Derringullen Energy Storage System

SCOPING REPORT

July 2024

BID ENERGY PARTNERS PTY LTD

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DISCLAIMER

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Glossary

Term	Definition
ACT	Australian Capital Territory
AEMO	Australian Energy Market Operator
AHIMS	Aboriginal Heritage Information Management System
ARTC	Australian Rail Track Corporation
BAM	Biodiversity Assessment Method
BESS	Battery Energy Storage System
BDAR	Biodiversity Development Assessment Report
BID	BID Energy Partners Pty Ltd
CIV	Capital Investment Value
DPE	Department of Planning and Environment (former)
DPIE	Department of Planning, Industry and Environment (former)
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act
FCAS	Frequency Control Ancillary Services
Ha	Hectare
HV	High voltage
IBRA	Interim Biogeographic Regionalisation for Australia
ISP	Integrated System Plan
Km	Kilometre
kV	Kilovolt
LEP	Local Environmental Plan
LGA	Local Government Area
m	Metre

Term	Definition
MVA	Megavolt-amperes
MW	Megawatt
MWh	Megawatt hours
NDC	Nationally Determined Contribution
NSP	Network Service Provider
NSW	New South Wales
PCS	Power Conversion System
RET	Renewable Energy Target
RFS	Rural Fire Service
SEARs	Secretary's Environmental Assessment Requirements
SRAS	System Restart Ancillary Services
SSD	State Significant Development
VRE	Variable Renewable Energy

1. Introduction

1.1. Overview

BID Energy Partners Pty Ltd is seeking regulatory and environmental planning approval for the construction, operation and decommissioning of the Derringullen Energy Storage System (the **Project**), which is a grid scale battery energy storage system with a discharge capacity of approximately 400 megawatt (**MW**) and storage capacity of 1,600 megawatt hours (**MWh**). The Project will connect to Transgrid's line 3J an existing 330kv transmission line running directly through the site.

The primary purpose of the Project is to store energy during periods of surplus electricity generation in the electricity network, typically excess solar renewable generation in the middle of the day, and then return that stored energy to the electrical network during periods of high demand, typically the afternoon and morning peak demand periods. Additionally, the Project will provide key electricity network services that support the secure and reliable operation of the electricity network for the benefits of consumers and businesses. The Project also supports the long-term reduction of emissions involved in the electricity generation and distribution network. The site selected for the Project is well suited to the deployment of energy storage assets and within a region that hosts several existing and proposed intermittent wind and solar generation assets but with limited complementary energy storage assets.

The Project is located on private land and sits wholly within the Yass Valley Council Local Government Area (**LGA**), on the north-western outskirts of the Yass township in New South Wales (**NSW**) (refer to **Figure 1**). Yass Valley is located in the Southern Tablelands region of NSW and is located approximately 280km southwest of the Sydney Central Business District (**CBD**), 600km northeast of the Melbourne CBD and 60km north of the Canberra CBD.

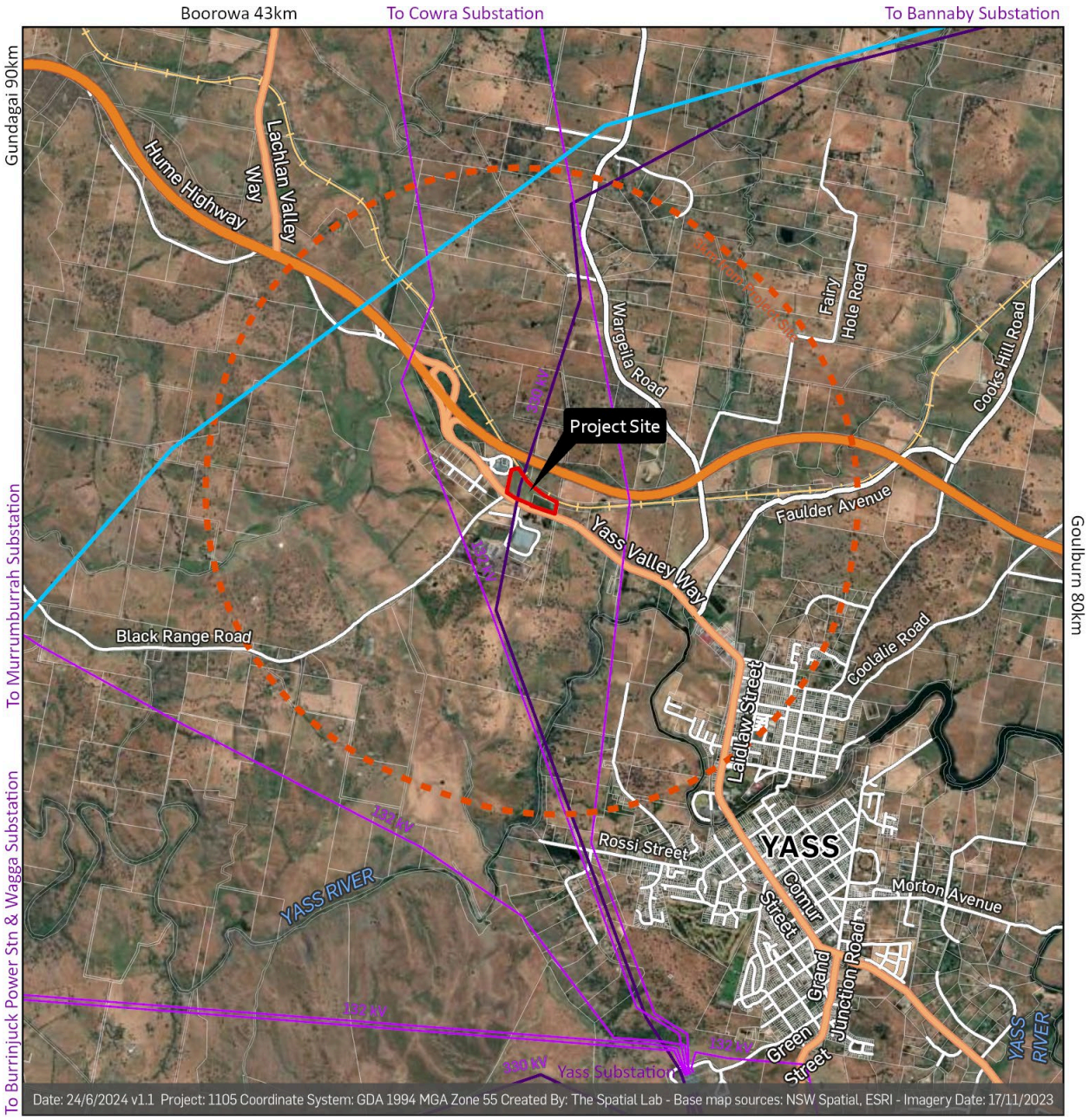

Boorowa 43km
To Cowra Substation
To Bannaby Substation
Gundagai 90km
To Murrumburrah Substation
To Burrinjuck Power Stn & Wagga Substation
Goulburn 80km
Hume Highway
Lachlan Valley Way
Wargeila Road
Fairy Hole Road
Cooks Hill Road
Project Site
Yass Valley Way
Faulder Avenue
Black Range Road
Coolalie Road
Laidlaw Street
YASS
Rossi Street
Comur Street
Morton Avenue
Grand Junction Road
Green Street
YASS RIVER
132 kV
330 kV
Yass Substation
Date: 24/6/2024 v1.1 Project: 1105 Coordinate System: GDA 1994 MGA Zone 55 Created By: The Spatial Lab - Base map sources: NSW Spatial, ESRI - Imagery Date: 17/11/2023
Local Context
Project Site
3km from Project Site
Transmission Lines
132 kV
330 kV
Hume Link Project
N
0
1 km

Figure 1

Land for the Project is accessed off Yass Valley Way and is located over two lots being Lot 100 DP 805154 and Lot 1 DP 541974. The development footprint will be in the order of 9 Ha.

The key elements of the Project's permanent infrastructure will include:

- Battery Energy Storage System (**BESS**) compounds comprising rows of enclosed lithium-ion type battery modules connected to associated power conversion systems (**PCS**) and high voltage (**HV**) reticulation equipment.
- Transformers and 33/330kV substation.
- Approximately 50m of overhead transmission line cutting in to the existing 330kV overhead transmission line passing through the site.
- Control room, safety systems and site ancillary infrastructure including parking, storage, maintenance and offices.

The Project's primary operational functions will be to store energy from the grid during periods of surplus electricity generation and then generate during periods of high demand in the grid using the stored energy in the battery banks. This regime is anticipated to be a daily cycle.

1.2. Proponent Details

The Project is being developed by BID Energy Partners Pty Ltd (**BID**). BID is an Australian owned business that specialises in the origination, development and delivery of renewable energy sector projects. Refer to **Table 1** for the details of the proponent.

Table 1 Proponent Details

Item	Details
Proponent Name	BID Energy Partners Pty Ltd
ABN	99 658 636 849
Postal address	Level 6, 77 Castlereagh Street, Sydney NSW 2000

1.3. Project Objectives

The objectives of the Project are to:

- Provide safe, reliable and efficient storage of energy in NSW including firming of variable renewable energy (**VRE**) generation such as wind and solar.
- Provision of reliability and security services to the electricity network such as Frequency Control Ancillary Services (**FCAS**), System Restart Ancillary Services (**SRAS**) and system strength services such as fast frequency and inertia services.
- Support the mitigation of volatility in the energy market by smoothing and stabilizing supply to the grid during periods of peak demand, unexpected outages and the closure of large-scale coal generation.
- Support the transition of the electricity network from fossil-fuel based generation to renewable energy and in particular achieving:

  - the NSW Climate Change Policy Framework net-zero emissions target by 2050 and
  - the Federal Government's Renewable Energy Target (**RET**) Scheme targets.
- Design, develop and operate the project in a manner that minimizes impacts to the environment and local stakeholders where possible.
- Provide positive outcomes for the local communities including the creation of employment and economic benefits.

1.4. Key Impacts Avoidance or Minimization

The Project will be designed, developed and operated to avoid impacts wherever possible, and will consider the outcomes of the detailed environmental, social and economic studies to be conducted during the Environmental Impact Statement (**EIS**), as well as ongoing community and stakeholder consultation. Where impacts are unavoidable, strategies to minimize or mitigate the impacts will be developed and detailed in the EIS.

The Project infrastructure has been arranged to be sited on previously disturbed land and with the minimum disturbance footprint possible. The location allows for direct connection to the existing HV transmission line, thereby minimizing the disturbance and potential impacts of connecting the project to the grid.

The site setting is a local valley with natural terrain providing substantive shielding of the site from locations beyond the immediately surrounding neighbours. To reduce visibility of the Project infrastructure from Yass Valley Way, the use of visual buffers will be considered in the design of the project around the perimeters with visibility from Yass Valley Way.

1.5. Purpose of this Report

The purpose of this report is to support a request for the Secretary's Environmental Assessment Requirements (**SEARs**), that will then guide preparation of an EIS as part of a development application under Division 4.1 of Part 4 of the Environmental Planning and Assessment Act (**EP&A Act**)

2. Strategic Context

2.1. Overview

The Project is supported by a range of strategic plans, policies and strategies at local, State and National levels of government. At a strategic level, the Project offers the opportunity to:

- Support Australia's commitments to reduce greenhouse gas emissions.
- Support the associated energy transition, which involves changing the generation of electricity from fossil fueled to renewable energy. This process is well underway and shift the grid's dependence from coal fired generation to firmed renewables.
    - The entire coal generation fleet in the National Electricity Market (**NEM**) is forecast to retire before 2040 (AEMO, *draft 2024 Integrated System Plan*, 2023) and be replaced by intermittent renewable energy generation such as wind and solar which will largely replace the coal generation capacity lost from the grid. However, the variability of these renewable generation sources introduces challenges to matching energy supply with demand.
    - BESS assets like the Project are essential to the future operation of the electricity grid, as they provide the ability to 'firm' intermittent renewable energy generators like wind and solar and store this energy for later flexible dispatch to the grid at the time it is required by energy users.
- Improve electricity network security and reliability.
- Mitigate against price volatility in the energy market by smoothing and stabilizing supply to the grid during periods of peak demand, unexpected outages and the closure of large-scale coal generation.
- To provide sustainable economic development and growth for the Yass Valley, including support for local employment and skills development while respecting the region's natural beauty and agricultural regions by locating the Project in a precinct identified for industrial development.

Further overview of key strategic plans and policies that the Project aligns with and supports is shown in **Table 2**.

Table 2 Project alignment with strategic plans and policies

Strategy, Policy or Plan	Details
National	
Paris Agreement	Under the Paris Agreement, Australia's Nationally Determined Contribution (**NDC**) is a target reduction in greenhouse gas emissions of 43% below 2005 levels by 2030. The NDC also includes a commitment to achieve net zero emissions by 2050
Renewable Energy Target	The Australian Federal Government's RET Scheme is designed to reduce greenhouse gas emissions in the electricity sector by encouraging renewable energy generation.

Strategy, Policy or Plan	Details
Capacity Investment Scheme	The Capacity Investment Scheme (**CIS**) provides a national framework to encourage new investment in renewable capacity, such as wind and solar, as well as clean dispatchable capacity, such as battery storage. It aims to help build a more reliable, affordable and low-emissions energy system for all Australians. The CIS involves the Australian Government seeking competitive tender bids for renewable capacity and clean dispatchable capacity projects to: • deliver an additional 32 GW of capacity by 2030 • fill expected reliability gaps as ageing coal power stations exit • deliver the Australian Government's 82% renewable electricity by 2030 target.
Integrated System Plan	The Integrated System Plan (**ISP**) is a whole-of-system plan that provides an integrated roadmap for the efficient development of the NEM over the next 20 years and beyond. The draft 2024 ISP was released on 15 December 2023. The ISP supports Australia's highly complex and rapid energy transformation towards net zero emissions, enabling low-cost renewable energy and essential transmission to provide consumers with reliable, and secure and affordable power. It serves the regulatory purpose of identifying actionable and future ISP projects, as well as the broader purposes of informing market participants, investors, policy decision makers and consumers.
State	
NSW Electricity Infrastructure Road Map	The NSW Electricity Infrastructure Roadmap (**Roadmap**) is the State's 20-year plan to transform the electricity system into one that is cheap, clean and reliable. The Roadmap is enabled by the Electricity Infrastructure Investment Act 2020 (**EII Act**). The plan sets out to coordinate investment in transmission, generation, storage and firming infrastructure as the State's coal-fired power plants are retired from 2023. It is intended to lay the foundations for more secure, reliable and affordable electricity. The Roadmap will support the private sector to deliver at least 12 gigawatts of new renewable electricity generation and 2 gigawatts of long-duration storage.
NSW Net Zero Plan	The Net Zero Plan Stage 1: 2020-2030 is the foundation for NSW's action on climate change and goal to reach net zero emissions by 2050. The plan aims to support the State's objective to deliver a 70% cut in emissions by 2035 compared to 2005 levels.
	The South East and Tablelands Regional Plan 2036 and Draft South East and Tablelands Regional Plan 2041 reference the NSW Renewable Energy Action Plan (2013) acknowledge the opportunities for renewable energy industries within the region. The proposal aligns with the actions *under Direction 6: Position the region as a hub of renewable energy excellence* of the current Regional Plan and strategies under 8.1, *Direction 8: Plan for a net zero region by 2050* identified in the Draft Plan.
Local	
Yass Valley Council Local Environmental Plan 2013	The Yass Valley Council Local Environmental Plan (**LEP**) defines what land may be used for as well as development standards and controls that apply to the land. The Project footprint sits on land zoned as E4 General Industrial. The objectives of this zone are to: • 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 purpose of the Project is 'electricity generating works' as defined in the Standard Instrument (Local Environmental Plans) Order 2006. The Yass Valley Council LEP provides for 'electricity generating works' to be carried out on land zoned E4 with development consent.

Strategy, Policy or Plan	Details
Yass Valley Council Local Strategy Planning Statement 2020	The Yass Valley Local Strategic Planning Statement (**LSPS**) sets outs the 20-year vision for land use within the Local Government Area, outlining how growth and change will be managed into the future. It defines the special characteristics which contribute to Yass Valley's identity and recognises the shared community values to be maintained and enhanced. The plan's vision is to build and maintain sustainable communities while retaining the region's natural beauty.
Yass Valley Council Yass Valley Settlement Strategy 2036	The Yass Valley Settlement Strategy provides a clear direction for long term growth and development within the Yass Valley LGA. The Settlement Strategy is informed by a range of referenced studies including: • Yass Valley Economic Development Strategy 2014-2017 The Economic Development Strategy considers the future development of Yass Valley and a transition from a primarily agriculturally based economy to one which is diverse, robust and sustainable, while maintaining a skilled workforce. The strategy recommends that the Yass Valley area investigate renewable energy production opportunities which could support the ACT's Renewable Energy Target • Yass Valley Industrial Lands Study 2008 The Industrial Lands Study identifies appropriate zones within the LGA for employment and generating economic development. The "Black Range Rd – Yass Valley Way Industrial Precinct" where the Project is sited is identified as being suitable for a range of industrial uses. This precinct is identified as being ideally situated to take full advantage of being located on a key transport corridor, and being located outside of the town of Yass where residential amenity will not be affected by industrial operations. The precinct also takes advantage of excellent access to major infrastructure, such as high voltage electricity, natural gas supply, main road access and reliable water supply.

2.2. Regional Context

The Project site including the network connection sits wholly within the Yass Valley Council LGA. The LGA area is approximately 4,000 km2 and adjoins the Australian Capital Territory (**ACT**). The population of the Yass Valley LGA is approximately 17,281 people (Australian Bureau of Statistics, 2021 Census).

Yass Valley has traditionally been inhabited by the Ngunnawal and Wiradjuri Tribes. The Yass area was first seen by Europeans in 1821, on an expedition led by Hamilton Hume, and by 1830 settlement had begun. Since this time Yass Valley agriculture has been the backbone of the community. Yass Valley residents live in a rural environment but are within daily commuting distance to access work and education opportunities in the ACT. Employment with Yass Valley include services to the agricultural, wine, tourism, education, recreation, transport, energy and art sectors.

The topography of the region is extremely diverse ranging from hills and waterways in the Wee Jasper area, to the large Burrinjuck Dam, to the rolling hills of Binalong and the vast plains of Yass and Murrumbateman.

2.3. Local Context

The Project is located within the "Black Range Rd – Yass Valley Way Industrial Precinct" (Yass Valley Council, *Yass Valley Industrial Lands Study*, 2008). This locality is identified in the Industrial Lands Study as a zone for future industrial development within Yass Valley, and as being located sufficiently far outside of the town of Yass such that industrial operations will not affect the residential amenity of the town.

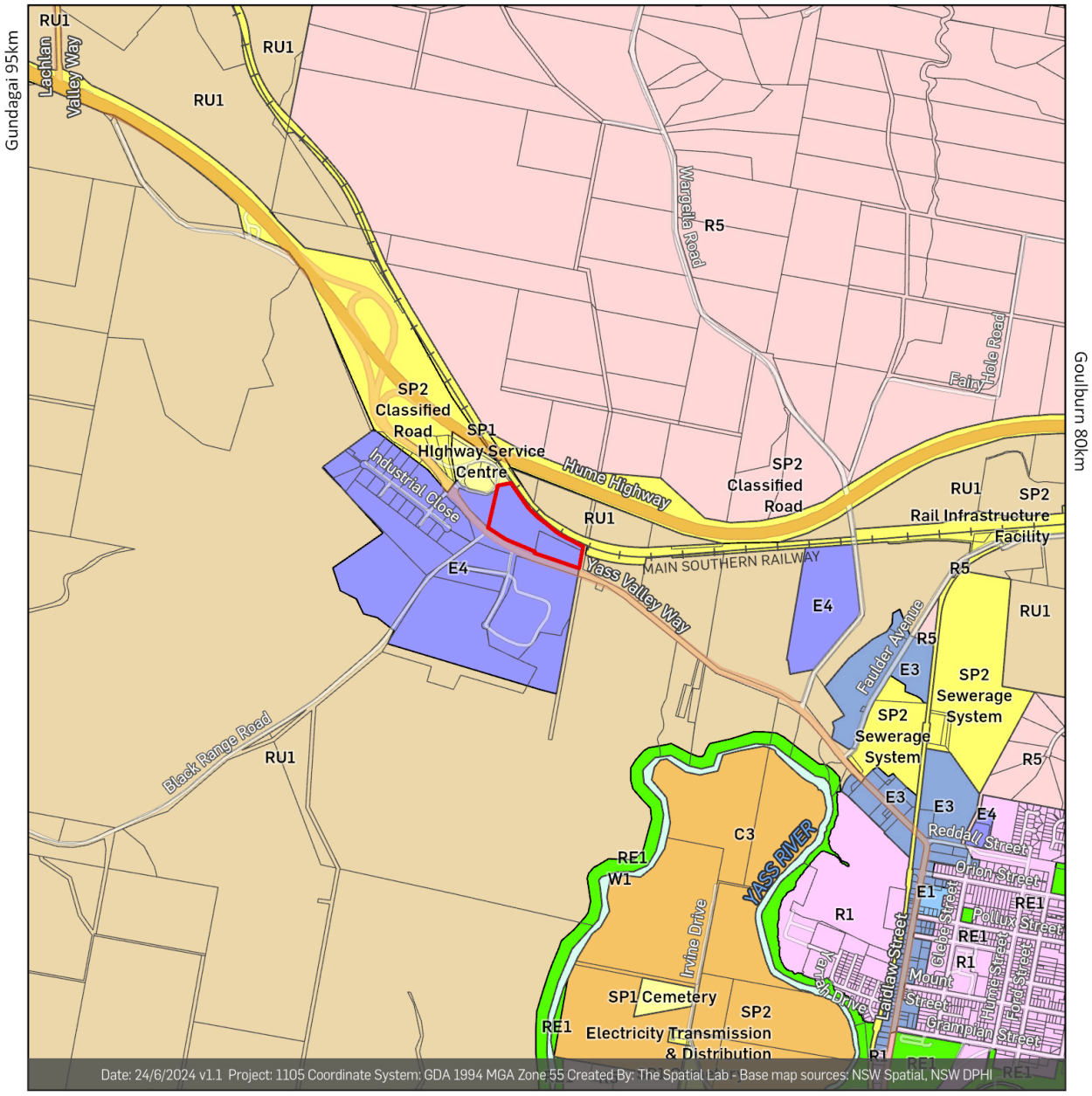
The land in this precinct has been identified as being suitable for a range of industrial uses due to its proximity to major infrastructure such as the high voltage electricity transmission line, natural gas supply, main road access and reliable water supply.

The Highway Service Centre, located at the junction of the Hume Highway and Yass Valley Way, is a prominent feature of the land immediately surrounding the Project site.

The local zoning and land use context is shown in **Figure 2**. The potentially sensitive receivers to the Project are indicated in **Figure 3**.

The nearest conservation areas to the Project site are:

- Bango National Park, approximately 10 km to the north-east.
- Mundoonen Nature Reserve, approximately 13 km to the east.
- Burrinjuck National Park, approximately 28 km to the south-west.



Land Zoning

Project Site

Land Zoning

- C3 - Environmental Management
- E1 - Local Centre
- E3 - Productivity Support
- E4 - General Industrial
- R1 - General Residential
- R5 - Large Lot Residential
- RE1 - Public Recreation
- RU1 - Primary Production
- SP1 - Special Activities
- SP2 - Infrastructure
- W1 - Natural Waterways

N

0 500 m

Figure 2


To Cowra Substation
To Bannaby Substation
To Cowra Substation
Gundagai 95km
Goulburn 80km
MAIN SOUTHERN RAILWAY
Hume Highway
Fairy Hole Road
Industrial Close
132 kV
330 kV
Wargeila Road
Faulder Avenue
Yass Valley Way
Black Range Road
YASS RIVER
Irvine Drive
Laidlaw Street
Glebe Street
To Yass Substation
Date: 24/7/2024 v3.1 Project: 1105 Coordinate System: GDA 1994 MGA Zone 55 Created By: The Spatial Lab - Base map sources: NSW Spatial, ESRI - Imagery Date: 17/11/2023
Site Context
Project Site
Transmission Line Structures
Transmission Lines
132 kV
330 kV
2km from Project Site
Nearest Residential Receivers
Associated
Non-associated
N
0
500 m

Figure 3

2.4. The Site

The Project Site is freehold land located off Yass Valley Way, with the Main Southern Rail line forming the northern boundary. The Hume Highway is within 1km to the north. Road access to the site will be provided by new entry/exits directly from Yass Valley Way.

Transgrid's 330kV overhead transmission line 3J runs north to south through the property, with tower 16 located within the site and an associated 60m wide easement covering the line.

The site has been previously fully cleared and is currently grassland used for sheep grazing. The topography is gently falling in the south-eastern direction towards Yass Valley, and there is a minor overland water course running north/south through the eastern end of the site.

2.5. Key Risks or Hazards

The key risks and hazards that have the potential to affect the project land are outlined below:

- **Bushfire** - The land for the Project is within a bush fire prone area, and is classed as Vegetation Category 3 (medium bush fire risk)
- **Flooding** - The land for the Project is not identified as flood prone land.
- **Land contamination** - No known contaminated sites have been identified within the land for the Project.

These risks will be further considered in the Project's hazard analysis during the EIS development (refer to **section 6.8**).

2.6. Cumulative Impacts

The locations of proposed and approved major development projects in relation to the Project are shown in **Figure 4** and the details of these developments are shown in **Table 4**. The EIS will consider any potentially relevant interactions between the Project and the developments in the vicinity and assess potential cumulative impacts.

The assessment of potential cumulative impacts will be undertaken in accordance with the Cumulative Impact Assessment Guidelines for State Significant Projects (DPIE 2022). The answers to the key questions in scoping the assessment are set out in **Table 3**.

Table 3 Cumulative impact assessment approach

Question	Answer
What to assess?	Matters to be considered would include: • Access • Air • Amenity • Biodiversity • Built environment • Economic • Hazards and risks • Heritage • Land • Social • Water

What study area?	The area will depend upon each assessment matter and be broad enough in nature to capture all relevant cumulative impacts.
Over what time period?	The life of the Project covering construction, operation and decommissioning
What projects to include?	The projects listed in **Table 4** and other proposed projects that are publicly known at the time of preparing the EIS.
What is the approach to assessment?	The assessment would be undertaken in accordance with the Cumulative Impact Assessment Guidelines for State Significant Projects (DPIE 2022).
What are the key uncertainties?	Typically quality and availability of data on proposed projects would be the key uncertainty.

Table 4 Major projects in the locality

Project	ID	Status (at time of Scoping Report Lodgement)	Approximate Distance from the Project	Project Type	Cumulative Impacts Assessment
Bango Wind Farm	SSD-6686	Operational	34km	Development of a 326 MW wind farm	Not proposed
Yass Valley (Copperbella) Wind Farm	SSD-6698	Operational	21km	Development of a 290 MW wind farm	Not proposed
Rye Park Wind Farm	SSD-6693	In construction (commenced 2021)	29km	Development of a 396 MW wind farm	Not proposed
Conroy's Gap Wind Farm	MP05_0170	Approved	21km	Development of a 30 MW wind farm	Yes
Springdale Solar Farm	SSD-8703	Approved	66km	Development of a 100 MW solar farm	Yes
Wallaroo Solar Farm	SSD-9261283	Assessment	59km	Development of a 100 MW solar farm	Yes
Humelink	SSI-36656827	Assessment	2km	Development of new transmission lines between Wagga Wagga and Bannaby	Yes
Yass Solar Farm	SSD-65518239	Prepare EIS	9km	Development of a 100 MW solar farm and 250 MW BESS	Yes

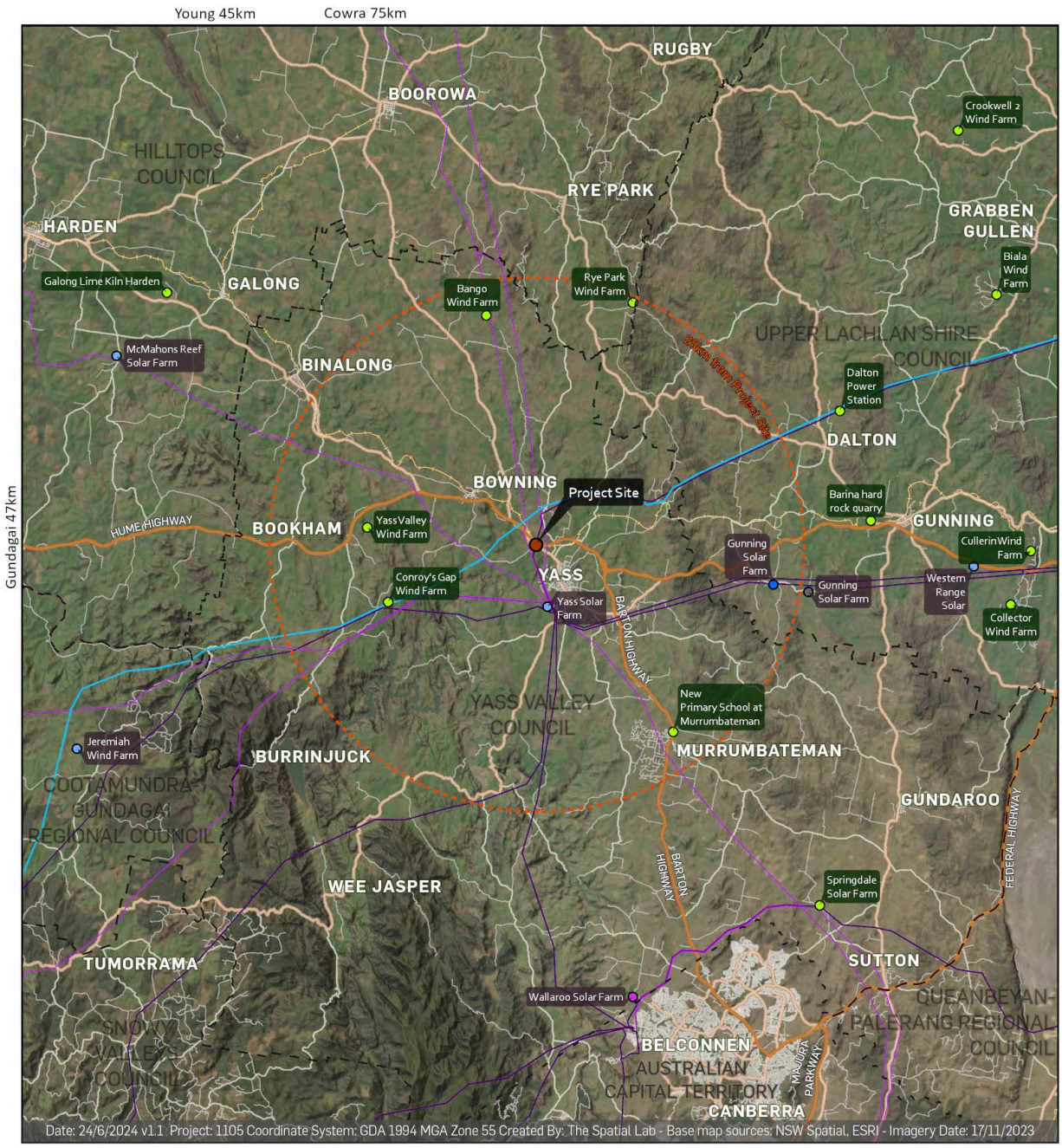

Young 45km
Cowra 75km
Crookwell 5km
Gundagai 47km
Goulburn 30km
RUGBY
BOOROWA
HILLTOPS COUNCIL
HARDEN
RYE PARK
GRABBEN GULLEN
Crookwell 2 Wind Farm
Biala Wind Farm
Galong Lime Kiln Harden
GALONG
Bango Wind Farm
Rye Park Wind Farm
McMahons Reef Solar Farm
BINALONG
UPPER LACHLAN SHIRE COUNCIL
25km from Project Site
Dalton Power Station
DALTON
BOWNING
Project Site
Barina hard rock quarry
GUNNING
HUME HIGHWAY
BOOKHAM
Yass Valley Wind Farm
Gunning Solar Farm
Cullerin Wind Farm
YASS
Conroy's Gap Wind Farm
Yass Solar Farm
Gunning Solar Farm
Western Range Solar
Collector Wind Farm
BARTON HIGHWAY
YASS VALLEY COUNCIL
New Primary School at Murrumbateman
Jeremiah Wind Farm
BURRINJUCK
MURRUMBATEMAN
COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
GUNDAROO
FEDERAL HIGHWAY
WEE JASPER
BARTON HIGHWAY
Springdale Solar Farm
TUMORRAMA
SUTTON
Wallaroo Solar Farm
QUEANBEYAN-PALERANG REGIONAL COUNCIL
SNOWY VALLEYS COUNCIL
BELCONNEN
AUSTRALIAN CAPITAL TERRITORY
MAJURA PARKWAY
CANBERRA
Date: 24/6/2024 v1.1 Project: 1105 Coordinate System: GDA 1994 MGA Zone 55 Created By: The Spatial Lab - Base map sources: NSW Spatial, ESRI - Imagery Date: 17/11/2023
Regional Context
Project Site
LGA Boundary
25km from Project Site
Existing Transmission Lines
132 kV
330 kV
Approved SSD/SSI Projects
Other SSD/SSI Projects - Stage
Prepare EIS
Response to Submissions
Assessment
Withdrawn
Hume Link Project
N
0
10 Km

Figure 4

2.7. Site Selection

The land for the Project was identified as viable for a battery energy storage system due to:

- Existing Transgrid high voltage transmission line (3J) that passes through the site will be the Project's onsite point of connection (**POC**) to the grid. This minimizes the cost of transmission infrastructure needed to connect the project relative to alternative sites that may require a new build transmission line to connect to the grid.
- Predominantly vacant and suitable land available on the Project site, with relatively unconstrained biophysical conditions and low site risks/hazards.
- Location of the Project site within an industrial precinct where residential amenity of the town of Yass will not be affected.
- Access from the Project site to major transport infrastructure including the Hume Highway and Yass Valley Way.
- Proximity of the Project to existing and proposed variable renewable energy wind and solar generators, which the Project could complement by storing excess energy from for flexible dispatch back to the grid when needed by energy users.
- Topography surrounding the site, which provides natural shielding protection from the Yass township and other rural receivers from impacts to visual amenity.
- Previously disturbed nature of the site, minimizing impacts of the Project to biodiversity.

2.8. Project Need

The NEM is in transition in line with government policies to reach a net zero economy by 2050. According to AEMO (AEMO, *draft 2024 Integrated System Plan*, 2023), urgent action is needed to deliver benefits for consumers as the NEM moves away from its traditional dependency on coal-fired generation. Renewable energy generated from wind and solar that is firmed with storage assets such as the Project will form the foundation of the replacement for the aging coal-fired generation.

The retirement of the coal generation fleet has been continuing at a steady rate since 2012, with all scheduled for retirement by 2051. AEMO's forecast is that the remaining coal fleet will close two to three times faster than the announced retirement dates due to higher operating costs, reduced fuel security, high maintenance costs and greater competition from renewable energy in the wholesale market.

Storage is required to smooth out the peaks and fill the gaps from VRE. AEMO estimates 50 gigawatts (**GW**) / 654 gigawatt hours (**GWh**) of dispatchable storage is required. Storage is typically considered in the following categories:

- Consumer owned or distributed storage (such as behind the meter household batteries)
- Shallow storage (such as utility scale batteries of duration up to 4 hours)
- Medium Storage (such as utility scale batteries or pumped hydro of duration between 4 and 12 hours)
- Deep storage (with duration exceeding 12 hours such as Snowy 2.0)

The Project is a form of shallow storage and is designed to dispatch stored energy upon demand and instantaneously, and to be able to support grid stability and security through various ancillary services functions.

The Project is justified and in the public interest as it:

- Is suitably located in the NSW electricity network, and within proximity to a number of existing and proposed wind and solar generators, to provide energy storage, flexible dispatch and grid stability and security services.
- Supports the energy transition and Australia achieving its target of net zero emissions by 2050.
- Is sited in a precinct designated for industrial development with direct access to high quality existing infrastructure including the high voltage transmission line and main access roads. Additionally, the precinct is located such that the residential amenity of the Yass town will not be affected.
- Would create economic and employment opportunities and benefits to the local region.
- Is not anticipated to result in significant environmental or social impacts.

2.9. Project Benefits

The Project would provide a range of direct and indirect benefits for local stakeholders. During the approvals process, BID intends to work closely with the Yass Valley Council, near neighbours, the local community, Indigenous groups, local businesses and other key stakeholders to understand local needs, preferences and opportunities to share the benefits of the Project through a community benefit sharing program.

Direct economic benefits of the Project are expected to include approximately 100 jobs during construction and 3 jobs for the operational life of the project, as well as the development and strengthening of local skills and capabilities in the electricity sector.

Benefits to the electricity network from the Project would include supporting the safe, reliable and affordable transition of the grid to renewable energy. Primarily this is through the storage of excess energy generated by VRE generators such as solar and wind, and then injection of this energy back into the electricity network at times of demand by consumers and businesses. The Project is also able to provide a range of network services to the grid such as FCAS and SRAS that facilitate the electricity network operating reliably and securely.

3. Project

3.1. Overview

The Project involves the construction, operation and eventual decommissioning of the proposed battery energy storage system, high voltage grid connection and other supporting infrastructure. An indicative general arrangement of the Project is shown in **Figure 2**.

The battery will have a peak generation capacity of approximately 400 MW and with an energy storage duration of 1,600 MWh. The Project will be configured to allow the stored energy to be discharged continuously over multiple hours at the peak capacity, or over a longer duration at a lower capacity.

3.2. Project Area

The footprint of the Project is expected to be approximately 9 ha including the grid connection, but not including the easement of the existing Transgrid 330kV transmission line passing through the site. The site would be accessed via Yass Valley Way.

3.3. Project Components

The main components of the Project are the battery system and the substation and associated network connection to the existing transmission line passing through the site. The relative layout of the components on the site is shown in **Figure 5**. The intended layout is based on the battery system being on the eastern side of the site and the substation and network connection on the west side of the site. The final orientation of the Project components will be finalised during the EIS but would remain within the estimated total development footprint. The final orientation of the components will be determined based on the EIS studies, the consultation with key stakeholders, outcomes of the grid connection application process with Transgrid and AEMO and the detailed design of the Project.

Battery System

The battery system component of the Project would comprise:

- rows of enclosed battery modules connected to associated power conversion systems (**PCS**) and underground 33kV HV ring main reticulation equipment and switchgear.
- Ventilation, heating, control and safety systems and likely include dedicated on-site fire water storage.
- Buildings and ancillary infrastructure including control room, storage, maintenance/workshop buildings and offices.
- Access roads and parking.
- Security fencing and landscaping.

The arrangement and number of battery modules, PCS and ring main units will be refined during the detailed design and EIS process.

The design life of the system would be 25 years, noting some components may be replaced or upgraded during this timeframe.

Substation and Network Connection

The Project will connect directly to the grid via a new substation and cut in to the existing 330kV transmission line that runs through the site. The substation and network connection component of the Project would comprise of:

- 33/330kV transformers
- Substation, anticipated to be a 'breaker and a half' arrangement.
- Approximately 50m of overhead transmission line cutting in to the existing 330kV overhead transmission.
- Substation control room, safety systems and site ancillary infrastructure including storage and maintenance/workshop buildings.
- Access roads and parking
- Security fencing and landscaping

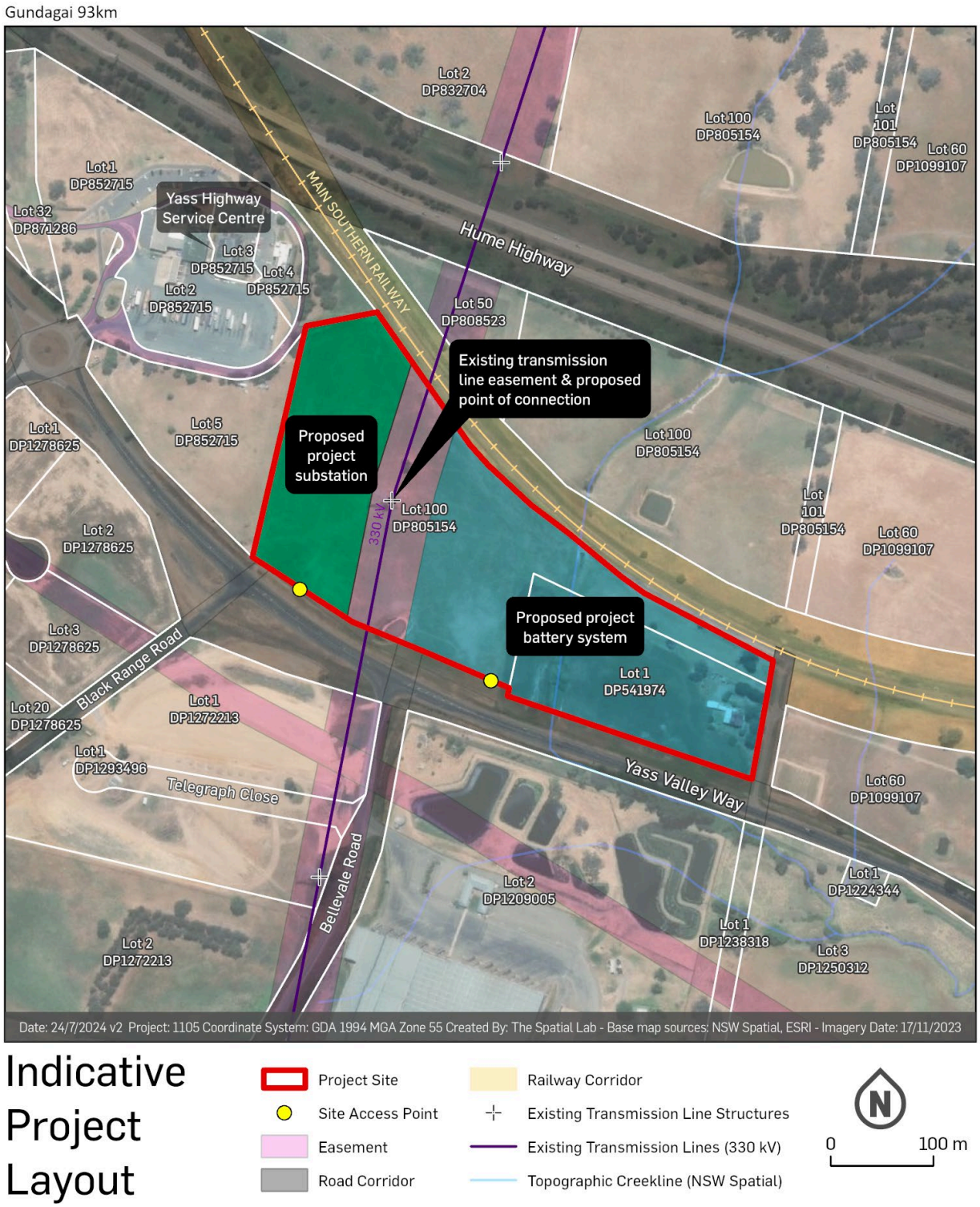

Gundagai 93km
Goulburn 85km
Yass 2.7km
Lot 2 DP832704
Lot 100 DP805154
Lot 101 DP805154
Lot 60 DP1099107
Lot 1 DP852715
Yass Highway Service Centre
Lot 32 DP871286
Lot 3 DP852715
Lot 4 DP852715
Lot 2 DP852715
MAIN SOUTHERN RAILWAY
Hume Highway
Lot 50 DP808523
Existing transmission line easement & proposed point of connection
Proposed project substation
Lot 1 DP1278625
Lot 5 DP852715
330 kV
Lot 100 DP805154
Lot 2 DP1278625
Proposed project battery system
Lot 3 DP1278625
Black Range Road
Lot 1 DP541974
Lot 20 DP1278625
Lot 1 DP1272213
Lot 1 DP1293496
Telegraph Close
Yass Valley Way
Bellevale Road
Lot 2 DP1209005
Lot 1 DP1224344
Lot 1 DP1238318
Lot 3 DP1250312
Lot 2 DP1272213
Date: 24/7/2024 v2 Project: 1105 Coordinate System: GDA 1994 MGA Zone 55 Created By: The Spatial Lab - Base map sources: NSW Spatial, ESRI - Imagery Date: 17/11/2023
Indicative Project Layout
Project Site
Site Access Point
Easement
Road Corridor
Railway Corridor
Existing Transmission Line Structures
Existing Transmission Lines (330 kV)
Topographic Creekline (NSW Spatial)
N
0
100 m

Figure 5

3.4. Project Stages and Timing

The Project stages are:

- Construction
- Operation
- Decommissioning

3.4.1. Construction

The construction of the Project is expected to begin in 2026, subject to the approvals processes, and have a duration of 18 months. Completion of construction, and commissioning of the Project, is therefore expected in 2027.

The development of the Project may be staged depending upon circumstances in the NEM and grid demand needs.

The majority of construction activities would be carried out during the following standard hours:

- 7am-6pm Monday to Friday
- 8am-1pm Saturday
- No work on Sundays or Public Holidays

Some construction activities may be carried out outside the standard hours including:

- Work determined to comply with the relevant noise limits at the nearest sensitive receiver.
- Delivery of materials and equipment as may be required by authorities for safety reasons.
- Testing and commissioning stages where continuous activities must be completed that extend beyond standard hours.
- Emergency situations.

3.4.2. Construction Activities

Activities comprising the construction of the Project would include:

- Establishment of road access points into the site from Yass Valley Way. Appropriate design of these points would be considered in the EIS and in consultation with relevant stakeholders that may include Transport for NSW, the Yass Valley Council and the Rural Fire Service.
- Establishment and maintenance of environmental controls.
- Clearing of vegetation.
- Cut and fill earthworks and construction of hardstand pads.
- Civil works to construct slabs and footings for the equipment and buildings.
- Delivery, installation and fit out of the equipment.
- Installation of cabling to connect the equipment.
- Testing and commissioning.
- Installation of buildings, fencing and other minor ancillary works.
- Removal of construction equipment and rehabilitation of construction areas.
- Landscaping.

3.4.3. Construction Workforce

Construction of the Project would involve a construction workforce estimated to peak at 100 people on site. As part of the selection of the delivery partners for the Project, commitments to use and upskill the workforce from the local Yass region, create indigenous and equal opportunity employment will be prioritised.

3.4.4. Operation

Operation of the Project is expected to commence in 2027. The Project would typically operate 24 hours per day, 7 days per week. The normal operational regime involves charging the battery during times of excess energy in the grid and then discharging the stored energy back to the grid during times of high energy demand. Typically, the Project is expected to cycle through one charge/discharge cycle per day. although the circumstances in the electricity market may increase the number of times the battery is cycled per day, or alternatively the battery may not be cycled at all on a given day.

The expected operating life of the Project is at least 25 years. Prior to the end of the Project's operating life, the viability of refurbishing or replacing equipment would be considered in the decision to extend or decommission the Project.

3.4.5. Decommissioning

At the end of its operational life, the Project would be decommissioned and land utilized or impacted by the Project would be appropriately rehabilitated in consultation with the relevant land owners.

3.5. Project Alternatives to be Investigated

During the EIS studies, through continued community and stakeholder consultation and through the detailed design process the layout and arrangement of the Project components will be refined.

4. Statutory Context

The framework for development control and land use planning in NSW is provided by the Environmental Planning and Assessment Act 1979 (**EP&A Act**) and the Environmental Planning and Assessment Regulation 2021 (**EP&A Regulation**). These are supported by Environmental Planning Instruments (**EPIs**), which include State Environmental Planning Policies (SEPPs) and Local Environmental Plans (**LEPs**). The key statutory considerations to the Project under the EP&A Act and other relevant NSW and Commonwealth legislation are summarised in **Table 5.**

Table 5 Planning framework:

Item	Details
Power to grant consent	The Project meets the threshold for State Significant Development (**SSD**) under Part 4 of the EP&A Act. Approval for the Project will be sought under Part 4, Division 4.7 of the EP&A Act. Under Clause 8 of the *State Environmental Planning Policy (State and Regional Development) 2011*, *(1) Development is declared to be State significant development for the purposes of the Act if—* *(a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and* *(b) the development is specified in Schedule 1 or 2.* Under Schedule 1, Clause 20 of the *State Environmental Planning Policy (State and Regional Development) 2011,* *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—* *(a) has a capital investment value of more than $30 million, or* *(b) has a capital investment value of more than $10 million and is located in an environmentally sensitive area of State significance.* The Project meets the definition of "electricity generating works' and it has a capital investment value exceeding $30 million and is therefore SSD. The consent authority for the Project is therefore the NSW Independent Planning Commission or the NSW Minister for Planning.
Permissibility	The purpose of the Project meets the definition of 'electricity generating works' as defined in the *Standard Instrument – Principal Local Environmental Plan (2006)*, ***electricity generating works** means a building or place used for the purpose of—* *(a) making or generating electricity, or* *(b) electricity storage.* The site of the Project facilities including the substation and network connection is wholly located within land zoned E4 – General Industrial. The site is located within the Yass Valley Council LGA. Under the *Yass Valley LEP 2013*, a development for the purpose of electricity generating works is permissible with consent on land zoned E4 General Industrial. Further, the *State Environmental Planning Policy (Infrastructure) 2007* provides for 'electricity generating works' to be carried out on any land in an industrial zone (as well as rural or special use). Therefore, the Project is permissible with consent.
Other approvals	**Consistent Approvals** • **Environmental Protection Licence** It is anticipated that an environment protection licence (**EPL**) will be required under the *Protection of the Environment Operations Act 1997 (**POEO Act**)*. If this is required, it would be obtained prior the Project commencing. • **Roads Act**

Item	Details
	Under the *Roads Act 1993*, Section 138, an approval is required to permit the erection of a structure or carry out a work in, on or over a public road. These would be obtained as part of the SSD DA approval. It is anticipated that the Project would involve new road access connections from Yass Valley Way in/out of the site. The impact assessment of traffic volumes and design of the turnoffs from Yass Valley Way will be assessed and identified in the EIS, including with consultation with Transport for NSW and the Yass Valley Council. **EPBC Act Approval** Under the *Environment Protection and Biodiversity Conservation Act 1999 (**EPBC Act**)*, any action which could have a significant impact on Matters of National Environmental Significance (**MNES**) must be referred to the Federal Minister for the Environment and Energy. A search of the Commonwealth Protected Matters Search Tool (**PMST**) undertaken in July 2024 identified that in the area of the Project there may occur 3 listed threatened ecological communities and 35 listed threatened species. There are no matters of national significance identified on the site. Biodiversity assessments during the EIS covering the land proposed to be included in the Project footprint will be completed to determine if there is a need for a referral under the EPBC Act. If a referral is required it would be made to the Commonwealth Department of Agriculture, Water and Environment under the EPBC Act. **Other Approvals** • **Native Title** The *Native Title (New South Wales) Act 1994* provides for native title in relation to land or waters. The Project does not affect land that is subject to a native title claim or determination nor to which an Indigenous Land Use Agreement applies. • **Water Access Licences** Water sources for the construction and operation of the Project will be identified and detailed within the EIS. If it is determined that a water access license or approvals is required, it would be obtained prior to the commencement of construction. • **Land Lease** Land access agreements have been entered into with the owners of the affected land. • **Network Connection** Agreements for the Project to connect to the NEM are being progressed with Transgrid separately. **Approvals not required for SSD** Under Section 4.41 of the EP&A Act, the following approvals are not required for an SSD development: *(a) (Repealed)* *(b) a permit under section 201, 205 or 219 of the Fisheries Management Act 1994,* *(c) an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977,* *(d) an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974,* *(e) (Repealed)* *(f) a bush fire safety authority under section 100B of the Rural Fires Act 1997,* *(g) a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000.*
Pre-conditions to exercising the power to grant consent	The EIS will be prepared in accordance with the relevant legislative requirements and guidelines. No pre-conditions to exercising the power to grant approval have been identified for the Project.
Mandatory matters for consideration	The applicability of the following legislation to the Project would be determined in the EIS. **Biodiversity Conservation Act 2016**

Item	Details
	The EIS for the Project would include an assessment of biodiversity impacts in accordance with the Biodiversity Conservation Act 2016 and biodiversity assessment method. **Biosecurity Act 2015** The Biosecurity Act may be applicable if listed weeds are identified within the Project site. **National Parks and Wildlife Act 1974** The *National Parks and Wildlife Act 1974* details the care, control, governance and management of national parks, nature reserves, Aboriginal and historic sites. The Project land does not include any land reserved under this act. Impacts to biodiversity and heritage will be assesses in the EIS. **Heritage Act 1977** One heritage site listed on the NSW State Heritage Inventory and in the Yass Valley LEP is located in the vicinity of the Project site. The listed heritage site is not located on land impacted by the project and therefore no impacts to the heritage item or value are expected as a result of the Project. **Rural Fires Act 1997** The Project site is mapped as containing category 3 bushfire prone vegetation which is considered a medium bushfire risk. Potential risks associated with bushfires would be assessed in the EIS. As part of the EIS, consultation would be undertaken with the NSW Rural Fire Service (**RFS**). **Contaminated Land Management Act 1997** This Act outlines the process in which notification of the NSW Environment Protection Authority (**EPA**) is required in relation to contaminated land. Preliminary investigations have not identified the existence of any contaminated land at the Project site. **Waste Avoidance and Resource Recovery Act 2001** Management practices as required by the *Waste Avoidance and Resources Recovery Act 2001* would be included in the EIS. **State Environmental Planning Policy (Resilience and Hazards) 2021** The EIS would include a preliminary hazard analysis (**PHA**) prepared in accordance with the *State Environmental Planning Policy (Resilience and Hazards) 2021* (***Resilience and Hazards SEPP***), and other guidelines such as *Multi-Level Risk Assessment* and *Applying SEPP 33*. **Yass Valley LEP 2013** The Project would be located within the Yass Valley LGA and development within this LGA is regulated by the Yass Valley LEP. The Project land is wholly located on land zoned E4 – General Industrial. Under the *Yass Valley LEP 2013*, a development for the purpose of electricity generating works is permissible with consent. Clauses from the Yass Valley LEP that would be considered in the EIS include: • Clause 2.3 Zone objectives and Land Use Table • Clause 5.10 Heritage Conservation • Clause 5.11 Bush fire hazard reduction • Clause 6.1 Earthworks • Clause 6.3 Terrestrial biodiversity • Clause 6.4 Groundwater vulnerability • Clause 6.5 Riparian land and watercourses • Clause 6.7 Highly erodible soils • Clause 6.8 Essential services

5. Engagement

5.1. Background

BID's approach to stakeholder engagement and consultation is to ensure:

- clear and accurate information about the Project is available to interested stakeholders.
- that this information is regularly updated as the Project progresses.
- that constructive and enduring working relationships are established and maintained with stakeholders.
- that stakeholder communication channels are created and maintained, and
- feedback on the Project details is sought and incorporated where relevant and appropriate.

To date BID has:

- established and maintained a public webpage with information about the Project.
- informed and commenced consultation process with the Yass Valley Council both staff and the elected Councilors.
- informed direct neighbours and a range of other stakeholders in the close proximity to the site,
- informed and sought engagement with the local representative to the NSW Parliament and
- informed the President of the Yass Business Chamber.

BID will continue to engage with council, neighbours, the community, other relevant stakeholders and agencies to ensure they are informed about the details and potential impacts of the Project as it progresses, and to understand any concerns that may exist and work to address and manage them.

5.2. Key Stakeholders and Engagement to Date

The likely level of community interest in the Project by geographic extent is summarised in **Table 6.**

Table 6 Likely level of community interest in the Project

Community Group	Likely Level of Interest
Local Community **(<5km from the site)**	Medium to high level of interest Early indications suggest that the local community are interested in: • Visual amenity • Impact on housing/accommodation during construction • Impact on one of the main entry roads to Yass • Disruption to roads and amenities during construction • Impact of multiple renewable energy projects being developed in the region at the same time
Regional **(5-100km from the site)**	Medium interest Early indications suggest that the regional community are interested in: • Impact on accommodation during construction • Disruption to roads and amenities during construction • Impact of multiple renewable energy projects being developed in the region at the same time

Community Group	Likely Level of Interest
>100km from the site)	Low There are multiple renewable energy developments both operating and in construction in the wider regional area.

Key stakeholders who may be directly or indirectly impacted by the Project, or who otherwise may have an interest in the Project have been identified, together with a summary of the engagement completed to date, in **Table 7.**

Table 7 Key stakeholder and engagement to date summary

Stakeholder	Engagement to Date
Yass Valley Council	Introductory meeting held 4 June 2024
Yass Valley Councilors and Mayor	Introductory workshop held on 9 July 2024
State MPs	Introduction email sent to Mrs Wendy Tuckerman 16 July 2024 providing information and offering a meeting which was declined at this stage.
DPIE	Introductory meeting held on 26 June 2024
NSW RFS	Introductory email sent 12 July 2024
Australian Rail Track Corporation (ARTC)	Introductory email sent 16 July 2024. Reply received 17th July advising a review of the provided information will be arranged and advice will sent on ARTC's requirements
Host landowner	Extensive discussions held with host landowner
Directly surrounding neighbours (within 1km from the site)	Introductory letter either emailed or hand delivered to residential neighbours and Ampol, McDonalds and KFC on the neighbouring service centre site.
Aboriginal stakeholders	Introductory letters sent 17 July 2024 to: • Onerwal Local Aboriginal Land Council • Office of the Registrar, Aboriginal Land Rights Act (1983) NSW • Native Title Services Corporation Limited • South East Local Land Services • Environment and Heritage, Department of Climate Change, Energy the Environment and Water
Broader community	Website created May 2024
Yass Valley Chamber of Commerce	Introductory letter sent offering a meeting with management and the full Chamber
Transgrid	Pre-connection enquiry meetings held August 2023 and January 2024

5.3. Ongoing Engagement

Continued engagement and consultation will be undertaken throughout the EIS. Engagement will be in accordance with the *Undertaking Engagement Guidelines for State Significant Projects* (DPIE,2021).

The summary of the proposed ongoing engagement is outlined in **Table 8**.

Table 8 Ongoing engagement plan summary

Engagement Method	Outline of Proposed Ongoing Engagement	Engagement Objective
Community information sessions	Consultation with general community, local neighbours and residents	Consult
Newsletters and project updates	Information distributed to stakeholders consenting to receive periodic updates and news on the Project	Inform
Project website updates	Information maintained about the Project and latest details on the publicly accessible website	Inform
Personal meetings & direct communications	Engagement available to any stakeholder that contacts the Project directly	Involve
Social impact assessment engagement activities	Engagement, involvement and consultation of key stakeholders as part of the social impact assessment including surveys, workshops, meetings with local residents, community groups, Aboriginal groups, local businesses and other key stakeholders	Consult/ Involve
Project briefings and presentations	Project specific briefings to key stakeholders including • Yass Valley Council Councilors and staff, • State and Federal Members of Parliament, • State and Federal government agencies, • NSW RFS, • local media, • local business and community groups, and • other key stakeholders.	Involve

BID understands that community engagement must evolve during the process and that it is critical to provide opportunities for the community to be involved in the process and provide feedback. BID adopts a range of communication methods including direct and indirect written communications as well as digital communications through website and social media.

BID uses an online database management tool to monitor the effectiveness of community engagement. The tool enables BID to monitor communications, information provided and responses received. All communication provided by BID offers the opportunity for the community to provide direct feedback and stakeholder feedback will be sought regularly through the process to ensure that the frequency and level of detail being provided is suitable.

BID will use this feedback to adapt engagement to ensure that all stakeholders are able to be engaged with and heard in an appropriate manner and that the feedback is used to influence the final shape of the project.

5.4. Identified Stakeholder Issues

The engagement conducted to date has provided valuable opportunities to receive feedback from stakeholders and to discuss potential issues, concerns and needs. A summary of the issues identified through stakeholder consultation to date is outlined in **Table 9**.

Table 9 Feedback summary

Aspect	Feedback to Date
Visual amenity	• Concerns about changes to visual amenity on one of the main public road entrances to Yass town • Identify the need to incorporate vegetation screening
Noise	• Interest in understanding the potential noise impacts during the construction and operation
Bushfire	• Address bushfire risk and need to undertake early engagement with RFS
Traffic and access	• Interest in understanding how the site will be accessed, and the traffic volumes associated with the project
Hazard and risk	• Interest in understanding further details on the main risks associated with battery energy storage projects • Interest in understanding the assessment of the risk of fire and how this will be managed/resolved
Social	• Interest in understanding the potential for project workforce to strain availability of short-term accommodation infrastructure in Yass town • Interest in understanding plans for shared benefits fund
Economic	• Interest in understanding of local employment opportunities

6. Proposed Assessment of Impacts

6.1. Overview

The assessment to date of the likely relevant matters has involved:

- Assessment of the construction and operational phases of the Project
- Desktop review of relevant databases and available background data
- Preliminary field review of the site and the surrounding area
- Information received from stakeholder consultation to date
- Review of *State significant development guidelines – preparing a scoping report* (DPIE, 2022)
- Review of relevant SEARs issued by DPHI

Potential categories of matters considered for assessment include:

- Access
- Air
- Amenity
- Biodiversity
- Built Environment
- Economic
- Hazards and risks
- Heritage
- Land
- Social
- Water

The scale and nature of the likely impacts have been considered to identify matters requiring further assessment in the EIS. The summary of the matters identified, the preliminary assessments and proposed level of assessment are summarised in **Table 10**.

In developing the Project through the detailed design and environmental assessment phases, a key focus will be to avoid and minimize impacts from the construction and operation of the Project. Mitigation and management measures will be identified in the assessment phase to minimize impacts.

Table 10 Summary of assessment matters

Matter	Scale and Nature of likely impacts	Receiving environment sensitivity	Cumulative Impact Assessment (CIA)	Level of Assessment
Access – access to property, traffic and parking, road facilities	New road entry/exit points to the Project site from Yass Valley Way are anticipated to be required for the project. During construction, the Project would involve additional traffic volumes to the local roads. Some oversize and overmass vehicle movements would be required for delivery of equipment such as the transformers. During operation of the Project traffic volumes on local roads are not expected to materially change. Private property access would not be affected by the Project.	The Project site is accessed directly by high quality road infrastructure, including the Hume Highway and Yass Valley Way, that is unlikely to be sensitive to the minor volumes of additional road traffic introduced by the Project on existing volumes.	No	Standard
Air – atmospheric emissions, particulate matter	During construction, activities such as site earth and civil works could eventuate in localized dust emissions. Standard management measures are available such that impacts would not extend off site. Normal operation of a battery energy storage system has no emissions.	The Project is located in an industrial precinct, with minimal sensitivity to the proposed Project activities.	No	Minor
Amenity – noise, vibration, visual	During construction the Project is anticipated to generate noise from various construction activities and equipment, this is unlikely to exceed noise management levels. Standard construction noise management measures would mitigate or manage any exceedance of noise management levels. Normal operation of a battery energy storage system does generate noise from the equipment, but these are not anticipated to exceed noise management levels. A range of measures are available to manage or mitigate operational noise including design and orientation of the equipment, specification of low noise level equipment and shielding of the noise sources. The topography surrounding the Project land provides substantial natural shielding to receivers beyond the immediately surrounding neighbours. Elements of the Project would be visible from Yass Valley Way. During the EIS, visual screening along the property boundary with Yass Valley Way will be investigated.	The Project is located in an industrial precinct, with minimal sensitivity to the proposed Project activities. Substantial natural shielding due to topography and separation distance exists between the Project site and any receivers currently identified as likely to be sensitive to noise, vibration or visual impacts.	No	Standard

Matter	Scale and Nature of likely impacts	Receiving environment sensitivity	Cumulative Impact Assessment (CIA)	Level of Assessment
Biodiversity – flora and fauna	The Project would involve clearing of approximately 9 ha of previously disturbed land area. All land for the Project sites wholly within an industrial precinct that has previously been identified by the Yass Valley Council as appropriate for industrial development. A search of the Commonwealth Protected Matters Search Tool has identified the potential for Matters of National Environmental Significance to occur within, or relate to, the land for the Project (refer to **Table 11**). No protected maters have been recorded on the site. Assessment of the potential for the presence of and impacts to these matters would be confirmed during the EIS.	The Project area is previously disturbed and mostly cleared. Neighbouring land surrounding the property is all also previously disturbed or developed.	No	Standard
Economic	The Project would contribute to the future stable, reliable and secure operations of the electricity grid and the transition of the energy sector to renewable sources. The Project would provide direct and indirect economic benefits for the local region through opportunities such as employment and skills development.	The Project area is located in an industrial precinct that has been identified by the Yass Valley Council as suitable for development and investment within the LGA.	No	Minor
Hazard and risk – biosecurity flooding, bushfire, environmental hazards, groundwater, waste, dangerous goods, land contamination	The design of the Project would need to consider hazards and risks including bushfire and flooding. The land for the Project is within a bush fire prone area, and is classed as Vegetation Category 3, which is considered a medium bush fire risk. Battery energy storage systems incorporate appropriate fire detection and management measures, and are not highly sensitive to bushfires. The site is not mapped as flood prone land and the Project is not anticipated to impact the flooding risks.	Surrounding the Project site are major infrastructure elements including the Hume Highway, the Main Southern Rail line and Yass Valley Way. A fire emanating from the Project would have the potential to impact the users of this infrastructure.	No	Standard
Heritage – Aboriginal	The Project would involve clearing of approximately 9 ha of previously disturbed land area. The Project land does not include any sites listed on the Aboriginal Heritage Information Management System (AHIMS). However Aboriginal heritage items and values may still be present.	Whilst the Project area is previously disturbed, if any Aboriginal heritage items or sites were identified they would have importance.	No	Standard

Matter	Scale and Nature of likely impacts	Receiving environment sensitivity	Cumulative Impact Assessment (CIA)	Level of Assessment
Heritage – non-Aboriginal	A search of the NSW State Heritage Inventory and the Yass Valley Council Local Environmental Plan (**LEP**) shows no record of non-Aboriginal heritage sites on the Project site. The nearest listed heritage site is the ruins of the Telegraph Inn (**ID A303**), which is located approximately 150m to the south and across the Yass Valley Way. The Project would not impact the ruins of the Telegraph Inn.	Whilst the Project area is previously disturbed, if any non-Aboriginal heritage items or sites were identified they would have importance.	No	Minor
Land	The site is relatively flat and the topography including the surrounding land is gently rolling. During construction, earth and civil works would initially be undertaken on the Project land to level, compact and prepare hardstand pads suitable for the equipment and components of the battery energy storage system to be installed. Standard construction management practices would be available to manage potential impacts associated with ground disturbance such as sedimentation and erosion controls. Site hygiene protocols would minimize risks of weed introduction or transfer. The Project land is not known to contain any contamination. An unexpected finds management process would mitigate the impacts of unknown contamination if encountered.	The Project site is located within a transport corridor including the Hume Highway, Yass Valley Way, the Main Southern Rail Line and a Highway Service Centre. An above ground 330kV high voltage transmission line runs north – south through the site. The site sits wholly within the Black Range Rd – Yass Valley Way Industrial Precinct that the Yass Valley Council has identified as being suitable for industrial development and operations.	No	Minor
Social	The Project is located in a precinct that is designated by the Yass Valley Council for further investment and development and being located outside of the town of Yass where residential amenity will not be affected by industrial operations. The Project is anticipated to have a range of positive social benefits through the direct and indirect benefits flowing from the significant investment required to construct the Project. The nearby town of Yass has relatively strong social infrastructure, and the substantial infrastructure of the ACT is also accessible to support the construction phase of the Project. The operation of the Project will not impact social infrastructure.	Social infrastructure capacity of Yass and the ACT is not considered likely to be sensitive to the labour demands of the construction phase of the Project.	Yes	Standard
Water	Stormwater from the Project area drains towards the south. The design of the Project would need to allow stormwater flow to continue to pass through or around the site from the north and to continue to drain to the south.	Properties to the south are likely to be sensitive from water quality and flooding perspectives.	No	Standard
Access – port, rail and airport facilities	The Project would not involve the development of, or impact to, rail, port or airport facilities.	Not applicable	No	No further assessment proposed

Matter	Scale and Nature of likely impacts	Receiving environment sensitivity	Cumulative Impact Assessment (CIA)	Level of Assessment
Amenity – odour	The Project would not produce odours during construction or operation that have the potential to impact amenity.	Not applicable	No	No further assessment proposed
Built Environment	The Project would not impact upon other built assets, the public domain or public infrastructure. The traffic impact assessment would consider any impacts to local roads.	Not applicable	No	No further assessment proposed
Biodiversity – conservation areas	There are no conservation areas within the area of the Project land nor within proximity of the site.	Not applicable	No	No further assessment proposed
Hazards and risks – coastal hazards	The Project land is not located near the coast, and therefore coastal hazards are not relevant.	Not applicable	No	No further assessment proposed
Land – soil chemistry	The Project would not involve any activities altering or impacting soil chemistry.	Not applicable	No	No further assessment proposed

6.2. Access and Traffic

Existing Environment

The area around the site is a transport corridor with high quality existing highway and regional standard roads, which host substantial existing traffic volumes. The Sydney to Melbourne Hume Highway passes to the north of the site. Traffic on the Hume Highway, and the local regional, is serviced by a Highway Service Centre located to the west of the Project site (refer to **Figure 5**). There are no footpaths or bicycle ways on Yass Valley Way in the proximity of the Project.

The Project site would be primarily accessed from the following key roads in the existing road network:

- Yass Valley Way, which is a Regional Road managed by the Yass Valley Council. Yass Valley Way is a two way road with a single lane in both directions. To the north-west, Yass Valley Way connects to the Hume Highway approximately 1.5 km away from the site. To the south-east Yass Valley Way connects to the center of Yass town, approximately 3km away from the site; and
- The Hume Highway (M31), which is State Road managed by Transport for NSW. The Hume Highway is a two way highway with two lanes in both directions. It connects to Sydney (approximately 280 km to the north-east), to Melbourne (approximately 600 km to the south-west) and to Canberra via the Barton Highway (approximately 80 km to the south).

Potential Impacts and Issues for Consideration

The primary potential for traffic impacts would occur during the construction and decommissioning phases of the Project. Potential impacts may include:

- Increases in traffic volumes on roads used by construction vehicles
- Performance of traffic flows on roads and intersections surrounding the site
- Disruptions to movements on roads used by construction vehicles
- Damage or deterioration of roads used by construction vehicles
- Modifications to Yass Valley Way for the new access to the site

During the operational phase of the project the traffic volumes associated with the Project would be of minor volumes and the potential impacts are expected to be negligible.

The Project would not involve the development of, or impact to, rail, port or airport facilities.

<u>New road intersections for site access points</u>

The Project is anticipated to require new entry and exit site access points intersecting off Yass Valley Way. The indicative locations of these site access points are shown in **Figure 5.** The details of these new intersections will be developed during the EIS in consultation with the Yass Valley Council, Transport for NSW and other stakeholders.

<u>Access Routes</u>

It is anticipated that equipment sourced internationally would enter Australia via either Port Kembla, or alternatively Port Botany (refer to **Figure 6**). Both options then connect via major existing road infrastructure

to the Hume Highway, which connects to the Project site directly via Yass Valley Way. Existing port and highway capacity would be sufficient for any requirements for material deliveries to the Project.

Internal roads would be provided within the footprint of the Project site for movements in and around the equipment forming the Project components.

Transport Vehicles

Light vehicle movements will be required for personnel working on the Project site.

Vehicles transporting all construction materials, plant and equipment to or from the site would be heavy vehicles up to B-double sizing, although a small number of oversize overmass vehicles may be required for large items such as the delivery of the step up transformers. Further details will be assessed and confirmed during the EIS.

Proposed Assessment Approach

A traffic, transport and access impact assessment will be included in the EIS to identify and assess potential impacts of the Project on the road network during construction and operation, and to propose measures to avoid, minimize and manage potential impacts where feasible and reasonable.

The assessment would include:

- Traffic surveys to assess existing volumes at key locations surrounding the site.
- Detailed assessment of traffic movements and vehicle types for the phases of the Project.
- The potential impacts and traffic performance on Yass Valley Way.
- Consultation with Yass Valley Council and other relevant stakeholders to design the optimal access points for the site, in consideration of local council's preferred approach and the potential for interaction with nearby existing intersections of Yass Valley Way with Black Range Road and Bellevale Road
- Review of other information and context relevant to the assessment including road safety, public transport, school transport, parking and property access on access routes surrounding the site.

No assessment relating to rail, port or airport facilities are proposed as part of the EIS.

Required Engagement

Consultation would be undertaken with Transport for NSW, Yass Valley Council and other relevant stakeholders as part of the traffic and transport assessment and the refinement of the entry/exit point design from Yass Valley Way.

Indicative Routes to Ports

Route from Port Kembla

Route from Port Botany

N

0 50 Km

Figure 6

BID ENERGY PARTNERS

6.3. Air

Existing Environment

There are no sensitive receivers in the immediate vicinity of the Project. The Project is wholly located within an industrial precinct with the surrounding land consisting of industrial properties, transport and electricity transmission infrastructure and grazing or cropping rural properties.

Potential Impacts and Issues for Consideration

Construction of the Project would involve disturbance of the soil by construction plant and equipment, which would have the potential to generate dust. Vehicle movements associated with the construction of Project would contribute combustion engine related vehicular air emissions. Standard construction management measures would be implemented to minimize dust generation and contain it within the site. Air quality impacts to the region are expected to be negligible.

Air impacts during the operation of the Project are expected to be negligible.

The Project would not involve any activities with the potential to generate odorous impacts.

Proposed Assessment Approach

The potential for dust generation associated with the Project would be assessed as part of the EIS. Standard mitigation measures would be implemented to manage.

No assessment relating to odour is proposed as part of the EIS.

6.4. Amenity

6.4.1. Noise and Vibration

Existing Environment

There are no sensitive receivers in the immediate vicinity of the Project. The Project is wholly located within an industrial precinct with the surrounding land consisting of industrial properties, transport and electricity transmission infrastructure and grazing or cropping rural properties.

Currently, the main receivers identified as likely to be sensitive are residential dwellings located approximately 1,200 m to the north-east, although this will be further investigated during the EIS. There is no direct line of sight between the Project and this receiver due to topography providing shielding. The centre of the town Yass is located approximately 4 km to the south-east. The topography between the Project and the town of Yass offers substantial shielding.

Noise sources in the vicinity of the Project include traffic along the Hume Highway and Yass Valley Way, the train line running to the north of the Project site and the noise from the operations of the industrial neighbours including the Highway Service Centre.

The background noise environment of the area is anticipated to be elevated compared to typical rural background noise levels, particularly due to the constant and continuous noise generated from the Hume Highway. A 2017 environmental noise impact assessment for a proposed development approximately 10km to the west of the Project site identified background noise levels of 38 dB(A) at night and 42 dB(A)

during the day and evening (*Environmental Noise Impact Assessment Proposed Service Station and Restaurants 27834 Hume Highway, Bowning, NSW,* Day Design Pty Ltd, 2017).

Potential Impacts and Issues for Consideration

Material noise impacts at the nearest sensitive receivers are not anticipated during either the construction or operation of the Project.

During construction the Project is anticipated to generate noise from various construction activities and equipment. The topographic shielding of the nearest sensitive receivers from the site, together with standard construction noise management measures would mitigate or manage construction noise to levels that do not exceed the applicable criteria at the nearest sensitive receivers.

Normal operation of a battery energy storage system does generate noise from the equipment, but these are not anticipated to exceed noise management levels. A range of measures are available to manage or mitigate operational noise including design and orientation of the equipment, specification of low noise level equipment and shielding of the noise sources.

Proposed Assessment Approach

A noise impact assessment would be undertaken as part of the EIS. This would model the anticipated noise impacts to local receivers by modelling the predicted noise levels generated during construction and operation of the Project, together with background noise characterisation and where applicable the benefits of the topographic shielding around the Project site.

6.4.2. Visual

Existing Environment

The Project land is set within a local valley with the natural terrain surrounding the site providing substantial topographical shielding of viewpoints to the site beyond the immediate neighbours around the site. Traffic on the publicly accessible Yass Valley Way, which runs along the southern side of the Project site, would have visibility of elements of the Project infrastructure.

The above ground 330kV Transgrid transmission line running through the Project site is a prominent existing visual feature.

Potential Impacts and Issues for Consideration

The Project is not anticipated to materially impact the visual amenity of the region.

The Project infrastructure would be comprised of predominantly low height elements, typically of a scale of a single-story structure and mostly set on ground. During the EIS, inclusion of visual screening along the property boundary with Yass Valley Way will be investigated.

Proposed Assessment Approach

A visual impact assessment will be included in the EIS showing the potential viewsheds of the Project and any planned mitigation and management measures to reduce the impact to visual amenity around the Project site.

6.5. Biodiversity

Existing Environment

The Project is located within the South-Eastern Highlands Interim Biogeographic Regionalisation for Australia (IBRA) region and falls within the Murrumbidgee River catchment. The Project sits approximately 1.5km to the north-west of the Yass River, which joins to the Murrumbidgee River and flows through Lake Burrinjuck.

The land that would be required for the Project has all been previously disturbed and is currently used for grazing or cropping activities. There are no conservation areas that would be impacted by, or are within the proximity of, the Project.

During the EIS consideration would be given to the *NSW Biodiversity Conservation Act, 2016* and Terrestrial Biodiversity as mapped under the Yass Valley LEP. Results from searches of the NSW Government's State Vegetation Type Map show the majority of the site does not have a classified vegetation type except for a small pocket on the eastern side of the site that is mapped as grassy woodland. To the south-east of the site and outside of the proposed disturbance footprint, a zone of mapped vegetation exists of the type grasslands and grassy woodland.

A Protected Matters Search was conducted on 25 July 2024, which identified the matters shown in **Table 11** as having the potential to occur in, or may relate to, the footprint of the Project site (for the full report refer to **Appendix B – EPBC Protected Matters Search Tool Report**).

Biodiversity assessments during the EIS covering the land proposed to be included in the Project footprint will be completed to determine if there is a need for a referral under the EPBC Act. If a referral is required it would be made to the Commonwealth Department of Agriculture, Water and Environment under the EPBC Act. At this time a referral is not anticipated, however this will be confirmed during the EIS.

Table 11 Protected matters search tool results

Matters of National Environmental Significance	Matters that may relate to the area within the footprint of the Project site
World Heritage Properties	None
National Heritage Places	None
Wetlands of International Importance (Ramsar)	4
Great Barrier Reef Marine Park	None
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	3
Listed Threatened Species	35
Listed Migratory Species	10
Other Matters Protected by the EPBC Act	**Matters that may relate to the area within the footprint of the Project site**
Commonwealth Lands	None

Commonwealth Heritage Places	None
Listed Marine Species	17
Whales and Other Cetaceans	None
Critical Habitats	None
Commonwealth Reserves Terrestrial	None
Australian Marine Parks	None
Habitat Critical to the Survival of Marine Turtles	None

Potential Impacts and Issues for Consideration

The Project has the potential to impact biodiversity during construction as a result of activities associated with the surface disturbance and clearing to prepare the site terrain for the Project infrastructure, with introduction or transfer of weeds and with disturbances from noise, light and vibration.

During the operation phase, the Project the potential for biodiversity impacts would likely be negligible.

Proposed Assessment Approach

The EIS will include a Biodiversity Development Assessment Report (**BDAR**) that will assess:

- Flora and fauna species, habitat and communities that occur or are likely to occur.
- Identification of threatened species or habitats.
- Assessment of the impacts and significance of the Project on the identified flora and fauna and any threatened species or habitats.
- Assessment of the potential for the presence and impacts to any Matters of National Environmental Significance in the area of the Project (refer to **Table 11**). The need for a Commonwealth referral under the EPBC Act would also be determined during the assessment.
- Identification of management, mitigation and offset measures in accordance with the Biodiversity Assessment Method (**BAM**) and the EPBC Act Environmental Offsets Policy, where necessary.

6.6. Built Environment

Existing Environment

The Project is located within the Black Range Rd – Yass Valley Way industrial precinct, located wholly within the Yass Valley Council LGA and approximately 4 km north-west of the town centre of Yass. Land use adjacent and surrounding the Project area consists of industrial properties, transport and electricity transmission infrastructure and grazing or cropping rural properties.

Potential Impacts and Issues for Consideration

The Project would be consistent with the land zoning and existing use in the area within which the Project, is located, which is within an industrial precinct identified as suitable for development and industrial operations. Disturbances to land required to construct and operate the project would be limited to previously disturbed land, and no significant impacts are anticipated on surrounding land uses. Currently,

the nearest receivers considered likely to be sensitive are located greater than 1,200 m away and with no direct line of sight due to topographic shielding. This will be assessed further during the EIS. The site is directly accessed via high quality road infrastructure, which is anticipated to have sufficient capacity to handle the additional traffic volumes associated with the construction of the Project.

Proposed Assessment Approach

Significant impacts upon the built environment are not anticipated. Local community and stakeholder preferences and feedback would be taken into consideration in the design and construction of the Project. Potential impacts associated with access (refer **section 6.2**) and amenity (refer **section 6.4**) would be considered as part of these respective sections of the EIS.

6.7. Economic

Existing Environment

The Project sits within the Yass Valley Council LGA. The population of this LGA is approximately 17,281 people (Australian Bureau of Statistics, 2021 Census) and covers an area of approximately 4,000 km2. Employment within Yass Valley include services to the agricultural, wine, tourism, education, recreation, transport, energy and art sectors. Yass Valley is within daily commuting distance for residents to also access the larger employment and economic opportunities of the ACT.

Potential Impacts and Issues for Consideration

Construction of the Project would represent a substantial investment that would provide a range of direct and indirect economic benefits for the local region including:

- A construction workforce anticipated to be up to 100 persons, to be sourced wherever possible from the LGA or surrounding regions.
- Training and upskilling of local capacity in the electricity sector.
- Indirect employment and economic opportunities in services and hospitality sectors.

During the operation phase approximately 3 permanent full-time positions are anticipated to be required. Additional resources to support periodic maintenance activities would be drawn from the local region where possible.

Proposed Assessment Approach

The Project would contribute positively to the economy of the LGA and support employment, skills and businesses in the area. The EIS level of assessment for economic matters would be standard.

6.8. Hazard and Risk

Existing Environment

The current characterisation of key hazards and risks for the land required for the Project is:

- Bushfire: the Project sits within an area mapped for bushfire risk as Vegetation Category 3 (medium bush fire risk) (refer to **Figure 7**).
- Flooding: the land for the Project is not identified as flood prone land.
- Land contamination: no known contaminated sites have been identified within the land for the Project.

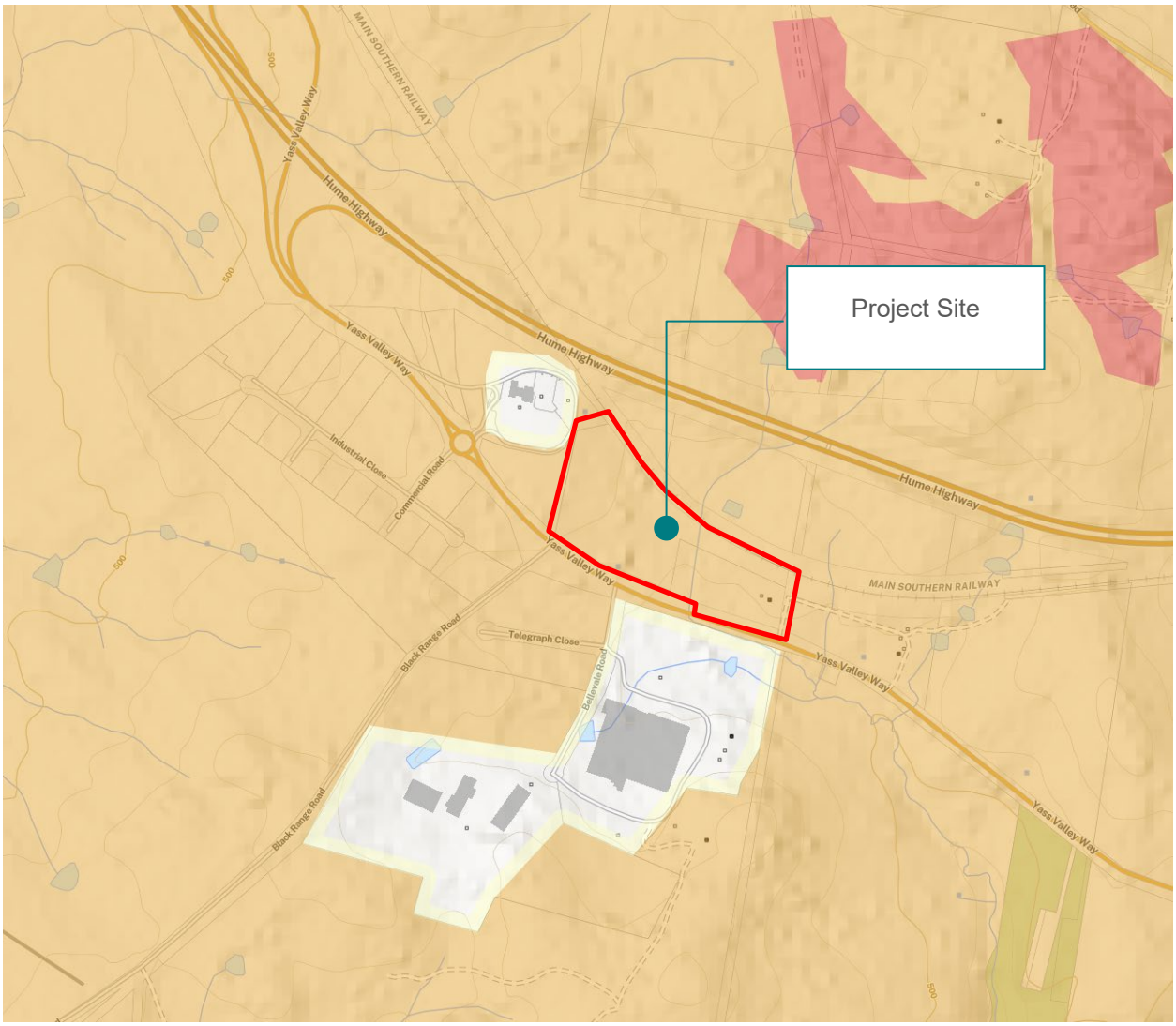


Figure 7 Bush fire prone land

Potential Impacts and Issues for Consideration

The design of the facilities comprising the Project would consider the management and mitigation of hazards and risks. Standard battery module technology includes fire prevention, detection and mitigation systems. Project specific fire risks to be considered by the EIS and the design phase include scenarios for both externally originated bushfires and a fire initiating from within the Project. The specific orientation of the Project assets, the neighbouring land uses and surrounding vegetation would be considered. It is anticipated that dedicated on site fire water storage may be a risk mitigation measure to be implemented, however this would be determined through the EIS risk assessment findings and stakeholder consultation processes.

Proposed Assessment Approach

The EIS would include a preliminary hazard and risk screening assessment prepared in accordance with relevant guidelines such as the NSW Government, State Environmental Planning Policy (Resilience and Hazards), 2021 and multi-level risk assessment publications by DPIE.

A Bushfire Risk Assessment would be prepared in accordance with the requirements of *Planning for Bush Fire Protection* (NSW RFS, 2019).

Required Engagement

The EIS process would include consultation and feedback from key stakeholders in relation to hazards and risks, which are anticipated to include the NSW RFS, DPIE, Transport for NSW, the Yass Valley Council and surrounding neighbours to the Project.

6.9. Heritage

6.9.1. Aboriginal Heritage

Existing Environment

The wider Yass Valley region has traditionally been inhabited by the Ngunnawal and Wiradjuri Aboriginal groups. At the Project site, a search of the AHIMS database (undertaken on 11 January 2024 with a 200 m buffer) does not identify any Aboriginal sites or Aboriginal places within 200m of the Project land.

A preliminary assessment of the archaeological potential of the Project site undertaken by a heritage consultant in July 2024, including a site walkover and desktop assessment of available information, identified no areas of archaeological potential.

Potential Impacts and Issues for Consideration

Although the immediate and surrounding area of the Project has been previously disturbed, there is still potential during the construction of the Project for encounter unrecorded Aboriginal sites or items.

During the operation of the Project, there would be no further ground disturbance.

Proposed Assessment Approach

As part of the EIS, an Aboriginal Cultural Heritage Assessment Report will be prepared. The report will consider:

- The Aboriginal archaeological potential of the Project area.
- Identification of registered Aboriginal sites within and surrounding the Project area.
- The significance of any heritage items or areas to the Aboriginal community, determined in consultation with the relevant stakeholders.
- Appropriate measures to be implemented to avoid, minimise and/or mitigate impacts to Aboriginal heritage.

Required Engagement

Consultation would be undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water, 2010).

6.9.2. Non-Aboriginal Heritage

Existing Environment

A search of the NSW State Heritage Inventory and the Yass Valley Council Local Environmental Plan (**LEP**) shows no record of non-Aboriginal heritage on the Project site. The nearest listed heritage site is the ruins of the Telegraph Inn (**ID A303**), which is located approximately 150m to the south and across the Yass Valley Way.

The Project land and surrounding area has been previously disturbed.

Potential Impacts and Issues for Consideration

The Project would not impact the ruins of the Telegraph Inn.

Proposed Assessment Approach

The EIS level of assessment for non-aboriginal heritage matters would be minor.

6.10. Land

Existing Environment

The Yass 1:100000 Geology Sheet (8628) characterises the geology at the Project site to be predominantly of the Laidlaw Volcanics, part of the Douro Group, comprising medium to very coarse grained, massive, crystal-rich, volcaniclastic sandstone, volcanic breccia and minor tuff from the Silurian period.

The Project area is mapped as having:

- A Land and Soil Capability of Class 4 (moderate to severe limitations) (OEH, 2012) (refer to **Figure 8**).
- A low probability of acid sulfate soils (NSW Department of Climate Change, Energy, the Environment and Water 1998).

The Project area does not contain land listed on the NSW EPA Contaminated Land Register.

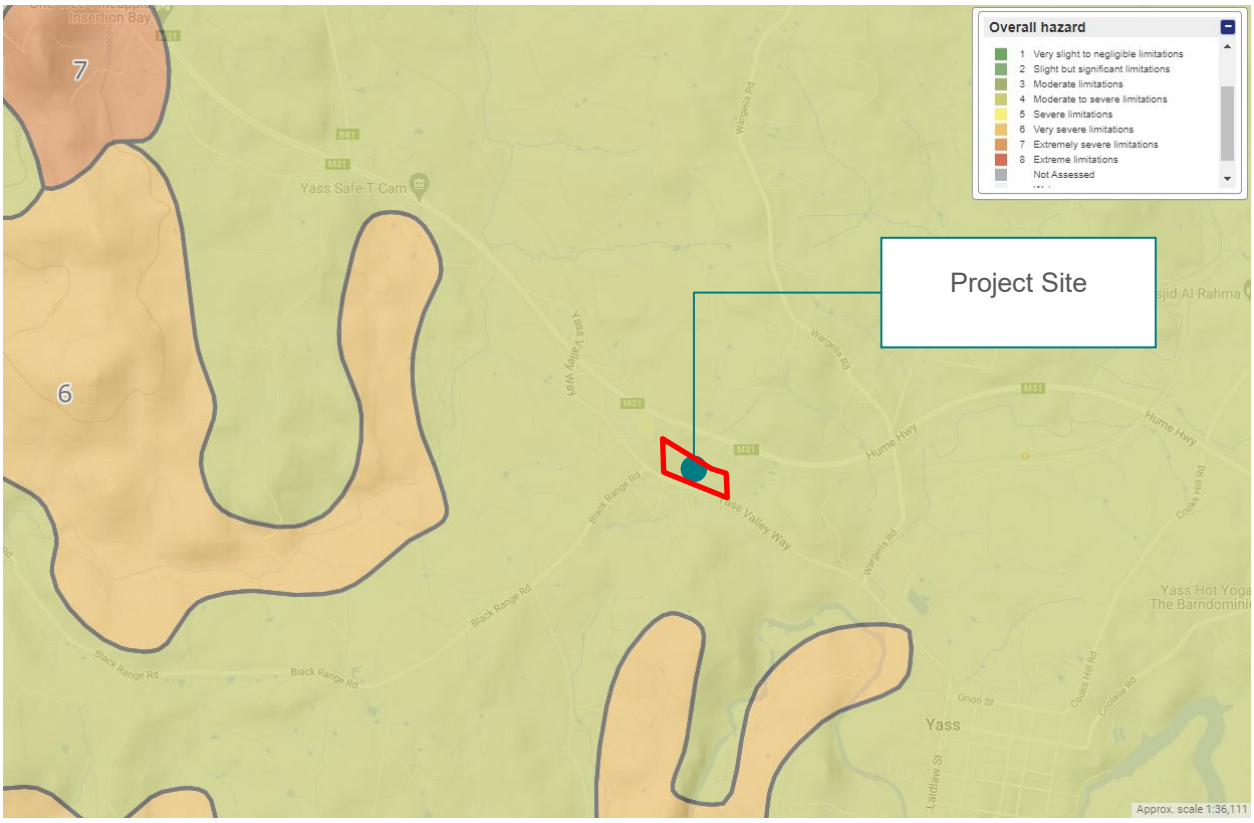


Figure 8 Land and soil capability

Potential Impacts and Issues for Consideration

During the construction and operation of the Project, a range of fuels, lubricants, building materials, wastes and other potential contaminants would be used, stored and handled on the site. The risks of contamination would be managed through engineering design, standard construction and operational management practices and where applicable the use of Australian Standards.

Proposed Assessment Approach

The EIS level of assessment for land matters would be minor.

6.11. Social

Existing Environment

The Project sits within the Yass Valley Council LGA. The region has a diverse history including first inhabitation by Aboriginal people and then beginning in the 1830s European settlement. Currently the LGA has a predominantly rural and agriculture social setting. The LGA is connected by high quality transport infrastructure and the major centres of the ACT and Sydney are comfortably accessible by road and rail connections.

The Project is located within the Black Ranges Rd – Yass Valley Way Industrial Precinct, which was identified by the Yass Valley Council as being suitable for development and industrial operations and being located sufficiently distant from the town of Yass to ensure residential amenity would not be affected.

Potential Impacts and Issues for Consideration

The Project is not anticipated to have a material impact upon the social infrastructure of the region. The LGA has high quality social infrastructure generally, and the larger resources and social capacity of the ACT is within daily commuting distance of the Project site.

Construction of the Project would involve an anticipated workforce of up to 100 persons. The construction contractor selection process would prioritise commitments to source local labour and businesses where possible, which may be drawn from the LGA or from the neighbouring ACT.

Workers involved in the construction of the Project not living locally may increase demand on motel/hotel type accommodation within the town of Yass, which would be short term given the anticipated 12-18 construction duration of the Project.

During the operation of the Project, it would support the reduction of volatility in the energy market during periods of peak demand and contribute to a reliable and efficient transition of the electricity sector to renewable energy sources.

Proposed Assessment Approach

The EIS level of assessment for social matters would be standard.

Required Engagement

Through the stakeholder engagement and consultation processes for the Project, local community and stakeholder preferences and feedback on potential social impacts would be taken into consideration in the design and construction of the Project.

6.12. Water

Existing Environment

The Project area is within the Murrumbidgee River catchment and sits approximately 1.5km to the north-west of the Yass River, which joins to the Murrumbidgee River and flows through Lake Burrinjuck. Passing through the Project site is an unnamed drainage line with a 2nd stream order in the catchment by the Strahler system. This drainage line flows to the south and eventually joins to the Yass River. The drainage line appears to have been straightened from its likely original course.

The Project is not located on land that is mapped as being susceptible to flooding under the Yass Valley Council flood mapping.

Potential Impacts and Issues for Consideration

During construction, the earthworks activities would have the potential for erosion and/or sedimentation of stormwater runoff. Given the low scale and nature of the earthworks activities the potential impacts are anticipated to be minor and able to be managed through standard construction environmental management processes. Water use would be required during construction for earthworks activities including dust suppression. Required volumes and sources will be assessed during the EIS.

During the operation of the project, negligible ongoing water use will be required. Management of stormwater drainage to minimise downstream impacts and prevention of sediment discharge from the site will be considered in the Project's detailed design.

Proposed Assessment Approach

The EIS would assess potential water impacts and any required mitigation and management measures associated with hydrology, water quality and water use including sources.

7. References

Document
Acid Sulfate Soil Management Advisory Committee, *Acid Sulfate Soils Assessment Guidelines*, 1998
AEMO, *draft 2024 Integrated System Plan,* 2023
Australian Bureau of Statistics, *2021 Census*, 2022
Austroads, *Guide to Traffic Management Part 3 Traffic Studies and Analysis*, 2018
Day Design Pty Ltd, *Environmental Noise Impact Assessment Proposed Service Station and Restaurants 27834 Hume Highway, Bowning, NSW,* 2017
Department of the Environment, Water, Heritage and the Arts, *Significant Impact Guidelines 1.1 - Matters of National Environmental Significance*, 2013
Department of Environment and Climate Change*, Managing Urban Stormwater Soils and Construction Volume 2A*, 2008
Department of Environment, Climate Change and Water, *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, 2010.
Department of Environment, Climate Change and Water, *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*, 2010.
Department of Environment, Climate Change and Water, *National Environment Protection (Ambient Air Quality) Measure*, 2021
Department of Planning, Industry and Environment, *Cumulative Impact Assessment Guidelines for State Significant Projects*, 2022
Department of Planning, *Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines*, 2011
Department of Planning and Environment, *Assessing heritage significance*, 2023
Department of Planning and Infrastructure, *Assessment Guideline: Multi-Level Risk Assessment*, 2011.
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Department of Planning, Industry and Environment, *Social Impact Assessment Guidelines for State Significant Projects*, 2021
Department of Planning, Industry and Environment, *Undertaking Engagement Guidelines for State Significant Projects*, 2021
Landcom, *Managing Urban Stormwater: Soils and Construction Volume 1*, 2004

Document
Landscape Institute and Institute of Environmental Management and Assessment, *Guidelines for Landscape and Visual Impact Assessment,* 2013
NSW EPA, *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, 2022
NSW EPA, *Draft Construction Noise Guideline*, 2020
NSW EPA, *Noise Policy for Industry*, 2017
NSW Heritage Office, *Heritage Guidelines*, 2002
NSW Government, *Electricity Infrastructure Roadmap*, 2020
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NSW RFS, *Planning for Bush Fire Protection*, 2019
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Yass Valley Council, *Local Strategy Planning Statement*, 2020
Yass Valley Council, *Yass Valley Economic Development Strategy 2014-2017*
Yass Valley Council, *Yass Valley Industrial Lands Study*, 2008
Yass Valley Council, *Yass Valley Settlement Strategy 2036*, 2019

Appendix A – Scoping Summary Table

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Standard	Access – access to property, traffic, parking, road facilities	No	Specific	• Guide to Traffic Management Part 3 Traffic Studies and Analysis (Austroads, 2018) • Guide to Traffic Generating Developments Version 2.2 (Roads and Traffic Authority, 2002)	Section 6.2
Standard	Amenity – noise and vibration	No	General	• Draft Construction Noise Guideline (NSW EPA, 2020) • Noise Policy for Industry (NSW EPA, 2017)	Section 6.4.1
Standard	Amenity – visual	No	General	• Guidelines for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management and Assessment, 2013)	Section 6.4.2
Standard	Biodiversity – flora and fauna	No	General	• NSW Biodiversity Offsets Policy for Major Projects (Office of Environment and Heritage, 2014) • Framework for Biodiversity Assessment (Office of Environment and Heritage, 2018) • Significant Impact Guidelines 1.1 – Matters of National Environmental Significance (Department of the Environment, Water, Heritage and the Arts, 2013)	Section 6.5
Standard	Economic	No	General	• Social Impact Assessment Guidelines for State Significant Projects (Department of Planning Industry and Environment, 2021)	Section 6.7
Standard	Hazard and Risk	No	Specific	• State Environmental Planning Policy (Resilience and Hazards) 2021 (NSW Government, 2021) • Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (Department of Planning, 2011) • Assessment Guideline: Multi-Level Risk Assessment (Department of Planning and Infrastructure, 2011)	Section 6.8
Standard	Heritage – Aboriginal	No	Specific	• Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (NSW Office of Environment and Heritage, 2011) • Aboriginal Cultural Heritage Consultation requirements for proponents (Department of Environment, Climate Change and Water NSW, 2010) • Code of practice for archaeological investigation of Aboriginal objects in NSW (Department of Environment, Climate Change and Water, 2010)	Section 6.9.1
Standard	Social	Yes	General	• Social Impact Assessment Guidelines for State Significant Projects (Department of Planning Industry and Environment, 2021)	Section 6.11

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Standard	Water	No	General	• Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) • Managing Urban Stormwater Soils and Construction Volume 2A (Department of Environment and Climate Change, 2008)	Section 6.12
Minor	Air	No	General	• National Environment Protection (Ambient Air Quality) Measure (Department of Climate Change, Energy, the Environment and Water, 2021) • Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW EPA, 2022)	Section 6.3
Minor	Heritage – non-Aboriginal	No	General	• Heritage Guidelines (NSW Heritage Office, 2002) • Assessing Heritage Significance (Department of Planning and Environment, 2023)	Section 6.9.2
Minor	Land	No	General	• Acid Sulfate Soils Assessment Guidelines (Acid Sulfate Soil Management Advisory Committee, 1998)	Section 6.10
Not relevant	Built Environment	No	General	Not applicable	Section 6.6

Appendix B – EPBC Protected Matters Search Tool Report

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: 25-Jul-2024

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	35
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	17
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	4
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)	[Resource Information]
Ramsar Site Name	Proximity
Banrock station wetland complex	700 - 800km upstream from Ramsar site
Hattah-kulkyne lakes	500 - 600km upstream from Ramsar site
Riverland	700 - 800km upstream from Ramsar site
The coorong, and lakes alexandrina and albert wetland	800 - 900km upstream from Ramsar site

Listed Threatened Ecological Communities		[Resource Information]

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

Community Name	Threatened Category	Presence Text
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community likely to occur within area
Natural Temperate Grassland of the South Eastern Highlands	Critically Endangered	Community likely to occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within 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
BIRD		

Scientific Name	Threatened Category	Presence Text
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat likely to occur within area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Lathamus discolor		
Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Melanodryas cucullata cucullata		
South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area
Neophema chrysostoma		
Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area
Polytelis swainsonii		
Superb Parrot [738]	Vulnerable	Species or species habitat known to occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Stagonopleura guttata		
Diamond Firetail [59398]	Vulnerable	Species or species habitat likely to occur within area
FISH		
Bidyanus bidyanus		
Silver Perch, Bidyan [76155]	Endangered	Species or species habitat likely to occur within area
Macquaria australasica		
Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area
FROG		
Litoria booroolongensis		
Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area
Litoria raniformis		
Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat may occur within area
INSECT		
Synemon plana		
Golden Sun Moth [25234]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
MAMMAL		
Dasyurus maculatus maculatus (SE mainland population)		
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Nyctophilus corbeni		
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat likely to occur within area
Pteropus poliocephalus		
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
PLANT		
Ammobium craspedioides		
Yass Daisy [20758]	Vulnerable	Species or species habitat likely to occur within area
Amphibromus fluitans		
River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat may occur within area
Lepidium aschersonii		
Spiny Peppercress [10976]	Vulnerable	Species or species habitat may occur within area
Leucochrysum albicans subsp. tricolor		
Hoary Sunray, Grassland Paper-daisy [89104]	Endangered	Species or species habitat may occur within area
Prasophyllum petilum		
Tarengo Leek Orchid [55144]	Endangered	Species or species habitat may occur within area
Senecio macrocarpus		
Large-fruit Fireweed, Large-fruit Groundsel [16333]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Thesium australe](#) Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area
REPTILE		
[Aprasia parapulchella](#) Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area
[Delma impar](#) Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis		
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans		
Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Lathamus discolor		
Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area
Neophema chrysostoma		
Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat may occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area

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
Southern RFA	New South Wales

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Not controlled action (particular manner)			
Aerial baiting for wild dog control	2006/2713	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval

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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