- Email</li> <li>- Phone</li> <li>- Video Call</li> </ul>



Stakeholder	Engagement Description	Method
NSW Rural Fire Service	<ul style="list-style-type: none"> <li>- Email advise issued on 22nd May 2023 providing information about the proposed development and inviting feedback/ questions.</li> <li>- A response was received from NSW rural fire service on 31st May 2023 stating:</li> <li>- “SEARs identify what information needs to be included in the environmental impact statement (EIS). A request for SEARs must be made for all State significant development (SSD) projects before a development application can be submitted. Applications for project-specific SEARs must include a scoping report. “</li> </ul>	- Email
Transport for NSW	<ul style="list-style-type: none"> <li>- Email advise issued on 22nd May 2023 providing information about the proposed development and inviting feedback/ questions.</li> <li>- No response has been received to date.</li> </ul>	- Email
Environmental Protection Authority	<ul style="list-style-type: none"> <li>- Email advise issued on 22nd May 2023 providing information about the proposed development and inviting feedback/ questions.</li> <li>- No response has been received to date.</li> </ul>	- Email
Mining Subsidence Advisory	<ul style="list-style-type: none"> <li>- Email advise issued on 7th May 2023 providing information about the proposed development and inviting feedback/ questions.</li> <li>- A response was received on 8th May 2023 stating:</li> <li>- “The property locations that you have identified in Aberdeen, are not within a mine subsidence district, therefore there are no requirements for approval by Subsidence Advisory NSW”</li> </ul>	- Email
Nearby Receptors	<ul style="list-style-type: none"> <li>- Letters issued on 19th May 2023 to identified receptors within a 500m buffer (as shown in <b>Figure 16</b>) of the project site to inform about the potential development, the current stage of the development and the intention to request a SEARs. Feedback requested and a dedicated email address provided to address all feedback and questions.</li> <li>- No responses have been received to date.</li> </ul>	- Mail
Australian Rail Track Corporation (ARTC)	<ul style="list-style-type: none"> <li>- Email issued 22nd May 23 providing information about the proposed development and inviting feedback/ questions.</li> <li>- A response was received on 25th May 2023 in which ARTC advised that it is not their standard practice to provide feedback or comments outside of the DA process and that correspondence would be provided during the DA period</li> </ul>	- Email
Community & Interested parties	<ul style="list-style-type: none"> <li>- A project email address was established in May 2023 and a project website was launched in June 2023. The project website provides an overview of the project and provides the dedicated email address for interested parties to provide feedback or questions:</li> </ul> <p>Website: <a href="http://www.maizewood.com.au/upperhunterbess">www.maizewood.com.au/upperhunterbess</a> Email: <a href="mailto:upperhunterbess@maizewood.com.au">upperhunterbess@maizewood.com.au</a></p>	- Website

## 5.2 EIS ENGAGEMENT

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

- Undertaking Engagement Guidelines for State Significant Projects (DPIE,2021)
- Social Impact Assessment Guideline (DPIE, 2023), as applicable
- Community Consultative Committee Guidelines State Significant Projects (DP&E 2019) – if a Community Consultative Committee is required

Proposed engagement during the EIS stage is outlined in **Table 7** below

TABLE 7 - COMMUNITY ENGAGEMENT TO BE CARRIED OUT

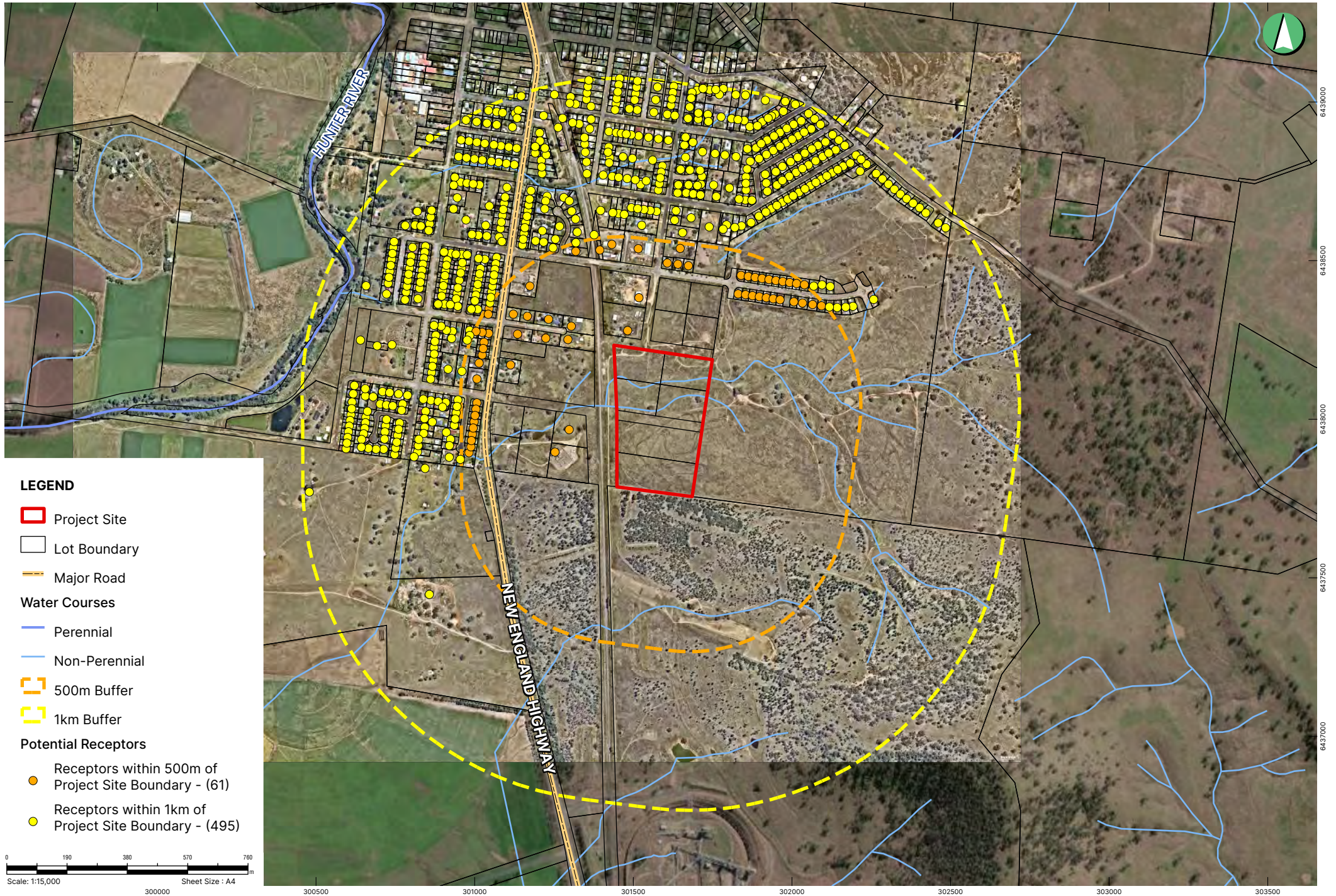
Stakeholder	Purpose	Method
Department of Planning & Environment (DPE)	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Engagement during EIS preparation</li> <li>- Respond to matters arising throughout EIS assessments</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
State Member for Upper Hunter, Dave Layzell MP	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Consultation to inform Social Impact Assessment</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Upper Hunter Shire Council	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Consultation to inform Social Impact Assessment</li> <li>- Updates to matters arising throughout the EIS phase</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Muswellbrook Shire Council	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Consultation to inform Social Impact Assessment</li> <li>- Updates to matters arising throughout the EIS phase</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Aberdeen Council Advisory Committee (ACAC)	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Consultation to inform Social Impact Assessment</li> <li>- Updates to matters arising throughout the EIS phase</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Wanaruah 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>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Aboriginal Community Advisory Group (ACAG)	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Identify cultural values and connection to place</li> <li>- Consultation to inform Social Impact Assessment</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
TransGrid	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Technical assessments and engineering</li> <li>- Identify potential matters arising from easements relating to grid connection</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>



<b>Stakeholder</b>	<b>Purpose</b>	<b>Method</b>
NSW 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 EIS assessments</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Transport for NSW	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Engagement during EIS preparation</li> <li>- Respond to matters arising throughout EIS assessments</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Environmental Protection Authority	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Engagement during EIS preparation</li> <li>- Respond to matters arising throughout EIS assessments</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Nearby Receptors	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Engagement during EIS preparation</li> <li>- Respond to matters arising throughout EIS assessments</li> <li>- Consultation to inform Social Impact Assessment</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> <li>- Mail</li> </ul>
Australian Rail Track Corporation (ARTC)	<ul style="list-style-type: none"> <li>- Project details/ Progress</li> <li>- Engagement during EIS preparation</li> <li>- Respond to matters arising throughout EIS assessments</li> </ul>	<ul style="list-style-type: none"> <li>- In Person</li> <li>- Video Call</li> <li>- Email</li> </ul>
Community & Interested parties	<ul style="list-style-type: none"> <li>- Continue to address feedback and questions received via our project website and dedicated project email address</li> </ul> <p>Website: <a href="http://www.maizewood.com.au/upperhunterbess">www.maizewood.com.au/upperhunterbess</a> Email: <a href="mailto:upperhunterbess@maizewood.com.au">upperhunterbess@maizewood.com.au</a></p>	<ul style="list-style-type: none"> <li>- Website</li> </ul>



**FIGURE 16 - Potential Nearby Receptors**





## 6. ENVIRONMENTAL RISK ASSESSMENT

### 6.1 INTRODUCTION

Environmental matters requiring technical assessment have been considered using the below key factors:

- Scale and nature of the likely impacts of the Project and the sensitivity of the site and surrounds.
- Whether the Project is likely to generate cumulative impacts with other relevant future projects in the area.
- Ability to avoid, minimise and offset the impacts of the Project to the extent known at the scoping stage.

As per the scoping report guidelines, the proposed technical assessments required to support the EIS have been categorised in the below. A summary table of the proposed categorising of technical assessments is provided in **APPENDIX A**.

Standard Level of Assessment:

- Social Impacts
- Land Use
- Traffic and Transport
- Bushfire
- Hazards and Risks
- Biodiversity
- Soils and Water
- Noise and Vibration
- Heritage
- Waste Management
- Visual Impact
- Air Quality

### 6.2 SOCIAL IMPACT

The project site is located within the Upper Hunter Shire LGA, which has a population of 14,292 people as of 2022. The unemployment rate is 2.5% as at 2022 which is significantly lower than the NSW average unemployment rate of 3.5%. The Upper Hunter Shire economy supports an estimated 5,703 jobs, representing 1.8% of the 325,647 people working in Hunter Region, 0.2% of the 3,672,240 people working in New South Wales. Agriculture, Forestry & Fishing is Upper Hunter Shire's largest employment sector, supporting an estimated 1,304 jobs, followed by healthcare and social assistance which supports 602 jobs. A social impact assessment will be provided as part of the EIS in accordance with the Social Impact Assessment Guideline (DPIE 2021).

### 6.3 LAND USE

#### 6.3.1 MINING

As shown in **Figure 5** and discussed in **Section 2.3.3**, there are nine historic mining and exploration titles within the surrounding area of the project site. One active coal mining licence (CL386) exists within the surrounding area of the project site, however this active coal licence does not intersect with the project site. The project site is not located within a mine subsidence area, however the project site is bordered to the South by the Muswellbrook Mining Subsidence District.

As outlined in **Section 5**, Maizewood has carried out initial engagement with the Mining Subsidence advisory to confirm if there are any requirements due to the bordering Mining Subsidence District directly adjacent to the South of the project site. The Mining Subsidence District responded and advised that there are no requirements for approvals by the Subsidence Advisory for the project site because it is not within a mine subsidence district.

### 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 TRAFFIC AND TRANSPORT

The Project involves construction of a new dedicated site access connecting to Campbell Street. The site is located in close proximity to the New England Highway providing immediate access to the wider road network (refer to **Figure 3**).

Traffic generation is expected to be greatest during the construction stage with the increased volume of both light vehicles used to transport workers and heavy vehicle movements associated with the delivery of materials, plant, and equipment. Once operational, the site will require approx. 5 FTE staff onsite. Details of the likely traffic volumes generated during both construction and operation stages, including details of proposed on-site car parking spaces, will be provided in a quantitative Traffic Impact Assessment (TIA) as part of the EIS.

During construction, materials will be transported to the site from either Port of Newcastle or Port Botany, as described in **Section 3.2.2** and shown in **Figure 13**. The capacity and efficiency of the local and regional road network for the proposed haulage route will be considered further in the TIA. The TIA will include an assessment of potential cumulative impacts associated with construction programs of nearby large-scale projects (refer to **Section 6.14**).

Consultation will be undertaken with Council and TfNSW to ensure any traffic-related concerns are sufficiently addressed during the preparation of the EIS.

### 6.5 BUSHFIRE

As shown in **Figure 11** and discussed in **Section 2.3.8**, given the presence of bush fire prone land within, and surrounding the project site a Bushfire Risk Assessment will need to be prepared to identify, and where possible, reduce the likelihood of a bushfire impacting the site or spreading to surrounding properties.

The Bushfire Risk Assessment will need to demonstrate that the Project can be designed, constructed, and operated to minimise ignition risks and provide for asset protection consistent with relevant NSW RFS design guidelines (Planning for Bushfire Protection 2019 (PBP) and Standards for Asset Protection Zones).

### 6.6 HAZARDS AND RISKS

The Project involves battery energy storage involving lithium-ion batteries, which may subsequently categorise the Project as being a 'potentially hazardous industry' under the Hazards and Resilience SEPP (refer to **Section 4.4.3**). The EIS will be supported by a preliminary risk screening assessment, prepared in accordance with the document Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (Department of Planning [DoP] 2011). Should the preliminary risk screening indicate that the Project is potentially hazardous, a preliminary hazard analysis (PHA) will subsequently be prepared in accordance with relevant Hazardous Industry Planning Advisory Papers.

### 6.7 BIODIVERSITY

As shown in **Figure 10** and discussed in **Section 2.3.7**, the project site does not contain any mapped vegetation aligning to a native plant community type. During a site survey, limited isolated remnant trees were identified on the site. Native PCTs are mapped as present further west, east and south of the project site.

The project will require a BDAR assessing impacts to biodiversity in accordance with the BC Act.



## 6.8 SOILS AND WATER

A review of the Australian Soil Classification (ASC) for the site indicates that the site is entirely mapped as the sodosols soil type. Sodosols soils are not highly acidic and have a low-nutrient status. They are vulnerable to erosion and dryland salinity when vegetation is removed.

A review of the Upper Hunter Shire Council online flooding maps and the Aberdeen Flood Study (Council, 2013) indicate that no imminent flood risk is presently mapped pertaining to the proposed development location, however flood plains are present to the far west boundary of the proposed project site as shown in **Figure 8** and discussed in **Section 2.3.5**.

The proposed development is unlikely to impact groundwater due limited excavation required to during site leveling. Groundwater levels are measured at 10 m standing water level at the nearest groundwater borehole with available data, 1.2 kilometres west of the site (GW080585, located at lower elevation and closer to the Hunter River).

As shown in **Figure 8**, there are 2 watercourses present towards the North of the project site (lots 35, 36, 39 and 56) which drain towards the Hunter River, potentially a seasonal stream, which bifurcates across the site generally flowing from the east to the west. When adopting the Strahler stream order system, the on-site watercourse appears to be a third order stream and would require adequate setbacks on either side when undertaking activities near the watercourse. A detailed Surface Water Assessment will be carried out during the EIS phase.

The EIS will also include consideration of water use during construction and operation of the project, including identifying available water sources.

## 6.9 NOISE AND VIBRATION

GIS mapping analysis carried out has identified potential residential noise and vibration impact receptors within a 500m and 1km buffer of the project site as shown in **Figure 16**. As discussed in **Section 5.1** early engagement letters were issued on 19th May 2023 to identified receptors to inform about the potential development. The details of the engagement carried out are also provided in **Appendix C**.

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 installation 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)

## 6.10 HERITAGE

As discussed in **Section 2.3.4** and shown in **Figure 6**, a review of the State Heritage Register, LEP and a search of the Aboriginal Heritage Information Management System (AHIMS) (**APPENDIX D**) has determined the following:

- 'The Grange' (I89) listed under the LEP, is the nearest European heritage item located 250m to the west of the project site,
- An AHIMS Extensive Search conducted on 9 August 2023 has identified six (6) Aboriginal sites located within a 1 km buffer of the project site.

Given the absence of European heritage within or adjoining the project site, a desktop assessment of European heritage will be provided in the EIS.

In relation to potential impacts to Aboriginal sites, it is noted that the site is undeveloped and may contain previously unidentified Aboriginal artefacts. Accordingly, an Aboriginal Cultural Heritage Assessment will be prepared to identify potential impacts to any unidentified Aboriginal artefacts, providing necessary management and mitigation measures as required.

### 6.11 WASTE MANAGEMENT

It is anticipated that the majority of waste generated will be during the construction period and may include green waste from cleared vegetation and general waste from construction material and activities. During the operation of the project, it is anticipated that the waste generated would be minimal. At the end of the projects operational life, it is expected that most of the project components will be recyclable.

A Waste Management Plan will be prepared to accompany the EIS.

### 6.12 VISUAL IMPACT

The proposed site is currently unoccupied. Nearby development includes the existing Ausgrid electricity substation and rail corridor to the west and other various small industrial structures to the north of the Project site.

On-site inspections and a completed site survey indicate that there are potential residential receivers to the Northeast of the project site on Perth St, and to the West of the site on New England Highway as shown in **Figure 16**.

A Visual Impact Assessment to be provided as part of the EIS. The Visual Impact Assessment will include an assessment of the likely visual and landscape impacts of the project (including glare, reflectivity, and night lighting) on surrounding residences, road users and rail corridors. The assessment will also consider the cumulative visual impact of the proposed BESS with the adjacent substation and utilised industrial premises. Where relevant, it will include mitigation measures to help reduce the project’s impacts on visual amenity.

### 6.13 AIR QUALITY

It is expected that most atmospheric emissions associated with the project will be a result of the construction phase, such as emissions from construction plant and equipment, increased dust, and embedded carbon emissions. An Air Quality Impact Assessment (AQIA) will be prepared during the EIS phase and will identify any necessary mitigation measures to be include in the Construction Management Plan.

### 6.14 CUMULATIVE IMPACTS

**Table 8** provides an overview of large-scale projects with the potential to generate cumulative impacts. **Figure 17** shows the location of large-scale projects in relation to the Project Site.

Further analysis of the potential for cumulative impacts would be addressed in detail in the EIS in accordance with the Cumulative Impact Assessment Guidelines for State Significant Projects (DPIE 2021).

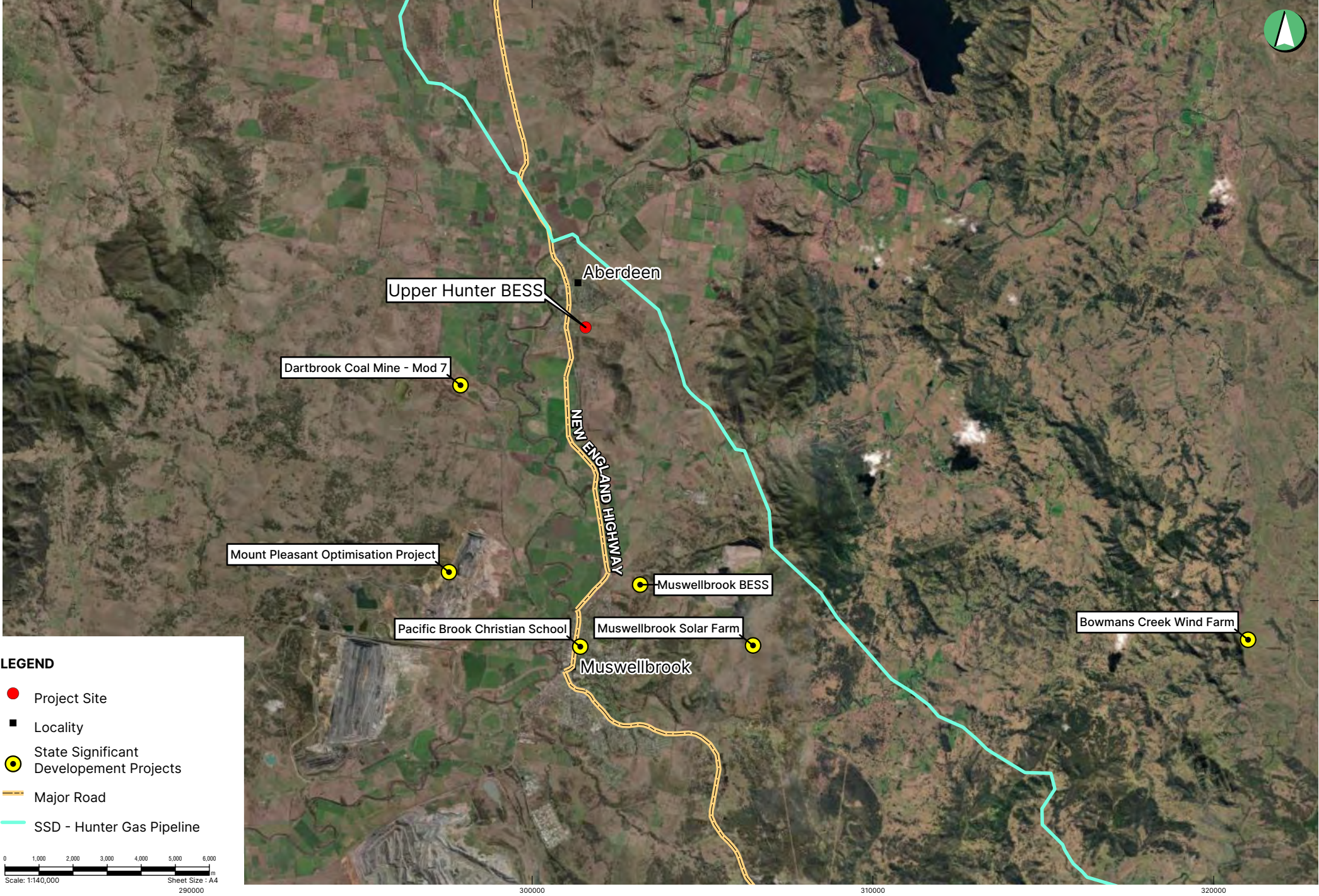
TABLE 8 - NEARBY MAJOR DEVELOPMENTS

Project	Description	Stage	Proximity
Muswellbrook BESS	Development of a 150 MW / 300 MWh BESS with associated infrastructure	Approved (Construction yet to commence)	Approx. 7km South
Hunter Gas Pipeline	Construction and operation of an approx. 820 km high pressure natural gas pipeline.	Approved (Construction yet to commence)	Approx. 2km Northeast



Project	Description	Stage	Proximity
Bowmans Creek Wind Farm	Construction and operation of a wind farm with up to 60 wind turbines and associated infrastructure	Planning	Approx. 9 km East
Muswellbrook Solar Farm	Construction and operation of a 135 MW solar farm, BESS, and associated infrastructure	Planning	Approx. 7km South
Pacific Brook Christian School	Concept Proposal and Stage 1 development application involving the construction of a new school catering for up to 656 students in Kindergarten to Year 12 including 140 students in Stage 1.	Planning	Approx. 10 km South
Dartbrook Coal Mine (Mod 7 – Bord and Pillar Mining)	Modification to recommence underground coal mining using bord and pillar methods, use of a varied coal clearance system, and extend mining duration to 2027	Operational (Mod 7 approved March 2022)	Approx. 1 km South
Mount Pleasant Optimisation Project	Extend the life of the open cut operation by mining deeper coal seams, using existing and proposed new infrastructure	Operational (Approved September 2022)	Approx. 4 km Southwest

**FIGURE 17 - State Significant Development Projects**



**LEGEND**

- Project Site
- Locality
- State Significant Development Projects
- Major Road
- SSD - Hunter Gas Pipeline

0 1,000 2,000 3,000 4,000 5,000 6,000  
Scale: 1:140,000 Sheet Size: A4  
2900000

Source: NSW Spatial Services, Department of Planning and Environment; ESRI World Imagery

6440000  
6430000



## 7. CONCLUSION

Maizewood is proposing to develop a BESS with a capacity of 400 MW, in the town of Aberdeen, NSW 2236. The Project is located within the Upper Hunter Shire Council LGA and borders the Muswellbrook Shire Council LGA. The Project is known as the Upper Hunter BESS.

The Project will include:

- An upgrade to the project site entry located on Campbell St, Aberdeen
- Site fencing to the BESS and landscaping works to the project perimeter
- Installation of lithium-ion batteries with an aggregated capacity of up to 400MW and 800 MWh
- Overhead or underground cables to connect the Project to the electricity grid to the east of the project site
- Installation of a switching station and associated infrastructure, including cabling, transformers, carpark, storage area, site fencing, lighting, temporary construction site office and amenities.

The Project is classified as SSD under section 4.36 of the EP&A Act as it has a CIV greater than \$30 million and meets the criteria in section 20 of Schedule 1 of the Planning Systems SEPP. Consequently, the Project will require development consent from the Minister for Planning (or delegate) or the IPC under section 4.5(1) of the EP&A Act.

Batteries are becoming an important part of the electricity market's response to the withdrawal of coal fired power stations from the market and as such are playing an increasingly important role by providing firm capacity to support intermittent renewable generation, whilst improving the strength of the network. The project is expected to significantly benefit the State and local communities by supporting increased renewable power generation, strengthening the broader electricity network, placing downward pressure on wholesale electricity costs, and creating employment opportunities.

This Scoping Report has been prepared to identify the project site, describe the proposed development, confirm the planning approval pathway, and identify the key environmental considerations. It aims to provide enough information to enable the DPE to issue targeted and project specific SEARs for the EIS needed to accompany the SSD application.

## 8. REFERENCES

Reference
State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP)
Environmental Planning and Assessment Act 1979 (EP&A Act)
State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
Hunter Regional Plan 2041
Upper Hunter Local Environmental Plan 2013 (Upper Hunter LEP)
Upper Hunter Development Control Plan 2015 (Upper Hunter DCP)
NSW Electricity Infrastructure Roadmap (DPIE 2020)
Energy Security Safeguard (NSW GOVERNMENT 2020)
NSW Electricity Strategy (NSW GOVERNMENT 2019)
Environmental Protection and Biodiversity Act 1999 (EPBC Act)
Native Title Act 1993
Biosecurity Act 2015
Biodiversity Conservation Act 2016 (BC Act)
Heritage Act 1977
National Parks and Wildlife Act 1974
Roads Act 1993
Water Management Act 2000
Protection of the Environment Operations Act 1997 (POEO Act)
Rural Fires Act 1997 (RF Act)
Large-Scale Solar Energy Guideline



## APPENDIX A – Scoping Summary Table

Level of Assessment	Matter (Group)	Matter (Specific)	CIA	Engagement	Relevant government plans, policies and guidelines	Scoping Report Reference
Standard	Social	– All	Y	Specific	Social Impact Assessment Guidelines for State Significant Projects (Department of Planning Industry and Environment, 2021)	<a href="#"><u>Chapter 6.2</u></a>
Standard	Access and Traffic	– Access to property – Traffic and parking	Y	Specific	Guide to Traffic Management – Part 3 Traffic Studies and Analysis (Austroads, 2013) Guide to Traffic Generating Developments Version 2.2 (RTA, 2002)	<a href="#"><u>Chapter 6.4</u></a>
Standard	Air	– Atmospheric emissions	N	General	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2016)	<a href="#"><u>Chapter 6.13</u></a>
Standard	Amenity	– Noise – Vibration – Visual	N	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)	<a href="#"><u>Chapter 6.9</u></a> <a href="#"><u>Chapter 6.12</u></a>



Level of Assessment	Matter (Group)	Matter (Specific)	CIA	Engagement	Relevant government plans, policies and guidelines	Scoping Report Reference
Standard	Biodiversity	<ul style="list-style-type: none"> <li>– Conservation Area</li> <li>– Terrestrial flora and fauna</li> <li>– Aquatic flora and fauna</li> </ul>	N	Specific	<p>Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (Commonwealth of Australia 2013)</p> <p>Commonwealth EPBC 1.2 Significant Impact Guidelines – Actions on, or impacting upon Commonwealth Land and Actions by Commonwealth Agencies (Commonwealth of Australia 2013)</p> <p>Commonwealth Department of the Environment – Nationally Threatened Ecological Communities and Threatened Species Guidelines (various)</p> <p>Commonwealth Department of Environment – Survey Guidelines for Nationally Threatened Species</p> <p>Threatened Species Survey and Assessment Guidelines</p> <p>NSW Biodiversity Offsets Policy for Major Projects (Office and Environment and Heritage 2014)</p> <p>Framework for Biodiversity Assessment (Office and Environment and Heritage 2014)</p>	<u>Chapter 6.7</u>
Standard	Built Environment	<ul style="list-style-type: none"> <li>– Private property</li> <li>– Public Infrastructure</li> <li>– Design Quality</li> </ul>	N	General	<p>Environmental Planning and Impact Assessment Practice Note: Socio-economic Assessment (Roads and Maritime Services 2013)</p>	<u>Chapter 6.2</u>
Standard	Economic	<ul style="list-style-type: none"> <li>– Natural resource use</li> <li>– Livelihood</li> <li>– Opportunity cost</li> </ul>	N	General	Refer to Scoping Report	





Level of Assessment	Matter (Group)	Matter (Specific)	CIA	Engagement	Relevant government plans, policies and guidelines	Scoping Report Reference
Standard	Hazards	<ul style="list-style-type: none"> <li>– Biosecurity</li> <li>– Bushfire</li> <li>– Dangerous goods</li> <li>– Environmental</li> <li>– Flooding</li> <li>– Groundwater contamination</li> <li>– Hazardous and offensive development</li> <li>– Land contamination</li> <li>– Waste</li> </ul>	N	Specific	<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>Hazardous Industries Planning Advisory Paper No:6 – Guidelines for Hazard Analysis (DoP 2011) and Multi-Level Risk Assessment (DoP 2011)</p> <p>Storage and Handling of Dangerous Goods Code of Practice (Work Cover 2005)</p> <p>Waste Classification Guidelines (DECCW 2009)</p> <p>NSW RFS design guidelines (Planning for Bushfire Protection 2019 (PBP) and Standards for Asset Protection Zones).</p> <p>Considering Flooding in Land Use Planning Guideline (July 2021)</p> <p>Floodplain Development Manual (NSW Government, April 2005)</p> <p>Section 10a of the Upper Hunter DCP</p> <p>Environment Operations Act 1997 (POEO Act)</p> <p>Biosecurity Act 2015</p>	<p><a href="#"><u>Chapter 6.5</u></a></p> <p><a href="#"><u>Chapter 6.6</u></a></p> <p><a href="#"><u>Chapter 6.11</u></a></p>
Standard	Heritage	<ul style="list-style-type: none"> <li>– Aboriginal</li> <li>– Historic</li> <li>– Natural</li> </ul>	N	Specific	<p>Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (Commonwealth of Australia 2013)</p> <p>NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998)</p> <p>Criteria for the Assessment of Excavation Directors (NSW Heritage Council, 2011)</p> <p>Native Title Act 1993</p>	<p><a href="#"><u>Chapter 6.10</u></a></p>
Standard	Land	<ul style="list-style-type: none"> <li>– Stability</li> <li>– Soil chemistry</li> <li>– Land capability</li> <li>– Topography</li> </ul>	N	Specific	<p>Coal Mine Subsidence Compensation Act 2017</p>	<p><a href="#"><u>Chapter 6.3</u></a></p> <p><a href="#"><u>Chapter 6.8</u></a></p>



Level of Assessment	Matter (Group)	Matter (Specific)	CIA	Engagement	Relevant government plans, policies and guidelines	Scoping Report Reference
Standard	Water	– Hydrology – Water quality	N	Specific	Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) Water Management Act 2000 (WM Act)	<u>Chapter 6.8</u>





## APPENDIX B – EPBC PROTECTED MATTERS SEARCH RESULTS



Australian Government

Department of Climate Change, Energy,  
the Environment and Water

# EPBC Act Protected Matters Report

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

Report created: 09-Aug-2023

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



# Summary

## Matters of National Environment Significance

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

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance (Ramsar)</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>	5
<a href="#">Listed Threatened Species:</a>	40
<a href="#">Listed Migratory Species:</a>	13

## Other Matters Protected by the EPBC Act

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

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

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

<a href="#">Commonwealth Lands:</a>	None
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	21
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	None
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">EPBC Act Referrals:</a>	5
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	None
<a href="#">Bioregional Assessments:</a>	1
<a href="#">Geological and Bioregional Assessments:</a>	None

# Details

## Matters of National Environmental Significance

### Wetlands of International Importance (Ramsar Wetlands) [\[ Resource Information \]](#)

Ramsar Site Name	Proximity	Buffer Status
<a href="#">Hunter estuary wetlands</a>	100 - 150km upstream from Ramsar site	In feature area

### Listed Threatened Ecological Communities [\[ Resource Information \]](#)

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

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Central Hunter Valley eucalypt forest and woodland</a>	Critically Endangered	Community may occur within area	In feature area
<a href="#">Hunter Valley Weeping Myall (Acacia pendula) Woodland</a>	Critically Endangered	Community may occur within area	In feature area
<a href="#">Lowland Rainforest of Subtropical Australia</a>	Critically Endangered	Community may occur within area	In buffer area only
<a href="#">River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria</a>	Critically Endangered	Community may occur within area	In feature area
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community likely to occur within area	In feature area

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

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>BIRD</b>			
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
<a href="#">Aphelocephala leucopsis</a> Southern Whiteface [529]	Vulnerable	Species or species habitat likely to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Calyptorhynchus lathami lathami</a> South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Climacteris picumnus victoriae</a> Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Melanodryas cucullata cucullata</a> South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Polytelis swainsonii</a> Superb Parrot [738]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Stagonopleura guttata</a> Diamond Firetail [59398]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<b>FROG</b>			
<a href="#">Litoria booroolongensis</a> Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area	In buffer area only
<b>MAMMAL</b>			
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area	In feature 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 likely to occur within area	In feature area
<a href="#">Nyctophilus corbeni</a> Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Petaurus australis australis</a> Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Petrogale penicillata</a> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Pseudomys novaehollandiae</a> New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
<b>PLANT</b>			
<a href="#">Androcalva procumbens</a> [87153]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Dichanthium setosum</a> bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Eucalyptus glaucina</a> Slaty Red Gum [5670]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Euphrasia arguta</a> [4325]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Lepidium aschersonii</a> Spiny Peppercross [10976]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Ozothamnus tessellatus</a> [56203]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Picris evae</a> Hawkweed [10839]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Pomaderris brunnea</a> Rufous Pomaderris, Brown Pomaderris [16845]	Vulnerable	Species or species habitat may occur within area	In feature 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	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Swainsona murrayana</a> Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Vincetoxicum forsteri listed as Tylophora linearis</a> [92384]	Endangered	Species or species habitat may occur within area	In buffer area only

## REPTILE

<a href="#">Aprasia parapulchella</a> Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Delma impar</a> Striped Legless Lizard, Striped Snake- lizard [1649]	Vulnerable	Species or species habitat likely to occur within area	In feature area

## Listed Migratory Species

[ [Resource Information](#) ]

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Migratory Marine Birds</b>			
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area

## Migratory Terrestrial Species

<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat may occur within area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat likely to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat likely to occur within area	In feature area
<b>Migratory Wetlands Species</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat may occur within area	In buffer area only

## Other Matters Protected by the EPBC Act

Listed Marine Species			[ <a href="#">Resource Information</a> ]
Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Bird</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Chalcites osculans as Chrysococcyx osculans</a> Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Pterodroma cervicalis</a> White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat may occur within area overfly marine area	In buffer area only



## Extra Information

### Regional Forest Agreements

[\[ Resource Information \]](#)

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
<a href="#">North East NSW RFA</a>	New South Wales	In feature area

### EPBC Act Referrals

[\[ Resource Information \]](#)

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Controlled action</b>				
<a href="#">Queensland Hunter Gas Pipeline, approximately 825 km in length</a>	2008/4483	Controlled Action	Completed	In buffer area only
<b>Not controlled action</b>				
<a href="#">Dartbrook Mine Bord and Pillar Mining, Hunter Valley, NSW</a>	2018/8295	Not Controlled Action	Completed	In buffer area only
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed	In feature area
<a href="#">Queensland Hunter Gas Pipeline, approximately 833 km in length</a>	2008/4620	Not Controlled Action	Completed	In buffer area only
<b>Not controlled action (particular manner)</b>				
<a href="#">Aerial baiting for wild dog control</a>	2006/2713	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

### Bioregional Assessments

SubRegion	BioRegion	Website	Buffer Status
Hunter	Northern Sydney Basin	<a href="#">BA website</a>	In feature area

# Caveat

## 1 PURPOSE

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

The report contains the mapped locations of:

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

## 2 DISCLAIMER

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

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

## 3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

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

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

## 4 LIMITATIONS

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

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

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

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

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

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

# Acknowledgements

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

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

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



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

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Department of Climate Change, Energy, the Environment and Water

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## APPENDIX C – STAKEHOLDER ENGAGEMENT REGISTER







Name	Address	Category	Email	Description	Date Sent	Sent via	Response Received as at 21/08/2023
NA	99 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	101 PerthSt	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	103 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	100 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	104 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	106 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	108 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	110 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	112 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	114 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	116 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	118 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	86 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	88 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	90 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	92 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
NA	122 Perth St	Nearby Receiver	NA	Potential Receiver to the North East of the site	24/05/2023	Mail	No
Wanaruah Local Aboriginal Land Council - Deanne Douglas	NA	Cultural Heritage Land Council	<a href="mailto:ceo@wanaruahlandcouncil.com.au">ceo@wanaruahlandcouncil.com.au</a>		22/05/2023	Email	No
RFS NSW (General Enquiries)	NA	Regulatory Body	<a href="mailto:webmaster@rfs.nsw.gov.au">webmaster@rfs.nsw.gov.au</a>		22/05/2023	Email	Yes 31/05/2023
RFS NSW (Planning and Environment Services Service)	NA	Regulatory Body	<a href="mailto:customerservicecentre@rfs.nsw.gov.au">customerservicecentre@rfs.nsw.gov.au</a>		22/05/2023	Email	Yes 31/05/2023
Fire and Rescue NSW (General enquiries)	NA	Regulatory Body	<a href="mailto:info@fire.nsw.gov.au">info@fire.nsw.gov.au</a>		22/05/2023	Email	No
Fire and Rescue NSW Advised Department	NA	Regulatory Body	<a href="mailto:firesafetv@fire.nsw.gov.au">firesafetv@fire.nsw.gov.au</a>		22/05/2023	Email	No
Transport for NSW (Development Dept.)	NA	Regulatory Body	<a href="mailto:developmentsydney@transport.nsw.gov.au">developmentsydney@transport.nsw.gov.au</a>		22/05/2023	Email	No
Mining Subsidence Advisory	NA	Regulatory Body	<a href="mailto:subsidenceadvisory@customerservice.nsw.gov.au">subsidenceadvisory@customerservice.nsw.gov.au</a>		7/05/2023	Email	Yes 08/05/2023
Aberdeen Council Advisory Committee	NA	Local Council			19/05/2023	Email	Yes
ARTC	NA	Rail Operator	<a href="mailto:enviroline@artc.com.au">enviroline@artc.com.au</a>		22/05/2023	Email	Yes 25/05/2023
Aberdeen Council Advisory Committee	NA	Local Council			19/05/2023	Email	Yes
Muswellbrook Shire Council	NA	Nearby Council/ LGA	<a href="mailto:council@muswellbrook.nsw.gov.au">council@muswellbrook.nsw.gov.au</a>	LGA and Council directly to the South of the site	21/08/2023	Email	No



## APPENDIX D – ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS) SEARCH RESULTS

IEMA - Integrated Environmental Management Australia

Date: 09 August 2023

41 Llewellyn Street  
Newcastle New South Wales 2303

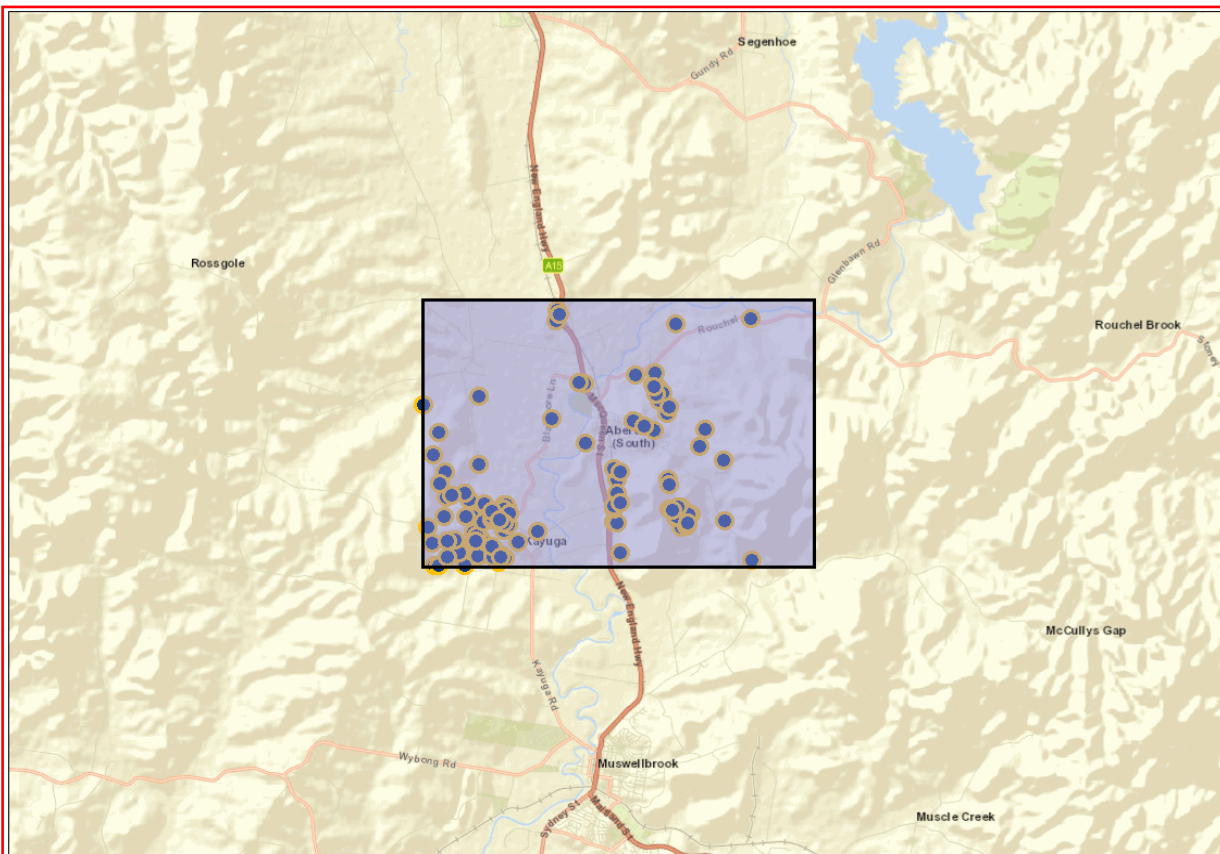
Attention: Harry Rees Parkes

Email: [harry.reesparkes@iema.com.au](mailto:harry.reesparkes@iema.com.au)

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lat, Long From : -32.2062, 150.834 - Lat, Long To : -32.1335, 150.9576, conducted by Harry Rees Parkes on 09 August 2023.**

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>116</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.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports	
37-2-1891	Dart-01	AGD	56	301610	6435000	Open site	Destroyed	Artefact : -	Isolated Find		
	<b>Contact</b>	<b>Recorders</b>	Iain Stuart								<b>Permits</b>
37-2-1892	Dart-02	AGD	56	297800	6436020	Open site	Valid	Artefact : -	Open Camp Site	1690	
	<b>Contact</b>	<b>Recorders</b>	Iain Stuart								<b>Permits</b>
37-2-1893	Dart-03	AGD	56	297760	6436000	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Iain Stuart								<b>Permits</b>
37-2-1894	Dart-04	AGD	56	297200	6436000	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Iain Stuart								<b>Permits</b>
37-2-1895	Dart-05	AGD	56	297640	6435930	Open site	Valid	Artefact : -	Isolated Find		
	<b>Contact</b>	<b>Recorders</b>	Iain Stuart								<b>Permits</b>
37-2-1904	Dart-14	AGD	56	296200	6436960	Open site	Valid	Artefact : -	Isolated Find		
	<b>Contact</b>	<b>Recorders</b>	Iain Stuart								<b>Permits</b>
37-2-1905	Dart-15	AGD	56	297860	6436050	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Iain Stuart								<b>Permits</b>
37-2-1915	DE 10	AGD	56	296148	6438501	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Ms.Vanessa Hardy								<b>Permits</b>
37-2-1916	DE 11	AGD	56	296012	6437850	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Ms.Vanessa Hardy								<b>Permits</b>
37-2-1842	MW-IF-2	AGD	56	305550	6434850	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Mr.Neville Baker,Gavin Martin								<b>Permits</b>
37-2-1843	MW-OS-4	AGD	56	304710	6436020	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Unknown Author								<b>Permits</b>
37-2-1598	CC100	AGD	56	299500	6439000	Open site	Valid	Artefact : -	Open Camp Site		
	<b>Contact</b>	<b>Recorders</b>	Unknown Author								<b>Permits</b>
37-2-1493	Abt 1;Aberdeen Abattoir;	AGD	56	302650	6440000	Open site	Valid	Artefact : -	Isolated Find	4181	
	<b>Contact</b>	<b>Recorders</b>	Ms.Claire Everett								<b>Permits</b>
37-2-1494	Abt 2;Aberdeen Abattoir;	AGD	56	302700	6439620	Open site	Valid	Artefact : -	Isolated Find	4181	
	<b>Contact</b>	<b>Recorders</b>	Ms.Claire Everett								<b>Permits</b>
37-2-1495	Abt 3;Aberdeen Abattoir;	AGD	56	302590	6439810	Open site	Valid	Artefact : -	Isolated Find	4181	
	<b>Contact</b>	<b>Recorders</b>	Ms.Claire Everett								<b>Permits</b>
37-2-1496	Abt 4;Aberdeen Abattoir;	AGD	56	302800	6439830	Open site	Valid	Artefact : -	Isolated Find	4181	
	<b>Contact</b>	<b>Recorders</b>	Ms.Claire Everett								<b>Permits</b>
37-2-1497	Abt 5;Aberdeen Abattoir;	AGD	56	302540	6440040	Open site	Valid	Artefact : -	Isolated Find	4181	
	<b>Contact</b>	<b>Recorders</b>	Ms.Claire Everett								<b>Permits</b>
37-2-1498	Abt 6;Aberdeen Abattoir;	AGD	56	302500	6440080	Open site	Valid	Artefact : -	Isolated Find	4181	
	<b>Contact</b>	<b>Recorders</b>	Ms.Claire Everett								<b>Permits</b>

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-1499	Abt 7;Aberdeen Abattoir; <b>Contact</b>	AGD	56	302550	6438700	Open site	Valid	Artefact : -	Isolated Find	4181
37-2-1500	Abt 8;Aberdeen Abattoir; <b>Contact</b>	AGD	56	302950	6439240	Open site	Valid	Artefact : -	Isolated Find	4181
37-2-1501	Abt 9;Aberdeen Abattoir; <b>Contact</b>	AGD	56	304080	6438780	Open site	Valid	Artefact : -	Isolated Find	4181
37-2-1502	Abt 10;Aberdeen Abattoir; <b>Contact</b>	AGD	56	303920	6438240	Open site	Valid	Artefact : -	Isolated Find	4181
37-2-1503	Abt 11;Aberdeen Abattoir; <b>Contact</b>	AGD	56	304660	6437860	Open site	Valid	Artefact : -	Isolated Find	4181
37-2-0529	(1) <b>Contact</b>	AGD	56	303600	6435900	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0530	(2) <b>Contact</b>	AGD	56	303500	6436100	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0531	(3) <b>Contact</b>	AGD	56	303300	6436400	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0532	(4) <b>Contact</b>	AGD	56	303700	6436200	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0533	Brouns Mountain 1; <b>Contact</b>	AGD	56	301400	6435900	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0534	Brouns Mountain 2,3,4; <b>Contact</b>	AGD	56	301500	6435900	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0535	Brouns Mountain 5; <b>Contact</b>	AGD	56	301400	6436300	Open site	Destroyed	Modified Tree (Carved or Scarred) : -	Scarred Tree	333,3669
37-2-0536	Brouns Mountain 6,7; <b>Contact</b>	AGD	56	301400	6436400	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0537	Brouns Mountain 8; <b>Contact</b>	AGD	56	301600	6436500	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0538	Brouns Mountain 9; <b>Contact</b>	AGD	56	301500	6436800	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0539	Brouns Mountain 10; <b>Contact</b>	AGD	56	301500	6437200	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0545	Aberdeen 1; <b>Contact</b>	AGD	56	299160	6435590	Open site	Valid	Artefact : -	Open Camp Site	2230,2231,223 2,2233



SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-0546	Aberdeen 1;Aberdeen Meatworks; <b>Contact</b>	AGD	56	303000	6439430	Open site	Valid	Artefact : -	Open Camp Site	2228
37-2-0547	Aberdeen 2;Aberdeen Meatworks; <b>Contact</b>	AGD	56	302550	6440450	Open site	Valid	Artefact : -	Open Camp Site	2228
37-2-1447	Kayuga (1996) 13/1;K(1996) 13/1; <b>Contact</b>	AGD	56	297000	6434500	Open site	Valid	Artefact : -	Open Camp Site	
37-2-1448	Kayuga (1996) ISF 13/1;K(1996) ISF 13/1; <b>Contact</b>	AGD	56	296500	6434750	Open site	Valid	Artefact : -	Isolated Find	
37-2-1449	Kayuga (1996) ISF 13/2;K(1996) ISF 13/2; <b>Contact</b>	AGD	56	296850	6434880	Open site	Valid	Artefact : -	Isolated Find	
37-2-0862	MAC 1; <b>Contact</b>	AGD	56	296950	6436710	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0863	MAC 2; <b>Contact</b>	AGD	56	296400	6436550	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0864	MAC 3; <b>Contact</b>	AGD	56	296560	6436620	Open site	Valid	Artefact : -	Isolated Find	
37-2-0865	MAC 4; <b>Contact</b>	AGD	56	296350	6435990	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0866	MAC 5; <b>Contact</b>	AGD	56	297080	6436500	Open site	Valid	Artefact : -	Isolated Find	
37-2-0867	MAC 6; <b>Contact</b>	AGD	56	297020	6435990	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0868	MAC 7; <b>Contact</b>	AGD	56	297530	6435840	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0869	MAC 8; <b>Contact</b>	AGD	56	298160	6435600	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0870	MAC 9; <b>Contact</b>	AGD	56	297770	6436010	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0871	MAC 10; <b>Contact</b>	AGD	56	297790	6435920	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0872	MAC 11; <b>Contact</b>	AGD	56	298030	6435820	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0873	MAC 12; <b>Contact</b>	AGD	56	298010	6435920	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0874	MAC 13; <b>Contact</b>	AGD	56	298270	6435770	Open site	Valid	Artefact : -	Open Camp Site	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-0875	MAC 14; <b>Contact</b>	AGD	56	298150	6435820	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0876	MAC 15; <b>Contact</b>	AGD	56	297790	6436150	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-0878	MAC 17; <b>Contact</b>	AGD	56	297320	6436010	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-0880	TOP EVAP 2; <b>Contact</b>	AGD	56	295890	6435650	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-0881	VILLAGE 2; <b>Contact</b>	AGD	56	298570	6435250	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-0883	BM 1; <b>Contact</b>	AGD	56	303600	6435920	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0884	BM 2; <b>Contact</b>	AGD	56	303570	6435820	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0885	BM 3; <b>Contact</b>	AGD	56	303420	6435800	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-0886	BM 4; <b>Contact</b>	AGD	56	303300	6436120	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0887	BM 5; <b>Contact</b>	AGD	56	303650	6436200	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0888	BM 6 (ISF); <b>Contact</b>	AGD	56	303420	6436420	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-0889	BM 7; <b>Contact</b>	AGD	56	302990	6437250	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0890	BM 8 (ISF); <b>Contact</b>	AGD	56	303050	6436320	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-0891	BM 9; <b>Contact</b>	AGD	56	303160	6436310	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0892	BM 10; <b>Contact</b>	AGD	56	303270	6436090	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0893	BM 11; <b>Contact</b>	AGD	56	303030	6437060	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>
37-2-1424	Travelling Stock Route-Kayuga;TSR-Kayuga; <b>Contact</b>	AGD	56	298200	6434750	Open site	Valid	Artefact : -	Open Camp Site	<b>Permits</b>
37-2-0845	BELL 1; <b>Contact</b>	AGD	56	297400	6434800	Open site	Valid	Artefact : -	Isolated Find	<b>Permits</b>

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-0846	BELL 2; <a href="#">Contact</a>	AGD	56	297500	6434840	Open site	Valid	Artefact : -	Isolated Find	
37-2-0848	BELL 4; <a href="#">Contact</a>	AGD	56	297850	6434770	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0850	BELL 6 <a href="#">Contact</a>	AGD	56	296690	6435280	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0851	BELL 7; <a href="#">Contact</a>	AGD	56	296480	6435230	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0852	BELL 8; <a href="#">Contact</a>	AGD	56	296850	6435070	Open site	Valid	Artefact : -	Isolated Find	
37-2-0853	BELL 9; <a href="#">Contact</a>	AGD	56	297300	6435250	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0854	EVAP 1; <a href="#">Contact</a>	AGD	56	297330	6435400	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0855	EVAP 2; <a href="#">Contact</a>	AGD	56	297260	6435500	Open site	Valid	Artefact : -	Isolated Find	
37-2-0856	FAIR 1; <a href="#">Contact</a>	AGD	56	298070	6434780	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0857	FAIR 2; <a href="#">Contact</a>	AGD	56	297690	6434870	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0858	FAIR 3; <a href="#">Contact</a>	AGD	56	297980	6434880	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0861	LON 2; <a href="#">Contact</a>	AGD	56	298010	6434630	Open site	Valid	Artefact : -	Open Camp Site	
37-2-0165	Kayuga <a href="#">Contact</a>	AGD	56	298208	6436374	Open site	Valid	Artefact : -	Open Camp Site	143
37-2-0166	Dartbrook, Sandy Creek <a href="#">Contact</a>	AGD	56	297324	6439651	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	143
37-2-0020	Dartbrook 1 <a href="#">Contact</a>	AGD	56	303134	6441954	Open site	Valid	Modified Tree (Carved or Scarred) : -, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial, Carved Tree	
37-2-1949	MACINTYRES DAIRY 5 (MD5) <a href="#">Contact</a>	AGD	56	298150	6436240	Open site	Valid	Artefact : -		

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
37-2-1950	MACINTYRES DAIRY 3 (MD3)	AGD	56	298300	6436120	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Peter Kuskie					<b>Permits</b>		
37-2-1948	D4	AGD	56	298100	6436100	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Peter Kuskie					<b>Permits</b>		
37-2-1958	MacIntyres Dairy 2B	AGD	56	298230	6436290	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Robyn Butler					<b>Permits</b>		
37-2-1952	MacIntyres Dairy 2	AGD	56	298280	6436060	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Peter Kuskie					<b>Permits</b>		
37-2-1953	MacIntyres Dairy 4	AGD	56	298140	6436370	Open site	Valid	Artefact : -		
	<b>Contact</b>	<b>Recorders</b>	Mr.Peter Kuskie					<b>Permits</b>		
37-2-0130	Aberdeen Scarred Tree	AGD	56	302278	6438828	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	<b>Contact</b>	<b>Recorders</b>	W Cook					<b>Permits</b>		
37-2-0134	Dartbrook 2	AGD	56	299567	6441979	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	<b>Contact</b>	<b>Recorders</b>	W Cook					<b>Permits</b>		
37-2-0162	Dartbrook Sandy Creek	AGD	56	295683	6439346	Open site	Valid	Artefact : -	Open Camp Site	143
	<b>Contact</b>	<b>Recorders</b>	Helen Brayshaw,Barry French,John Mathews					<b>Permits</b>		
37-2-2027	Halcombe Hill 1 IF	AGD	56	299618	6442281	Open site	Valid	Artefact : 1		
	<b>Contact</b> S Scanlon	<b>Recorders</b>	Janice Wilson					<b>Permits</b>	2232	
37-2-2028	Halcombe Hill 2 IF	AGD	56	299670	6442152	Open site	Valid	Artefact : 1		
	<b>Contact</b> S Scanlon	<b>Recorders</b>	Janice Wilson					<b>Permits</b>	2232	
37-2-2051	DF7/A	AGD	56	301590	6437430	Open site	Valid	Artefact : 1		
	<b>Contact</b> T Russell	<b>Recorders</b>	Mr.Peter Kuskie					<b>Permits</b>		
37-2-2052	DF6/A	AGD	56	301390	6437520	Open site	Valid	Artefact : 3		
	<b>Contact</b> T Russell	<b>Recorders</b>	Mr.Peter Kuskie					<b>Permits</b>		
37-2-0877	MAC 16;	AGD	56	297550	6436400	Open site	Valid	Artefact : -	Isolated Find	
	<b>Contact</b>	<b>Recorders</b>	Ms.Jill Ruig					<b>Permits</b>		
37-2-2590	Rouchel Road 0S2	AGD	56	305360	6442160	Open site	Valid	Artefact : 2		100738
	<b>Contact</b> Searle	<b>Recorders</b>	Mr.John Appleton					<b>Permits</b>		
37-2-2591	Rouchel Road 0S1	AGD	56	301970	6440360	Open site	Valid	Artefact : 2		100738
	<b>Contact</b> Searle	<b>Recorders</b>	Mr.John Appleton					<b>Permits</b>		
37-2-2627	PAD RTA AB1	AGD	56	300288	6440115	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		
	<b>Contact</b>	<b>Recorders</b>	Ms.Penny Mccardle					<b>Permits</b>	2969	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports	
37-2-2753	RTAAB1	GDA	56	300550	6440270	Open site	Valid	Artefact : 1			
	<b>Contact</b>	<b>Recorders</b>	Ms.Penny Mccardle								<b>Permits</b>
37-2-4107	DB-AS1-11	GDA	56	297592	6435505	Open site	Valid	Artefact : 5		3175,3501	
	<b>Contact</b>	<b>Recorders</b>	R Lampert,AECOM Australia Pty Ltd - Sydney								<b>Permits</b>
37-2-4131	DM-AS1-11	GDA	56	296470	6437504	Open site	Valid	Artefact : 30			
	<b>Contact</b>	<b>Recorders</b>	Mr.Geordie Oakes,AECOM Australia Pty Ltd - Sydney								<b>Permits</b>
37-2-5473	GS1A	GDA	56	302093	6439153	Open site	Valid	Artefact : -			
	<b>Contact</b>	<b>Recorders</b>	Tocomwall Pty Ltd,Mr.William Moon								<b>Permits</b>
37-2-5474	GS2B	GDA	56	302026	6439177	Open site	Valid	Artefact : -			
	<b>Contact</b>	<b>Recorders</b>	Tocomwall Pty Ltd,Mr.William Moon								<b>Permits</b>
37-2-5585	DB-IA2-18	GDA	56	297910	6435307	Open site	Valid	Artefact : -			
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd - Sydney,Mr.Luke Wolfe								<b>Permits</b>
37-2-5586	DB-QS1-18	GDA	56	298164	6435051	Open site	Valid	Artefact : -, Stone Quarry : -			
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd - Sydney,Mr.Luke Wolfe								<b>Permits</b>
37-2-5587	DB-AS3-18	GDA	56	296140	6435358	Open site	Valid	Artefact : -			
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd - Sydney,Mr.Luke Wolfe								<b>Permits</b>
37-2-5588	DB-IA3-18	GDA	56	297341	6435373	Open site	Valid	Artefact : -			
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd - Sydney,Mr.Luke Wolfe								<b>Permits</b>
37-2-5580	DB-IA1-18	GDA	56	297456	6437761	Open site	Valid	Artefact : -			
	<b>Contact</b>	<b>Recorders</b>	AECOM Australia Pty Ltd - Sydney,Mr.Luke Wolfe								<b>Permits</b>
37-2-5948	MTP-1745	GDA	56	296332	6434677	Open site	Valid	Artefact : 1			
	<b>Contact</b>	<b>Recorders</b>	Mr.Peter Kuskie,South East Archaeology								<b>Permits</b>
37-2-5947	MTP-1744	GDA	56	296197	6434688	Open site	Valid	Artefact : 1			
	<b>Contact</b>	<b>Recorders</b>	Mr.Peter Kuskie,South East Archaeology								<b>Permits</b>
37-2-6213	HRA-20-01	GDA	56	300643	6438469	Open site	Valid	Artefact : -			
	<b>Contact</b>	<b>Recorders</b>	Mr.Joel Deacon,Arrow Heritage Solutions								<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