



Burroway Wind Farm

Scoping Report

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Scoping Report

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1. INTRODUCTION

TagEnergy Australia Pty Ltd (the 'Applicant'), proposes to construct, operate, maintain and decommission the Burroway Wind Farm (the 'Project'), located north of Narromine, NSW. The Project overlaps both the Narromine Shire local government area (LGA) and the Dubbo Regional LGA, comprises 49 individual freehold lots (the 'Project area') and extends over 6,568 hectares (ha). However, the preliminary development footprint (the area within which construction and operational activities will occur) is only 488.34 ha.

The Project is a wind farm comprising up to 75 wind turbine generators (WTGs) with a generation capacity of approximately 400 megawatts (MW), a battery energy storage system (BESS) with an installed capacity of up to 200 MW / 800 megawatt hours (MWh), and associated and ancillary infrastructure.

Approval for the Project is sought under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as the Project meets the requirements of state significant development (SSD) pursuant to Part 2.2, clause 2.6, and schedule 1 of the *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP).

Environmental Resources Management Australia Pty Ltd (ERM) has prepared this Scoping Report on behalf of the Applicant, to support a request for Secretary's Environmental Assessment Requirements (SEARs). The SEARs will guide the preparation of the Environmental Impact Statement (EIS) for the Project to support the development application. This Scoping Report identifies the Project site, describes the proposed development, confirms the planning approvals pathway, and identifies key environmental and social aspects that require further consideration.

This Scoping Report has been prepared with consideration of the:

- NSW Renewable Energy Planning Framework, inclusive of:
 - 'NSW Wind Energy Guideline' (NSW DPFI, 2024a);
 - 'NSW Wind Energy Visual Technical Supplement' (NSW DPFI, 2024b);
 - 'NSW Wind Energy Noise Technical Supplement' (NSW DPFI, 2024c); and
 - 'NSW Benefit Sharing Guideline' (NSW DPFI, 2024d).
- 'State Significant Development Guidelines' (NSW DPFI, 2024e) inclusive of:
 - 'State Significant Development Guidelines – Preparing a Scoping Report: Appendix A to the State Significant Development Guidelines' (NSW DPFI, 2022);
- 'Social Impact Assessment Guidelines' (NSW DPFI, 2025);
- 'Undertaking Engagement Guidelines for State Significant Projects' (NSW DPFI, 2024f); and
- 'Cumulative Impact Assessment Guidelines for State Significant Projects' (NSW DPFI, 2022).

1.1 THE APPLICANT

Since its formation in 2019, TagEnergy has assembled a portfolio of more than 20 gigawatt (GW) of solar, wind and battery storage assets in the UK, France, Germany, Japan and Australia, of which 1.9 GW is under construction or operation.

TagEnergy is controlled by TagHolding SAS, a joint venture between the Impala SAS Group and Exor N.V., supported by major investors Mirova and Omnes, and is operated by a team of entrepreneurs, all shareholders. Its operations span the renewables value chain from development, financing, construction and asset management to commercialisation of its competitive clean energy.

Locally, TagEnergy is operated by a highly experienced team and collectively, TagEnergy's team has developed, financed and built multiple wind, solar and BESS projects in Australia over the last decade, totaling over 2.3 GW.

Their Australian Business Number (ABN) and address are:

- **ABN:** 48 655 814 958; and
- **Address:** Levels 1 & 2, 5-7 Raglan Street, Manly NSW 2095.

1.2 PROJECT OVERVIEW

The Project will involve the construction, operation and eventual decommissioning of a wind farm, including a BESS and associated and ancillary infrastructure. The Project is situated 17.5 kilometres (km) (direct) to the northeast of Narromine NSW, 21.5 km (direct) to the northwest of Dubbo NSW, and about 420 km (by road) from Sydney NSW. The regional context including the nearest population centres to the Project is shown in **Figure 1-1**.

The Project area comprises 49 individual freehold properties, which fall under six landholders (**Table 1-1; Figure 1-2**). The Project area and land immediately surrounding is zoned RU1 Primary Production. There are 2 crown roads identified within the Project area.

TABLE 1-1 LAND TITLES TO WHICH THE APPLICATION APPLIES

Landowner Group	Lot	DP	Tenure
Landowner Group 1	10, 15, 16, 20	752577	Freehold
Landowner Group 2	14	752577	
	5, 6	752591	
	391	1089925	
Landowner Group 3	1	121096	
	7, 8	44869	
Landowner Group 4	A	32833	
	1, 2, 3	578669	
	1, 2, 3	1238625	
	40, 41	752600	
	2, 24, 38, 39	752577	
	4	1238625	
Landowner Group 5	3, 12, 13, 17, 18, 19, 25, 40	752577	
	4, 5	1229735	

Landowner Group	Lot	DP	Tenure
Landowner Group 6	22	611042	
	B	392883	
	161	754303	
	17, 18, 19	752572	
	2	530388	
	1, 2	576831	
	1	651551	
	2, 3	728723	
	1	1121278	
	251	1277972	

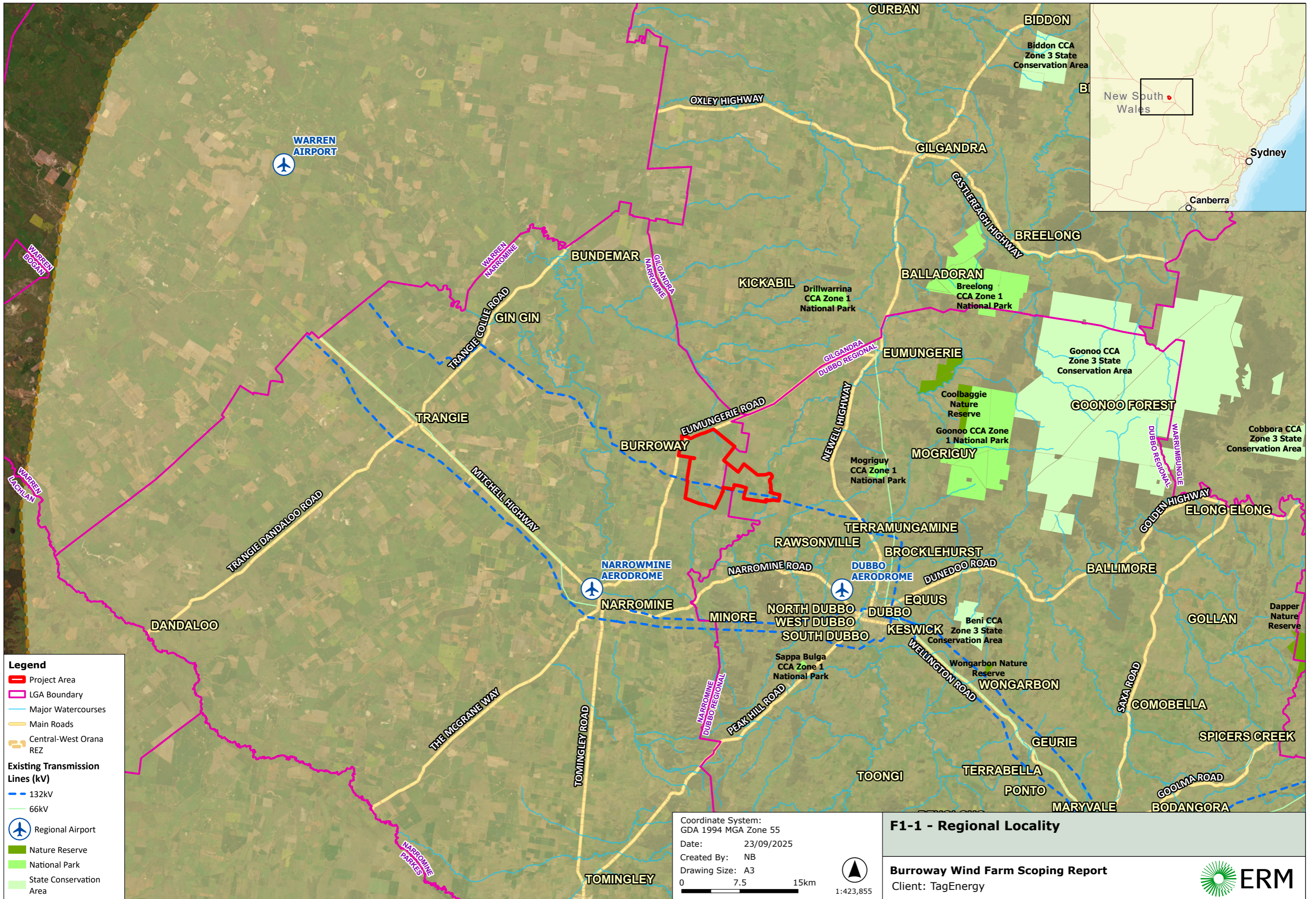
The Project will include:

- Up to 75 WTGs with a hub height of up to 180 metres (m) and tip height up to 280 m, with a combined installed generating capacity of approximately 400 MW;
- A BESS facility with an installed capacity of 200 MW / 800 MWh;
- Electrical reticulation network to connect the Project to the national electricity market (NEM);
- Associated and ancillary infrastructure including a substation, switchyard, operations and maintenance facility, fencing, landscaping, internal access roads and site access via the existing state and local road network; and
- Temporary construction facilities including a construction compound, laydown area, car parking and workforce accommodation.

A concept design has been developed for the Project, which includes a preliminary development footprint and project layout. The preliminary development footprint refers to the area occupied by project infrastructure and includes an area of temporary disturbance necessary to facilitate the construction of the Project. This Scoping Report has assessed the Project layout displayed in **Figure 1-2**.

This Scoping Report has considered relevant environmental and social aspects that will require further consideration in the EIS to quantify, further avoid and minimise impacts and recommend appropriate mitigation measures for any residual impacts (**Section 6**).

There are no restrictions or covenants that apply to the Project land.



Legend

- ▬ Project Area
- ▬ LGA Boundary
- ▬ Major Watercourses
- ▬ Main Roads
- ▬ Central-West Orana REZ
- Existing Transmission Lines (kV)**
- ▬ 132kV
- ▬ 66kV
- ✈ Regional Airport
- Nature Reserve
- National Park
- State Conservation Area

Coordinate System:
GDA 1994 MGA Zone 55

Date: 23/09/2025

Created By: NB

Drawing Size: A3


0 7.5 15km

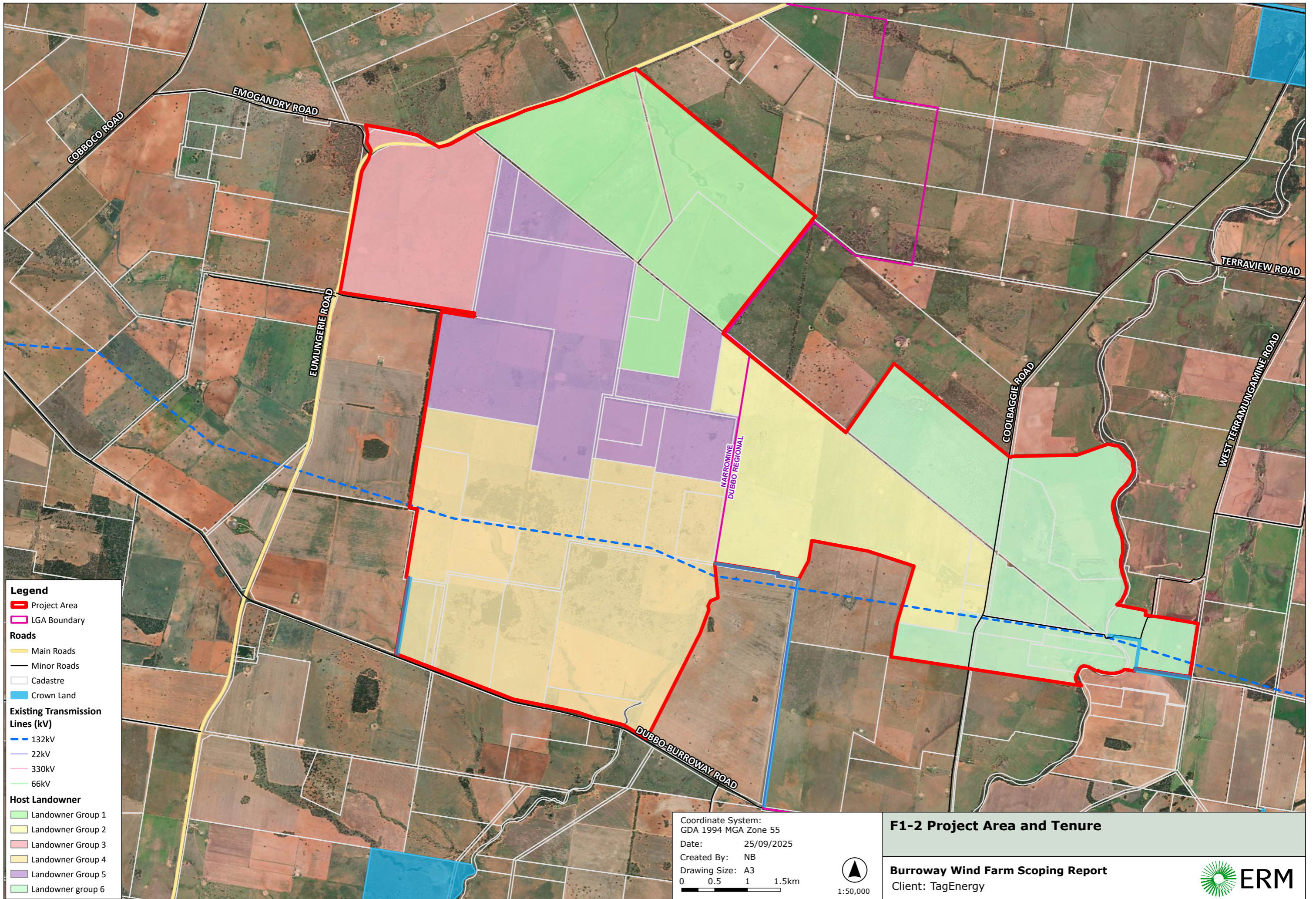
1:423,855

F1-1 - Regional Locality

Burroway Wind Farm Scoping Report

Client: TagEnergy





Legend

- ▬ Project Area
- ▬ LGA Boundary
- Roads**
- ▬ Main Roads
- ▬ Minor Roads
- Cadastre
- ▬ Crown Land
- Existing Transmission Lines (kV)**
- - - 132kV
- - - 22kV
- - - 330kV
- - - 66kV
- Host Landowner**
- Landowner Group 1
- Landowner Group 2
- Landowner Group 3
- Landowner Group 4
- Landowner Group 5
- Landowner group 6

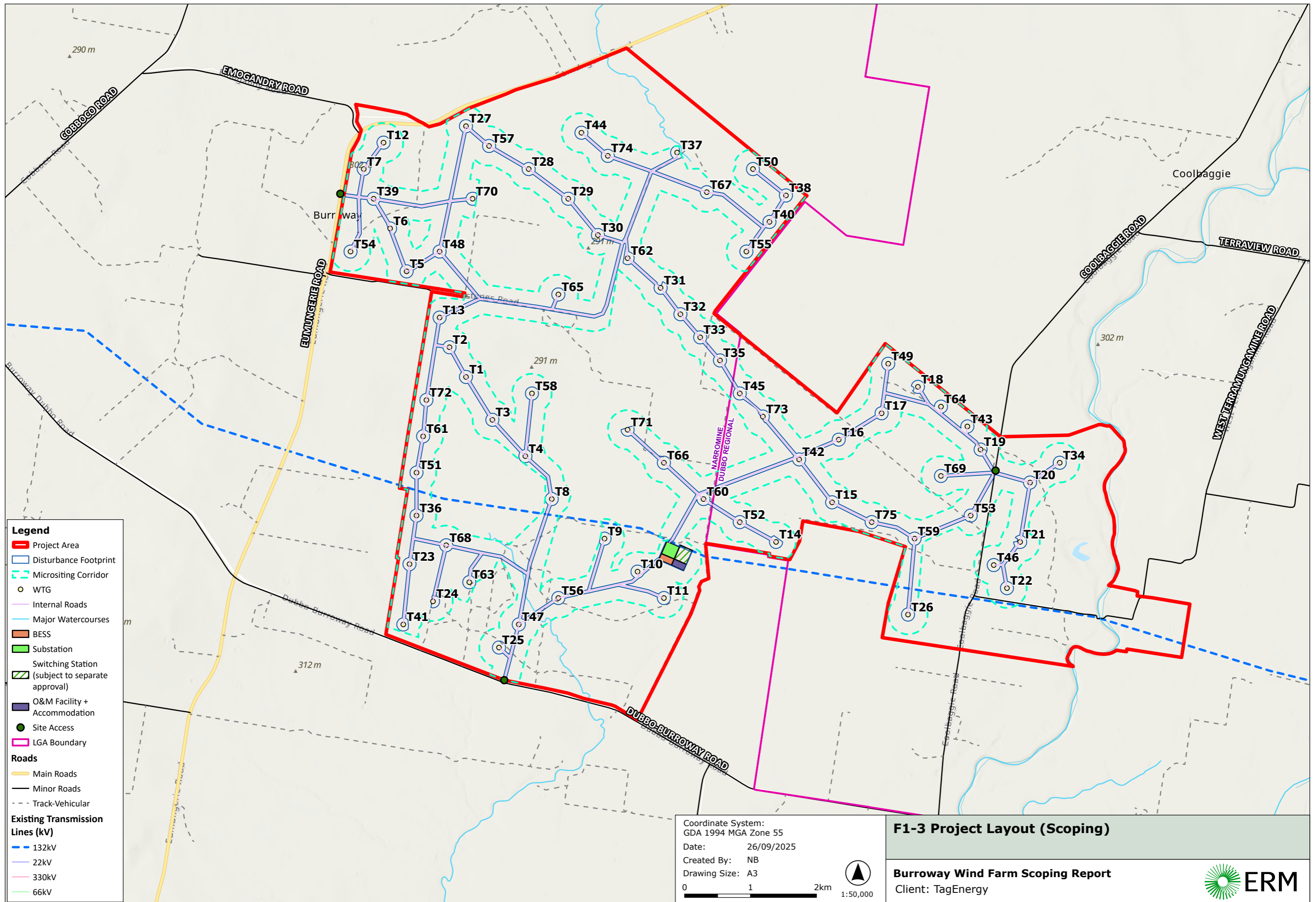
Coordinate System:
GDA 1994 MGA Zone 55
Date: 25/09/2025
Created By: NB
Drawing Size: A3
0 0.5 1 1.5km



F1-2 Project Area and Tenure

Burroway Wind Farm Scoping Report
Client: TagEnergy





1.3 PROJECT OBJECTIVES

The objectives of the Project are to:

- Contribute to Australian and NSW targets for renewable energy generation and greenhouse gas emissions reduction;
- Provide significant electricity generating capacity to offset the retirement of NSW existing coal-fired power stations;
- Facilitate energy security, reliability, and network stability for NSW consumers with the inclusion of energy storage (e.g., BESS) to store energy and dispatch it to the NEM as required by demand, which will reduce the risk of future load shedding and blackout events and enable deeper penetration of renewables into the grid;
- Provide both direct and indirect employment opportunities during construction and operation;
- Establish a Community Benefit Fund (CBF), with funds to be spent locally on community enhancement projects;
- Liaise and work with the community and all potentially affected stakeholders in the identification, mitigation and/or monitoring of any potential environmental effects;
- Ensure quality, safety and environmental standards are maintained;
- Recycle and reuse materials where practical and economically feasible; and
- Minimise all potential adverse environmental impacts.

1.4 PROJECT BACKGROUND

The Project area was identified in 2022 as having the key features required for a wind farm development, with host landowner relationships commencing in the same year. These key features identified include:

- In an area that has excellent wind resource to support the viable operation of a wind farm;
- Located within the Central West Orana Renewable Energy Zone (CWO REZ), an area nominated for significant investment in renewable energy generation, storage and transmission projects;
- Located near existing transmission infrastructure, which runs through the Project area;
- Comprised of large areas of already cleared land;
- A reasonable distance to non-associated dwellings;
- Compatible with existing agricultural land use within and surrounding the Project area, as large-scale renewable energy generation can coexist with the current agricultural land use; and
- Well-connected to the road network providing suitable access from the regional centres of Dubbo and Narromine, and from ports where most large components will be imported to.

1.5 KEY STRATEGIES TO AVOID, MINIMISE OR OFFSET IMPACTS

A multivariable and iterative design approach has been adopted for the Project, taking into consideration a range of technical, environmental, social, and economic opportunities and constraints. These design iterations have progressed with the key driver being to minimise and avoid environmental and social impacts in line with the Avoid-Minimise-Mitigate-Offset design hierarchy:

- Avoid – in the first instance, all efforts were made to avoid potential environmental and social impacts;
- Minimise – where potential impacts could not be avoided, design principles aimed to minimise environmental and social impacts, as far as feasibly possible;
- Mitigate – mitigation strategies will be implemented to manage the extent and severity of remaining environmental and social impacts; and
- Offset – environmental and social offsets shall be used only as applicable, following all efforts to first avoid, minimise and mitigate environmental impacts.

The Project design and layout will be subject to further refinements in response to detailed sight investigations that will be undertaken to inform the Project EIS, through which the Applicant will seek to further avoid and minimise impacts.

1.6 RELATED DEVELOPMENT

The Project intends to connect to electricity infrastructure that is owned and operated by Essential Energy, specifically the 132 kV Dubbo and Nevertire transmission line (Line #94W/1), which runs through the Project area. The Applicant has engaged with Essential Energy, and both parties have agreed on an approach to connect the Project to Line #94W/1.

However, separate to this Project, Essential Energy are investigating several large-scale network upgrades in the region, including the construction of new transmission lines, duplication of existing transmission lines, and construction of new switching stations. Line #94W/1 is included in these plans, including duplication of the transmission line and a new switching station proposed to be located on a property that adjoins the Project. Depending on the timing of approvals and construction of these new Essential Energy assets, the Project may connect to these.

All other works associated with the Project are subject to this SSD application.

1.7 SUBDIVISION

The Project may require at least one subdivision for the land proposed to host the on-site substation and switchyard. The operator of this infrastructure may require a freehold title to facilitate access rights for ongoing maintenance. The operator of the substation and switchyard may obtain freehold title through either transfer, dedication or acquisition.

2. STRATEGIC CONTEXT

This section of the Scoping Report identifies the key government strategies, policies, and plans that provide strategic support for undertaking the Project.

Increased adoption of renewable energy technology will assist Australia to transition away from traditional fossil fuel energy generation, which is linked to anthropogenic climate change, atmospheric pollution, water pollution, land pollution and human health impacts. This transition to energy generation forms that have negligible emissions of greenhouse gases during construction and operation will assist in minimising the effects of climate change. This will benefit current and future generations in line with the principles of Ecologically Sustainable Development.

In addition to achieving the objectives outlined in **Section 1.3**, the Project will assist to achieve objectives of the following International, Australian Government, State Government and local policies strategic goals.

2.1 COMMITMENT TO RENEWABLE ENERGY

All levels of government in Australia have committed to the increased adoption of renewable power generation using a combination of wind (onshore and offshore), water, and solar power.

2.1.1 FEDERAL GOVERNMENT COMMITMENTS

Australia is one of 195 countries to have signed the 'United Nations Paris Agreement on Climate Change' (Paris Agreement). The Paris Agreement sets in place a framework for all countries to take climate action from 2020, building on existing international agreements in the period up to 2020. The aim of the Paris agreement is to limit greenhouse gas emissions globally to net-zero in the second half of this century. The Australian Government has set a target to reduce emissions by 43% below 2005 levels by 2030, and net-zero by 2050. These targets are legislated under the Commonwealth *Climate Change Act 2022*. Recently, the Australian Government set a new interim target of 62-70% reduction on 2005 levels by 2035.

The current efforts to achieve Australia's targets are reflected in the Australian Government's Renewable Energy Target (RET) Scheme. The RET was implemented in 2009 and set a target of 33,000 GWh of renewable energy generation by 2030, incentivising investment in renewable energy development and creating a market for creating and selling generation certificates. The RET has been successful in that it has helped drive the cost of large-scale wind and solar projects down over the past decade.

2.1.2 STATE GOVERNMENT COMMITMENTS

In November 2020, the NSW Government released the NSW 'Electricity Infrastructure Roadmap' with the aim of facilitating reliable and affordable energy. This roadmap is facilitated by the NSW *Electricity Infrastructure Investment Act 2020*. Section 63 of this Act appoints the NSW Energy Corporation (EnergyCo) as the infrastructure planner for the states Renewable Energy Zones (REZ).

In May 2023, EnergyCo released the NSW Network Infrastructure Strategy which outlines a 20-year plan for the state's electricity network and a target to deliver a total of 12 GW of renewable energy generation and 2 GW of long-duration storage within the REZs by 2030. The Strategy also includes a "Secure Now" and "Plan for the Future" approach, which seeks to identify options to increase network capacity and resilience to and beyond 2030.

These targets for renewable energy generation are backed by the *Climate Change (Net Zero Future) Act 2023*, which legislates:

- 50% reduction on 2005 levels by 2030;
- 70% reduction on 2005 levels by 2035; and
- Net zero greenhouse gas emissions by 30 June 2050.

The Project will provide renewable energy generation, energy storage and demand management, with benefits to grid stability and reliability. It will also assist the Australian and NSW governments meet their respective emissions reduction targets by displacing traditional coal-fired power generation.

2.1.3 CENTRAL-WEST ORANA RENEWABLE ENERGY ZONE

The Central-West Orana (CWO) region was identified as one of the seven REZ to be created in NSW. REZ combine wind, solar, hydroelectric and energy storage, and high-voltage transmission lines to generate and deliver clean, renewable energy. By connecting multiple generators and storage in the same area, REZs capitalise on economies of scale to deliver cheap, reliable and clean electricity for homes and businesses in NSW.

The objectives of REZ are to:

- Deliver affordable energy into the future;
- Diversify the NSW energy mix;
- Expand electrical transmission capabilities; and
- Open new parts of the NEM for renewable energy generation in locations that can benefit from diverse weather patterns.

The Project is strategically located within the Central-West Orana REZ (**Figure 1-1**).

As part of the establishment of the CWO REZ, EnergyCo will oversee the development of new transmission infrastructure and upgrades to road access – the 'Central-West Orana REZ Transmission Project' and 'Port to REZ Project', respectively.

The 'Central-West Orana REZ Transmission Project' was declared Critical State Significant Infrastructure (CSSI) in December of 2020. An EIS was lodged in late 2023 and planning approval (State and Commonwealth) was obtained in mid-2024. The transmission project began construction in June 2025, with completion expected in 2028.

While the Project does not intend to connect to CWO REZ transmission infrastructure, it will benefit from the project, specifically the associated road upgrades and regional investment.

The 'Port to REZ Project' comprises road upgrades at 19 locations along the transport route from the Port of Newcastle to Elong Elong in the CWO REZ. The upgrades are required to facilitate the safe transport of oversize and overmass (OSOM) components (e.g., WTG blades, WTG tower sections, substations) from the Port of Newcastle to the CWO REZ.

The Project will benefit from the 'Port to REZ Project' upgrades as it plans to use the route from the Port of Newcastle to Elong Elong to transport OSOM Project components. The Project will also deliver affordable renewable energy, contribute to the diversification of the NSW energy sector, and facilitate the expansion of electrical transmissions capabilities and the opening of new parts of the NEM for energy generation.

2.2 CONTRIBUTING TO THE NATIONAL ELECTRICITY MARKET

The NEM operates on one of the world's longest interconnected power systems, delivering electricity from generators to consumers through an extensive transmission and distribution network comprising about 40,000 km of transmission lines and cables. The NEM services the entire eastern and southeastern portion of Australia, connecting five states, and providing electricity to more than 23 million customers (AEMO, 2024a).

Traditionally, across Australia, coal-fired power generation and some gas peaking power plants have met electricity needs. However, over the past decade this trend shifted, and in 2024 coal-fired power generation supplied only 45% of electricity, while renewables supplied 36% (DCCEEW, 2024). In NSW close to 86% of existing coal-fired power generation is scheduled to close by 2033.

The energy sector in Australia is undergoing an inevitable and necessary transition from a centralised system of large fossil-fuel generation to a decentralised system of widely dispersed, renewable energy generation (mainly grid-scale wind and solar) (Australian Energy Regulator, 2023). The Australian Energy Regulator identifies key drivers for the transition as:

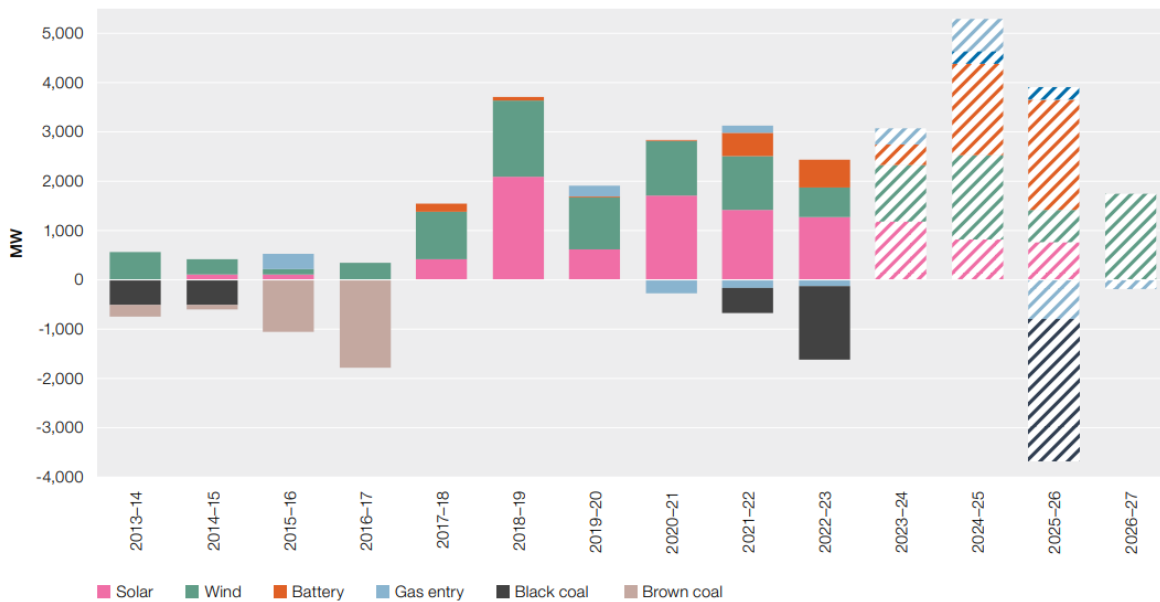
- Increasing community concern regarding the impact of fossil fuel generation of greenhouse gas emissions. Since 2012, no energy business in Australia has invested in new coal fired generation, whilst investment in wind and solar power generation and battery storage continues to grow (**Figure 2-1**);
- Technological advancements and cost reductions in grid-scale wind and solar generation, which have led to lower costs for new wind and solar energy generation projects; and
- Deteriorating economics of fossil fuel generation associated with the aging coal fired power generation fleet and increasing costs of fossil fuel.

The imminent exit of much of the NEM's coal fired power generation has prompted the AEMO to forecast reliability gaps (i.e., risk of unserved electricity demand). These reliability gaps are forecast to accelerate in response to growing demand for electricity due to increased electrification, while new generation investment proceeds slower than expected.

Wind and solar projects provide emission-free, low-cost electricity; however, their supply will need to be supplemented with adequate energy storage to avoid reliability gaps as coal stations continue to retire (Australian Energy Regulator, 2023).

The accelerated retirement of coal-fired power generation, and the comparatively lower capacity factors (i.e., efficiency) of wind and solar energy generation means that an exponential increase in variable renewable energy (VRE) generation is required to meet energy demand. The 'Integrated System Plan' (AEMO, 2024c) states the need for a three-fold increase in VRE generation across the NEM by 2030, and a six-fold increase by 2050 (AEMO, 2024c). This is in addition to a four-fold increase in firming capacity (e.g., BESS) by 2050.

The Project will facilitate investment in renewable energy by providing approximately 400 MW of energy generation and 200 MW / 800 MWh of storage capacity that will regulate the supply of energy to the grid. This will increase the reliability of the NEM and encourage further development of renewable energy.



Note: Capacity includes scheduled and semi-scheduled generation, but not rooftop solar capacity. New entry and exit are by registered capacity, except for solar which uses maximum capacity. Committed investment and closures from 30 June 2023 are shown as shaded components. These include Eraring power station in 2025.

Source: AER; AEMO (data).

FIGURE 2-1 EXIT AND ENTRY OF GENERATION CAPACITY IN THE NEM (AEMO, 2024B)

2.3 PROJECT SPECIFIC BENEFITS

The Project will deliver significant benefits to the Narromine Shire LGA and Dubbo Regional LGA communities, through:

- Direct investment in both the Narromine Shire LGA and Dubbo Regional LGA;
- Opportunities for local contractors and businesses, through the creation of construction jobs, the need for construction materials, and operational activities;
- Providing a diversified income stream for Project landowners;
- Supporting the resilience of the NEM, which could reduce the cost of electricity; and
- Aiding in the development of new skilled labour in the region, within the growing renewable energy industry.

A summary of the Project benefits is displayed in **Figure 2-2**.



FIGURE 2-2 PROJECT-SPECIFIC BENEFITS

2.4 STRATEGIC FRAMEWORK

Renewable energy development in the region is supported by provisions of regional and local plans, strategies and instruments as listed in **Table 2-1**.

TABLE 2-1 REGIONAL AND LOCAL PLANNING CONTEXT

Strategy, Policy or Plan	Description	Project Alignment
International Context		
United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP28)	COP28 was the 28 th climate change COP, held in Dubai, United Arab Emirates in 2023. One of the key outcomes of COP28 was an agreement to “triple the world’s renewable energy capacity and double its energy efficiency by 2030 (UNFCCC, 2024). This pledge was made by 130 countries, including Australia.	Achieving the reduction in greenhouse gas emissions required to minimise the impacts of climate change will require the replacement of fossil-fuel power generation with renewable energy generation. The Project will contribute to meeting Australia’s commitments to the UNFCCC through the generation and storage of renewable wind energy, which will displace coal-fired power generation, thus reducing greenhouse gas emissions.
UNFCC (COP21) – The Paris Agreement	The United Nations Paris Agreement on climate change (Paris Agreement) outlines a framework for all countries to take climate action from 2020 and builds on international efforts in the period up to 2020. The aim of the Paris Agreement is to limit global emissions to net-zero in the second half of this century. Australia is one of 195 signatories to the Paris Agreement and has set a target to reduce emissions by 43% below 2005 levels by 2030, and net-zero by 2050.	
National Context		
<i>Climate Change Act 2022</i>	The <i>Climate Change Act 2022</i> enshrines in law Australia greenhouse gas emissions reduction targets, provides for annual climate change statements, confers advisory functions on the climate change authority, and related purposes.	The Project is a renewable energy development. Replacing coal-fired power generation with renewable energy generation will reduce emissions of greenhouse gases, assisting Australia (and NSW) in meeting legislated emissions reduction targets.

Strategy, Policy or Plan	Description	Project Alignment
Integrated System Plan 2024 (AEMO, 2024) (2024 ISP)	<p>The 2024 ISP highlights the need for urgent investment in renewable energy generation and storage, as well as transmission infrastructure to provide secure, reliable energy through the energy transition.</p> <p>The 2024 ISP provides a roadmap for the development of the NEM over the next 20 years. It specifies that almost triple the grid-scale VRE is required to be operational by 2030, increasing to up to seven-fold the grid-scale VRE by 2050, and four times the firming capacity is needed across the NEM to meet increasing demand.</p>	<p>The Project is a renewable energy development with a nominal generating capacity of approximately 400 MW of firm, reliable, renewable energy. This has the potential to power approximately 195,000 homes annually.</p> <p>The Project also includes a 200 MW / 800 MWh BESS and will connect to the existing transmission network to provide dispatchable energy to the NEM.</p>
Capacity Investment Scheme (CIS)	<p>The CIS aims to build a more reliable, resilient and affordable energy system for all Australians. A key goal of the CIS is to integrate renewable energy generation into the grid while maintaining reliability. The CIS is technology agnostic, supporting any energy capacity that can meet system needs.</p>	<p>The Project will include a BESS for the storage of renewable energy that can increase system efficiency and enable greater penetration of renewable energy into the grid. The Project also contributes to and complements the diverse mix of renewable energy solutions required to meet increasing demand.</p>
NSW Context		
<i>Climate Change (Net Zero Future) Act 2023</i>	<p>The <i>Climate Change (Net Zero Future) Act 2023</i> enshrines in law NSW emissions reduction targets, specifically:</p> <ul style="list-style-type: none"> • A 50% reduction on 2005 emissions by 2030; • A 70% reduction on 2005 emissions by 2035; and • Net-zero by 2050. 	<p>The Project is a renewable energy development. Replacing coal-fired power generation with renewable energy generation will reduce emissions of greenhouse gases, assisting Australia (and NSW) in meeting legislated emissions reduction targets.</p>
NSW Electricity Strategy	<p>The NSW Electricity Strategy is the NSW Government’s plan to provide more reliable, affordable, and sustainable electricity to support a growing NSW economy and responds to increasing energy security challenges.</p> <p>The Strategy recognises that VRE may not always satisfy demand and, therefore, the system must include other technologies that provide energy on demand (e.g., BESS).</p>	<p>The Project will provide renewable energy generation and storage capacity that will assist in making the system more secure, reliable and affordable to NSW consumer.</p> <p>The Project includes a BESS for the storage of renewable energy that can increase system efficiency and enable greater penetration of renewable energy into the grid. The Project also contributes to and complements the diverse mix of renewable energy solutions required to meet increasing demand.</p>

Strategy, Policy or Plan	Description	Project Alignment
	<p>The Strategy supports a new affordable and reliable energy system by:</p> <ul style="list-style-type: none"> • Delivering Australia’s first coordinated REZ in the Central-West Orana region; • Saving energy via the Energy Security Safeguard; • Supporting the development of new electricity generators; • Setting a target to increase the state’s energy resilience; and • Making it easier to do energy business in NSW. 	
<p><i>Electricity Infrastructure Investment Act 2020</i></p> <p>Electricity Infrastructure Roadmap (DPIE, 2020)</p>	<p>The Electricity Infrastructure Roadmap provides a framework to delivery energy infrastructure, capitalising on the opportunity to transform the NSW electricity system into one that is “cheap, clean and reliable”. Its implementation sets the foundation for significant investment and job creation, while also addressing electricity reliability and affordability.</p>	
<p>NSW Transmission Infrastructure Strategy</p>	<p>The NSW Transmission Infrastructure Strategy is the government’s plan to unlock private sector investment in priority energy infrastructure projects. The Strategy forms part of the government’s broader plan to make energy more affordable, secure investment in network infrastructure and ensure new technologies deliver benefits for consumers.</p>	
<p>Wind Energy Guideline (2024)</p>	<p>The Wind Energy Guideline outlines the planning framework for large-scale, SSD wind energy developments and identifies the key planning considerations relevant to wind energy development in NSW.</p>	<p>The Guideline has been used to inform this Scoping Report, including aspects relating to site selection, and assessment of visual, noise and impacts to other aspects.</p>
Regional Context		
<p>Central West and Orana Regional Plan 2041</p>	<p>Provides a 20-year blueprint for the future of the Central West and Orana Region of NSW, including a framework for guiding land use planning, development proposals, and infrastructure funding decisions. Objective 2 of this plan is of relevance to the Project as it aims to support the transition to net zero by 2050.</p>	<p>The Project will support the Central West and Orana Regional Plan 2041’s goal of transitioning to net zero by 2050 by providing new renewable energy to the region.</p>

Strategy, Policy or Plan	Description	Project Alignment
<p>Narromine Shire Council Local Strategic Planning Statement (LSPS)</p>	<p>Provides a 20-year framework to outline the economic, social and environmental land use needs in Narromine Shire. The LSPS expands on and couples the Council’s numerous other plans including the Local Environmental Plan, the Development Control Plan, and the Community Strategic Plan (Narromine Shire Council, 2020).</p>	<p>The Project aligns with the following priorities of Narromine Shire LSPS:</p> <ul style="list-style-type: none"> • Priority 7: Development, diversification and sustainability of the local business and industry base; • Priority 8: Encourage employment and skills development to address industry needs and grow the regions knowledge base; and • Priority 11: Values the efficient use of utilities, natural resources and energy.
<p>Narromine Shire Council Community Strategic Plan 2022-2032</p>	<p>A 10-year plan to deliver Narromine community’s vision for the future. Objectives of this plan relevant to the Project include:</p> <ul style="list-style-type: none"> • Planning mechanisms that support ... infrastructure that allows for localised employment opportunities; • Support the growth and development of new and existing businesses and industry; • Attract and retain a quality workforce that meets the needs of the community and future strategic directions; and • Ensure sufficient resources to meet current and future needs of the community. 	<p>The Project will support local employment, attract and retain a quality workforce, will introduce a new industry to the local area, and ensures renewable energy resources for the community.</p>
<p>Dubbo Regional Local Strategic Planning Statement (LSPS)</p>	<p>Provides a 20 year plan to guide decision making with regards to planning considerations. The plan is structured around five main themes which frame its objectives – infrastructure, economy, housing, liveability and sustainability.</p>	<p>The project supports the following themes:</p> <ul style="list-style-type: none"> • Infrastructure: direct investment towards supporting growth, focusing ... renewable energy; • Economy: Strengthen and support town centres, agricultural industries, health and education precincts, tourism, and employment-generating land; and • Sustainability: Promote and develop resilience to climate change, promote energy, water, and waste efficiency.
<p>Dubbo Community Strategic Plan 2040</p>	<p>Provides an overarching Strategy to guide council, developed though community consultation, via a holistic blueprint for community development through:</p> <ul style="list-style-type: none"> • Housing; • Infrastructure; • Economy; • Leadership; • Liveability; and • Environmental sustainability. 	

2.5 SITE SETTING AND FEATURES

2.5.1 LOCAL AND REGIONAL CONTEXT

The Project is located within both the Narromine Shire LGA and the Dubbo Regional LGA (**Figure 2-3**). The closest regional centre is Narromine (17.5 km southeast [direct]) with a population (LGA) of 6,360 people (ABS, 2021). Dubbo is located 21.5 km (direct) southeast of the Project and has a population (LGA) of 54,922 people (ABS, 2021).

Land use in the Narromine Shire LGA and Dubbo Regional LGA predominantly comprises agricultural productivity, including sheep and cattle grazing (**Figure 2-4**). This correlates with the major employment sectors in the region which are led by agriculture and agricultural services, with healthcare and retail services also significant.

Exploration Licence (EL) 8961 (held by Sunrise Energy Exploration Pty Ltd) covers most of the Project area (**Figure 2-3**). EL 8961 has an expiry date of 6 April 2026. The Applicant will engage with Sunrise Energy Exploration Pty Ltd. during the preparation of the EIS if the EL is still active.

2.5.2 NATURAL FEATURES

The Project area is in the Brigalow Belt South Interim Biogeographic Regionalisation for Australia (IBRA) bioregion and the Pilliga IBRA subregion. The Brigalow Belt IBRA bioregion is characterised by several major watercourses including the Namoi, Castlereagh, and Macquarie Rivers. The climate of this bioregion varies from subhumid in the southeastern section to subtropical in the northwest. Soils in this bioregion vary greatly depending on topography, which affects the type of vegetation found throughout the landscape. Sandstone dominant areas support forests and woodlands while grasslands dominate the black earths of the Liverpool Plains region (NSW NPWS, 2003). The Pilliga IBRA subregion located in western NSW, is characterised by sandy plains and low hills with vegetation including Pilliga Scrub and forests containing White Cypress Pine and Eucalypts (Australian Government, 2018).

The Project area is characterised by a relatively flat topography with elevation ranging between approximately 255 to 285 m above sea level (ASL) (**Figure 2-5**). The Project area contains a mix of improved pasture and low-quality native grasslands, and remnant woody vegetation in varying condition states. More densely vegetated areas, scattered remnant trees, and linear fragments of riparian vegetation are found along and near surface water features throughout the site.

Conservation areas in proximity to the Project include:

- Mogriguy National Park, located about 10 km to the east;
- Breelong National Park, located about 30 km to the northeast; and
- Goonoo State Conservation Area, located about 30 km to the east.

Distances are measured directly from the Project area at its closest (**Figure 1-1**).

The Project is within the Macquarie-Castlereagh River Catchment, which is part of the larger Murray-Darling Basin. Kookaburra Creek is a seasonal creek that traverses the southwest portion of the Project area. Coolbaggie Creek, a tributary of the Macquarie River, traverses the eastern section of the Project area, before it exits and then flows along the eastern boundary of the Project area (**Figure 2-3**). There are several man-made water supply ponds scattered around the Project area. There is one mapped floodplain wetland within the southwest section

of the Project area. The landscape contains various large rivers and creeks that support agricultural practices within the region.

Recreational and tourism opportunities in proximity to the Project occur predominantly in nearby towns such as Narromine and Dubbo or in nearby National Parks and State Conservation Areas as described above. Narromine's main tourist activity revolves around the Narromine Aerodrome which hosts aviation events, including an annual flying event, 'Ausfly', which occurs in October. Narromine also sees an influx of water sport enthusiasts during spring and summer months due to its proximity to the Macquarie River (Narromine Shire Council, 2025). Dubbo hosts a variety of events including livestock shows and sporting championships.

2.5.3 BUILT FEATURES

Major transport corridors in proximity to the Project are shown in **Figure 1-1** and include:

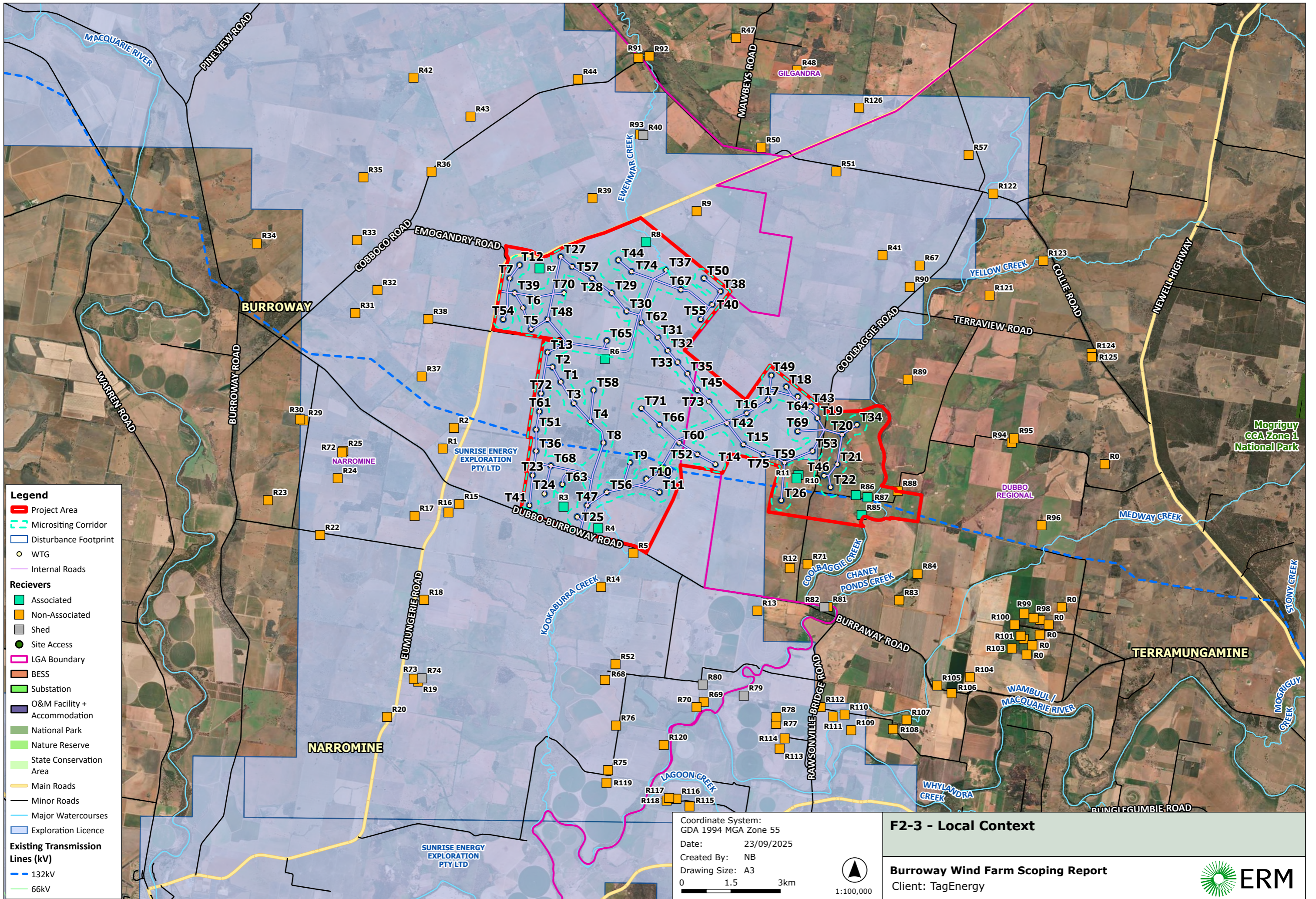
- Mitchell Highway, located to the south of the Project, connecting Bathurst to Bourke via Orange, Dubbo and Narromine;
- Newell Highway, located to the east of the Project, connecting Tocumwal on the NSW/Victorian border to Gilgandra via Narrandera, Parkes and Dubbo; and
- Dubbo – Central Railway line, located about 18 km to the southeast, provides a return daily rail service to Sydney.

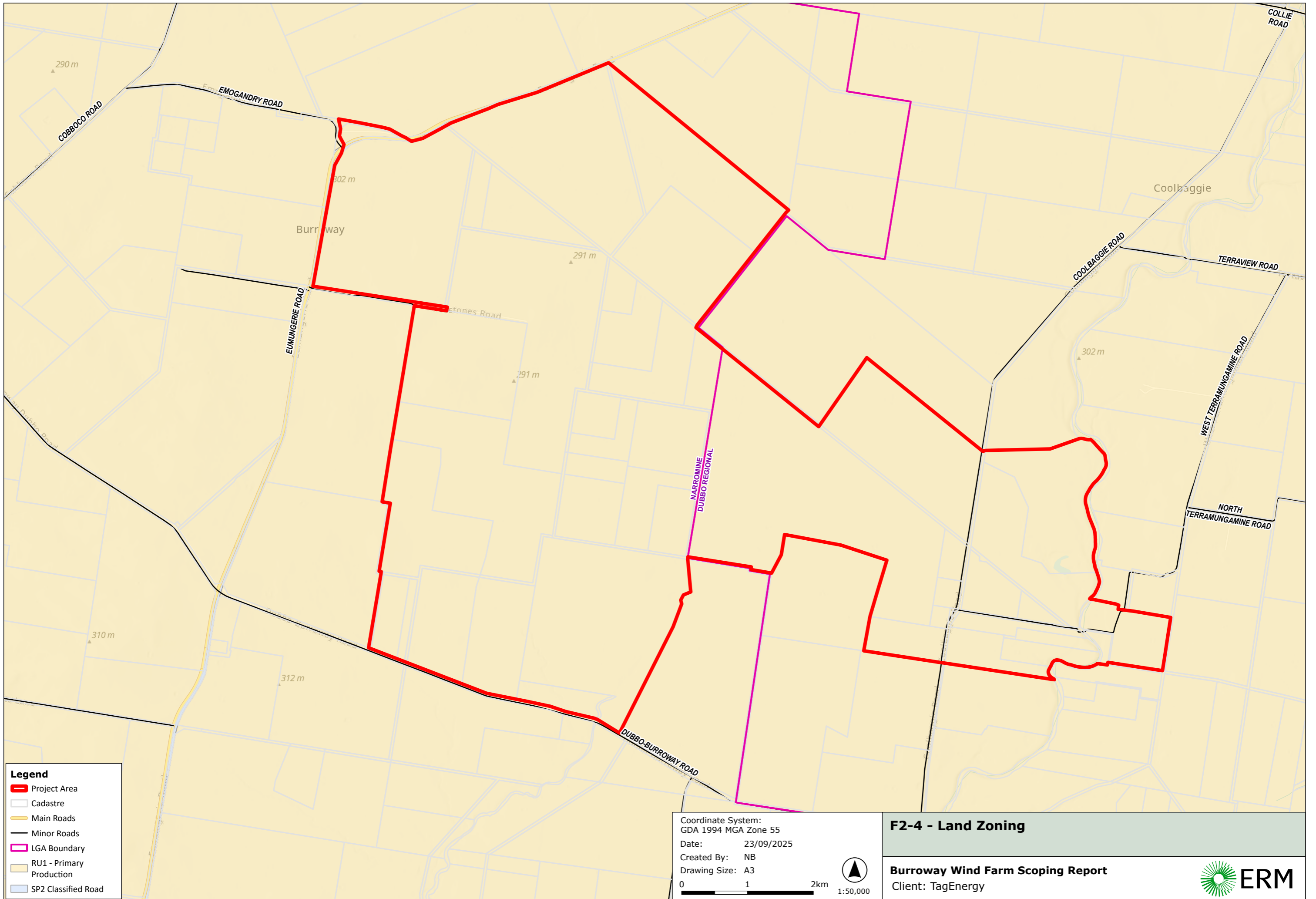
The Inland Rail Narrabri to Narromine section is adjacent to the Project. It is part of the broader Inland Rail Project, which will provide a 1,600 km freight rail line between Melbourne and Brisbane. This opens the possibility for the Project to use the Port of Brisbane for imports of Project components.

Several airports are in proximity to the Project including Narromine Airport (YNRM; 8.5 nautical miles [NM] [15.8 km] southwest from nearest WTG) and Dubbo Regional Airport (DBO; 8.9 NM [16.6 km] southeast from nearest WTG). Aviation facilities are shown on **Figure 1-1**. Aviation activities associated with aerial agricultural applications (e.g., fertiliser, pest spraying) are undertaken in areas surrounding the Project.

The existing Dubbo-Nevertire 132 kV transmission line (Line #94W/1) operated by Essential Energy crosses the Project area.

A search of Before You Dig determined that there are no gas and/or water utilities within the Project area. However, telecommunication and energy assets were identified within the Project area (BYDA, 2025).





Legend

- ▬ Project Area
- Cadastre
- Main Roads
- Minor Roads
- LGA Boundary
- RU1 - Primary Production
- SP2 Classified Road

Coordinate System:
GDA 1994 MGA Zone 55

Date: 23/09/2025

Created By: NB

Drawing Size: A3

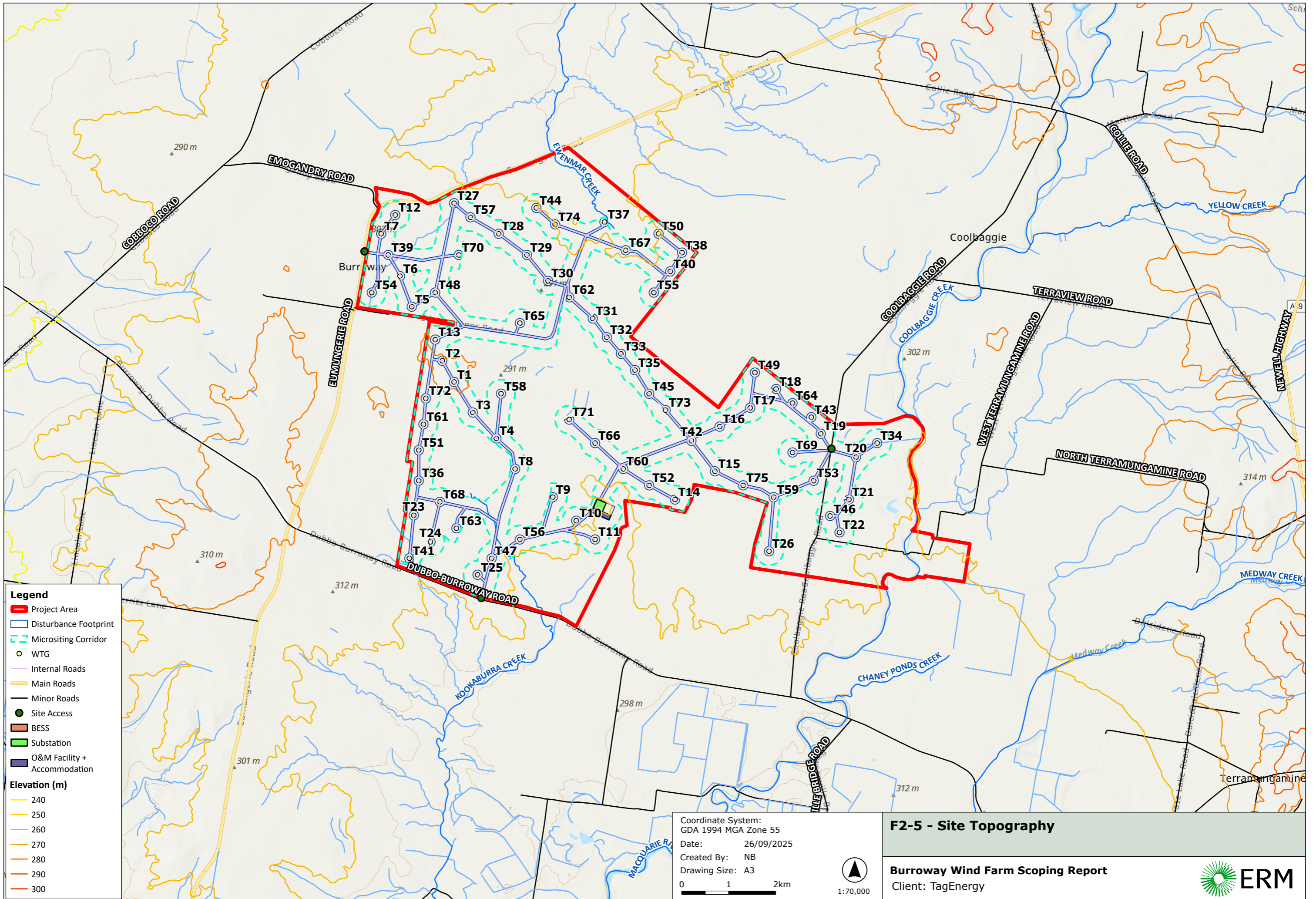
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F2-4 - Land Zoning

Burroway Wind Farm Scoping Report

Client: TagEnergy



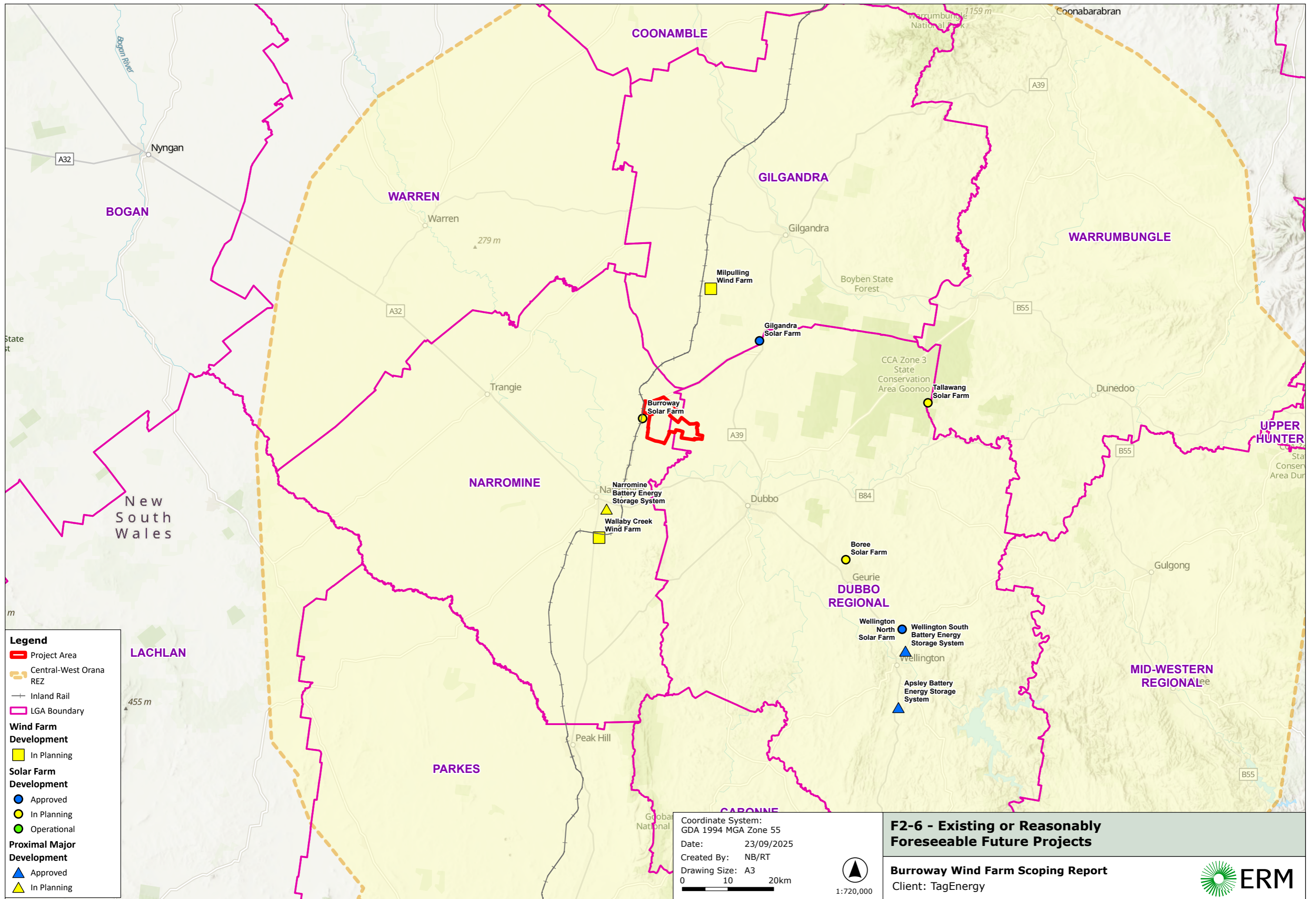
2.5.4 REASONABLY FORESEEABLE FUTURE PROJECTS AND CUMULATIVE IMPACTS

Table 2-2 lists the existing and reasonably foreseeable future projects within 100 km of the Project. These projects are shown in **Figure 2-6**.

TABLE 2-2 MAJOR PROJECTS IN THE REGION

Project	Status	Proximity (km)
Inland Rail Narromine to Narrabri	Approved	Adjacent
Burroway Solar Farm	Assessment	Adjacent
Forest Glen Solar Farm	Approved	16 km
Narromine BESS	Prepare EIS	18 km
Gilgandra Solar Farm	Approved	23 km
Wallaby Creek Wind Farm	Prepare EIS	24 km
Milpulling Wind Farm	Prepare EIS	27 km
Tallawang Solar Farm	Recommendation	50 km
Wellington North Solar Farm	Approved	60 km
Bodangora Wind Farm	Approved	62 km
Wellington South BESS	Approved	64 km
Spicers Creek Wind Farm	Approved	64 km
Dapper Solar Farm	Prepare EIS	69 km
Apsley BESS	Approved	72 km
Avonside Solar Farm	Prepare EIS	73 km
Cobbora Solar Farm	Collate submissions	73 km
Sandy Creek Solar Farm	Assessment	73 km
Uungula Wind Farm	Approved	85 km
Orana Wind Farm	Prepare EIS	85 km
Dunnedoo Solar Farm	Approved	87 km
Piambong Wind Farm	Prepare EIS	92 km
Central West Orana REZ Transmission	Approved	141 km

The study area for cumulative impact assessment will be aspect specific, i.e., it will vary depending on the specific characteristics of the assessment matter and the scale and nature of the potential impacts. For e.g., the 'Cumulative Impact Guidelines for State Significant Projects' states for biodiversity, the study area may be based on the range and distribution of listed threatened species within a relevant bioregion and may only focus on species that are at risk of serious and irreversible harm due to cumulative impacts. Conversely, the noise assessment may only specify locations where noise impacts from nearby projects may overlap. The Cumulative Impact Assessment will consider each applicable aspect and is further detailed in **Section 6.16**.



Legend

- ▭ Project Area
- ▭ Central-West Orana REZ
- Inland Rail
- ▭ LGA Boundary

Wind Farm Development

- ▭ In Planning

Solar Farm Development

- Approved
- In Planning
- Operational

Proximal Major Development

- ▲ Approved
- ▲ In Planning

Coordinate System:
GDA 1994 MGA Zone 55
Date: 23/09/2025
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F2-6 - Existing or Reasonably Foreseeable Future Projects

Burroway Wind Farm Scoping Report
Client: TagEnergy

2.6 KEY HAZARDS AND RISKS

Wind farm developments by their nature require areas of land to accommodate WTGs and ancillary infrastructure in a manner that makes the most of the wind resource at the chosen site. This means wind farm developments are typically located in rural areas resulting in changes to the landscape character and other impacts from project construction and operation.

For this Project, aspects that require more detailed assessment include biodiversity, Aboriginal cultural heritage, landscape and visual, noise and social.

Separately, the chosen site for a wind farm development may present hazards and risks for project infrastructure. These hazards and risks typically relate to bushfire prone land, flooding, erosion and subsidence, contaminated land and climate change.

These aspects are considered in more detail in **Section 6**; however, preliminary assessment suggests that the above do not present a significant risk to the Project.

2.7 PROJECT JUSTIFICATION

The benefits of the Project include:

- Providing renewable energy generation to support the transition from a centralised system of large fossil-fuel power generation to a decentralised system of widely dispersed renewable energy;
- Reducing greenhouse gas emissions, thereby benefiting future generations by minimising the impacts of climate change;
- Improving the reliability and efficiency of the NEM through renewable energy generation, combined with a BESS that can enable greater penetration of renewable energy into the grid; and
- Economic and social benefits, including:
 - Potential reduction in wholesale electricity costs that will benefit NSW consumers;
 - Attracting investment and expertise in renewable energy development to the regions;
 - Generating significant employment opportunities during construction and operation;
 - Generating procurement opportunities for local services and businesses throughout construction and operation;
 - Providing a diversified income to host landowners, which will have flow-on benefits to the local community;
 - Providing significant local investment and financial contributions to the Narromine and Dubbo communities through the establishment of a benefit sharing schemes; and
 - Providing other investment throughout the Central West and Orana Region.

The Project is located within the CWO REZ and while it will not connect to REZ transmission infrastructure it will benefit from other REZ upgrades, specifically those for the transport route from the Port of Newcastle.

The site selected for the Project has all the attributes required for a wind farm, specifically it is:

- In an area that has excellent wind resource to support the viable operation of a wind farm;
- Located within the CWO REZ geographic boundary, an area nominated for significant investment in renewable energy generation, storage and transmission projects;
- Located near existing transmission infrastructure, which runs through the Project area;
- Comprised of large areas of already cleared land;
- A reasonable distance to non-associated dwellings;
- Compatible with existing agricultural land use within and surrounding the Project area, as large-scale renewable energy generation can coexist with the current agricultural land use; and
- Well-connected to the road network providing suitable access from the regional centres of Dubbo and Narromine, and from ports where most large components will be imported to.

2.8 AGREEMENTS WITH OTHER PARTIES

2.8.1 LANDOWNER AGREEMENT

The Applicant has engaged with all landowner groups identified in **Table 1-1**. Agreements have been signed with all landowner groups, and they have consented to their land being included in the Project layout shown in this Scoping Report. Titles with signed Agreements have had caveats for the Project lodged against them.

2.8.2 OTHER AGREEMENTS

The Applicant has commenced engagement with both Narromine Shire Council and Dubbo Regional Council and in due course intends to establish benefit sharing agreements, administered through a Voluntary Planning Agreement (VPA) in accordance with the Benefit Sharing Guidelines (NSW DPHI, 2024d).

The Applicant will continue to engage with both Narromine Shire Council and Dubbo Regional Councils to finalise these agreements throughout the planning phase and prior to construction of the Project.

3. THE PROJECT

3.1 PROJECT AREA AND PRELIMINARY DEVELOPMENT FOOTPRINT

The Project area is defined as the area of land corresponding to property boundaries on which the Project is located (**Figure 1-3**). The Project area extends across about 6,568 ha. Under the Narromine LEP 2011 and Dubbo Regional LEP 2022 the Project area is zoned as RU1 – Primary Production.

The preliminary development footprint represents the area associated with the construction and operation of the Project. To the extent known at the scoping stage, the preliminary development footprint covers an area of 488.34 ha as shown in **Figure 1-3**, comprising:

- Temporary preliminary development footprint, which is the area of land that will be temporarily disturbed during construction of the Project with these areas to be progressively rehabilitated during construction; and
- Permanent preliminary development footprint is the area of land that will have project infrastructure located on it and will remain 'disturbed' throughout the operational life of the Project.

3.2 PROJECT DESCRIPTION AND LAYOUT

The Project includes the in-perpetuity approval for construction, operation, maintenance, and decommissioning of a wind farm, including associated infrastructure, and ancillary activities. The preliminary Project layout is shown in **Figure 1-3**.

The final design and location of the components of the Project (including infrastructure) will be subject to further detailed design and assessment, including consideration of the outcomes of technical and environmental assessments as part of the EIS. Disturbance areas for 'cut and fill' batters as well as asset protection zones (APZ) will also be considered during this process. The preliminary Project design components and specifications are summarised in **Table 3-1**.

TABLE 3-1 PRELIMINARY PROJECT DESIGN SUMMARY

Element	Feature	Specification
Energy generation	Wind turbine generators	<ul style="list-style-type: none"> • Up to 75 WTGs, each with: <ul style="list-style-type: none"> ◦ Hub height up to 180 m; ◦ Blade length of 100 m; ◦ Maximum tip height 280 m; ◦ Rotor diameter up to 200 m; and ◦ Ground installed converter, step-up transformer and switchgear.
Energy Storage	BESS	<ul style="list-style-type: none"> • A 200 MW / 800 MWh BESS
Electrical Reticulation Network	Substations	<ul style="list-style-type: none"> • On-site substations; • Collector substations; and • 132 kV / 33 kV transformer switch rooms and power quality and reactive plant.
	Internal electrical reticulation network	<ul style="list-style-type: none"> • 33 kV underground and overhead electrical reticulation connecting the WTGs to the substations.

Element	Feature	Specification
Other Infrastructure	Operations and Maintenance (O&M) Facility	<ul style="list-style-type: none"> • Construction and operational compounds; • Permanent O&M facility (including on-site office and maintenance and storage facilities); and • Car parking.
	Construction and operational infrastructure	<ul style="list-style-type: none"> • Hardstands; • Mobile concrete batching plants; • Crushing facilities; • Borrow pits; • Construction laydown areas; • Visual screening and landscaping as necessary to minimise impacts; and • Security fencing, security lighting and security devices.
Ancillary Activities	Temporary and Permanent Ancillary Activities	<ul style="list-style-type: none"> • Sourcing of materials for construction; • Sourcing of water for construction; • Subdivision and boundary adjustments relating to lease arrangements; • Temporary power and other utilities; and • Associated minor works.
Access	Internal access tracks	<ul style="list-style-type: none"> • Internal access tracks, road turning head connecting Project infrastructure and watercourse crossings and bridge.
	To Project	<ul style="list-style-type: none"> • Project access via three (3) main access points on: <ul style="list-style-type: none"> ◦ Dubbo-Burroway Road; ◦ Eumungerie Road; and ◦ Coolbaggie Road.
	From Port	<ul style="list-style-type: none"> • Project-related OSOM components are proposed to be transported via Port of Newcastle; and • Potential requirements for public road upgrades along the transport route, and some temporary roads to facilitate construction.

3.2.1 WIND TURBINE GENERATORS

The Project will comprise up to 75 WTGs, each with a hub height of 180 m, three blades of 100 m length, providing a maximum height (to tip of vertical blade) of 280 m. The WTG model has not been selected; however, each will have a design life of about 30 years. WTGs will be fixed to a concrete footing (WTG foundations) and mounted on tubular steel towers, with adjacent hardstand area to facilitate their installation and maintenance.

3.2.2 BATTERY ENERGY STORAGE SYSTEM

The Project will include a BESS with a capacity of up to 200 MW / 800 MWh. The BESS will store excess energy generated by the wind farm during times of low demand and discharge it to the NEM during times of high demand. This will provide additional benefits to consumers as it will increase network reliability, minimising load shedding and blackouts, enabling greater penetration of renewable energy into the grid.

The BESS will consist of battery units housed in shipping container style enclosures with inverters, transformers, and other associated electrical infrastructure. The BESS technology has yet to be confirmed but will likely be lithium-ion (Li-Ion).

3.2.3 ELECTRICAL RETICULATION NETWORK

Electrical reticulation infrastructure includes substations (inclusive of associated transformers), power quality and reactive plant (e.g., SynCon, STATCOM, capacitor and/or filter bank), switchgear, protection, communications equipment, and a control room.

A network of underground and overhead electrical reticulation will connect the WTGs to the distributed substations, which will connect to the existing Essential Energy transmission assets. A transmission line, new feeders and transformers may also be required, depending on the connection requirements.

The location and specifications of the transmission route and new feeder are subject to final agreement with Essential Energy and landowners. The final alignment will be confirmed in the EIS.

3.2.4 OTHER INFRASTRUCTURE AND ANCILLARY ACTIVITIES

The Project will comprise various supporting infrastructure and ancillary activities including:

- Hardstands to allow crane activities;
- Construction laydown areas;
- Mobile concrete batching plant/s;
- Rock crushing facilities (for the generation of suitable aggregates for mobile concrete batching, hardstand construction and/or for access track);
- Borrow pits (and associated access tracks);
- Construction and operational compounds (including site office, maintenance and storage facilities, car parking, and security fencing);
- Erosion and sedimentation control infrastructure and areas;
- Sourcing of gravel, rock, and other materials for construction (e.g., cut and fill activities and borrow pits within the Project area);
- Sourcing of water for construction (e.g., offsite, or on-site water sourcing, including the construction bores and / or nest dams on-site);
- Subdivision and boundary adjustments, if required for the substations and switchyard;
- Visual screening; and
- Associated ancillary works.

3.2.5 SITE ACCESS

Internal Access Tracks

The construction, operation and maintenance of the Project will require new internal access tracks within the Project area. The tracks will provide ongoing access to the WTGs and other Project infrastructure. Where practicable and with landholder agreement, the internal access track network will be aligned with existing farm tracks to reduce impacts and to provide upgraded access for ongoing agricultural activities. These tracks will then connect to the existing external road network via site access/egress points.

If waterways within the Project area require crossing for access to Project's elements, the crossing design will consider relevant guidelines, including:

- 'Guidelines for Controlled Activities on Waterfront Land' (DPI, 2018);
- 'Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings' (DPI, 2003); and
- 'Policy and Guidelines for Fish Habitat Conservation and Management' (DPI, 2013)

To The Project

Access to the Project area during construction and operation will be via the existing external road network and may include:

- Access to the north and west portions of the Project via Eumungerie Road;
- Access to the south portion of the Project via Dubbo Burroway Road; and
- Access to the east and central portions of the project via Coolbaggie Road.

If upgrades are required to sections of these roads, these will be identified in the EIS.

From Port

Whilst the transport route for large components has not been determined, the Port of Newcastle has been identified as the proposed port of origin for OSOM Project components. However, the transport route will be subject to further consideration in the EIS. It is expected that the EnergyCo 'Port to REZ' transport route will be used for most of the Project transport route. This will therefore minimise the potential road upgrade required for the Project.

Component and Materials Transport

The following construction components and material are expected to be required and/or likely to be transported to and from the Project:

- WTG components (e.g., blades, towers), sub-station(s), transformers, electrical reticulation infrastructure;
- Temporary site buildings and facilities for construction contractors and equipment;
- Materials for construction of permanent site infrastructure, e.g., O&M facility;
- Construction plant and equipment, e.g., mobile concrete batching plant/s to supply concrete for WTG footings and substation construction works, rock crushing facilities for the generation of aggregates for concrete batching and/or for access track and hardstand construction;
- Raw materials (e.g., aggregates, gravel, water), foundation supplies (e.g., concrete, steel) and other materials for internal access tracks (e.g., geotextiles);
- Fuels, oils and other hazardous materials; and
- Miscellaneous construction materials.

3.2.6 MICRO-SITING

The layout presented in this Scoping Report may require refinement during preparation of the EIS and prior to construction, based on identified environmental and social constraints, detailed geotechnical investigations and selection of the final WTG model. As such, the Applicant requires the ability to micro-site Project infrastructure.

This will allow the design to be adjusted to, for example, avoid unnecessary excavation, vegetation clearing, or to benefit constructability, plant and equipment access. To allow the Applicant to make general design refinements without the need to modify the application, the EIS will assess impacts for an area that includes temporary and permanent Project development areas (e.g., preliminary development footprint) with a micro-siting buffer of, generally, 200 m applied to this. However, the EIS will also specify the nature of impact relevant to the calculated temporary and permanent development areas (as this will be the true maximum impact).

3.3 STAGING

The indicative staging for the Project is summarised in **Table 3-2**.

TABLE 3-2 INDICATIVE PROJECT STAGING

Stage of Project	Estimated Date of Completion
Site Selection	2022-2024
Wind Testing	2022-2031
Planning and Approvals Process	2024-2027
Grid Connection Approval	2027
Construction	2028-2029
Commissioning and Operations	Operational Years 1 – in perpetuity
Decommissioning, Rehabilitation or Repowering	35 years from commencement of operation

3.3.1 CONSTRUCTION

Construction of the Project is expected to occur over 24 months, including commissioning. A peak construction workforce of up to 250 full time equivalent (FTE) employees will be required.

3.3.2 OPERATIONS

It is anticipated that the wind farm will have an operational life of 30 years. Wind farms are designed to operate without intervention, with each wind turbine capable of operating independently of all other WTGs. Maintenance will primarily be preventative, operating to a schedule which will cycle through all WTGs to ensure service intervals are met. Some unscheduled repair work will be required (e.g., should breakdowns occur). In these circumstances, priority works would be undertaken as soon as possible to ensure all WTGs are operational.

The operational workforce will consist of up to 15 FTE staff. Preventative maintenance will occupy most of the operational staff time.

3.3.3 DECOMMISSIONING, REHABILITATION OR REPOWERING

The EIS will discuss the options for decommissioning of the Project. This may include full decommissioning (e.g., WTGs removed, and the site rehabilitated) or repowering with the latest technology WTGs and associated infrastructure.

This process of decommissioning will be undertaken in accordance with relevant legal requirements, regulations, and conditions of the Development Consent. If full decommissioning occurs, all above-ground infrastructure and to a depth of 1000 mm will be removed; however, some infrastructure may be retained subject to landowner agreement.

3.4 ALTERNATIVES CONSIDERED

Alternatives to the Project have been explored, including 'no Project', 'alternative sourcing of energy', 'alternate site location', and the 'maximised site layout'. Each is discussed below.

3.4.1 NO PROJECT

The Project area is currently used for agricultural activities and grazing. The 'do nothing' scenario would allow for continued use of the Project area for agricultural purposes; however, it would forgo the opportunity for the Project area to support both agricultural production and renewable energy generation.

The 'do nothing' scenario would also forgo the opportunity to reduce Australia's dependency on fossil fuels for energy generation, reduce emissions of GHGs, and the opportunity to contribute to the development of the CWO REZ.

The Project is expected to abate 1,045,000 t CO₂-e per year of greenhouse gas emissions. The electricity generated by the Project could supply up to 195,000 NSW households per year. These benefits would not be realised with the 'do nothing' scenario.

In addition, the local area and wider region would not realise the benefits of the Project including:

- The direct and indirect benefits to the local and regional economies;
- Direct and indirect employment opportunities during construction and operations; and
- Contributions to local community projects, events, programs, facilities and infrastructure through the CBF.

3.4.2 ALTERNATIVE SOURCING OF ENERGY

The alternative to renewable energy generation is the continued use of fossil fuels, including coal and natural gas. The use on these fuel sources releases large concentrations of greenhouse gases, which have been directly linked to anthropogenic climate change.

Section 2.1 outlines the commitments made by the Australian and NSW governments to reduce greenhouse gas emissions and their respective targets for renewable energy generation. Other forms of large-scale renewable energy (e.g., hydro, biomass) are not feasible for the Project area. Attributes of the Project area including the wind resource, historical land use, large areas of already cleared land, and sparsely populated locality make wind energy the most feasible form of energy generation for the Project area. The Project is at a scale that will provide significant renewable energy generation over about 30-years. Large-scale wind technology is also now one of the cheapest forms of new energy generation.

3.4.3 ALTERNATIVE SITE LOCATION

Alternate locations for a project of this scale are limited due to the requirement for large areas of generally cleared land, proximity to existing or proposed transmission and distribution networks, available network capacity, suitable topography, and need to avoid major population centres.

Alternatives were considered by the Applicant during site selection, including other areas in NSW. Other areas and land parcels within the region were assessed for wind resource, proximity to grid, grid capacity, available land, landowner sentiment, access, topography, and constructability; however, the Project site was considered the most viable for wind energy development.

3.4.4 MAXIMISED SITE LAYOUT

The Project layout shown in this Scoping Report was informed by the proximity to the existing transmission line, topography, wind resource, electricity generation optimisation, site access, and preliminary environmental and social assessments. Infrastructure has been located to minimise impacts; however, the Applicant will continue to review the design and further avoid or minimise impacts during development of the EIS. The Project layout was also designed in consideration of the principles of ecologically sustainable development (ESD).

Design refinements undertaken to date include:

- Avoidance, where possible, of areas of woody vegetation and threatened ecological communities (TECs);
- Avoidance, where possible, of areas of high archaeological potential;
- Use of existing internal access tracks, where possible;
- Siting of WTGs outside of the required visual impact setback distance for a 280 m WTG as specified in the NSW Wind Energy Visual Impact Technical Supplement (DPHI, 2024b);
- Reduced micro-siting around WTGs T4, T8, T9, T21, T24, T30, T37, T41, T45, T50, T62, T63, T67, T70 and T71 to minimise impacts to biodiversity values; and
- Reduced micro-siting corridor along access roads between T4 to T8 and T62 to T65 to minimise impacts to biodiversity values.

4. STATUTORY CONTEXT

4.1 POWER TO GRANT CONSENT

The Project is development for the purpose of “electricity generating works, with an estimated development cost (EDC) of more than \$30 million. Therefore, the Project is classified as SSD pursuant to Schedule 1, Clause 20 of the State Environmental Planning Policy (Planning Systems) 2021, and under Part 4 of the EP&A Act will require development consent. Approval for the Project will be sought under Part 4, Division 4.7 of the EP&A Act.

4.2 PERMISSIBILITY

The Project area is within both the Narromine Shire LGA and Dubbo Regional LGA and is, therefore, subject to the provisions of the Narromine LEP 2011 and Dubbo LEP 2022. The Project area is zoned as ‘RU1 – Primary Production’ under both LEPs; however, a section of the Project that crosses over Eumungerie Road that is zoned as ‘SP2 – Classified Road’.

State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP) is applicable to the Project. As above, the Project meets the definition of “electricity generating works” under the Transport and Infrastructure SEPP. Clause 2.36 (1) of the Transport and Infrastructure SEPP states that “electricity generating works” may be carried out with development consent on land within a prescribed rural, industrial or special use zone.

The Project area is predominantly as ‘RU1 – Primary Production’ under the Narromine LEP 2011 and Dubbo Regional LEP 2022. As ‘RU1 – Primary Production’ is a prescribed rural zone, the Project is permissible with consent under the provisions of Clause 2.36 (1) of the Transport and Infrastructure SEPP.

4.3 OTHER APPROVALS

Consideration of approvals or permits that may be required in addition to the Project SSD development consent are discussed in **Table 4-1**.

TABLE 4-1 OTHER APPROVALS REQUIRED

Approval	Requirement
Consistent Approvals - Section 4.42 of the EP&A Act outlines seven areas where additional approvals cannot be refused if necessary for carrying out an approved SSD.	
<i>Roads Act 1993</i>	Consent from the appropriate roads’ authority under Section 138 of the Roads Act is required for any works undertaken on or under public roads. An approval for works on public roads will be required for the Project.
<i>Protection of the Environment Operations Act 1997 (POEO Act)</i>	Under the provisions of Schedule 1, Clause 17 of the POEO Act as activities requiring an environment protection licence include “electricity works (wind farms)”. Accordingly, an environmental protection license will be required for the Project.
<i>Mining Act 1992</i>	The <i>Mining Act 1992</i> aims to encourage and facilitate the discovery and development of mineral resources in NSW, having regard to the need to encourage ESD. There is one exploration licence within the Project area (Section 2.5.4).

Approval	Requirement
Commonwealth Approvals	
<i>Native Title Act 1993 (NT Act)</i>	<p>Under Section 13 of the NT Act, an individual can apply to the Federal Court for a determination of native title. Native title claims are extinguished on all freehold land. The Project area does not comprise any Crown land (only Crown roads).</p> <p>A review of the potential for native title will be undertaken for the Project. The Native Title Vision online mapping tool currently indicates there is no Native Title claim over the Project area (NNTT, 2025).</p>
<i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i>	<p>The preliminary biodiversity assessment confirmed the potential presence of matters of national environmental significance (MNES) within the Project area. As such, a Referral under the EPBC Act is required.</p> <p>The Applicant will refer the Project to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW). It is assumed that the Project will be considered a 'controlled action' because it will or is likely to have a significant impact on one or more MNES.</p>
<i>Civil Aviation Regulation 1988</i>	<p>Reporting of tall structures is required under the <i>Civil Aviation Regulations 1988</i>.</p> <p>A detailed assessment in accordance with the regulations and consultation with the relevant agencies will be undertaken as part of the preparation of the EIS. Engagement with relevant agencies including the Civil Aviation Safety Authority and Air Services Australia will be undertaken.</p>
<i>Heavy Vehicle National Law</i>	<p>Approvals will be required for the transport of wind turbines and associated infrastructure by OSOM vehicles. The requirements for such OSOM transport will be assessed via a route analysis study as part of the EIS.</p>
Other Approvals	
<i>Water Management Act 2000</i>	<p>The Project may require water access licences under the <i>Water Management Act 2000</i>. The Project is within 'Water Sharing Plan for the Macquarie Bogan Unregulated Rivers Water Sources 2012'. The EIS will assess and identify any requirement for water access licences for the Project.</p>
<i>Conveyancing Act 1919</i>	<p>The Project will require a lease from the owners of the affected land. Lease of a wind farm site is treated as a lease of premises regardless of whether the lease will be for more or less than 25 years.</p> <p>Subdivision consent is not required under Section 23G of the <i>Conveyancing Act 1919</i>.</p>
<i>Biodiversity Conservation Act 2016 (BC Act)</i>	<p>A Biodiversity Development Assessment Report (BDAR) will be prepared to inform the EIS. The BDAR will provide a discussion of the management and protection of listed threatened flora and fauna species and TECs and will assess biodiversity offsets consistent with the Biodiversity Offset Scheme.</p> <p>As a SSD, entry into the Biodiversity Offset Scheme is automatically triggered.</p>
<i>Local Land Services Act 2013 (LLS Act)</i>	<p>The LLS Act regulates the management of vegetation on rural land. Amendments to the LLS Act have resulted in a change to the criteria for native vegetation clearing, including:</p> <ul style="list-style-type: none"> • Category 1 – 'Exempt land' which will not require a clearing approval;

Approval	Requirement
	<ul style="list-style-type: none"> Category 2 – ‘Regulated Land’ on which clearing of native vegetation may be carried out with or without approval in accordance with an ‘allowable activity’ or ‘code’ under the LLS Act, and ‘Excluded Land’ – Land not categorised in the Regulatory Maps and to which the LLS Act does not apply. <p>A land category assessment (LCA) will be prepared. The LCA will be submitted to the Conservation Programs, Heritage and Regulation (CPHR) division of NSW DCCEE. Areas that are confirmed as Category 1 land will be excluded from assessment (and subsequently offset in NSW) under the Biodiversity Assessment Method (BAM).</p>
<p>Approvals not required under SSD - Section 4.41 of the EP&A Act states which approvals are not required for an approved SSD.</p>	
<p><i>Fisheries Management Act 1994 (FM Act)</i></p>	<p>The FM Act provides for the conservation, protection and management of fisheries, aquatic systems, and habitats in NSW. Like the BC Act, the FM Act lists threatened species, populations and ecological communities of fish and marine vegetation.</p> <p>While permits under sections 201, 205 or 219 will not be required, the EIS will demonstrate the avoidance or mitigation of impacts.</p>
<p><i>Heritage Act 1977 (Heritage Act)</i></p>	<p>The Heritage Act is administered by Heritage NSW and aims to protect the natural and cultural heritage of NSW. It provides blanket protection for surface and sub-surface relics and for heritage items of state significance listed on the State Heritage Register. The Heritage Act defers to local planning instruments under the EP&A Act for the protection of items of local significance.</p> <p>The Project will not require a Part 4 approval to carry out an act, matter or thing referred to in Section 57(1), or an excavation permit under Section 139.</p> <p>The EIS will consider historic heritage values.</p>
<p><i>National Parks and Wildlife Act 1974 (NP&W Act)</i></p>	<p>The objective of the NP&W Act is to consolidate and amend the law relating to the establishment, preservation and management of national parks, historic Project areas, certain other area, and the protection of certain fauna, native plants and Aboriginal objects.</p> <p>The EIS will assess Aboriginal cultural heritage values of the Project area.</p> <p>Under the provisions of Section 4.41 (1)(d) of the EP&A Act, a Section 90 Aboriginal heritage impact permit is not required for the Project.</p>
<p><i>Rural Fires Act 1997 (RF Act)</i></p>	<p>The RF Act aims to prevent, mitigate, and suppress bush and other fires in local government areas of the NSW. Section 63(2) of the RF Act requires the owners of land to prevent the ignition and spread of bushfires on their land.</p> <p>The Project will not require a bush fire safety authority under Section 100B, as the development does not involve subdivision for residential or rural residential development.</p>
<p><i>Water Management Act 2000 (WM Act)</i></p>	<p>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 WM Act is not required for the Project.</p>

TABLE 4-2 MANDATORY CONSIDERATIONS - PLANNING

Statutory Reference	Mandatory Consideration
Considerations under the EP&A Act and Regulation	
<p>Section 1.3 – Objects of the Act</p>	<p>Pursuant to section 1.3 of the EP&A Act, the Objects of the Act are:</p> <ul style="list-style-type: none"> (a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State’s natural and other resources; (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment; (c) to promote the orderly and economic use and development of land; (d) to promote the delivery and maintenance of affordable housing; (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats; (f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage); (g) to promote good design and amenity of the built environment; (h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants; (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State; and (j) to provide increased opportunity for community participation in environmental planning and assessment. <p>The EIS will consider and confirm the Project’s concurrence with the Objects of the Act.</p>
<p>Section 4.15 – Evaluation</p>	<p>Pursuant to section 4.15 of the EP&A Act, the consent authority is required to take the following matters into consideration in determining a development application:</p> <ul style="list-style-type: none"> • Relevant environmental planning instruments (EPI) including: <ul style="list-style-type: none"> ◦ <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>; ◦ Transport and Infrastructure SEPP; and ◦ Tamworth LEP. • The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality; • The suitability of the site for the development; • Any submissions made in accordance with this Act or the regulations; and • The public interest. <p>The EIS will consider and confirm the Project’s concurrence with these considerations.</p>
Considerations under relevant EPIs	
<p><i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> (Hazards SEPP)</p>	<p>Hazards SEPP assesses the potential hazards associated with the proposed development by providing definitions and guidelines for hazardous industry, offensive industry, hazardous storage establishments, and offensive storage establishments.</p> <p>In accordance with Clause 3.7 of the Hazards SEPP, consideration will be given to current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development, including:</p>

Statutory Reference	Mandatory Consideration
	<ul style="list-style-type: none"> • Hazardous Industry Advisory Paper No 4 – ‘Risk Criteria for Land Use Safety Planning’ (DoP, 2011); and • Hazardous Industry Planning Advisory Paper No 6 – ‘Hazard Analysis’ and ‘Multi-level Risk Assessment’ (DoP, 2011). <p>Under Section 4.6 of the Hazards SEPP, a consent authority is required to consider whether a development is affected by soil or other contaminants before granting consent.</p> <p>Each of a hazards and contamination assessment will be prepared as part of the EIS.</p>
Narromine Local Environmental Plan 2011	<p>The EIS will address relevant components of the Narromine LEP, including:</p> <ul style="list-style-type: none"> • Section 1.2 – Aims of Plan; and • Land Use Table –Zone RU1 – Primary Production; and • Section 6.7 Wetlands.
Dubbo Local Environmental Plan 2022	<p>The EIS will address relevant components of the Dubbo Regional LEP, including:</p> <ul style="list-style-type: none"> • Section 1.2 – Aims of Plan; and • Land Use Table – Zone RU1 - Primary Production.

5. STAKEHOLDER ENGAGEMENT

The Applicant is committed to building long-term, constructive relationships with stakeholders and the community throughout the Project lifecycle, beginning with early engagement.

Stakeholder engagement is an integral part of any major development, providing an opportunity for projects to benefit from local insights, better anticipate unforeseen issues and respond early to issues that are raised. Implementing genuine two-way engagement builds lasting partnerships, which is key to forging a social licence to operate for the 30-plus year project lifespan.

This chapter summarises engagement and consultation undertaken with identified stakeholders to date and outlines the Project's key future engagement activities.

5.1 ENGAGEMENT APPROACH AND PRINCIPLES

The Applicant prepared a 'Community and Stakeholder Engagement Plan' (CSEP) for the Project in September 2024. The Plan is updated at the conclusion of each round of engagement, to ensure it fulfills its purpose to guide meaningful engagement. The latest revision was in September 2025.

The engagement approach detailed in the CSEP outlines a process to enable consistent, targeted, and meaningful engagement, which focuses on the following guiding principles:

- **Engage early** to establish and build relationships with key stakeholders, including the local council and occupiers of neighbouring land, to identify any risks and concerns;
- **Genuine engagement** by sharing information about the Project in plain language. The information includes impacts and benefits, providing opportunities for consultation relevant to the level of impact and interest in the Project, and collaboration with potentially affected landholders and community members; and
- **Local focus** to proactively understand the hopes, concerns and interests of the local community through two-way communication channels tailored to the community's needs.

Following research into the engagement outcomes of other projects in the wider area, face-to-face engagement was adopted as the primary engagement approach. However, to maximise reach and accessibility, digital engagement tools are also used. By utilising both methods of engagement, the Applicant was able to establish constructive relationships with a variety of stakeholders.

5.2 ALIGNMENT WITH NSW GOVERNMENT ENGAGEMENT GUIDELINES

The CSEP has been prepared in line with relevant NSW Government engagement guidelines:

- 'State Significant Development Guidelines';
- 'Undertaking Engagement Guidelines for State Significant Projects';
- 'Social Impact Assessment Guideline for State Significant Projects'; and
- 'Community Participation Plan'.

Industry best practice guidelines have also informed the engagement approach:

- 'International Association of Public Participation (IAP2) Quality Assurance Standard', recognised as the engagement industry best practice guideline;

- 'Clean Energy Council (CEC) Community Engagement Guidelines for the Australian Wind Industry'; and
- 'First Nations Clean Energy Network – Best Practice Principles for Clean Energy Projects'.

5.3 STAKEHOLDER IDENTIFICATION

The Applicant has identified relevant stakeholders who are affected by or have an interest in or influence on the Project. **Table 5-1** provides an initial list of stakeholder groups who have been or will be engaged with throughout the project lifecycle. This list will be updated in response to stakeholder feedback as the Project progresses.

TABLE 5-1 IDENTIFIED STAKEHOLDERS

Stakeholder group	Identified stakeholders
Host landholders	<ul style="list-style-type: none"> • Residents hosting wind turbines on their land.
Adjacent neighbours	<ul style="list-style-type: none"> • Residents whose property directly borders the Project Area.
Near neighbours	<ul style="list-style-type: none"> • Residents within an 8km radius of the Project site have the potential to be affected by the visual impact of the wind farm, the noise, and heavy vehicle traffic associated with the construction phase.
First Nation stakeholders	<ul style="list-style-type: none"> • Narromine Local Aboriginal Land Council (LALC); • Dubbo Local Aboriginal Land Council (LALC); and • Traditional Owners Wiradjuri peoples.
Federal MP	<ul style="list-style-type: none"> • Mr Jamie Chaffey, Member for Parkes (NP).
State MP	<ul style="list-style-type: none"> • Mr Dugald Saunders, Member for Dubbo (NP).
Local government	<p>Narromine Shire Council (host council)</p> <ul style="list-style-type: none"> • Mayor Cr. Ewen Jones; • Deputy Mayor Cr. Stacey Bohm; • Elected councillors; • General Manager, Jane Redden; • Director Community & Economic Development, Phil Johnson; • Director Finance & Corporate Strategy: Barry Bonthuys; • Director Governance, Marion Truscott; and • Director Infrastructure & Engineering Services, Melanie Slimming. <p>Dubbo Regional Council (neighbour council)</p> <ul style="list-style-type: none"> • Mayor Cr. Joshua (Josh) Black; • Deputy Mayor Cr. Phillip Toynton; • Elected councillors; • Chief Executive Officer, Murray Wood; • Manager Building and Development Services, Darryll Quigley; • Craig Arms, Director Community, Culture & Places; • Director Development & Environment, Stephen Wallace; and • Director Infrastructure, Luke Ryan.
Burroway, Narromine, and Dubbo communities	<ul style="list-style-type: none"> • Community members living within the Burroway, Narromine and Dubbo areas adjacent to the Project.
Local community groups	<ul style="list-style-type: none"> • Sports groups, event committees • Narromine Aerodrome • Narromine Aviation Museum • Soar Gliding Club
Utilities	<ul style="list-style-type: none"> • Essential Energy • EnergyCo

Stakeholder group	Identified stakeholders
Schools	<ul style="list-style-type: none"> Narromine Christian School; Narromine High School; Narromine Public School; St Augustine’s Parish School; St John’s Parish Primary School; and Trangie Central School.
Business, industry and interest groups	<ul style="list-style-type: none"> Business NSW – Western NSW; Country Women’s Association (CWA) – Narromine Branch; NSW Farmers – Narromine/Trangie Branch; and Zest Café, Narromine.
Other projects within proximity to proposed Project location	<ul style="list-style-type: none"> Other construction, SSD or renewable energy developments proposed or underway in the region, such as Inland Rail by Australian Rail Track Corporation (ARTC) and relevant future projects identified above in Table 2-2; and Sunrise Energy Exploration Pty Ltd.
Industry bodies/ government department	<ul style="list-style-type: none"> Airservices Australia; Australian Energy Infrastructure Commissioner; Australian Energy Market Operator (AEMO); Civil Aviation Safety Authority (CASA); Commonwealth Department of Defence; Crown Lands; Emergency services, including NSW Rural Fire Service; EnergyCo NSW; Environment Protection Authority; Fire & Rescue NSW; Heritage NSW; NSW Aboriginal Land Council; NSW DCCEEW; NSW Department of Planning, Housing and Infrastructure (DPHI); NSW Department of Primary Industries and Regional Development (DPIRD); NSW Environmental Protection Authority; NSW Local Land Services; NSW National Parks and Wildlife Service; NSW Telco Authority; Regional Development Australia – Orana; Regional Development NSW – Western; and Transport for NSW (TfNSW).

5.4 ENGAGEMENT ACTIVITIES

The Applicant commenced landowner consultation in July 2022. Consultation undertaken during the scoping phase is summarised in **Table 5-2** and has been conducted in accordance with ‘Undertaking Engagement Guidelines for State Significant Projects’ (DPHI, 2024).

TABLE 5-2 SUMMARY OF ENGAGEMENT ACTIVITIES DURING SCOPING PHASE

Activity	Description	Reach
Stakeholder feedback database	<ul style="list-style-type: none"> The Applicant maintains a stakeholder and feedback database. This system captures stakeholder information and specific engagement details, ensuring that stakeholder feedback, concerns, and enquiries are recorded and addressed. The database also serves to analyse feedback into key themes. This allows the Applicant to amend messaging or engagement approach if required 	<ul style="list-style-type: none"> As at time of submission, 308 entries in the database

Activity	Description	Reach
Communications channels and tools	<ul style="list-style-type: none"> Established a toll-free community enquiry number (1800 577 455) to receive and respond to enquiries from the community and interested stakeholders; Established a dedicated email address (burroway@acepower.com.au) to receive and respond to enquiries from the community and interested stakeholders; Established a project website (www.acepower.com.au/burroway) to provide information on the Project background and need, a map of the proposed Project area, Project milestones and timelines, community consultation opportunities, and links to further information and how to provide feedback. The website also has a sign-up function for e-newsletters; Developed an A4 two-page Project fact sheet providing information on the background, the need and community benefit, timeline, and contact details. Printed copies of the fact sheet were available at the community drop-in sessions; and Developed a doorknock calling card to leave at properties where people are not home when team members visit local homes. 	<ul style="list-style-type: none"> Ten emails have been received and responded to Four hits on the website Fact sheet was issued to 60 community members
Community sessions	<ul style="list-style-type: none"> Hosted two community information sessions in Narromine on 6 and 7 March 2025 for the community to learn more about the Project, ask questions and provide feedback. Sessions were held on different days and at different times to capture as many residents as possible; Sessions were promoted in the Narromine Star newspaper (x3 advertisements) and through posters in local cafes and Narromine Council's foyer; Set up outside Zest Café, identified and recommended as a high foot traffic location; Partnered with Zest Café to provide free coffee to stall visitors and facilitate early local supply chain benefits; The set-up included a teardrop banner to attract attention; Provided a printed fact sheet and maps to assist conversations; and Provided a QR code link to the Project survey. 	<ul style="list-style-type: none"> Approximately 35 attendees
Community survey	<ul style="list-style-type: none"> Established an online survey for stakeholders to provide feedback on all aspects of the Project. The survey helped to identify sentiment towards the Project and provided feedback to the Project team to inform them of the approach to ongoing engagement and Project development; and The survey was available between 21 February and 14 March 2025 and was promoted at each community session. 	<ul style="list-style-type: none"> 15 surveys completed
Doorknock based on Visual Impact Assessment Results	<ul style="list-style-type: none"> Doorknocked 36 properties identified by the Preliminary Visual Impact Assessment as very high, high or moderate visual impact within an 8km radius of the Project site in March 2025. Left calling cards at 19 properties where no-one was home. 	<ul style="list-style-type: none"> 17 interactions

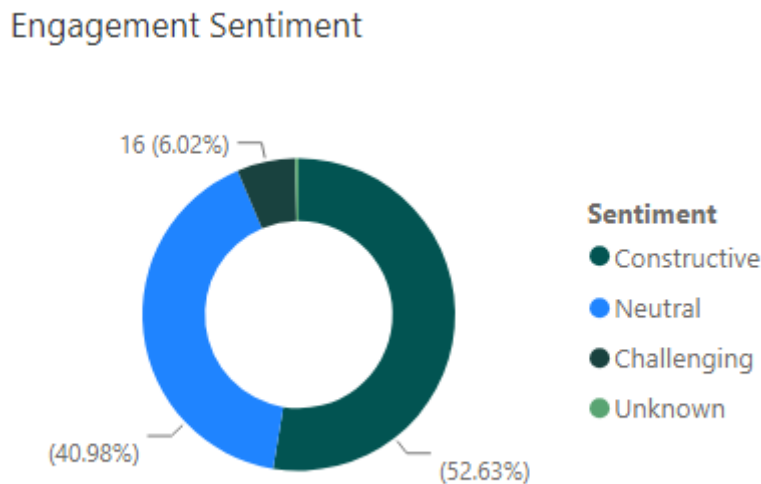
Activity	Description	Reach
	<ul style="list-style-type: none"> Conversations outlined the VIA process that will take place as part of the EIS and subsequent engagement that would follow this workstream. 	
First Nations engagement	<ul style="list-style-type: none"> One face-to-face meeting with Narromine LALC to introduce the Project and team and explain the cultural heritage process; and Two meetings with Aboriginal Partnerships Managers at Department of Primary Industries and Regional Development. 	<ul style="list-style-type: none"> Three meetings
Host landholder and neighbour engagement	<ul style="list-style-type: none"> 1:1 meeting/s with all five host landholders to introduce the Project team, update them on Project milestones and timeline expectations, confirm preferred communications channels, and address any initial issues or concerns; Eight Project introduction letters sent to adjoining (share a boundary with the Project) and nearby (3-8 km from the boundary) landowners; and Fourteen (14) in-person/email/phone interactions with four adjoining landowners to introduce the Project team and Project (including scope, milestones, and expected timeframes). Confirming preferred communication channels and address any initial issues or concerns. 	<ul style="list-style-type: none"> Approximately 27 interactions across face-to-face, written correspondence and phone calls
Federal, State and Local Government	<ul style="list-style-type: none"> Sent letters to the local State and Federal MPs introducing the Applicant and the Project and offering a briefing; Briefings held with Narromine Shire in October and November 2024 to introduce the Project (scope, milestones, and expected timeframes) and the Project team; Briefing was offered to Dubbo Regional Council, but it requested to meet after SEARs is issued; Meeting held with Dubbo MP Dugald Saunders; and Confirmed preferred communications channels, addressed any initial issues or concerns, and gained an understanding of local community nuances and sentiments. 	<ul style="list-style-type: none"> Update prior to issuing communications with the wider community, and 'report back' on feedback received
Stakeholder Interest Group	<ul style="list-style-type: none"> Following the community session, the Applicant engaged with the relevant stakeholders to discuss impacts to aviation and airspace that may result from the Project; and The Applicant presented the Project and the requirements for the EIS aviation assessment at a quarterly meeting undertaken in October 2025 to understand stakeholder's concerns, and discuss how impacts will be avoided or mitigated. 	<ul style="list-style-type: none"> Meeting attended by about three aviation interest groups, the Narromine Council Mayor and Economic Development Manager.
Utilities and nearby development engagement	<ul style="list-style-type: none"> Provide an overview of the Project and discuss infrastructure connection opportunities; and Phone calls and emails with Inland Rail to initiate discussions around the cumulative impact of both developments. 	<ul style="list-style-type: none"> Fortnightly and monthly meetings plus regular email and phone interactions with Essential Energy

Activity	Description	Reach
'What we heard' Newsletter	<ul style="list-style-type: none"> Prior to submission of the scoping report, a newsletter was posted and emailed to stakeholders on the database and to neighbours within 8km This newsletter 'reported back' to the community what was heard during the scoping phase of the project, demonstrating the Applicant listened, and outlined how feedback will be considered as part of future phases of the project. 	<ul style="list-style-type: none"> 350 (mailed+emailed copies)

5.5 ENGAGEMENT FEEDBACK

The feedback from the community and stakeholders has been overwhelmingly constructive or neutral (**Figure 5-1**). It is important to note that all feedback shown in **Figure 5-1** is from stakeholders **not** involved in the Project through a hosting agreement.

FIGURE 5-1 OVERALL SENTIMENT TOWARDS THE PROJECT



Regarding the sentiment:

- Constructive:** captures supportive, solution-oriented engagement—including instances where curiosity or disagreement is expressed productively;
- Challenging:** Identifies friction, resistance, or obstacles in addition to negative or oppositional comments. This distinction enables a clearer understanding of how participants are influencing the direction of a discussion, reduces the risk of misclassifying healthy debate as antagonism, and supports more precise interpretations of collaboration, alignment, and tension;
- Neutral:** Expressed ambivalence, or no definable positive or negative sentiment; and
- Unknown:** acknowledges instances where sentiment cannot be confidently inferred. Ambiguity may arise from limited context, mixed or evolving tone, sarcasm, or minimal responses.

Feedback has varied from requesting general Project information to detailed discussions around specific elements, such as community benefits and jobs. **Figure 5-2** shows the

frequency of the topics discussed, and **Table 5-3** summarises feedback themes and responses to date.

FIGURE 5-2 TOP FIVE MOST FREQUENTLY DISCUSSED TOPICS

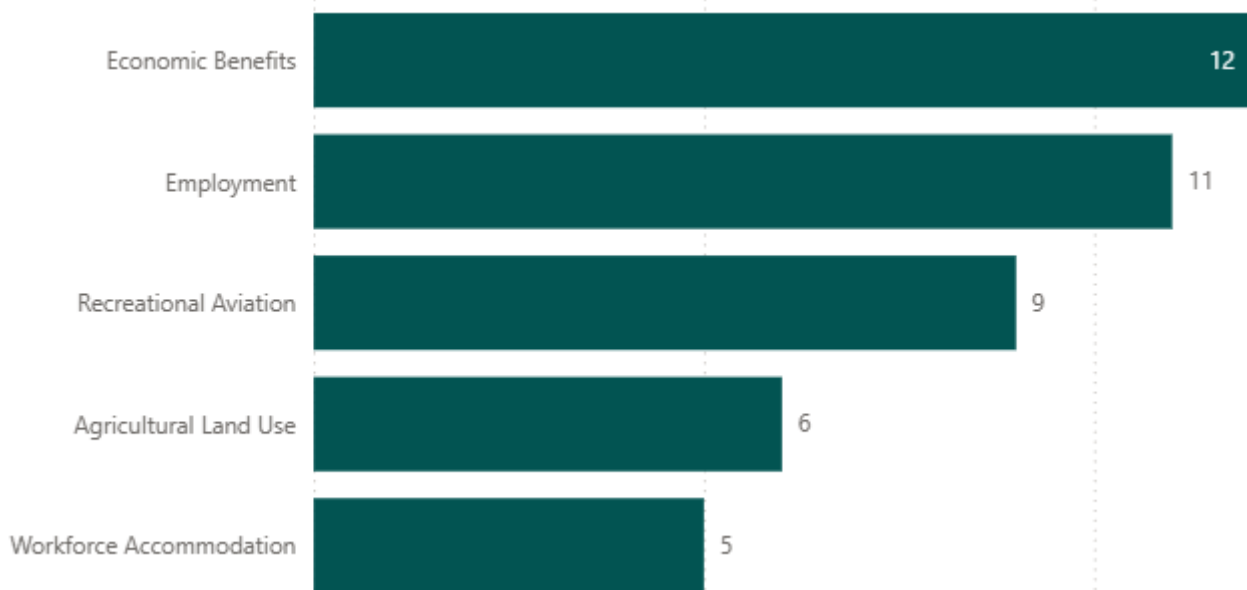


TABLE 5-3 FEEDBACK THEMES

Theme	Focus of feedback	Response to feedback
Community benefits and employment	<ul style="list-style-type: none"> Support for the economic and job benefits the Project will bring to the region. <p>Representative quote: "I can see job creation and further opportunities within the community"</p>	<ul style="list-style-type: none"> Committed to ongoing efforts to activate short and long-term local benefits.
Neighbour engagement	<ul style="list-style-type: none"> Interest in being part of the Project; Potential for neighbour agreements 	<ul style="list-style-type: none"> Discussed potential for involvement where possible; Commenced conversations about neighbour agreements; Preliminary Visual Impact Assessment prepared as part of Scoping Report; Commitment to prepare detailed visual impact assessments for neighbouring dwellings; and Established regular check-in points to continually engage with neighbours and keep them up to date.
Aviation	<ul style="list-style-type: none"> Concern that the Project would impact a local flying school and aviation activities Narromine is renowned for. <p>Representative quote: "I appreciate your communication and engagement with all aviation stakeholders. The impact on our aviation activities needs to be considered, so I would certainly be interested in further discussions."</p>	<ul style="list-style-type: none"> An aviation impact assessment will be prepared as part of the EIS in accordance with the relevant guidelines; and Increasing engagement frequency with local flying groups, including attending some quarterly meetings.

Theme	Focus of feedback	Response to feedback
General curiosity	<ul style="list-style-type: none"> Keen to learn more about renewable energy projects Eager to understand how the broader community would benefit <p>Representative quote: "I don't mind the project is going ahead, I'm not for or against it."</p>	<ul style="list-style-type: none"> Include educative-styled information about renewable energy in community updates.
Community engagement	<ul style="list-style-type: none"> Opportunity to have a say in the Project development and be kept informed of progress. Complementary of the engagement process <p>Representative quote: "Thank you for being so collaborative."</p>	<ul style="list-style-type: none"> Regular website updates, drop-in sessions, community survey, and consideration of a newsletter as the Project progresses.
Workforce accommodation and local housing	<ul style="list-style-type: none"> Lack of housing and concern about additional pressure. <p>Representative quote: "There is already a lack of housing in Narromine."</p>	<ul style="list-style-type: none"> Commitment to consider cumulative impacts and work with Council to determine the best solutions.
Opposition to renewable energy	<ul style="list-style-type: none"> Perceived clash with agricultural land. <p>Representative quote: "These farms destroy farms and shouldn't be put on prime agricultural land."</p>	<ul style="list-style-type: none"> Provided examples of successful co-existence on other projects; Explained project is committed to continuing farming practices on site; and Provided additional information and web links for further information.
Sustainability concerns	<ul style="list-style-type: none"> Concern about the sustainability of the production and decommissioning of turbines <p>Representative quote: "They are made on fossil fuels and are you planning to abandon them once they grind to a halt?"</p>	<ul style="list-style-type: none"> Explained sustainability practices in the production of turbines, and commitment to a decommissioning fund.

5.6 FUTURE ENGAGEMENT

Community and stakeholder engagement will continue throughout the Project.

The next engagement stage will build on relationships established through early engagement activities, be informed by the feedback and topics raised, and complement formal consultation required under planning regulations. Key matters anticipated to be raised are workforce accommodation, visual impact, environmental impact, job creation and community benefits.

Table 5-4 outlines the community and stakeholder engagement activities planned during EIS preparations.

TABLE 5-4 FUTURE ENGAGEMENT ACTIVITIES

Activity	Stakeholder group/s
One-on-one meetings	<ul style="list-style-type: none"> Government (agencies, Federal and State MPs, local Councils); First Nations / Traditional owners; Host Landowners; Adjacent Neighbours; and Near Neighbours

Activity	Stakeholder group/s
Neighbour engagement based on results of detailed Visual Impact Assessment	<ul style="list-style-type: none"> • Adjacent Neighbours • Near Neighbours
Stakeholder briefings	<ul style="list-style-type: none"> • Government (Federal, State, local); and • Business, industry and interest groups, such as aviation.
Community sessions at high foot traffic locations promoted through advertisements and relationships with local media outlets	<ul style="list-style-type: none"> • Community (who neither own land surrounding the Project area or host Project infrastructure); and • Business, industry and interest groups.
Communications materials (newsletters, letters, FAQ and fact sheets) updated regularly throughout the project lifecycle	<ul style="list-style-type: none"> • All.
Responding to the toll-free community information number	<ul style="list-style-type: none"> • All.
Continuing to monitor and respond to the Project email address	<ul style="list-style-type: none"> • All.
Regular updates to the Burroway Wind Farm website	<ul style="list-style-type: none"> • All.
Online community survey	<ul style="list-style-type: none"> • All, particularly surrounding community.

All stakeholder engagement feedback will continue to be collected and recorded in a structured and formal manner using the Burroway Wind Farm community engagement management platform.

5.7 MONITORING AND EVALUATION

Engagement and communication processes will be monitored and evaluated throughout the Project life cycle to ensure the techniques used are effective, new stakeholders are identified, and any new issues or concerns are addressed.

The effectiveness of stakeholder engagement strategy and tactics will be monitored by the following:

- Reviewing enquiries and complaints data to identify unresolved or recurring issues and emerging trends;
- Informal discussions with stakeholders and the community; and
- Media monitoring, including social media.

The 'Community and Stakeholder Engagement Strategy' is an organic document that will be adapted to ensure the techniques being used are effective, identify new stakeholders, and respond to any new issues or topics.

6. PROPOSED ASSESSMENT OF IMPACTS

6.1 CATEGORISATION OF ASSESSMENT MATTERS

A preliminary environmental assessment was undertaken to identify the potential environmental and social impacts associated with the Project. The following areas were considered in the identification of matters requiring further assessment:

- The scale and nature of the likely impacts of the Project and the sensitivity of the receiving environment;
- Whether the Project is likely to generate cumulative impacts with other relevant future projects in the area;
- The ability to avoid, minimise and/or offset the impacts of the Project, to the extent known at the scoping stage; and
- The complexity of the technical assessment of the Project.

Each matter and its proposed level of assessment is identified in **Table 6-1** and discussed further below. Detailed assessments will include environmental aspects that present a potential higher level of sensitivity to the development, and other aspects which require detailed assessment, but are not considered to pose a higher level of sensitivity. A Scoping Summary Table is provided in **Appendix A**.

The EIS will be prepared in accordance with the SEARs and in consideration of engagement with stakeholders, industry best practice guidelines, and the experiences from other wind farm projects.

TABLE 6-1 PROPOSED LEVEL OF ASSESSMENT

Level of Assessment	Aspect
Detailed (potential higher sensitivity)	<ul style="list-style-type: none"> • Aboriginal Heritage; • Biodiversity; • Noise and Vibration; and • Visual and Lighting.
Detailed	<ul style="list-style-type: none"> • Aviation; • Historic Heritage; • Social; • Traffic and Transportation; • Telecommunications; • Water Resources; and • Land Resources.
Standard	<ul style="list-style-type: none"> • Economics; • Hazards – Preliminary Hazard Analysis; • Hazards – Bushfire; • Hazards – Blade Throw; • Hazards – Electromagnetic Field; • Air Quality and Greenhouse Gas; and • Waste Management.

6.2 BIODIVERSITY

6.2.1 BACKGROUND

The identification of biodiversity constraints at the preliminary stages of a Project informs meaningful impact avoidance and minimisation outcomes. These considerations form part of the mitigation hierarchy (i.e., avoid, minimise and mitigate), which precedes the determination of residual impacts where offset obligations are incurred.

Application of the mitigation hierarchy is central to the BAM 2020, which is the mandatory framework for assessing impacts on biodiversity values. For this reason, the Project has and will continue to avoid impacts on high biodiversity values wherever possible through the design evolution. These decisions will be based on constraints identified through field and desktop assessment. During development of the EIS, a BDAR would be prepared by a BAM Accredited Assessor. The BDAR will document and demonstrate the avoid, minimise, mitigate outcomes and, if required, calculate the residual impacts that carry an offset liability.

The information provided in the following sections generally outlines the biodiversity values in the Project area and includes reference to information provided as part of a Preliminary Biodiversity Constraints Memo (EMM, 2024).

6.2.2 EXISTING ENVIRONMENT

6.2.2.1 BIOREGIONAL SETTING

The Project area is located within the:

- Piliga IBRA subregion of the Brigalow Belt South IBRA bioregion; and
- Macquarie Alluvial Plains Mitchell Landscape and Goonoo Slopes Mitchell Landscape (MCP and GOS Mitchell Landscapes respectively).

Most of the Project area is within the GOS Mitchell Landscape and as such this landscape has been considered when interrogating the BAM calculator (BAM-C). The GOS Mitchell Landscape is described by NPWS (2002) as:

“Extensive undulating to stepped low hills with long slopes on sub-horizontal Triassic/Jurassic quartz sandstone, conglomerates, siltstone, shale and some coal. General elevation 300 to 500 m with overall westerly slope, poorly defined drainage network, local relief to 30 m. Stony yellow earths with sandstone outcrop on ridgelines to yellow harsh texture-contrast soils in shallow valleys. Broad-leaved ironbark (*Eucalyptus fibrosa ssp. fibrosa*) and black cypress pine (*Callitris endlicheri*) on ridges, broad-leaved ironbark, narrow-leaved ironbark (*Eucalyptus crebra*), red ironbark (*Eucalyptus sideroxylon*), fringe myrtle (*Calytrix tetragona*), spur-wing wattle (*Acacia triptera*), dainty phebalium (*Phebalium obcordatum*), daphne heath (*Brachyloma daphnoides*) on slopes with patches of green mallee (*Eucalyptus viridis*), Dwyer’s mallee gum (*Eucalyptus dwyeri*) and broombush (*Melaleuca uncinata*). Grey box (*Eucalyptus microcarpa*), red ironbark (*Eucalyptus sideroxylon*), red stringybark (*Eucalyptus macrorhyncha*), fuzzy box (*Eucalyptus conica*) and Blakely’s red gum (*Eucalyptus blakelyi*) with knob sedge (*Carex inversa*), and tall sedge (*Carex appressa*) along streams.” (NPWS 2002).

6.2.2.2 LAND CATEGORISATION

Rural lands are regulated lands under the NSW LLS Act, which includes the classification of lands with reference to native vegetation cover. Several land categories exist for this purpose, each influencing the type and nature of assessment involved in a native vegetation clearing proposal. Land categories defined under the LLS Act include:

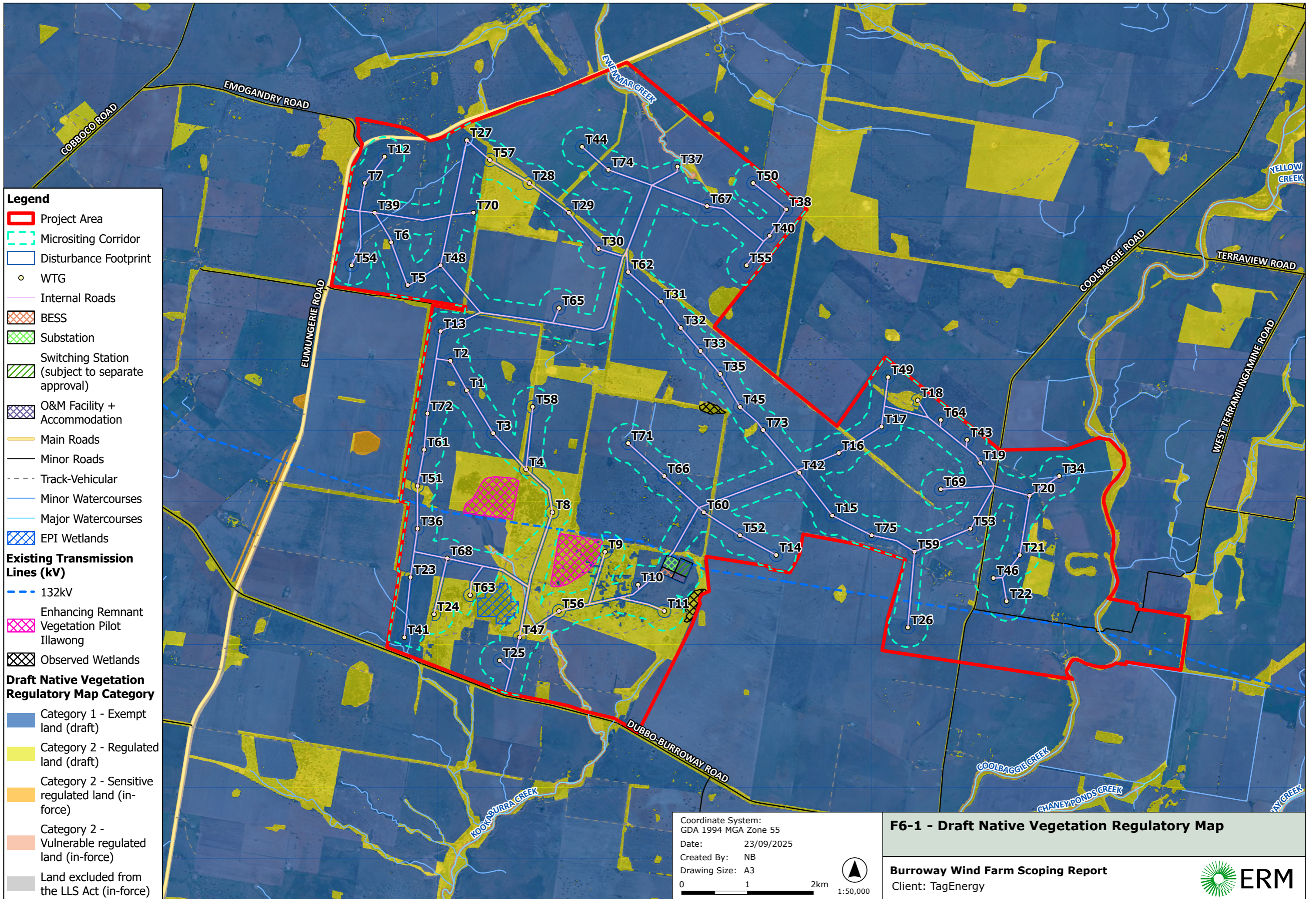
- Category 1 – Exempt Land (draft);
- Category 2 – Regulated Land (draft);
- Category 2 – Vulnerable Regulated Land (in-force); and
- Category 2 – Sensitive Regulated Land (in-force).

The BAM does not assess biodiversity values for loss of native vegetation and habitat on Category 1 Exempt Land (refer to section 1.5 of the BAM), except for the assessment of 'prescribed impacts' on biodiversity values (i.e., clause 6.1 of the *Biodiversity Conservation Regulation 2017*). Prescribed impacts are those that are additional to the clearing of native vegetation and associated habitat. These include management of the habitat of threatened species or ecological communities associated with:

- Karst, caves, crevices, cliffs, rock outcrops and other geological features of significance;
- Human made structures;
- Non-native vegetation;
- Management of areas connecting threatened species habitat, such as movement corridors;
- Management of water quality, water bodies and hydrological processes that sustain threatened species and TECs (including from subsidence or subsidence from underground mining);
- Wind turbine strikes on protected animals; and
- Vehicle strikes on threatened species or on animals that are part of a TEC.

Land categorisation applies to the Project as it is located on rural zoned land ('RU1 - Primary Production'). There is currently a draft Native Regulatory Map (NVR Map) published for the Project area that identifies predominantly Category 1 – Exempt Land and Category 2 – Regulated Land occurring within the Project area. There are also small sections mapped as Category 2 – Vulnerable Regulated Land. This is shown in **Figure 6-1**.

In preparing the BDAR, the draft NVR map (NSW DCCEEW, 2024) would be reviewed using guidance provided in 'Determining Native Vegetation Land Categorisation for Application in the Biodiversity Offsets Scheme' (DPIE 2023). Any proposed variations to the draft NVR map would be evidence-based and determined through consultation with the CPHR group within NSW DCCEEW. A Land Categorisation Assessment (LCA) approved by CPHR is required to define the extent of these land categories, notably the extent of Category 1 – Exempt Land.



Legend

- Project Area
- Micrositing Corridor
- Disturbance Footprint
- WTG
- Internal Roads
- BESS
- Substation
- Switching Station (subject to separate approval)
- O&M Facility + Accommodation
- Main Roads
- Minor Roads
- Track-Vehicular
- Minor Watercourses
- Major Watercourses
- EPI Wetlands

Existing Transmission Lines (kV)

- 132kV

Enhancing Remnant Vegetation Pilot Illawong

- Observed Wetlands

Draft Native Vegetation Regulatory Map Category

- Category 1 - Exempt land (draft)
- Category 2 - Regulated land (draft)
- Category 2 - Sensitive regulated land (in-force)
- Category 2 - Vulnerable regulated land (in-force)
- Land excluded from the LLS Act (in-force)

Coordinate System:
GDA 1994 MGA Zone 55
Date: 23/09/2025
Created By: NB
Drawing Size: A3

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F6-1 - Draft Native Vegetation Regulatory Map

Burroway Wind Farm Scoping Report
Client: TagEnergy



6.2.2.3 NATIVE VEGETATION

Much of the Project area has been subject to clearing for agricultural purposes. Native vegetation within the Project area exists as patches of native woodland, scattered trees and woody corridors following fence lines, and has been estimated to cover 10 to 30% of the site.

The extent and type of native vegetation within the Project area is to be determined through field survey and assessment. Preliminary insight obtained from EMM (2024) and desktop searches of State Vegetation Type Map (SVTM) (Version v1.2 – VIS_ID 4469) identified the following plant community types (PCTs) as having the potential to occur within the Project area:

- PCT 27 Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion;
- PCT 36 River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion;
- PCT 45 Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion;
- PCT 55 Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions;
- PCT 56 Poplar Box - Belah woodland on clay-loam soils on alluvial plains of northcentral NSW;
- PCT 70 White Cypress Pine woodland on sandy loams in central NSW wheatbelt;
- PCT 74 Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion;
- PCT 76 Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions;
- PCT 78 River Red Gum riparian tall woodland / open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion;
- PCT 82 Western Grey Box – Poplar Box – White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Penneplain Bioregion;
- PCT 88 Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South Bioregion;
- PCT 201 Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion;
- PCT 227 Silver-leaved Ironbark – White Cypress Pine - Rough barked Apple woodland on alluvial terraces in central north NSW;
- PCT 244 Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt); and
- PCT 248 Mixed box eucalypt woodland on low sandy-loam rises on alluvial plains in central western NSW.

The unverified SVTM mapping (NSW DCCEEW, 2024) of PCTs within the Project area is shown in **Figure 6-2**.

Application of Section 4.1 to 4.4 of the BAM is required to verify native vegetation extent, classification and integrity. This is a formative part of preparing the BDAR and is often done in parallel with a LCA. Once complete, predicted and candidate threatened species will be more accurately determined for further consideration.

6.2.2.4 PREDICTED CANDIDATE SPECIES

The SVTM predicted PCTs of the Project area have been used to generate a preliminary list of candidate species that may be impacted by the Project. The preliminary flora species list is provided in **Table 6-2**. The table outlines the listings under both the BC Act as well as the EPBC Act.

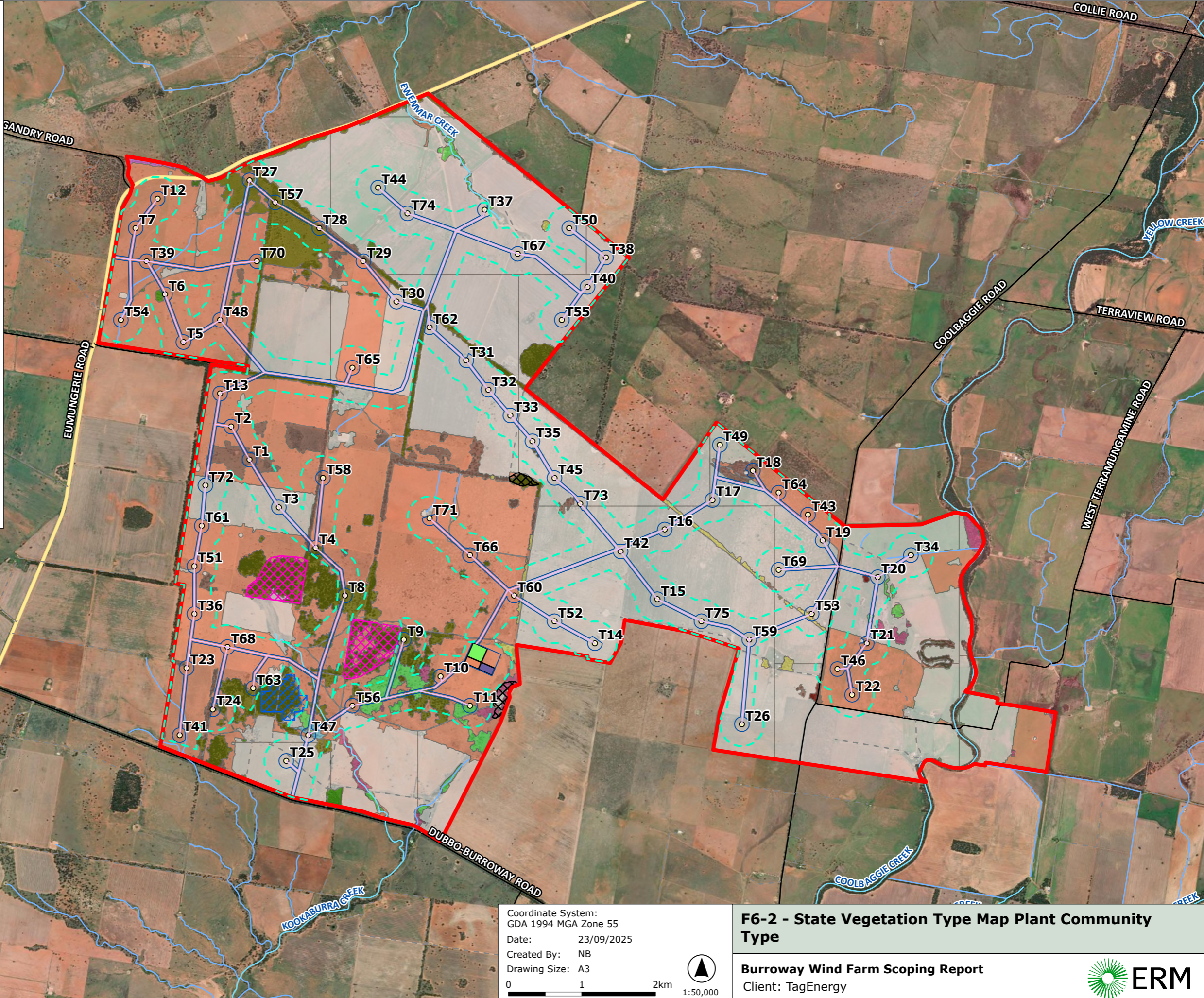
Legend

SVTM Plant Community Types (unverified) (NSW DCCEEW, 2024)

- 0, Not classified
- 27, Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion
- 45, Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion
- 55, Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.
- 56, Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW
- 70, White Cypress Pine woodland on sandy loams in central NSW wheatbelt
- 74, Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion
- 76, Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions
- 82, Western Grey Box - Poplar Box - White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion
- 88, Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South Bioregion
- 227, Silver-leaved Ironbark - White Cypress Pine - Rough-barked Apple woodland on alluvial terraces in central-north NSW
- 244, Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt).

Legend

- Project Area
- Disturbance Footprint
- Micrositing Corridor
- WTG
- Internal Roads
- Observed Wetlands
- Enhancing Remnant
- Vegetation Pilot Illawong
- EPI Wetlands
- Main Roads
- Minor Roads
- Track-Vehicular
- Minor Watercourses
- Major Watercourses
- BESS
- Substation
- O&M Facility + Accommodation



Coordinate System:
GDA 1994 MGA Zone 55
Date: 23/09/2025
Created By: NB
Drawing Size: A3

0 1 2km
1:50,000

F6-2 - State Vegetation Type Map Plant Community Type

Burroway Wind Farm Scoping Report
Client: TagEnergy

TABLE 6-2 PRELIMINARY CANDIDATE SPECIES LIST - FLORA

Scientific Name	Common Name	BC Act ¹	EPBC Act	Survey Period
<i>Dichanthium setosum</i>	Bluegrass	V	V	<input checked="" type="checkbox"/> Jan <input checked="" type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec
<i>Digitaria porrecta</i>	Finger Panic Grass	E	-	<input checked="" type="checkbox"/> Jan <input checked="" type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Pterostylis cobarensis</i>	Greenhood Orchid	V	-	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Polygala linariifolia</i>	Native Milkwort	E	-	<input checked="" type="checkbox"/> Jan <input checked="" type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec
<i>Diuris tricolor</i>	Pine Donkey Orchid	V	-	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Prasophyllum</i> sp. <i>Wybong</i>	<i>Prasophyllum</i> sp. <i>Wybong</i>	-	CE	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Swainsona sericea</i>	Silky Swainson-pea	V	-	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input type="checkbox"/> Dec

Scientific Name	Common Name	BC Act ¹	EPBC Act	Survey Period
<i>Swainsona murrayana</i>	Slender Darling Pea	V	V	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Lepidium aschersonii</i>	Spiny Peppergrass	V	V	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec
<i>Tylophora linearis</i>	<i>Tylophora linearis</i>	V	E	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input checked="" type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec

1: V = Vulnerable, E = Endangered, CE = Critically Endangered, Ma = Marine

With reference to the guidelines for conducting targeted threatened flora surveys, the preliminary candidate species list notionally indicates a need for three targeted flora surveys being undertaken at some point in November- February, and in both September and October. However, the Greenhood Orchid (*Pterostylis cobarensis*) is associated with fewer PCTs than other threatened species and therefore could be identified in tandem with fauna surveys in October.

The preliminary candidate fauna species list is provided in **Table 6-3**. The table outlines the listings under both the BC Act as well as EPBC Act.

TABLE 6-3 PRELIMINARY CANDIDATE SPECIES LIST - FAUNA

Scientific Name	Common Name	BC Act ¹	EPBC Act	Survey Period
<i>Ardeotis australis</i>	Australian Bustard	E	-	All
<i>Ninox connivens</i>	Barking Owl	V	-	All

Scientific Name	Common Name	BC Act ¹	EPBC Act	Survey Period
<i>Hamirostra melanosternon</i>	Black-breasted Buzzard	V	-	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Burhinus grallarius</i>	Bush Stone-curlew	E	-	All
<i>Vespadelus troughtoni</i>	Eastern Cave Bat	V	-	<input checked="" type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V	-	<input checked="" type="checkbox"/> Jan <input checked="" type="checkbox"/> Feb <input checked="" type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec
<i>Phascolarctos cinereus</i>	Koala	E	E	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec
<i>Hieraaetus morphnoides</i>	Little Eagle	V	-	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input checked="" type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Tyto novaehollandiae</i>	Masked Owl	V	-	All
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake	V	-	<input checked="" type="checkbox"/> Jan <input checked="" type="checkbox"/> Feb <input checked="" type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec

Scientific Name	Common Name	BC Act ¹	EPBC Act	Survey Period
<i>Lophochroa leadbeateri</i>	Pink Cockatoo	V	E	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Ninox strenua</i>	Powerful Owl	V	-	All
<i>Crinia sloanei</i>	Sloane's Froglet	E	E	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input checked="" type="checkbox"/> Jul <input checked="" type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo	V	V	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input checked="" type="checkbox"/> Apr <input checked="" type="checkbox"/> May <input checked="" type="checkbox"/> Jun <input checked="" type="checkbox"/> Jul <input checked="" type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Lophoictinia isura</i>	Square-tailed Kite	V	-	<input checked="" type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	-	All
<i>Polytelis swainsonii</i>	Superb Parrot	V	V	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input type="checkbox"/> Dec
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V	Ma	<input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input checked="" type="checkbox"/> Jul <input checked="" type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec

1: V = Vulnerable, E = Endangered, CE = Critically Endangered, Ma = Marine

Several guidelines govern the way targeted threatened fauna surveys are performed. Noting these guidelines, the preliminary Candidate species list notionally indicates a need for at least three surveys with one being in October, one being in November-December, and one being in July-August. Some of the fauna species surveys may be undertaken as part of the targeted flora survey where timing and/or methods allow (e.g., in October the Greenhood Orchid flora transects could be undertaken with the relevant bird surveys).

In addition to the fauna species listed above for surveys, bird utilisation surveys (BUS) would need to be completed to aid the assessment of prescribed impacts (i.e., wind turbine strike) and the Bird and Bat Adaptive Management Plan (BBAMP). Current draft guidance available for BUS will be considered when designing and implementing these surveys.

In addition to the PCT filter, habitat constraints and geographical limitations may also influence the finalisation of the Project candidate species list. **Table 6-4** lists the preliminary candidate species with habitat constraints or geographic limitations that are likely to be excluded.

TABLE 6-4 PRELIMINARY CANDIDATE SPECIES LIKELY TO BE EXCLUDED ON THE BASIS OF HABITAT CONSTRAINTS AND/OR GEOGRAPHIC LIMITATIONS

Scientific Name	Common Name	Habitat Constraint	Geographic Limitation
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	No land within one kilometre of rocky escarpments, gorges, steep slopes, boulder piles, rock outcrops or cliff lines	Not applicable
<i>Commersonia procumbens</i>	Commersonia procumbens	No Piliga sandstone present	Not applicable
<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	No caves, tunnels, mines or culverts known within the Project area	Not applicable
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	No cliffs within two kilometres of rock areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels	Not applicable
<i>Lathamus discolor</i>	Swift Parrot	No important area map	Not applicable
<i>Anthochaera phrygia</i>	Regent Honeyeater	No important area map ¹	Not applicable

Finalisation of the candidate species list and the associated seasonal survey schedule would occur after the production of a verified PCT map for the Project area and consideration of habitat constraints and geographic limitations. The refined candidate species list will define the BDAR scope for detailed survey and assessment requirements.

¹ See Figure 6-1

6.2.2.5 THREATENED ECOLOGICAL COMMUNITIES

The NSW BioNet Vegetation Database identifies that several of the SVTM predicted PCTs may have associated TECs. **Table 6-5** details the PCTs within the Project area and their potential associated TECs. These PCTs are based on the SVTM and investigations undertaken by EMM (2024). Due to the constraints and known characteristics of several TECs listed as associated, the following TECs have been excluded as they are not expected to be found within the Project area, noting this is pending verification during field investigations:

- BC Act:
 - Artesian Springs Ecological Community in the Great Artesian Basin (Critically Endangered);
 - Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions (Endangered);
 - Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Penepain and Mulga Lands Bioregions (Endangered);
 - Native Vegetation on Cracking Clay Soils of the Liverpool Plains (Endangered);
 - Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions (Endangered);
 - Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions (Endangered); and
- EPBC Act:
 - Natural Grasslands of the Murray Valley Plains (Critically Endangered).

EMM (2024) mapped patches of TEC within the Project area extent they investigated (which is not commensurate with the Project area assessed for this Scoping Report). Additional TECs may be identified during field verification due to the preliminary nature of the EMM (2024) assessment. The presence of TECs may also involve the consideration of condition states.

TABLE 6-5 THREATENED ECOLOGICAL COMMUNITIES ASSOCIATED WITH PLANT COMMUNITY TYPES WITHIN THE PROJECT AREA

PCT Name	Formation	Class	Potential TEC associations (BC Act)	Potential TEC associations (EPBC Act)	Serious and irreversible impact candidate
PCT 27 - Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Semi-arid Woodlands (Grassy sub-formation)	Riverine Plain Woodlands	<ul style="list-style-type: none"> Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Penepplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions (Endangered) 	<ul style="list-style-type: none"> Weeping Myall Woodlands (Endangered) 	No
PCT 36 - River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion	Forested Wetlands	Inland Riverine Forests	N/A	N/A	No
PCT 45 - Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion	Grasslands	Riverine Plain Grasslands	N/A	N/A	No
PCT 55 - Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.	Semi-arid Woodlands	North-west Floodplain Woodlands	<ul style="list-style-type: none"> Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Penepplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions (Endangered) 	N/A	No
PCT 56 - Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Grassy Woodlands	Floodplain Transition Woodlands	N/A	<ul style="list-style-type: none"> Poplar Box Grassy Woodland on Alluvial Plains (Endangered) 	No
PCT 70 - White Cypress Pine woodland on sandy loams in central NSW wheatbelt	Grassy Woodlands	Floodplain Transition Woodlands	N/A	N/A	No

PCT Name	Formation	Class	Potential TEC associations (BC Act)	Potential TEC associations (EPBC Act)	Serious and irreversible impact candidate
PCT 74 - Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion	Grassy Woodlands	Floodplain Transition Woodlands	<ul style="list-style-type: none"> White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions (Critically Endangered, SAII) 	<ul style="list-style-type: none"> White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered) 	Yes
PCT 76 - Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions	Grassy Woodlands	Floodplain Transition Woodlands	<ul style="list-style-type: none"> Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (Endangered) 	<ul style="list-style-type: none"> Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Endangered) 	No
PCT 78 - River Red Gum riparian tall woodland / open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion	Forested Wetlands	Inland Riverine Forests	N/A	N/a	No
PCT 82 - Western Grey Box - Poplar Box - White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion	Grassy Woodlands	Floodplain Transition Woodlands	<ul style="list-style-type: none"> Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (Endangered) 	<ul style="list-style-type: none"> Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Endangered) 	No

PCT Name	Formation	Class	Potential TEC associations (BC Act)	Potential TEC associations (EPBC Act)	Serious and irreversible impact candidate
PCT 88 - Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South Bioregion	Dry Sclerophyll Forests	Pilliga Outwash Dry Sclerophyll Forests	N/A	<ul style="list-style-type: none"> Poplar Box Grassy Woodland on Alluvial Plains (Endangered) 	No
PCT 201 - Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion	Grassy Woodlands	Western Slopes Grassy Woodlands	<ul style="list-style-type: none"> Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions (Endangered) 	N/A	Yes
PCT 227 - Silver-leaved Ironbark - White Cypress Pine - Rough-barked Apple woodland on alluvial terraces in central-north NSW	Semi-arid Woodlands (Shrubby sub-formation)	North-west Alluvial Sand Woodlands	N/A	N/A	No
PCT 244 - Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt)	Grassy Woodlands	Floodplain Transition Woodlands	N/A	<ul style="list-style-type: none"> Poplar Box Grassy Woodland on Alluvial Plains (Endangered) 	No
PCT 248 - Mixed box eucalypt woodland on low sandy-loam rises on alluvial plains in central western NSW	Grassy Woodlands	Floodplain Transition Woodlands	<ul style="list-style-type: none"> Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Penepplain, Nandewar and Brigalow Belt South Bioregions (Endangered) 	<ul style="list-style-type: none"> Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Endangered) 	No

6.2.2.6 IMPORTANT HABITAT FOR THREATENED SPECIES

'Important areas' of habitat for several highly mobile threatened species is mapped and requires specific consideration under the BAM. The species concerned include:

- Swift Parrot (*Lathamus discolor*);
- Regent Honeyeater (*Anthochaera phrygia*);
- Plains Wanderer (*Pedionomus torquatus*); and
- Migratory shorebirds.

Important habitat mapping for the above threatened and listed species does not overlap the Project area.

6.2.2.7 SERIOUS AND IRREVERSIBLE IMPACT ENTITIES

The potential for impacts on species that are at risk of serious and irreversible impacts (SAII) requires detailed consideration when locating and designing the Project. The following preliminary candidate species and TECs are listed as entities at risk of SAII:

- Species:
 - *Prasophyllum* sp. *Wybong*;
 - Eastern Cave Bat (*Vespadelus troughtoni*);
 - Sloane's Froglet (*Crinia sloanei*);
- TECs:
 - Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions (Endangered, SAII); and
 - White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions (Critically Endangered, SAII).

The Project would be designed to avoid direct impacts to these SAII where possible and practicable. Survey and design principles would be required to demonstrate that the entities at risk of SAII would not be adversely affected by the Project.

6.2.3 ASSESSMENT APPROACH

The desktop assessment highlights several opportunities and constraints related to biodiversity values. The construction and operation of the Project has the potential to cause impacts to species and TECs listed under the BC Act and the EPBC Act. At a high level, these will need to be considered as part of locating the Project prior to determining the preliminary development footprint where the BAM is to be applied to assess impacts on biodiversity values (as defined in the BC Act). Any action that will or is likely to have a significant impact on MNES listed under the EPBC Act would require approval from the Minister for the Commonwealth DCCEEW.

6.2.3.1 MAPPING OF CATEGORY 1 – EXEMPT LANDS

The draft NVR Map is not in force other than for lands categorised as Category 2 - Vulnerable Regulated Land and Category 2 – Sensitive Regulated Land. These categories are in force and cannot be revised.

Otherwise, site data and analysis are required to verify the extent of Category 1 – Exempt Land and Category 2 – Regulated Land. For these lands, a BAM accredited assessor has the option of identifying the extent of Category 1 – Exempt Land when preparing a BDAR. The guidance provided for this is outlined in 'Determining Native Land Categorisation for Application in the Biodiversity Offsets Scheme' (NSW DPE, 2023).

It is anticipated that an LCA would be prepared, and form part of the early works associated with the preparation of the BDAR. The mapping of Category 1 – Exempt Land may influence the Project location (i.e., early avoidance of biodiversity values) and the way in which the BDAR is to be prepared.

6.2.3.2 PREPARATION OF A BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT

A BDAR is mandatory for SSD projects unless set aside by an approved BDAR Waiver. The BDAR comprises Stages 1 and 2 of the BAM.

The following steps form part of the Stage 1 assessment of biodiversity values impacted by the Project:

- Map the extent of native vegetation within the direct impact area;
- Prepare a detailed assessment of MNES and submit an EPBC Act Referral (if deemed required); and
- Perform targeted seasonal fauna and flora surveys in accordance with the BAM for candidate species considered likely or potentially occurring within the Project area; and
- Identify relevant prescribed Impacts.

The Stage 2 assessment includes:

- Assessment of direct and indirect impacts on native vegetation (e.g., loss of PCTs and associated habitat);
- Assessment of impacts to threatened species and ecological communities including predicted ecosystem and candidate species; and
- Prescribed impacts (e.g., loss of threatened and protected animals from wind turbine strikes, loss of connectivity, mortality and injury from vehicle strike).

The BDAR would also document the application of the mitigation hierarchy, namely:

- Avoidance of impacts;
- Minimisation of impacts; and
- Mitigation measures.

The residual impact would be documented in the form of ecosystem and species credits. Impacts on entities at risk of SAII would also be identified and documented for the consideration.

The BDAR would likely be required to include a BBAMP to identify potential risk and mitigation measures for wind turbine strikes as a result of the Project.

A detailed transport route assessment would be completed during preparation of the BDAR and EIS. This would assess potential biodiversity impacts relating to any transportation route road upgrades, necessary for the delivery of wind farm components to the Project area.

6.3 ABORIGINAL HERITAGE

6.3.1 BACKGROUND

The Project area falls within the traditional lands of the Wiradjuri linguistic group (AIATSIS, 2025). The Wiradjuri lands cover a vast distance including the Riverine Plains in the west and the Central Tablelands in the east. The Wiradjuri Nation are known as the people of the three rivers, being the Macquarie River (Wambool), Lachlan River (Kalari) and the Murrumbidgee River (Murrumbidjeri). The Narromine Local Aboriginal Land Council governs the Project area on matters regarding traditional heritage.

6.3.2 ARCHAEOLOGICAL BACKGROUND

In the present regional archaeological context, it is difficult to discern much of the past daily activities of Aboriginal life, especially within the open site context that is dominant in the region today. Any archaeologically significant material made from organic material such as bark, wood, or animal hide would decay quickly in this environment. However, items or features made of more resilient material, such as stone or earth, would likely survive in the places they were made or left. Sources of raw materials, such as the extraction of wood or bark would also leave scars on the trees that are archaeologically visible, although few of these trees survive. The stone outcrops that were used as quarries for resources would also leave behind archaeologically visible evidence, with the marks on the outcrops from the removal process or flakes produced during the same process likely being in the area; although the pebble beds that were often used to source these same materials does not leave similar traces.

Evidence of the presence of the Wiradjuri people is common along the Macquarie River and Lachlan River in the northern half of the South-western Slopes Bioregion, but less so along the Murrumbidgee in the south, even though the Wiradjuri people lived on both sides of the Murrumbidgee (HO and DUAP 1996). The Project area is located within the Macquarie-Castlereagh catchment which is part of the larger Murray-Darling Basin.

At its closest, the Macquarie River is 5 km to the south of the Project area; however, a tributary of the Macquarie River, Coolbaggie Creek flows through the southeastern corner of the Project area and along the eastern Project boundary. Surviving carved trees are numerous in the northern part of the traditional Wiradjuri range (HO and DUAP 1996) and may be present in the Project area.

The region surrounding the Project area has been subject to several archaeological studies performed over the past decade:

- EMM (2020) Dubbo Quarry Continuation Project ACHAR, NSW;
- Jacobs GHD (2020) Narromine to Narrabri Environmental Impact Statement and ACHAR;
- Edify (2023) Burroway Solar Farm Scoping Report;
- OzArk EHM (2023) Narromine Freight Hub Aboriginal Due Diligence Assessment Report;
- icubed Consulting (2020) Planning Constraints Assessment – Kerrs Creek WF;
- NGH Consulting (2021) Preliminary desktop Assessment: Kerrs Creek Wind Farm; and
- OzArk EHM (2011) Tomingley Gold Project CHA.

However, there is one report which directly relates to the Project area (Smith 1988):

Smith, LJ (1988) Archaeological Survey of the Dubbo to Nyngan 132kV Transmission Line

Smith (1988) surveyed a narrow 756 ha corridor of land for a proposed (at the time) transmission line from Dubbo to Nyngan. This is the existing Dubbo-Nevertire transmission line (Line #94W/1) which passes through the Project area. The survey recorded four artefact scatters that are within the Project area. These sites were located within 100 m of marshy areas that form the headwaters of Kookaburra Creek. The landowner at the time said that he had discovered “numerous stone artefacts in the wheat fields to the south of the proposed transmission line” (p. 25) while ploughing. The density of the artefact scatters was noted as being contrary to predictions that few sites would occur at the headwaters of water courses. When examining the archaeological context, Smith (1998) found that the most frequently recorded site types along the transmission route were culturally modified trees (CMT’s). Smith notes that the predominance of CMT’s is likely due to recorder bias, as open sites are the most common in nearby areas that have been more systematically surveyed.

The results of previous archaeological studies have resulted in the registration of several Aboriginal sites. In general, the variety in the site types identified for this report are artefact sites, potential archaeological deposits (PADs), stone quarries and CMT’s.

Artefact sites dominate the record with quartz as the main material type followed by siliceous volcanic, and tuff with artefact sites often associated with areas of exposure and erosion. The patterning of the site locations appears to relate to the presence of resources with modelling suggesting that Aboriginal sites may be expected throughout all landscapes; however, the most sensitive archaeological areas are in proximity to water with slope and terraced landforms most common to include artefactual material. Scarred trees may be present throughout the Project area where old growth native trees remain.

Based on the result of the previous archaeological investigations the following predictive model is provided:

- **Stone artefact scatters** – representing camp sites can occur across the landscape, usually in association with some form of resource or landscape unit such as slopes and along terraces. Within the proposal area, Kookaburra Creek, and nearby Coolbaggie Creek are obvious resource area. Most of the scatters comprise the typical occurrences of flakes, cores and debitage; however, some formal tool types including axes, hatchets, scrapers and blades also sporadically occur;
- **Isolated Artefacts** – are sporadically present across the entire landscape. As Aboriginal people traversed the entire landscape for thousands of years, such finds can occur anywhere and indicate the presence of isolated activity, dropped or discarded artefacts from hunting or gathering expeditions or the ephemeral presence of short-term camps;
- **Scarred Trees** – these require the presence of mature trees and are likely to be concentrated along major waterways and around swamps areas. There are some patches of remnant vegetation across the Project area. Therefore, it is possible that this feature could occur;
- **Stone resources** – are areas where people used natural stone outcrops as a source material for flaking. This requires geologically suitable material outcropping to be accessible;

- **Burials** – are generally found in elevated sandy contexts or in association with rivers and major creeks. There is one named creek within the Project area, so therefore it is possible this feature could occur;
- **Hearths/Ovens** – are identified by burnt clay and stone used for heat retainers. None are recorded in the district, but they could occur either independently or in association with other Aboriginal cultural features such as campsites, often in association with resource locations. Such places are not obvious within the Project area, and this feature is therefore unlikely to occur; and
- **Shell Middens** – are the agglomeration of shell material disposed of after consumption. Such places are found along the edges of significant waterways, swamps and billabongs. Mussel shells have been found along the nearby Macquarie River (Smith, 1988). Due to the low number and size of waterways in the Project area, it is unlikely this feature will occur.

6.3.3 PRELIMINARY ASSESSMENT

6.3.3.1 AHIMS SEARCH RESULTS

The Aboriginal Heritage Information Management System (AHIMS) database provides information concerning previously recorded Aboriginal sites in NSW. An extensive search of the AHIMS database was conducted on 11 September 2025 to identify registered sites within and in the vicinity of the Project area. The AHIMS search utilised the details provided in **Table 6-6**.

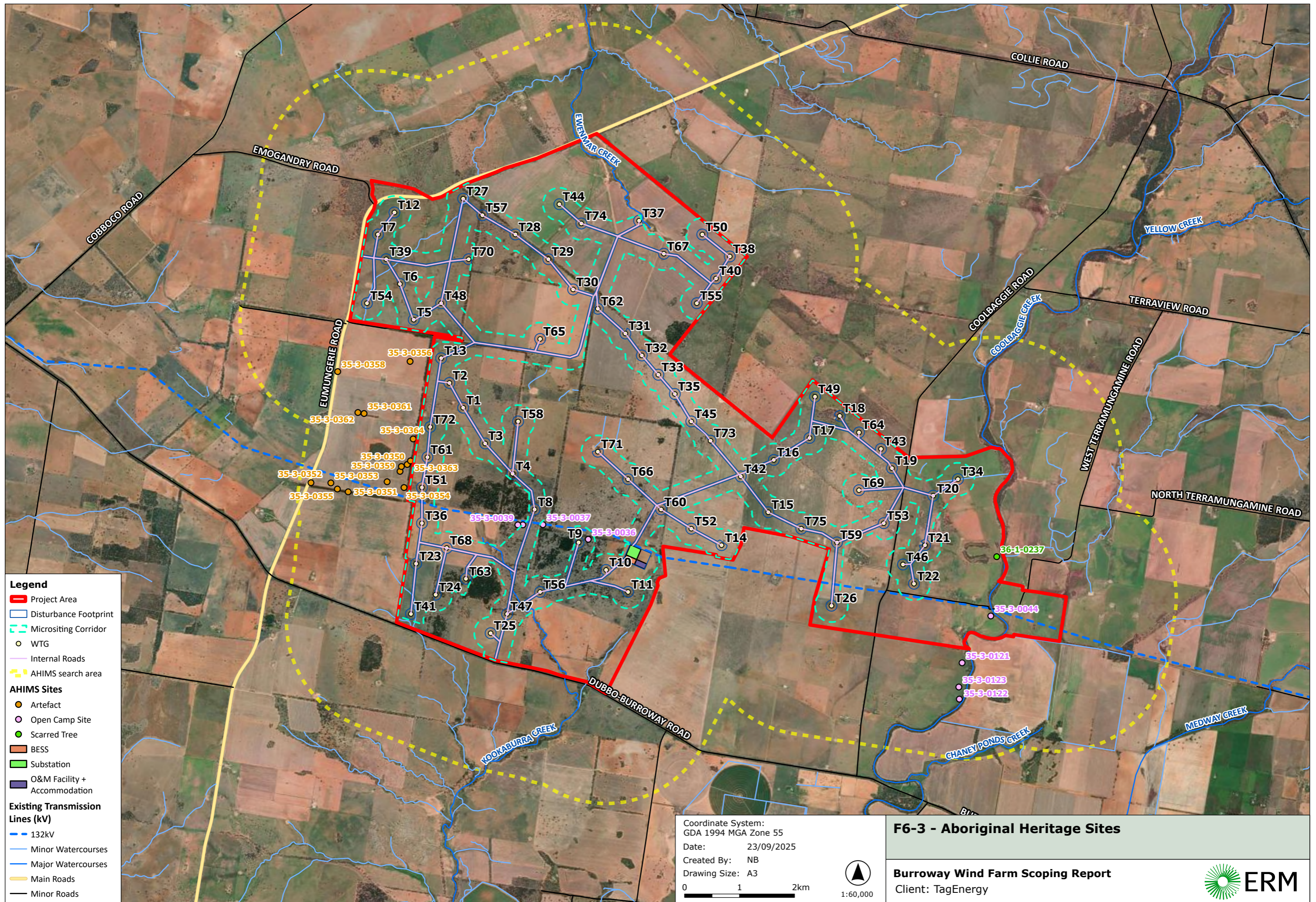
TABLE 6-6 AHIMS DATABASE SEARCH DETAILS

Item	Detail
Client Service ID	1043308
Datum	AGD Zone 55
Search Parameters	Project Area with 2 km buffer
Number Sites	24

A total of 24 registered Aboriginal sites were identified within the parameters of the AHIMS search (as of 11 September 2025). All sites were listed as artefacts besides one CMT (**Table 6-7**). **Figure 6-3** illustrates the AHIMS results. Sites DN 4, DN 5, DN 6 and DN 7 were recorded in Smith (1988), and all four sites were found near creeks or marshy depressions, with artefacts exposed by sheet wash erosion or erosion scars caused by bioturbation from ants.

TABLE 6-7 AHIMS RESULTS

Site ID	Site Name	Site Feature	Proximity to Project area
36-1-0237	CK-ST-1	Culturally Modified Tree	Within
35-3-0036	DN 4	Artefact	Within
35-3-0037	DN 5	Artefact	Within
35-3-0038	DN 7	Artefact	Within
35-3-0039	DN 6	Artefact	Within
35-3-0044	DN 3	Artefact	Within
35-3-0121	CC-OS-3 (Narromine)	Artefact	Outside
35-3-0122	CC-OS-2 (Narromine)	Artefact	Outside
35-3-0123	CC-OS-1 (Narromine)	Artefact	Outside
35-3-0350	Kookaburra OS1	Artefact	Outside
35-3-0351	Kookaburra OS2	Artefact	Outside
35-3-0352	Kookaburra OS3	Artefact	Outside
35-3-0353	Kookaburra OS4	Artefact	Outside
35-3-0354	Kookaburra IF1	Artefact	Outside
35-3-0355	Kookaburra IF2	Artefact	Outside
35-3-0356	Kookaburra IF3	Artefact	Outside
35-3-0357	Kookaburra IF5	Artefact	Outside
35-3-0358	Kookaburra IF4	Artefact	Outside
35-3-0359	Kookaburra IF6	Artefact	Outside
35-3-0360	Kookaburra IF7	Artefact	Outside
35-3-0361	Kookaburra IF11	Artefact	Outside
35-3-0362	Kookaburra IF10	Artefact	Outside
35-3-0363	Kookaburra IF9	Artefact	Outside
35-3-0364	Kookaburra IF8	Artefact	Outside
Total: 24			



Legend

- ▬ Project Area
- ▬ Disturbance Footprint
- ▬ Micrositing Corridor
- WTG
- ▬ Internal Roads
- ▬ AHIMS search area

AHIMS Sites

- Artefact
- Open Camp Site
- Scarred Tree
- BESS
- Substation
- O&M Facility + Accommodation

Existing Transmission Lines (kV)

- ▬ 132kV
- ▬ Minor Watercourses
- ▬ Major Watercourses
- ▬ Main Roads
- ▬ Minor Roads

Coordinate System:
GDA 1994 MGA Zone 55

Date: 23/09/2025

Created By: NB

Drawing Size: A3


0 1 2km

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F6-3 - Aboriginal Heritage Sites

Burroway Wind Farm Scoping Report

Client: TagEnergy



6.3.3.2 EIS ASSESSMENT APPROACH

Based on the results of the preliminary assessment, it is understood that the Project area contains 6 Aboriginal archaeological resources. It's likely the Project area may contain more evidence of past Aboriginal land use, particularly in areas that have not previously been surveyed. Predictive modelling can assist in determining sensitive landscapes; however, it is acknowledged that more detailed investigation and assessment will be required to inform the next phase of Project planning and design.

The EIS will consider the following:

- Comprehensive investigation, to include pedestrian field survey, consultation with Aboriginal stakeholders, sensitivity mapping, and archaeological test excavation (as required) should be undertaken to support the Project EIS;
- These investigations will be undertaken in accordance with all NSW legislation and relevant guidelines including the 'Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW' (NSW OEH, 2011) the 'Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW' (NSW DECCW, 2010), and 'Aboriginal Cultural Heritage Consultation Requirements for Applicants 2010' (NSW DECCW, 2010);
- Results of the investigations will be detailed in an Aboriginal Cultural Heritage Assessment Report (ACHAR), in accordance with the 'Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW' (NSW DECCW, 2010); and
- If required, upon completion of the ACHAR, a Cultural Heritage Management Plan (CHMP) should be prepared to ensure appropriate management of any identified cultural heritage throughout the construction process.

6.4 HISTORIC HERITAGE

6.4.1 BACKGROUND

The first European visitors journeyed to the Brigalow Belt South IBRA Bioregion in the early 1800s. The Surveyor General of NSW at the time, John Oxley, began surveying the bioregion in 1817. Six years later (1823), the Governor of New South Wales, Thomas Brisbane, created an Agricultural Convict Establishment in the Wellington Valley, approximately 80 km southeast of the Project area. This created the first European settlement west of Bathurst and facilitated the commencement of pastoral practices in the bioregion. This Agricultural establishment was shut down in 1828; however, by this time several agricultural stations had been established in the region. Pastoral occupation around Dubbo escalated rapidly in the following years, as it did throughout the colony (NSW National Parks and Wildlife Service, 2003).

The Project area is located within the historical Parishes of Emogandry, Moonul, Coolbaggie and Wirrigai, in the County of Emogandry. Its boundaries are also located within the Beckenbeenee and Terramungamine pastoral runs.

6.4.2 PRELIMINARY ASSESSMENT

A search of all relevant historic heritage databases was undertaken on the 11 September 2025 with the following results:

Commonwealth Heritage List

The Commonwealth Heritage List (CHL) includes natural, Indigenous and historical heritage places owned or controlled by the Australian Government. Items on the list have satisfied the minister as having one or more Commonwealth Heritage values.

There are no Commonwealth Heritage listed places within or in proximity to the Project area.

National Heritage List

The Australian National Heritage List (NHL) contains natural, historic, and Indigenous places deemed to be of outstanding heritage significance to Australia. Before a site is placed on the list a nominated place is assessed against nine criteria by the Australia Heritage Council.

There are no National Heritage listed places within or in proximity to the Project area.

State Heritage Register

The State Heritage Register (SHR) was established under Section 22 of the *Heritage Act 1977* and is a list of places and objects of particular importance to the people of NSW, including built heritage and archaeological sites. Listing on the SHR controls activities such as alteration, damage, demolition and development. When a place is listed on the SHR, the approval of the Heritage Council of NSW is required or any major work.

A search of the NSW State Heritage Register (SHR) was conducted. No registered historic heritage items have been identified within 3km of the Project area.

Section 170 Heritage Registers

Section 170 of the *Heritage Act 1977* requires all NSW state agencies to identify, conserve and manage the heritage assets owned, managed and occupied by that agency. To facilitate this, Section 170 heritage registers were established for all NSW government agencies. These registers are held and maintained by each state agency and updated as assets are acquired, altered, or decommissioned.

No Section 170 heritage places are located within or in proximity to the Project area.

Local Environment Plans (LEPs)

The EP&A Act is the main act regulating land use planning and development in NSW. The EP&A Act also controls the making of EPIs. Two types of EPIs can be made - LEPs covering local government areas and SEPPs, covering areas of State or regional environmental planning significance. LEPs commonly identify, and have provisions for, the protection of local heritage items and heritage conservation areas.

The search identified that there no listed Historic heritage items within 3 km of the Project area listed on Schedule 5 of the Narromine LEP 2011. The closest listed item (item #I303) is Immarna located at Lot 362 DP 609785 (12 Coolbaggie Road, Rawsonville, NSW).

6.4.3 EIS ASSESSMENT APPROACH

The preliminary assessment identified that the Project area is located within a semi-rural landscape which has been subject to historic land uses associated with pastoral and agricultural uses. The potential for significant historic heritage values to be present within the Project area is, therefore, considered low. Notwithstanding this, there is potential for additional heritage values to be present across the Project area, therefore a Historical Heritage Due Diligence (HHDD) assessment should be prepared as part of the EIS. The HHDD would confirm the potential for unlisted heritage items to be present within the Project area.

The HHDD will investigate potential heritage values, and potential impacts to built heritage features and areas of historical archaeological sensitivity across the Project area.

Preparation of the HHDD will involve detailed historical research, including analysis of historical aerial imagery, and physical inspection of the relevant areas within the Project area. The preparation of this report would ensure compliance with all statutory obligations and best practice guidelines and would assist in the management of risk associated with inadvertent impact to heritage values.

6.5 LANDSCAPE AND VISUAL

A Visual Scoping Report (VSR) was prepared to inform this Scoping Report and is presented in **Appendix B**. The VSR was prepared in accordance with the 'Wind Energy Guideline: Technical Supplement for Landscape Character and Visual Impact Assessment' (Visual Technical Supplement) (NSW DPHI, 2024b).

The Study Area relevant to the VSR is generally defined as the Project area and surrounding land up to 8,018 m from the nearest turbine. This was defined based on the maximum assumed tip height of 280 m and the study area requirements specified in Figure 7 of the Visual Technical Supplement for a WTG of that height.

The VSR included the following steps:

- Define the turbine setback and study area in accordance with the Visual Technical Supplement and identify private receivers and public viewpoints for assessment;
- Prepare a viewshed map to determine the extent of visibility and eliminate receivers within the study area that do not have a line of sight to the Project; and
- Undertake a simple assessment in accordance with the Visual Technical Supplement to identify receivers that require an intermediate assessment to be undertaken as part of the EIS.

6.5.1 BACKGROUND

6.5.1.1 EXISTING LANDSCAPE CHARACTER

The Project is located within the Brigalow Belt South IBRA bioregion in central-western NSW, approximately 265 m above sea level. The existing landscape surrounding the Study Area is typically flat with expanses of cleared farmland and native riparian vegetation corridors along creeks.

6.5.2 PRELIMINARY ASSESSMENT

6.5.2.1 SETBACK AND STUDY AREA

In accordance with the Visual Technical Supplement, the Applicant is to identify the turbine setback and Study Area for the Project relative to the maximum turbine height (tip height). For this Project, the maximum turbine height (at tip of vertical blade) is 280 m. The turbine setback for the Project, in accordance with the Visual Technical Supplement, is 1,768 m. No non-associated receivers were identified within the turbine setback distance.

The magnitude of wind turbine visibility decreases over distance and, therefore, there is a point at which they become inconsequential and difficult to discern against the background. Consequently, the Visual Technical Supplement specifies distances within which a visual impact

assessment for private receivers and public viewpoints must be undertaken for specific WTG heights, referred to as the Study Area. As discussed above, the Study Area for the Project, based on a 280 m maximum WTG height, is 8,018 m.

6.5.2.2 RECEIVERS

Receivers are defined in the Visual Technical Supplement as 'viewpoints that are more sensitive to change than others, including dwellings, historic homesteads, tourist accommodation, places of worship, town centres and central business districts'.

Public Viewpoint Receivers

Key public viewing corridors in the Study Area include:

- Dubbo Burroway Road;
- Eumungerie Road;
- Cobboco Road; and
- Collie Road.

No key public viewpoints have been identified within the Study Area.

Private Receivers

No non-associated receivers were identified within the turbine setback (1,768 m); however, 90 non-associated receivers were identified within the Study Area (8,018 m).

6.5.2.3 VIEWSHED MAPPING

Viewshed mapping has been undertaken to determine the areas with potential visibility of the Project. The viewshed mapping has been prepared for the Project based on topography alone to illustrate the theoretical visibility without screening, structures, or vegetation. Receivers that do not have a line of sight to the project (due to topography) are excluded from the assessment. The viewshed map has been prepared based on the tip height of 280 m (**Figure 6-4**).

The viewshed mapping identified that due to the flat topographic character of the region, views of the Project are likely to be available across the entire Study Area. All non-associated receivers within the Study Area (8,018m) were identified as having potential visibility of the Project. However, it is important to note the viewshed map is worst case. The assessment undertaken to inform the EIS will consider actual visibility at receivers considering structures and vegetation.

6.5.2.4 SIMPLE VISUAL ASSESSMENT

A 'Simple Assessment' was undertaken in accordance with the Visual Technical Supplement. All 90 non-associated receivers identified within the Study Area with a theoretical line of sight to the Project were assessed. Thirty-nine (39) non-associated receivers were identified as having a moderate or high visual impact rating. These dwellings will require an intermediate assessment (during the EIS phase). The remaining non-associated receivers identified within the Study area were assessed as having very low or low visual impact rating resulting in no further assessment being required.

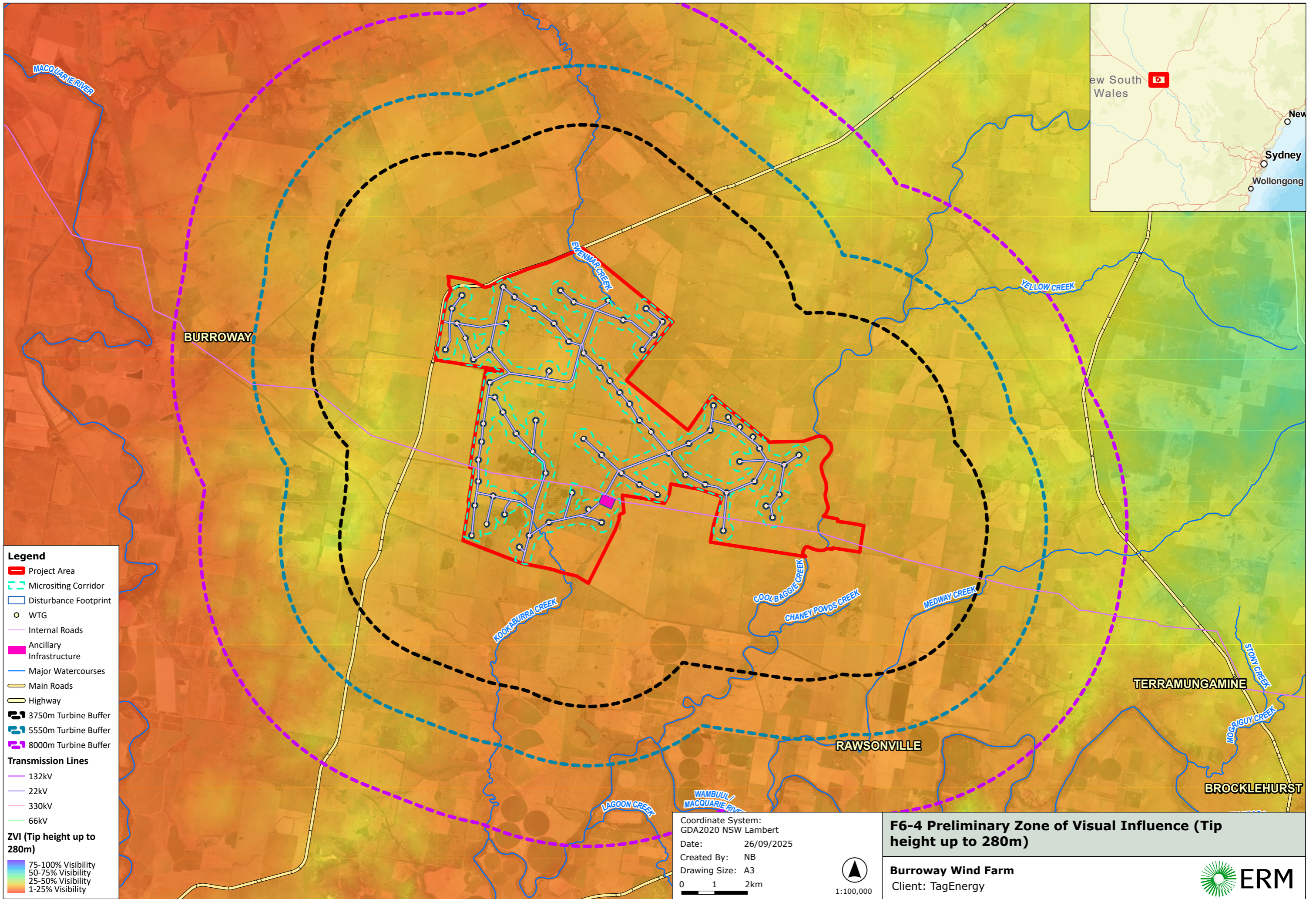
The Applicant has engaged with near neighbours regarding potential impacts, including visual impacts.

6.5.3 EIS ASSESSMENT APPROACH

All non-associated receivers that were determined to have the potential for a moderate or higher visual impact will be assessed to inform the EIS. This will involve an 'intermediate assessment', which accounts for factors that influence magnitude including intervening topography, distances at which turbines will be visible, and spacing between individual and clusters of turbines. The 'intermediate assessment' involves 3D modelling of existing topography and the Project's layout. Non-associated receivers identified through the 'intermediate assessment' that may have a 'moderate' or 'high' impact will then require a 'detailed assessment'. The 'detailed assessment' includes site visits and preparation of photomontages to accurately assess scenic quality and determine the effectiveness of existing or proposed screening. **Table 6-8** details the receivers that require further assessment in the EIS.

TABLE 6-8 NON-ASSOCIATED RECEIVERS NEEDING FURTHER ASSESSMENT

Receiver ID	Simple Assessment Rating	Receiver ID	Simple Assessment Rating
1	High	41	Moderate
2	High	43	Moderate
5	High	44	Moderate
9	High	50	High
12	High	51	Moderate
13	High	52	High
14	High	67	Moderate
15	High	68	Moderate
16	High	69	Moderate
17	Moderate	70	Moderate
18	Moderate	71	High
24	Moderate	72	Moderate
25	Moderate	81	High
31	Moderate	83	Moderate
32	Moderate	84	Moderate
33	Moderate	88	High
36	Moderate	89	High
37	High	90	High
38	High	93	High
39	High		



6.6 NOISE

A preliminary Noise Impact Assessment (NIA) was undertaken in accordance with the NSW 'Wind Energy Guideline - Technical Supplement for Noise Assessment' (NSW DPHI, 2024c) (Noise Technical Supplement). Potential noise impacts from WTGs were modelled and assessed based on applicable assessment standards and guidelines. The preliminary assessment considers the worst-case noise propagation conditions based on the WTG layout shown in this Scoping Report, maximum WTG sound power levels, and without the consideration of any noise mitigation measures.

6.6.1 EXISTING ENVIRONMENT

The Project is in a rural area, dominated by natural noise sources such as foliage and birdsong. Sensitive residential receivers (dwellings) that are within a range where noise impacts may occur were identified to be scattered and isolated. Those close to main road corridors are likely to experience higher ambient noise levels, due to road traffic noise. Background noise monitoring may be undertaken at select dwellings during preparation of the EIS to determine the existing background noise levels in the area and establish project-specific WTG noise criteria.

With respect to the sensitive receivers assessed in this preliminary NIA, dwellings whose owners are hosting Project infrastructure or have entered into an agreement in relation to the Project are referred to as 'associated' dwellings with all other dwellings referred to as 'non-associated' dwellings.

6.6.2 STATUTORY CONTEXT AND CRITERIA

This preliminary NIA was prepared in accordance with:

- NSW DPHI 'Wind Energy Guideline, Technical Supplement for Noise Assessment' (NSW DPHI, 2024c) ('Noise Technical Supplement'); and
- South Australia (SA) Environment Protection Authority's (EPA's) 'Wind Farms Environmental Noise Guidelines' (SA EPA, 2009) (updated in 2021) ('SA Guidelines').

6.6.2.1 NON-ASSOCIATED DWELLINGS

The Noise Technical Supplement (NSW DPHI, 2024c) provides a detailed description of the noise assessment process for wind farms and includes practical guidance on how to measure and assess environmental noise impacts. It ensures acceptable amenity for people living near wind energy projects by establishing clear standards and noise limits.

As stated in the Noise Technical Supplement, the NSW Government has adopted the SA Guidelines as a basis for assessing and managing noise from wind energy projects in NSW.

The Noise Technical Supplement provides guidance for a scoping and preliminary assessment for a proposed wind farm as follows:

Although the project design may change during preparation of an environmental impact statement and in the development application stage, it is important to provide early indicative noise predictions using simple modelling techniques and conservative assumptions. For example, the predictions could be made using the maximum sound power level of the likely turbines and calculated under worst-case noise propagation conditions. Applicants should compare these indicative predictions with the base criteria of 35 dB(A), unless detailed studies support more elevated criteria based on prevailing background noise levels.

As per the above guidance, a base noise limit of 35 dB(A) at all identified non-associated dwellings was used for this assessment

6.6.2.2 ASSOCIATED DWELLINGS

Applicants of renewable energy developments typically negotiate agreements with private landholders to manage impacts where projects may not achieve noise limits. This means that landholders may enter into an agreement with an Applicant to accept noise levels above the prescribed noise limits. Where such an agreement is in place, these receivers are not required to be assessed in accordance with **Section 4.2** of the Noise Technical Supplement.

6.6.3 PRELIMINARY ASSESSMENT

6.6.3.1 MODELLING METHODOLOGY

Environmental data, specifications for the candidate WTG and the preliminary layout described in **Section 3.2** were used for the preliminary NIA.

In accordance with the Noise Technical Supplement, the maximum sound power level of the candidate WTG modelled under worst-case noise propagation conditions were investigated to provide indicative noise predictions at associated and non-associated dwellings.

The environmental noise model used for the assessment, SoundPLAN 9.1, allows 3D elevation data to be combined with ground characteristics and receptor locations, to create a detailed representation of the Project and surrounding area. The noise model allows the quantification of noise levels from multiple WTGs based on sound power levels emitted from each WTG. The parameter computed at all identified receptors was the $L_{Aeq,10 \text{ minute}}$ parameter, measured in A-weighted decibels (dB(A)).

The Noise Technical Supplement provides guidance on the modelling parameters to be used. Details of the noise model and the modelling parameters used for this assessment are provided in **Table 6-9**.

TABLE 6-9 NOISE MODELLING PARAMETERS

Modelling Aspect	Parameter
Candidate WTG Model	Unspecified
Investigated Hub Height, m	180
Rotor Diameter, m	200
Cut-in wind speed, m/s	2.5
Cut-out wind speed, m/s	24
Maximum Sound Power Level, dB(A)	110.0
Sound Power Level Spectra Reference	As specified in Table 6-10
Serrated Trailing Edge (STE) Blade	Not applied to any WTG
Noise Modelling Software	SoundPLAN 9.1
Noise Modelling Algorithm	'International Standard ISO 9613-2:1996 Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation' (ISO 9613-2) (Standards Australia, 1996).

Modelling Aspect	Parameter
Ground Absorption Factor	0.5 (50% of the ground is acoustically soft and 50% of the ground is acoustically hard))
Humidity	80%
Temperature	10°C
Topographical Contours	10 m intervals
Receptor Height	1.5 m
Wind Direction	Downwind – noise level at each receptor is predicted based on being simultaneously downwind of every wind turbine at the site.

TABLE 6-10 REFERENCE SOUND POWER LEVEL AT 1/3 OCTAVE BAND CENTRE FREQUENCY AT WIND SPEED >8.5M/S

1/3 Octave Band Centre Frequency	Sound Power Level (dB)
20 Hz	121.6
25 Hz	119.3
31 Hz	116.6
40 Hz	114.5
50 Hz	112.9
63 Hz	111.7
80 Hz	110.7
100 Hz	109.7
125 Hz	109.6
160 Hz	108.8
200 Hz	108.1
250 Hz	108.0
315 Hz	107.3
400 Hz	106.2
500 Hz	104.7
630 Hz	102.9
800 Hz	100.4
1 kHz	98.2
1.25 kHz	96.0
1.6 kHz	93.8
2 kHz	90.6
2.5 kHz	86.7
3.15 kHz	81.9

1/3 Octave Band Centre Frequency	Sound Power Level (dB)
4 kHz	77.6
5 kHz	73.2
6.3 kHz	68.1
8 kHz	63.1
10 kHz	61.8
Overall A-weighted value	110.0 dB(A)

6.6.3.2 PREDICTED RESULTS

Preliminary $L_{Aeq,10 \text{ minute}}$ noise levels at associated and non-associated dwellings have been predicted based on the modelling methodology outlined above. For each dwelling, the noise level was calculated based on the noise contributions of all WTGs operating simultaneously and being down-wind.

The predicted results at dwellings located within 5 km of the closest WTB are presented in **Table 6-11**. Results for non-associated dwellings are compared against the base criterion of 35 dB(A) $L_{Aeq,10 \text{ minute}}$. The results are sorted from the closest dwelling to a WTG to the furthest within 5 km. Exceedances of noise criterion are shown in **bold**. A noise contour map displaying these predictions graphically is presented in **Figure 6-5**.

TABLE 6-11 PREDICTED NOISE LEVELS AT DWELLINGS

Receptor ID	Receptor Status	Distance to Nearest WTG (m)	Nearest WTG	Base Noise Limit, Predicted Worst-case WTG Noise Level,	
				$L_{Aeq,10 \text{ minute}}$ in dB(A)	
R5	Non-Associated	2013	T11	35	37
R39	Non-Associated	2024	T27	35	37
R9	Non-Associated	2015	T37	35	36
R88	Non-Associated	2010	T21	35	36
R2	Non-Associated	2496	T51	35	36
R15	Non-Associated	2135	T41	35	35
R71	Non-Associated	2095	T26	35	34
R89	Non-Associated	2065	T34	35	34
R1	Non-Associated	2835	T36	35	34
R38	Non-Associated	2275	T54	35	34
R12	Non-Associated	2072	T26	35	34
R14	Non-Associated	2246	T25	35	34
R16	Non-Associated	2471	T41	35	33
R37	Non-Associated	3022	T54	35	32

Receptor ID	Receptor Status	Distance to Nearest WTG (m)	Nearest WTG	Base Noise Limit,	Predicted Worst-case WTG Noise Level,
				L _{Aeq,10 minute} in dB(A)	
R17	Non-Associated	3505	T41	35	29
R93	Non-Associated	3875	T44	35	28
R81	Non-Associated	3529	T26	35	27
R13	Non-Associated	3425	T26	35	27
R84	Non-Associated	3727	T22	35	27
R32	Non-Associated	3922	T54	35	27
R36	Non-Associated	3898	T12	35	26
R90	Non-Associated	4482	T34	35	26
R50	Non-Associated	4333	T50	35	25
R83	Non-Associated	4014	T22	35	24
R31	Non-Associated	4497	T54	35	22
R18	Non-Associated	4301	T41	35	21
R52	Non-Associated	4620	T25	35	20
R33	Non-Associated	4780	T7	35	20
R41	Non-Associated	4954	T18	35	20
R94	Non-Associated	4733	T34	35	17
R43	Non-Associated	4748	T12	35	17
R95	Non-Associated	4790	T34	35	17
R3	Associated	515	T25	-	48
R10	Associated	566	T59	-	47
R7	Associated	614	T12	-	47
R11	Associated	603	T59	-	47
R6	Associated	553	T65	-	46
R4	Associated	724	T25	-	44
R8	Associated	1008	T44	-	43
R86	Associated	806	T22	-	43
R87	Associated	1160	T22	-	40
R85	Associated	1263	T22	-	39

6.6.3.3 SUMMARY OF FINDINGS

The results provided in **Table 6-11** show the base noise criterion of 35 dB(A) is exceeded at 5 non-associated dwellings by up to 2 dB. These exceedances are due to the maximum WTG sound power levels modelled and without the consideration of background noise or noise mitigation measures (e.g., serrated trailing edge technology). Measures to avoid or minimise impacts will be assessed and included in the EIS.

The Noise Technical Supplement states that associated dwellings do not require a noise assessment. Predicted noise levels for associated dwellings are provided for information.

6.6.3.4 LIMITATIONS

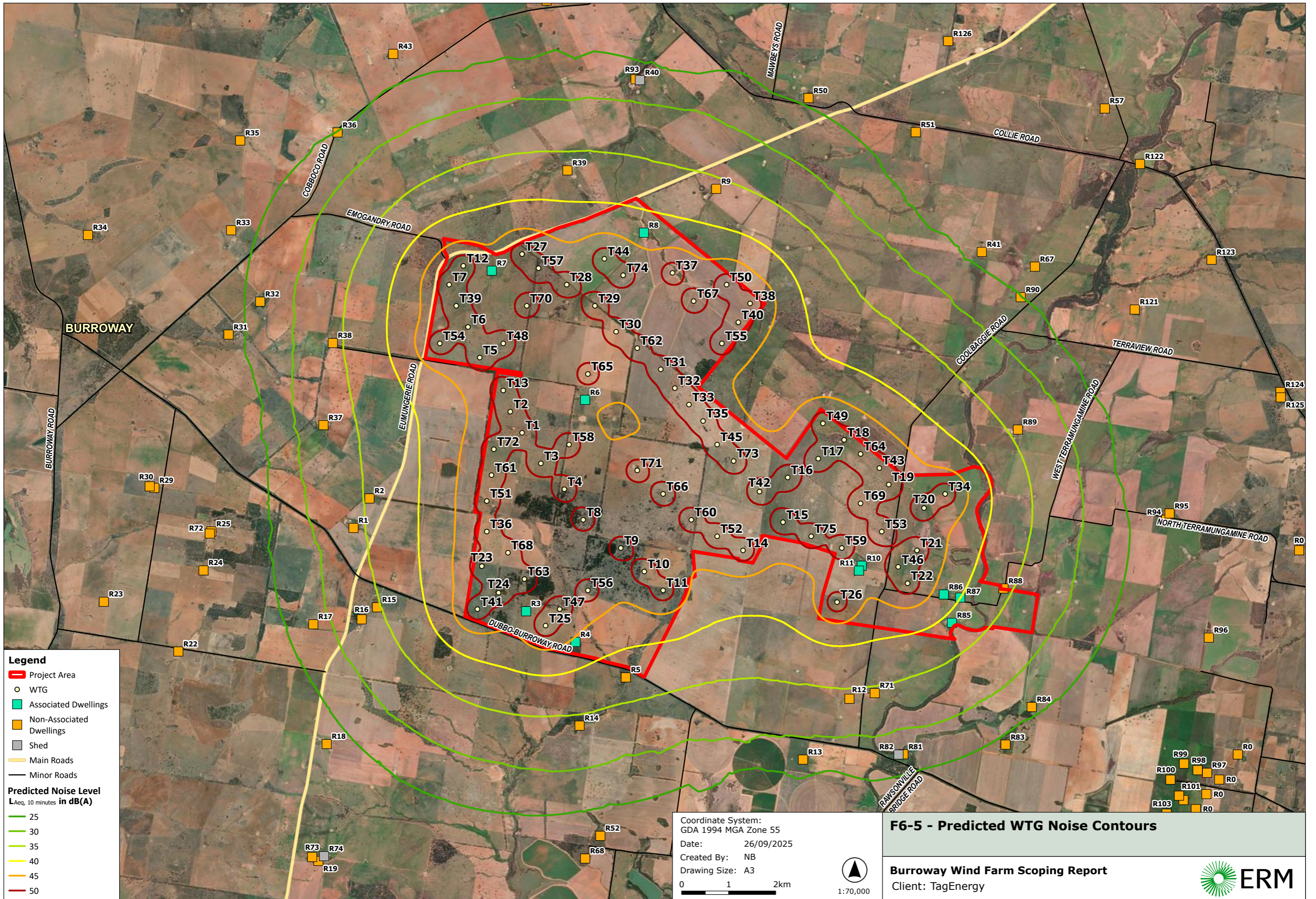
This preliminary NIA is based on the candidate WTG described in **Section 3.2** and the preliminary wind turbine layout shown in **Figure 6-5**. Worst-case sound power levels for the WTGs and conservative noise modelling assumptions have been used to allow for refinement during detailed design; however, if significant changes to the WTG layout and WTG specifications are made, re-assessment of the potential noise impacts would be undertaken during the EIS.

Additionally, during the EIS stage, the noise criteria at non-associated dwellings will be refined using baseline noise monitoring data. Noise levels from wind turbines rise as the wind speed at the site increases. An increase in wind speed typically results in an equal or greater increase in the background noise at receptor locations due to aerodynamic and foliage noise which may mask turbine noise (NSW DPFI, 2024c). Accordingly, the predicted results presented in this preliminary NIA may change with wind speed-based noise criteria that reflect this.

6.6.4 EIS NOISE IMPACT ASSESSMENT APPROACH

This preliminary NIA has focused on operational noise emissions from the WTGs. The EIS noise impact assessment will provide further assessment of WTG operational noise as well as other noise related aspects of the Project, as listed below:

- Baseline noise monitoring to quantify existing noise conditions (and meteorological conditions) at select non-associated dwellings to establish receptor-specific noise criteria;
- Detailed modelling of the Project's anticipated construction and operational noise emissions, including:
 - General construction and operational noise impacts;
 - Road traffic noise (mostly focused on construction);
 - Vibration impacts (mostly focused on construction);
 - Cumulative operational noise impacts associated with other nearby wind farms or surrounding industry (as relevant); and
- Recommended mitigation and management measures to minimise noise and vibration impacts.



6.7 TRAFFIC AND TRANSPORT

6.7.1 BACKGROUND

The Project area is serviced by a road network which includes the Newell Highway, Barrier Highway, Eumungerie Road, and Dubbo-Burroway Road. Access to the Project will likely be via Eumungerie Road, Dubbo Burroway Road, and Coolbaggie Road as follows:

- Access to the north and west portions of the Project via Eumungerie Road;
- Access to the south portion of the Project via Dubbo Burroway Road; and
- Access to the east and central portions of the project via Coolbaggie Road.

The Newell Highway, Dubbo-Burroway Road, Narromine Road, Collie Road, and a section of Eumungerie Road have the capacity to carry OSOM vehicles to and from the Project area. These roads are anticipated to be used as much as possible to avoid road upgrades and impacts on local roads and local traffic. Secondary access will be subject to assessment in the EIS phase.

The ultimate route for transport of WTG components and other Project-related materials will be informed by a Transport Route Assessment undertaken as part of the EIS. The outcomes of the Transport Route Assessment will be incorporated into the Traffic and Transport Impact Assessment (TTIA). This will identify the preferred transport route from port to the Project boundary, as well as required road upgrades.

Whilst a port and transport route has not yet been determined, indicative options that may be considered (but not necessarily limited to) are detailed in **Section 3.2.5**.

6.7.2 POTENTIAL IMPACTS

OSOM wind farm components are proposed to be transport from the Port of Newcastle to the Project site. The Port of Newcastle is approximately 420 km from the Project area. Upgrades to the road network may be required to facilitate access for OSOM vehicles to the Project site. All OSOM vehicles will travel on designated transport routes.

The details and specifications of road upgrades required will be dependent on the size of the vehicles and infrastructure required to be delivered to the Project area and are subject to assessment in a Transport Route Assessment. The Project proposes to use the 'Port to REZ' transport route being updated by EnergyCo to accommodate OSOM WTG components, including WTG blades up to 110 m.

Construction materials (e.g., aggregates and cement) and equipment will, where possible, be sourced from within the region. Where not available locally, these will need to be sourced from further afield. These materials and equipment will require transport to the Project area by heavy vehicle.

Light vehicles carrying construction staff and contractors will need to access the Project site via dedicated site access points.

Construction traffic and transport requirements have the potential to impact the performance of the local and State road network if not managed appropriately.

6.7.3 EIS ASSESSMENT APPROACH

A detailed TTIA, including a Transport Route Assessment, will be prepared to inform the EIS. The TTIA will consider potential transportation routes for construction traffic and potential impacts of the size, loads, and volumes of vehicles on the road network.

The TTIA will be prepared with reference to the 'Guide to Traffic Generating Developments' (RTA, 2002), 'Austroads Guide to Road Design' (Austroads, 2025) and 'Austroads Guide to Traffic Management' (Austroads, 2020).

The scope of the TTIA will include:

- Identification and assessment of the transport route and site access, including swept path analysis at intersections and pinch points, and a site distance assessment to determine if road upgrades are required to ensure road safety;
- Predicted traffic volumes during construction and operation and an assessment of the capacity and condition of the existing road network to accommodate the type and volume of traffic to be generated by the Project;
- Assessment of the potential impacts of Project traffic and transport on road network functioning, including intersection performance, capacity, safety, and access;
- Identification of mitigation and management measures required;
- Identification of road upgrades required, associated clearing and disturbance works; and
- Assessment of potential cumulative impacts.

6.8 AVIATION

6.8.1 BACKGROUND

Operation of wind farms may cause aviation safety impacts. The Project will require aviation safety advice in respect of relevant requirements of air safety regulations and procedures, and in consultation with the relevant aviation agencies and stakeholders.

6.8.2 PRELIMINARY ASSESSMENT

A preliminary review of airports in the region surrounding the Project area was undertaken, and identified the following:

- Narromine Airport (YNRM) about 8.5 NM (15.8 km) southwest from the nearest WTG;
- Dubbo City Regional Airport (YSDU) about 8.9 NM (16.6 km) southeast from the nearest WTG; and
- Warren Airport (YWRN) about 33.5 NM (62 km) northwest from the nearest WTG.

Narromine Airport is home to the Narromine Gliding Club which accommodates a large gliding community. Recreational gliding takes place all year round and major gliding competitions including world championship events are regularly held. A flight training school, 'Wings Out West' is also located approximately 28 km southeast of the nearest proposed WTG.

Dubbo City Regional Airport is operated by Dubbo Regional Council and services regional destinations, including Sydney, and interstate destinations including Brisbane and Melbourne.

Aircraft landing areas (ALA; uncertified aerodromes) are likely to be located within 3 NM of the Project area. Identification and assessment of any nearby ALAs will be undertaken during the EIS.

6.8.3 EIS ASSESSMENT APPROACH

An Aviation impact Assessment (AIA) will be undertaken for the EIS in accordance with the 'National Airports Safeguarding Framework Guideline D: Managing Wind Turbine Risk to Aircraft' (NASAG, 2012). The AIA will assess any potential impacts to aviation safety associated with the Project and it will include consideration of:

- Potential impacts to aviation safety including wake / turbulence issues;
- The need for aviation safety lighting;
- Potential impacts to air traffic routes, heights procedures, radar and communications systems and navigation aids;
- Potential impacts on aerial emergency services, aerial firefighting, and aerial agricultural operations; and
- Required mitigation and management measures.

The assessment will address any aviation concerns raised during consultation with the community and key stakeholders and identify relevant mitigation strategies to be implemented where required. Consultation with the Civil Aviation Safety Authority, Royal Australian Air Force, Air Services Australia, and other relevant regulators (**Section 5**) will be undertaken to determine relevant aviation safety requirements (e.g., WTG lighting), notification and reporting requirements, and marking of turbines, wind monitoring towers, and overhead transmission lines and poles.

6.9 TELECOMMUNICATIONS

6.9.1 BACKGROUND

The operation of a wind farm has the potential to interfere with the electromagnetic signals associated with telecommunication services. Existing telecommunication services in the vicinity of the Project area include mobile phone services, radio communication services, television and radio broadcast services, and aircraft navigation services, which residents and local towns (including Narromine) are reliant upon.

6.9.2 PRELIMINARY ASSESSMENT

A search of the Australian Communication and Media Authority Site Location Map on 10 March 2025 identified 97 sites within 20 km of the Project boundary. These include point-to-point links for emergency services, meteorological radars, trigonometrical stations, citizen's band radio, mobile phone, wireless internet, satellite television and internet, radio broadcasting, and television broadcasting. The preliminary assessment indicates that at least one point-to-point link crosses the Project area.

6.9.3 EIS ASSESSMENT APPROACH

The assessment of potential telecommunications and electromagnetic interference (EMI) impacts associated with the Project will be undertaken in accordance with the 'Wind Energy Guideline' (NSW DPFI, 2024a) and the 'National Wind Farm Development Guidelines – Draft' (Draft National Guidelines) (EPHC, 2010).

While the 'Wind Energy Guideline' outlines the requirement of assessing EMI, they do not specify the methodology.

As such, the methods outlined in the Draft National Guidelines will be used to identify telecommunications site relevant to the Project, assess electromagnetic impacts, consult with affected asset operators, and develop mitigation measures to address residual impacts.

The Draft National Guidelines are considered to meet, if not exceed, the requirements of the SEARs and the 'Wind Energy Guideline' and are therefore appropriate to inform the method for the assessment.

The assessment of potential EMI impacts associated with the Project will consider:

- Fixed point-to-point links;
- Fixed point-to-multipoint links;
- Radiocommunication assets belonging to emergency services;
- Meteorological radars;
- Trigonometrical stations;
- Citizens band radio and mobile phones;
- Wireless internet;
- Satellite television and internet; and
- Broadcast radio and television.

Consultation with operators of potentially impacted services will be undertaken where necessary to verify the impact and, if needed, work to resolve any conflicts.

6.10 WATER RESOURCES

6.10.1 BACKGROUND

The construction, operation and decommissioning of wind farms, in the absence of management and mitigation measures, may impact water resources through pollution and modification.

Similarly, the hydrology and hydraulic characteristics of the Project area and surrounds need to be understood to determine whether flooding may impact the Project or, conversely, whether the Project may alter flood regimes and impact neighbouring areas.

By necessity, the construction of a wind farm requires the disturbance of soils associated with site establishment, installation of infrastructure and replacement of soils for revegetation. This can increase sediment runoff to adjacent environs, including waterways.

If not appropriately managed, construction equipment and procedures can introduce other pollutants to the environment, and these may find their way to adjacent waterways.

To facilitate access within the Project area, e.g., to WTG hardstand locations, ancillary infrastructure areas etc., upgrades to existing access tracks and/or the construction of new access tracks will be required. This may involve the construction of waterway crossings, which would modify the watercourse, and has the potential to introduce pollutants (e.g., sediments) to the waterway and downstream environs.

Operational and maintenance activities may also lead to impacts on water resources in the absence of management and mitigation measures.

6.10.2 PRELIMINARY ASSESSMENT

The Project area is in the Macquarie-Castlereagh catchment which is part of the larger Murray-Darling Basin (MDB). The Macquarie-Castlereagh catchment covers about 75,000 km², or 7% of the total MDB area, and provides about 8.4% of total inflow of surface water to the MDB. The Macquarie-Castlereagh catchment comprises three major river networks - the Castlereagh River, the Macquarie River and the Bogan River (MDBA, 2025). Elevations across the catchment range from 1,300 m in the Great Dividing Range to less than 100 m near Brewarrina. Below Dubbo, the valley mainly comprises flat alluvial plains with elevations less than 300 m.

Burrendong Dam on the Macquarie River is the largest water storage in the catchment with a capacity of about 1,190,110 megalitres. Burrendong Dam provides water for irrigation, town water, stock and domestic use.

The Macquarie River is the longest of the three major rivers in the catchment at about 960 km. It is also the closest to the Project area at about 5 km from the southern boundary of the Project. The Macquarie River originates in the Great Divided Range south of Bathurst and flows in a general northwest direction until it reaches the Barwon River near Brewarrina. Coolbaggie Creek, a tributary of Macquarie River, flows through the south-east and along the eastern boundary of the Project area.

The Ramsar listed Macquarie Marshes are located on the Macquarie River between Warren and Carinda, more than 150 km from the Project area.

The local hydrology of the Project area is provided in **Figure 6-6**.

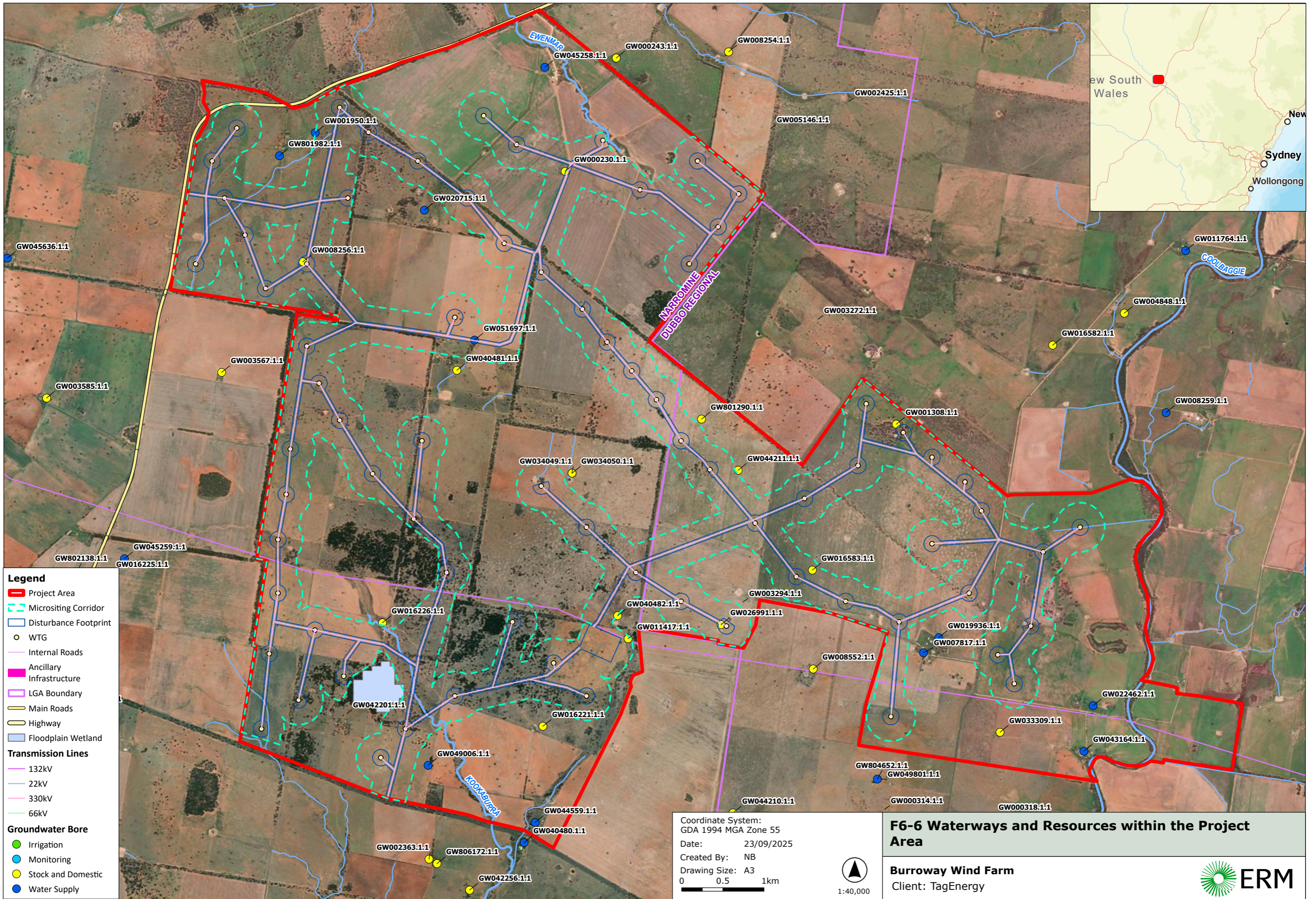
The Narromine LEP 2011 and Dubbo LEP 2022 do not show mapped flood prone lands within the Project area; however, an area mapped as 'wetland' in the Narromine LEP is in the southwest of the Project area.

6.10.3 EIS ASSESSMENT APPROACH

The assessment approach of water resources for the EIS will include:

- Flooding and Hydrology Assessment, including:
 - Assessment of existing flood behaviour through review of existing available data, developing computer models and defining flood levels, depths, velocities, and flood hazard category for the Project area for existing topographic conditions;
 - Post development flood behaviour, including quantifying flood levels, depths, velocities, and flood hazard category with the Project in place, and measures proposed to monitor, reduce, and mitigate impacts;
- Water impact assessment, including:
 - A review of standard construction environmental management plans to ensure that impacts during excavation, road works, and transport of machinery. are adequately mitigated through avoidance, minimisation, and management;
 - The assessment will consider the potential impacts of the Project on hydrology and groundwater and will determine the need for further hydrological investigations. The assessment will also identify and quantify sources of water required during construction and operation of the Project and determine whether any water access licences under the *Water Management Act 2000* are likely to be required;

- An assessment of the likely impacts on surface water and groundwater resources, including local waterbodies and GDEs; and
- Recommended mitigation and management measures to reduce potential impacts of the Project, including monitoring and adaptive management requirements.



6.11 AGRICULTURE AND LAND RESOURCES

6.11.1 BACKGROUND

Soils will be subject to disturbance during construction activities associated with site establishment, installation of infrastructure and replacement of soils for revegetation. Both the construction and operation of the Project may impact agricultural activities and production.

6.11.2 PRELIMINARY ASSESSMENT

A preliminary review of the Land and Soil Capability (LSC) mapping data for NSW (NSW Government, 2021) indicates there are two LSC classes within the Project area:

- LSC Class 4 (moderate to severe limitations) comprising small areas in the south of the Project; and
- LSC Class 3 (moderate limitations) across the remainder to the Project area.

A preliminary map of LSC classes in the vicinity of the Project area is provided in **Figure 6-7**.

A search of the 'Australian Soil Classification (ASC) Soil Type Map of NSW' (NSW Government, 2012) shows that the Project area has the following soils:

- Chromosols;
- Kandosols; and
- Sodosols.

A map of the ASC in proximity to the Project area is provided in **Figure 6-8**. A small area of biophysical strategic agricultural land (BSAL) occurs within the Project area; however, it does not occur within the preliminary development footprint or micro-siting corridor (**Figure 6-8**).

There are no critical industry clusters near the Project area.

The Project area is currently used for agricultural enterprise including cropping and grazing. Impacts to these enterprises are inevitable during construction; however, these impacts are likely to be negligible and offset by the benefits the Project will have for host landowners and their farming operations.

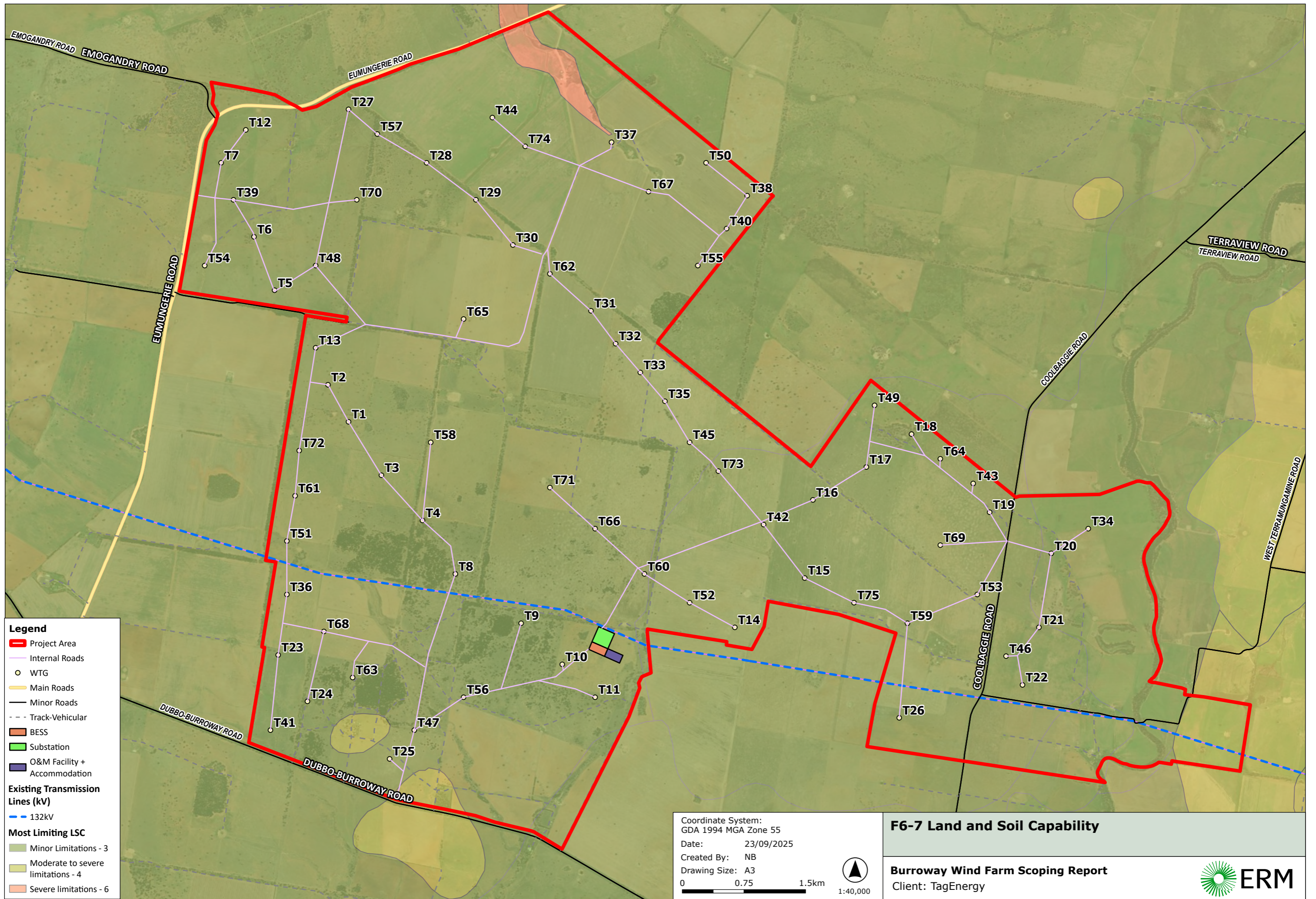
6.11.3 EIS ASSESSMENT APPROACH

An Agricultural and Soil Assessment will be undertaken for the EIS. The assessment will focus on assessing the impacts on the soil and LSC of the Project area that may result because of the Project. The assessment will also consider the potential impacts on agricultural resources, enterprises, and industries, at the scale of the Project area and surrounding locality/region. Appropriate mitigation measures will be proposed to minimise potential impacts.

The Agricultural and Soil Assessment will generally consider the requirements included in:

- 'Soil and Landscape Issues in Environmental Impact Assessment' (Gray, 2000);
- 'Land Use Conflict Risk Assessment Guide' (LUCRA Guide) (DPI, 2011);
- 'Landslide Risk Management Guidelines' (AGS, 2007);
- 'Site Investigations for Urban Salinity' (Department of Land and Water Conservation, 2002);
- 'Guidelines for surveying Soil and Land Resources' (NJ McKenzie, 2008);
- 'The Australian Soil Classification' (Isbell, 2021));

- 'Australian Soil and Land Survey Field Handbook' (NCST, 2009);
- 'The land and soil capability assessment scheme' (Office of Environment and Heritage, 2012);
- 'Interpreting Soil Test Results – What do all the numbers mean?' (Hazelton, 2007);
- 'Concepts and Rationale of the Australian Soil Classification' (Isbell, 1997); and
- 'Managing Urban Stormwater: Soils and Construction' (Landcom, 2004).



Legend

- ▬ Project Area
- ▬ Internal Roads
- WTG
- ▬ Main Roads
- ▬ Minor Roads
- - - Track-Vehicular
- BESS
- Substation
- O&M Facility + Accommodation

Existing Transmission Lines (kV)

- - - 132kV

Most Limiting LSC


- Minor Limitations - 3
- Moderate to severe limitations - 4
- Severe limitations - 6

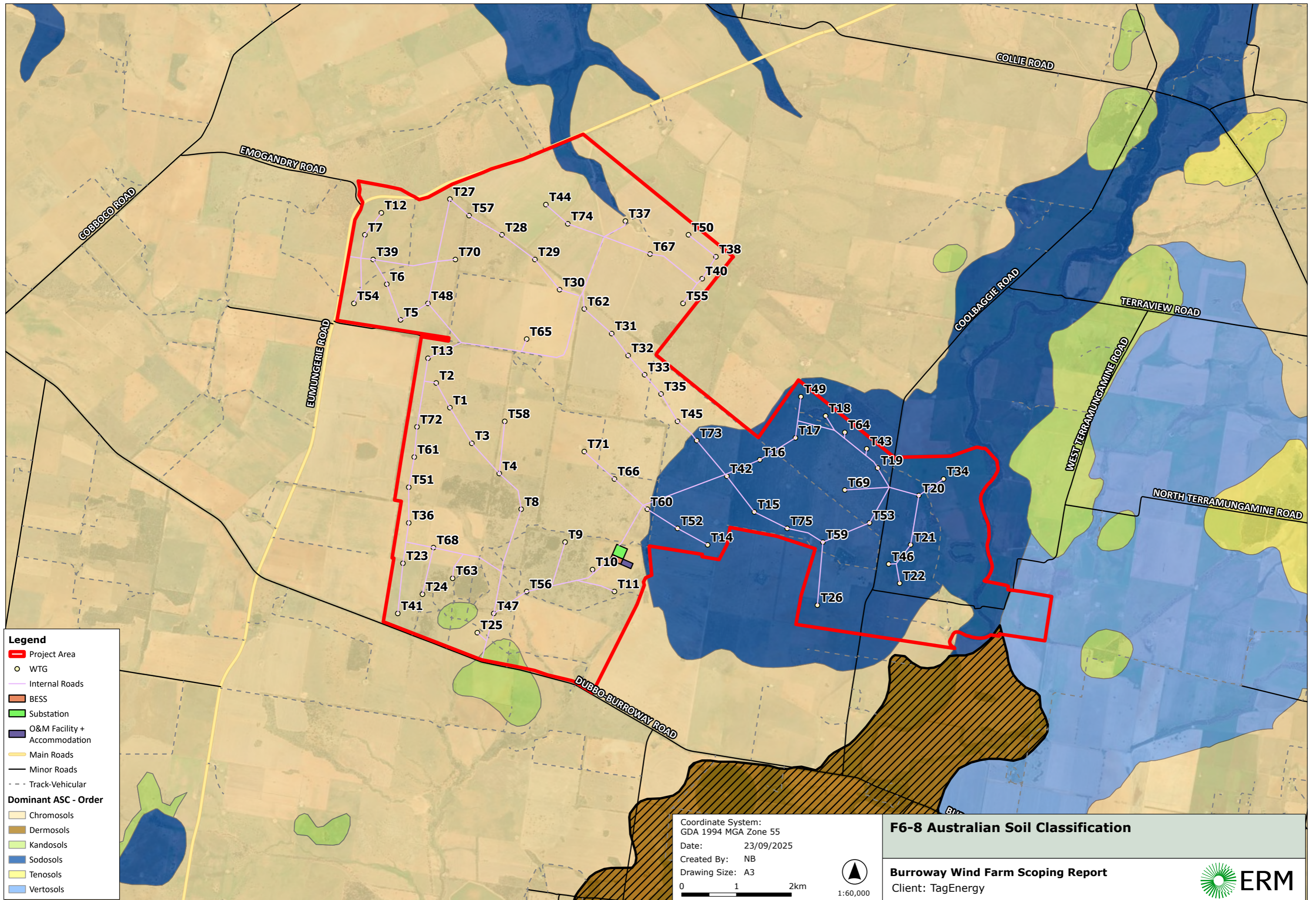
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F6-7 Land and Soil Capability

Burroway Wind Farm Scoping Report
Client: TagEnergy





Legend

- ▬ Project Area
- WTG
- Internal Roads
- ▬ BESS
- ▬ Substation
- ▬ O&M Facility + Accommodation
- ▬ Main Roads
- ▬ Minor Roads
- - - Track-Vehicular

Dominant ASC - Order

- ▬ Chromosols
- ▬ Dermosols
- ▬ Kandosols
- ▬ Sodosols
- ▬ Tenosols
- ▬ Vertosols

Coordinate System:
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F6-8 Australian Soil Classification

Burroway Wind Farm Scoping Report
Client: TagEnergy



6.12 SOCIAL AND ECONOMIC²

This section provides the first phase Social Impact Assessment (SIA) for the Project. The first phase of SIA aligns with the DPHI 'Social Impact Assessment Guideline for SSD Projects' (SIA Guideline) (NSW DPHI, 2025) and Technical Supplement: Social Impact Assessment Guideline for State Significant Projects (SIA Technical Supplement) (DPHI, 2025b).

The first phase of SIA involves scoping and preliminary assessment and sets further parameters for the second phase of SIA (the assessment report to be appended to the EIS. Accordingly, the first phase of SIA includes:

- A definition of the Project Social Locality;
- A description of the social baseline including the profile of the community in the Social Locality;
- A preliminary assessment of potential social impacts to inform Project refinement; and
- An outline of the approach that will be undertaken to complete the second phase of SIA.

Construction of the Project would require the procurement of broad array of materials, equipment, products, and services. It is the intent of the Applicant to procure as much as possible from within the Narromine Shire LGA and Dubbo Regional LGA.

Construction supplies and construction-related services, including local civil, labouring, and electrical businesses are likely to benefit from the Project. Additionally, because of the inter-linkages between sectors, many indirect businesses would also benefit through increased economic activity.

The 250 FTE construction workforce is likely to increase demand for food, accommodation, and other goods, which would deliver a positive impact to the region in towns such as Narromine, Dubbo, and Trangie.

During operations, the Project would provide a long-term benefit to the local economy through employment and procurement opportunities, as well as the establishment of a CBF.

6.12.1 SOCIAL LOCALITY

The scoping SIA helps define the social area of influence, or 'Social Locality' of the Project. Determining the 'Social Locality' for the Project involves understanding the nature of the Project, the characteristics of the surrounding communities, and how potential positive and/or negative impacts will be experienced by different community members/groups.

Accordingly, the following is to be considered when defining the 'Social Locality':

- The location and layout of the proposed Project as well as the associated components within the overall Project area relative to sensitive land uses, being residential dwellings and structures. This included proximity to environmental values and topographical features;

² The first phase SIA Report, included in the Scoping Report, was completed by Loucky Spit, lead author, and contains all relevant information. The lead author holds MSc in Social Sciences (International Relations) from the University of Amsterdam. The Report was completed in good faith in accordance with the relevant ethical frameworks, and to the lead author's knowledge does not contain any false or misleading information.

- Construction and operation phase activities, such as:
 - Land clearing and ongoing access for maintenance;
 - Workforce requirements, including skills required and accommodation arrangements;
 - Goods and services required by the Project; and
 - Haulage routes to and from the Project area.

When considering these aspects, it was determined that the Project 'Social Locality' should include the:

- Project area;
- Area surrounding the Project area wherein noise, visual and other amenity impacts may occur;
- Haulage routes where similar amenity impacts may be experienced; and
- Communities in larger nearby centres that may provide accommodation, workers or goods and services to the Project.

The Project is in Burroway, NSW, in the Narromine Shire LGA and the Dubbo Regional LGA. The Project area is approximately 21.5 km (direct) northwest of Dubbo and 17.5 km (direct) northeast of Narromine. The roads connecting to the Project site are shown in **Table 6-12**.

TABLE 6-12 ROAD CLASSIFICATIONS

Road	Authority	OSOM Vehicles Approved Road
Dubbo-Burroway Road	Local	No
Eumungerie Road	Local	No
Collie Road	Local	Yes
Coolbaggie Road	Local	No

6.12.1.1 APPROACH TO DETERMINING THE 'SOCIAL LOCALITY'

Based on the above, the Project's 'Social Locality', as defined for the purposes of the SIA, is comprised of the following:

- **The Project and immediate surrounding areas:** The Project is located within the Australian Bureau of Statistics (ABS) Statistical Area Level 1 (SA1) Nos. 10503110502 and 10503110302. It is adjacent to SA1 10503110309 (adjacent to the Project Boundary in the southeast), SA1 10503110403 (adjacent to the Project Boundary in the north), and SA1 10503110308 (adjacent to the Project Boundary in the south);
- **The possible transportation and haulage routes to the Project:** Primary access to the Project during construction and operations is proposed via the existing road network. Roads surrounding the Project area include the Dubbo-Burroway Road on the south side, Eumungerie Road on the north and west side, Collie Road on the northeast side, and Coolbaggie Road on the west side. All plant is expected to be delivered from the Port of Newcastle; and
- **The surrounding towns and regional centres** within a one-hour driving distance and a population over 800 people. These include Narromine, Dubbo, Gilgandra and Wellington, which may provide goods and services to support the construction phase of the Project.

This 'Social Locality' will enable the following types of comparative statistical analysis in the second phase SIA:

- **Rural-urban analysis:** UCLs establish baseline data for urban areas whilst SA1s surrounding the UCLs represent low-density rural areas, which allows for a rural-urban analysis;
- **Hierarchical spatial analysis:** LGA and State data is included to allow for a hierarchical spatial analysis comparing local areas (SA1s and UCLs) to regional and state baselines; and
- **Time-series analysis:** Including ABS data from the two most recent census years (currently 2016 and 2021) will allow for a time-series analysis to identify positive and negative socio-economic trends.

ABS SA1 data has been used to identify key baseline indicators for the 'Social Locality', where applicable. ABS Urban Centres and Localities (UCLs) and Significant Urban Areas (SUAs)³ provide baseline data for the relevant towns. Additionally, LGA level data for the Narromine LGA and Dubbo Regional LGA, and State and Territory level data for NSW were used to provide an understanding of the broader and comparative social context within which the Project is located.

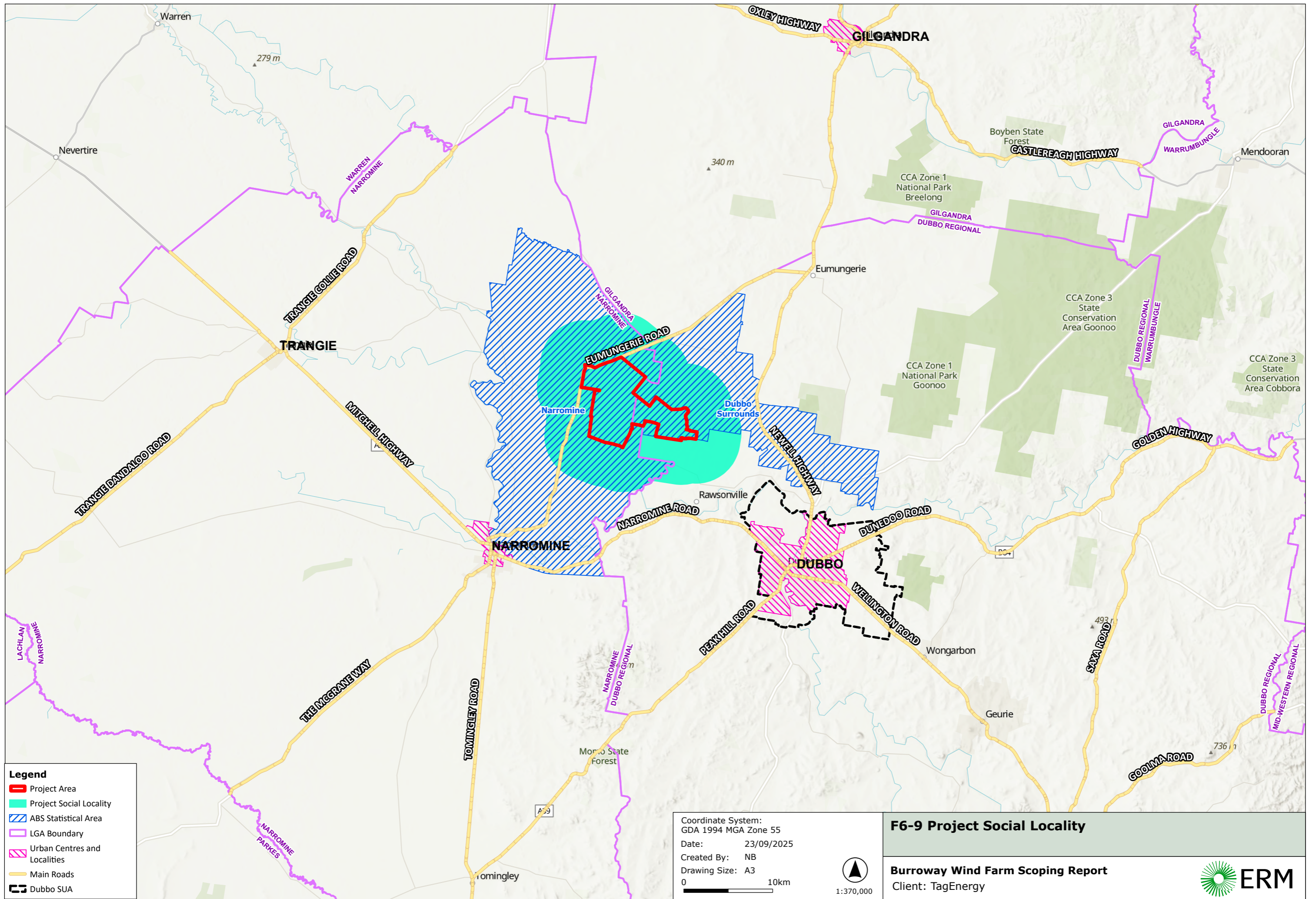
Table 6-13 provides an overview of the approximate distances of the UCLs and SUA to the Project area.

TABLE 6-13 APPROXIMATE DISTANCES TO THE PROJECT AREA

Town/Regional Centre (UCLs and SUA)	Travel Distance (direct) (km)	Travel Time (min)
Narromine (UCL)	17.5 km	19 min
Dubbo (SUA)	21.5 km	26 min
Gilgandra (UCL)	65.5 km	42 min
Wellington (UCL)	82.8 km	63 min

The Project's 'Social Locality' is shown in **Figure 6-9**.

³ For Dubbo, baseline data of Dubbo SUA - rather than Dubbo UCL - is used as Dubbo's SUA covers a slightly larger population (40,578 people compared to 38,783 people in 2021). Dubbo is the only of the four (4) relevant towns which is a SUA.




Legend

- Project Area
- Project Social Locality
- ABS Statistical Area
- LGA Boundary
- Urban Centres and Localities
- Main Roads
- Dubbo SUA

Coordinate System:
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F6-9 Project Social Locality

Burroway Wind Farm Scoping Report
Client: TagEnergy



6.12.1.2 COMMUNITY PROFILE

The community profile presented in this section will inform the social baseline in the second phase SIA and is largely based on ABS 2016 and 2021 census data.

Table 6-14 outlines the primary ABS datasets used to provide key demographic data across the Project's 'Social Locality'. For the purposes of the first phase SIA, only 2021 ABS datasets (i.e., latest available) were considered; however, in the second phase SIA, relevant 2016 ABS data will also be used for the purposes of trend analysis.

TABLE 6-14 SUMMARY OF RELEVANT ABS DATASETS

Social Locality Categories	Location	2016 ABS Data Reference (Census)	2021 ABS Data Reference (Census)
Immediate surrounds	Relevant SA1s		
	SA1 containing the Project area	1110502	10503110502
	SA1 containing the Project area	1110302	10503110302
	SA1 adjacent southeast of the Project area	1110309	10503110309
	SA1 adjacent north of the Project area	1110403	10503110403
	SA1 adjacent south of the Project area	1110308	10503110308
Surrounding towns and regional centres	Relevant UCLs		
	Narromine UCL	115105	115111
	Gilgandra UCL	115062	115065
	Wellington UCL	115150	115155
	Relevant SUAs		
	Dubbo SUA	1011	1012
Broader comparative context	Relevant LGAs		
	Narromine LGA	15850 Narromine (A)	15850 Narromine
	Dubbo Regional LGA	18230 Western Plains Regional (A)	12390 Dubbo Regional
	Relevant STEs		
NSW STE	Code 1	Code 1	

In addition to the above listed ABS datasets, the second phase SIA social baseline will be informed by a desktop review of sources including from public health advisory bodies, principally NSW Health and local hospitals (i.e., regarding physical and mental health issues prevalent in the local community), and educational institutions, principally the NSW Department of Education and local schools. Information relating to the economic profile of the Project is also provided by ABS 2016 and 2021 Census data, while information on developmental priorities and challenges in the region will be provided by local and state government planning documents, such as Narromine and Dubbo Regional LGA's Local Strategic Planning Statements.

6.12.1.3 DEMOGRAPHIC OVERVIEW

Table 6-15 draws on the ABS datasets listed in **Table 6-14** to provide a demographic overview of the Project's 'Social Locality'. The Project area is located within SA1 10503110502 and SA1 10503110302, which have small populations and a median age of 37 and 43. The highest unemployment rate in the 'Social Locality' was found in Wellington (7.7%), which is higher than that of NSW (4.9%).

6.12.1.4 SOCIO-ECONOMIC CONDITIONS

Table 6-15 also includes the ABS' Socio-Economic Indexes for Areas (SEIFA)⁴ based on 2021 census to provide an IRSAD (ABS, 2023). The ABS broadly defines socio-economic advantage and disadvantage in the SEIFA as, "...people's access to material and social resources" at an area rather than individual level (ABS, 2023). A lower SEIFA score (<50) indicates that an area is relatively disadvantaged compared to an area with a higher score (>50). The SEIFA scores in **Table 6-15** are a percentile score, which divides a distribution into 100 equal groups. The lowest scoring 1% of areas are given a percentile number of 1 and the highest 1% of areas are given a percentile number of 100. A score of 50 suggests an area is neither advantaged nor disadvantaged. This report uses the percentile ranking within State or Territory.

SEIFA analysis

Table 6-15 shows that SA1 10503110403 (percentile 45) can be considered as relatively less advantaged, whilst the other locations within the Social Locality range percentiles from 51 to 69, which demonstrates these locations can be considered as relatively advantage in comparison to other areas within the State.

The locations within the 'Social Locality' score well compared to the Narromine LGA. Narromine LGA has a percentile of 27 and is significantly less advantaged than the State. Dubbo Regional LGA's percentile of 53 is comparable with that of the locations within the 'Social Locality'.

⁴ SEIFA is a product developed by the ABS that ranks areas in Australia according to relative socio-economic advantage and disadvantage. The indexes are based on information from the five-yearly Census, available at: <https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/latest-release>. SEIFA combines Census data such as income, education, employment, occupation, housing and family structure to summarise the socio-economic characteristics of an area. Each area receives a SEIFA score, referred to as the socio-economic advantage and disadvantage score, indicating how relatively advantaged or disadvantaged that area is compared with other areas.

TABLE 6-15 KEY INDICATORS FOR ALL ABS DATASETS (2021) ACROSS THE PROJECT'S SOCIAL LOCALITY

Population	Median Age	Indigenous Pop. (%)	Pop. over 65 Years of Age	Median Weekly Household Income (\$)	Unemployment (%)	SEIFA (IRSAD ⁵ percentile in NSW)	Dwelling count (occupied/unoccupied) (%)	Dwelling tenure (owned outright / mortgaged / rented) (%)	Household composition (families/ singles/ group) (%)
SA1 10503110502 (Containing the Project area)									
373	↓ 37	↑ 58 (15.5)	↓ 41 (11.8)	↑ 2,025	↑ 10 (5.4)	↑ 51	105 (96.3) / 4 (3.7)	40 (38.1) / 36 (34.3) / 16 (15.2)	82 (79.6) / 21 (20.4) / 0 (0)
SA1 10503110302 (Containing the Project area)									
232	↑ 43	↑ 24 (10.3)	↑ 52 (21.7)	↓ 1,771	↓ 0 (0)	↑ 55	71 (88.8) / 10 (12.5)	33 (46.5) / 35 (49.3) / 3 (4.2)	57 (83.8) / 8 (11.8) / 3 (4.4)
SA1 10503110309 (Adjacent southeast of the Project area)									
314	↓ 37	↑ 13 (4.1)	↓ 47 (14.8)	↑ 2,374	↓ 3 (1.8)	↑ 69	97 (89.8) / 8 (7.4)	31 (32) / 50 (51.5) / 9 (9.3)	86 (83.5) / 11 (10.7) / 6 (5.8)
SA1 10503110403 (Adjacent north of the Project area)									
267	↑ 48	↑ 31 (11.6)	↑ 53 (19.9)	↓ 1,394	↓ 0 (0)	↓ 45	84 (85.7) / 15 (15.3)	32 (38.1) / 24 (28.6) / 12 (14.3)	71 (84.5) / 13 (15.5) / 0 (0)
SA1 10503110308 (Adjacent at the south of the Project area)									
196	↑ 50	↑ 16 (8.2)	↑ 38 (20.3)	↑ 2,042	↓ 0 (0)	↑ 68	66 (94.3) / 4 (5.7)	30 (45.5) / 32 (48.5) / 0 (0)	48 (78.7) / 13 (21.3) / 0 (0)
115111 (Narromine UCL)									
3,507	~ 39	↑ 872 (24.9)	↑ 643 (22.8)	↓ 1,159	↑ 80 (5.8)	/	1,275 (88.5) / 164 (11.4)	504 (39.5) / 366 (28.7) / 352 (27.6)	835 (66) / 396 (31.3) / 35 (2.8)
115065 (Gilgandra UCL)									
2,417	↑ 47	↑ 488 (20.2)	↑ 644 (26.6)	↓ 1,022	↑ 66 (7.2)	/	947 (85.3) / 162 (14.6)	356 (37.6) / 204 (21.5) / 313 (33.1)	593 (62.2) / 336 (35.3) / 24 (2.5)

⁵ Index of Relative Socio-Economic Advantage and Disadvantage

Population	Median Age	Indigenous Pop. (%)	Pop. over 65 Years of Age	Median Weekly Household Income (\$)	Unemployment (%)	SEIFA (IRSAD ⁵ percentile in NSW)	Dwelling count (occupied/unoccupied) (%)	Dwelling tenure (owned outright / mortgaged / rented) (%)	Household composition (families/ singles/ group) (%)
115155 (Wellington UCL)									
4,582	↑ 41	↑ 1,253 (27.4)	↑ 1,033 (22.7)	↓ 1,060	↑ 128 (7.7)	/	1,700 (85.6) / 287 (14.4)	618 (36.4) / 443 (26.1) / 567 (33.4)	1,033 (60.7) / 609 (35.8) / 61 (3.6)
1012 (Dubbo SUA)									
40,578	↓ 35	↑ 6,600 (16.3)	↓ 6,693 (16.5)	↓ 1,658	↓ 697 (3.5)	/	14,582 (93.5) / 1,018 (6.5)	3,943 (27) / 4,896 (33.6) / 5,165 (35.4)	10,009 (68.7) / 4,040 (27.7) / 527 (3.6)
15850 (Narromine LGA)									
6,360	↑ 41	↑ 1,300 (20.4)	↑ 1,387 (21.8)	↓ 1,308	↓ 121 (4.4)	↓ 27	2,221 (87.6) / 317 (12.5)	938 (42.4) / 640 (28.8) / 533 (24)	1,522 (68.4) / 649 (29.2) / 54 (2.4)
12390 (Dubbo Regional LGA)									
54,922	↓ 36	↑ 9,101 (16.6)	↓ 9,484 (17.3)	↓ 1,597	↓ 946 (3.6)	↑ 53	19,279 (92.2) / 1,623 (7.8)	5,850 (30.3) / 6,544 (33.9) / 6,074 (31.5)	13,367 (69.4) / 5,256 (27.3) / 650 (3.4)
Code 1 (NSW STE)									
8,072,163	39	278,043 (3.4)	1,424,141 (17.7)	1,829	189,852 (4.9)	/	2,900,468 (90.6) / 299,524 (9.4)	914,537 (31.5) / 942,804 (32.5) / 944,585 (32.6)	2,065,107 (71.2) / 723,716 (25) / 111,646 (3.8)

↑↓ Demographic indicator suggests negative social impact, socio-economic disadvantage and/or sensitivity/vulnerability to the Project.

↑↓ Demographic indicator suggests positive social impact, socio-economic advantage and/or resilience to the Project.

↑ Above state average.

↓ Below state average.

~ Equal to state average.

*Note: SEIFA is not provided for ABS UCL Statistical Areas.

6.12.1.5 ECONOMIC PROFILE

Table 6-16 provides a categorisation of the industry of employment data for the ABS statistical areas likely to service and accommodate the construction workforce based on five (5) categories (ordered from largest to smallest):

- Health and Public Services⁶;
- Commercial and Retail Services⁷;
- Construction and Infrastructure⁸;
- Industrial and Manufacturing Services⁹; and
- Agriculture and Primary Production¹⁰.

Coding ABS industry of employment data into these five (5) categories enables a comparative analysis of industry data and clearly highlights trends through applying conditional formatting¹¹.

Table 6-16 shows there is a diverse range of industries across the 'Social Locality', with the largest portion of workers active in the 'health and public services' industry and the smallest industry category 'agriculture and primary production'.

TABLE 6-16 CATEGORISATION OF TOP INDUSTRIES IN DIRECTLY IMPACTED AREAS

Location ¹²	Agriculture and Primary Production (no.)	Health and Public Services (no.)	Commercial and Retail Services (no.)	Industrial and Manufacturing (no.)	Construction and Infrastructure (no.)
Surrounding towns and regional centres					
Narromine UCL	131	275	166	87	95
Gilgandra UCL	55	255	101	26	51
Wellington UCL	57	434	181	38	164
Dubbo SUA	377	5,533	2,472	1,362	1,713
Total	620	6,497	2,920	1,513	2,023
Broader comparative context					

⁶ Health and Public Services combines the following ABS categories: 'Public Administration and Safety' and 'Health Care and Social Assistance'.

⁷ Commercial and Retail Services combines the following ABS categories: 'Retail Trade' and 'Wholesale Trade'.

⁸ Construction and Infrastructure refers to the following ABS category: 'Construction'.

⁹ Industrial and Manufacturing Services combines the following ABS categories: 'Manufacturing' and 'Mining'.

¹⁰ Agriculture and Primary Production refers to the following ABS category: 'Agriculture, Forestry and Fishing'.

¹¹ Conditional formatting was applied by rows to represent the diversity of each statistical area.

¹² These ABS statistical areas were chosen to represent the areas with potential for direct social impacts.

Location ¹²	Agriculture and Primary Production (no.)	Health and Public Services (no.)	Commercial and Retail Services (no.)	Industrial and Manufacturing (no.)	Construction and Infrastructure (no.)
Narromine LGA	617	460	256	135	182
Dubbo Regional LGA	1,202	6,858	3,076	1,684	2,301

Table 6-17 suggests that most local construction workers, if available, may be sourced from Dubbo SUA. There is a total of 958 people with relevant occupations in the Narromine LGA, 7,828 in Dubbo Regional LGA, and 7,277 in the regional centres within a one-hour commute of the Project.

Nationally, 'Technicians and Trades Workers', 'Labourers' and 'Machinery operators and drivers' have some of the largest proportion of independent contractors (13.5%, 5.8% and 3.9%, respectively), which is an indicator for existing employee mobility within the workforce (ABS, 2024b).

TABLE 6-17 CATEGORIZATION OF RELEVANT TOP OCCUPATIONS IN THE SOCIAL LOCALITY

Location	Technicians and Trades Workers (no.)	Machinery Operators and Drivers (no.)	Labourers (no.)	Total
Surrounding towns and regional centres				
Narromine UCL	193	145	182	520
Gilgandra UCL	123	75	118	316
Wellington UCL	200	131	252	583
Dubbo SUA	2,726	1,144	1,988	5,858
Broader comparative context				
Narromine LGA	338	296	324	958
Dubbo Regional LGA	3,556	1,580	2,692	7,828

6.12.1.6 SOCIAL INFRASTRUCTURE OVERVIEW

Social infrastructure is a term that covers a wide range of services and facilities that meet community needs for education, health, social support, recreation, cultural expression, social interaction and community development. This includes schools and other educational institutions, medical services, emergency services, recreational facilities, community organizations, as well as some commercial services like childcare facilities and recreational sports.

Table 6-18 shows that Dubbo is likely to provide most goods and services to support the construction and operational phases of the Project.

Dubbo has a total of 126 social infrastructure services, which is 54.3% of the total number identified across the Social Locality. The other UCLs may provide additional support.

TABLE 6-18 SUMMARY OF SOCIAL INFRASTRUCTURE

Services and Organisations	Narromine UCL	Gilgandra UCL	Wellington UCL	Dubbo SUA	Total
Health					
Hospitals	1	1	1	3	6
Medical Centres / Dental	1	4	4	12	21
Family and Education					
Childcare	3	2	3	22	30
Primary schools	3	2	3	10	18
Secondary schools	1	1	1	7	10
Tertiary education facilities	1	1	1	2	5
Recreation and Community					
Swimming Pools	2	1	1	4	8
Sporting facilities	4	2	3	10	19
Fitness Centres	4	1	3	13	20
Shopping Centres	1	0	0	7	8
Post Offices	1	1	1	5	8
Libraries	2	2	1	2	7
Place of worship	4	6	7	17	34
Transport					
Airport	1	1	0	1	3
Bus routes	3	5	4	5	17
Train (passenger)	0	1	1	1	3
Emergency Services					
State Fire Emergency	1	1	2	3	7
Police	2	1	1	1	5
Ambulance	1	1	1	1	4
Total	34	34	38	126	232

6.12.2 POTENTIAL SOCIAL IMPACTS

The first phase SIA provides a preliminary desktop assessment of the potential impacts while the second phase SIA, that will be incorporated into the EIS, develops this preliminary assessment into a full assessment report. The full assessment report provides a detailed analysis of the potential impacts and incorporates key stakeholder feedback.

The scoping of potential social impacts was initially facilitated through consideration of the SIA Scoping Tool (DHI, 2025d) that complements the SIA Guideline. The SIA Scoping Tool identifies the potential social impacts that are considered likely to occur, and the corresponding level of assessment for each potential social impact. Use of the updated SIA Scoping Tool allows for the level of assessment to be identified, which in this case was determined to be 'detailed assessment'.

The methodology that will be followed in the second phase SIA is provided in **Section 6.12.3**. The second phase SIA will also consider potential cumulative impacts in view of recent and proposed renewable energy projects, and other large-scale projects in the Project 'Social Locality'.

As this is a first phase SIA, this impact assessment is preliminary in nature and makes assumptions about community perceptions and potential impacts from the Project, based on the desktop review, prior Wind Farm SIA experience, and the outcomes of the engagement activities carried out to-date. The identified potential impacts listed in **Table 6-19** will be verified, supplemented by stakeholder feedback, and reviewed against any changes associated with further design development after issuing the SEARs.

It should be noted that the Project is continuously evolving and improving, and as such the outcomes of this preliminary assessment will be used to inform future refinements as part of the ongoing design development. Furthermore, given the operational timeframe for the Project (30 years), components of the Project may be upgraded to prolong the life of operation or decommissioned and the land returned to the original land use. For the purposes of this first phase SIA and the second phase SIA; therefore, a future decommissioning phase are not to be assessed. The potential social impacts associated with the decommissioning of the Project will be considered as part of a Decommissioning Plan (or similar).

TABLE 6-19 PRELIMINARY SOCIAL IMPACT ASSESSMENT

Description of Impact	Impact Categories	Impact Influence	Project Phase	Level of Assessment
Employment and Procurement				
Increased demand for labour in the Social Locality (generates direct and indirect employment opportunities)	Way of life, livelihoods	Positive	Construction	Detailed Assessment
Increased demand for labour in the Social Locality leading to a skill shortages/ reduced labour availability for local services and/or businesses	Way of life, livelihoods	Negative	Construction	Detailed Assessment

Description of Impact	Impact Categories	Impact Influence	Project Phase	Level of Assessment
Increased demand for goods and services in the Social Locality (stimulates local economies)	Way of life, livelihoods	Positive	Construction	Detailed Assessment
Increased demand for goods and services in the Social Locality (creates shortages)	Way of life, livelihoods	Negative	Construction	Detailed Assessment
Diversification of income streams for Associated landowners	Way of life, livelihoods	Positive	Operation	Detailed assessment
Accommodation and Workers Influx				
Increased demand / pressures on housing and accommodation potentially resulting in a shortage and/or increased cost of living	Livelihood, Community, Way of life, accessibility	Negative	Construction	Detailed assessment
Increased demand and pressure on social, emergency, community, and recreational services and/or facilities including health care.	Way of life, community, accessibility, health and wellbeing	Negative	Construction	Detailed assessment
Local Disruptions				
Impacts to existing agricultural operations, including efficiency of aerial agricultural applications in the vicinity of Project	Way of life, livelihoods	Negative	Operation	Detailed assessment
Impacts associated with noise, vibration, and dust, which may cause impacts or disruptions to community health.	Way of life, community, health and wellbeing, surroundings	Negative	Construction	Detailed assessment
Increased vehicular movement from workers employed by the Project, and the transportation of materials and equipment to site, increasing the potential for accidents and wear and tear on road infrastructure.	Way of life, community, accessibility, health and wellbeing	Negative	Construction	Detailed assessment
Interruptions to daily life, such as changes in traffic conditions (e.g. diversions for school buses, road closures, changes to public vehicular access), utility disruptions, etc.	Way of life, community, accessibility, health and wellbeing	Negative	Construction	Detailed Assessment

Description of Impact	Impact Categories	Impact Influence	Project Phase	Level of Assessment
Land Use and Landscape				
Perceived impacts to land values	Way of life, livelihoods	Negative	Life of Project	Detailed assessment
Visual impact through altered rural character/changes to rural amenity (i.e. loss of scenic views and negative changes to visual amenity)	Way of life, community, culture, health and wellbeing	Negative	Operation	Detailed assessment
Altered landscape has the potential to impact tangible and intangible Aboriginal heritage	Culture	Negative	Life of the Project	Detailed Assessment
Stakeholders and Community				
Perceived health impacts, including from Electromagnetic Interference (EMI), shadow flicker, blade throw and noise	Way of life, community, culture, health and wellbeing	Negative	Operation	Detailed assessment
Reduced community cohesion and increased social tensions if appropriate management and/or mitigations are not implemented.	Community, Health and Wellbeing, Decision-making Systems, Way of life	Negative	Life of Project	Detailed assessment

6.12.3 ASSESSMENT APPROACH

The second phase SIA will be prepared in accordance with the requirements of the Social Impact Assessment Guideline and its Technical Supplement (NSW DPHI, 2025; DPHI, 2025b) and will be structured according to the following sections:

- **Introduction, Project Description, Regulatory Context:** This section will provide a detailed overview of the project locale, components, stages, and history. It will also provide a detailed review of the legislative and regulatory framework applicable to the SIA, considering relevant company policies.
- **Methodology:** The impact assessment methodology to be applied to the second phase SIA follows DPHI's Social Impact Significance matrix (DPHI, 2025b), as depicted in **Table 6-20**. In this matrix, the likelihood level refers to the probability of a social impact's occurrence as a result of the Project while the magnitude is considered in terms of the following elements. The *likelihood* level refers to the probability of a social impact occurring as a result of the Project, while the *magnitude* is considered as a combination of the following characteristics rated from very low to very high:
 - **Extent:** Which location(s) and people are affected? (e.g. near neighbours, local, regional, future generations). Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any vulnerable people?

- **Duration:** When is the social impact expected to occur? Will it be time-limited (e.g., over particular Project phases) or permanent?
- **Severity:** What is the likely scale or degree of change? (e.g., mild, moderate, severe).
- **Sensitivity:** How sensitive/vulnerable (or how adaptable/resilient) are affected people to the impact, or (for positive impacts) how important is it to them? This might depend on the value they attach to the matter; whether it is rare/unique or replaceable; the extent to which it is tied to their identity; and their capacity to cope with or adapt to change.
- **Level of Concern/Interest:** How concerned/interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/or severity. Concern itself can lead to negative impacts, while interest can lead to expectations of positive impacts.

The *magnitude* for each impact from the following five levels can then be defined on the following scale:

- **Transformational:** Substantial change experienced in community wellbeing, livelihood, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20% of a community.
- **Major:** Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time, or affecting many people in a widespread area.
- **Moderate:** Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
- **Minor:** Mild deterioration/improvement, for a reasonably short time, for a small number of people who are generally adaptable and not vulnerable.
- **Minimal:** Little noticeable change experienced by people in the locality.

The characteristics of the magnitude of impact combined with their likelihood of occurrence to yield a rating of social impact significance, as indicated in Table 6-20. The social impact significance matrix depicted in **Table 6-20** will be applied to yield the initial evaluation of social impacts that are likely to be experienced by different groups within the Project’s ‘Social Locality’.

TABLE 6-20 ADAPTED DPHI SOCIAL IMPACT SIGNIFICANCE MATRIX (DPHI, 2025B)

		Magnitude level				
		1 Minimal	2 Minor	3 Moderate	4 Major	5 Transformational
Likelihood level	A Almost certain	Low	Medium	High	Very High	Very High
	B Likely	Low	Medium	High	High	Very High
	C Possible	Low	Low	Medium	High	High
	D Unlikely	Negligible	Low	Low	Medium	High
	E Very unlikely	Negligible	Negligible	Low	Medium	Medium

*Where impacts are positive the following colour scale is used:

Positive		Low	Medium	High	Very High
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- **'Social Locality' and Stakeholder Identification:** This section will elaborate on the preliminary outline of the Project's 'Social Locality'. The update will incorporate regulator feedback and provide an updated stakeholder list as the SIA moves into the second phase, and more information becomes available;
- **Stakeholder Engagement relevant for the SIA:** This section summarises the community and stakeholder engagement activities and outcomes relevant to the SIA that have been undertaken during ongoing stakeholder engagement for the Project, and during targeted engagement for the SIA;
- **Social Baseline:** This section will update and expand on the community profile outlined above. The preliminary desktop assessment will be supplemented and verified with data obtained during fieldwork, including from stakeholder engagement activities outlined above;
- **Impact Assessment and Management:** This section will update and expand on the preliminary SIA outlined above, providing an impact assessment informed by the baseline data, technical studies, and stakeholder engagement. Two ratings will be provided in the impact assessment table covering pre- and post-mitigation levels of impact significance. This section also provides a summary of all the impact assessment mitigation measures to be applied to the Project through all phases to reduce the social impact significance levels for the various social impacts identified. The level of residual impacts will also be noted;
- **Monitoring Framework:** This section will provide an overview of the recommended monitoring framework for the social impact management and mitigation measures put in place during the construction and operation phases of the Project. The framework provided will help to form the basis for developing a SIMP as part of Project post-approval requirements; and
- **References:** List of all documents and other resources cited in the SIA.

Appendices: Appendices will include community profile information such as short-term accommodation capacity data, and other supporting information such as summaries of stakeholder engagement and primary research.

In addition to the second phase SIA, a stand-alone Economic Assessment will be undertaken for the EIS, which will review the impacts or benefits of the Project for the region and State as a whole.

It will consider any increase in demand and impact on local and regional economy during construction and operation of the Project, as well as reduction in agricultural activity because of the Project development, and other economic issues such as potential impact on land values and regional wages, house prices, tourism, and cumulative impacts.

6.13 HAZARDS

6.13.1 BACKGROUND

This section provides a preliminary assessment of environmental hazards and risks that could arise during the construction and operation of the Project. Specifically, it considers hazards and risks associated with the operation of the BESS, hazardous materials, bushfire, blade throw, and electromagnetic fields (EMF).

6.13.2 PRELIMINARY HAZARD ASSESSMENT

A Preliminary Hazard Assessment (PHA) is required where potentially hazardous or offensive development under Resilience and Hazards SEPP 2021. Clause 3.2 of the Resilience and Hazards SEPP defines a potentially hazardous industry as:

... development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality—

(a) to human health, life or property, or

(b) to the biophysical environment,

Appendix 3 of the 'Applying SEPP 33 Guidelines' (NSW DoP, 2011) lists the industries that may fall within the Resilience and Hazards SEPP (former SEPP 33), which do not include wind farms or energy storage facilities. However, the BESS proposed for the project is likely to use Li-Ion or Ni-Cd batteries, which are listed as 'Class 9 - Miscellaneous Dangerous Goods'. While Class 9 materials are excluded from the former SEPP 33 screening test, the hazards related to these materials should be considered in accordance with the 'Applying SEPP 33 Guidelines' and the Resilience and Hazards SEPP.

A risk screening and risk assessment will be undertaken for the Project, which will evaluate the likely risks to public safety, focusing on the transport, handling, and use of hazardous materials. The assessment will also consider whether the Project should be considered a hazardous or potentially hazardous industry under Resilience and Hazards SEPP.

6.13.3 BUSHFIRE

Bushfires present a threat to human life and assets and can adversely impact ecological values. Bushfire risk can be considered in terms of environmental factors that increase the risk of fire (e.g., fuel quantity and type, topography, and weather patterns), as well as specific activities (e.g., hot works and construction activities) or infrastructure components that exacerbate combustion or ignition risks (e.g., transmission lines and other electrical components).

A review of the NSW RFS Bushfire Prone Land mapping confirms that the Project area contains land recognised as being bushfire prone as shown in **Figure 6-10**. More than half of the Project area is not mapped as bushfire prone land; however, the eastern third is mapped as Vegetation Category 3 bushfire prone land, plus there are scattered patches of Vegetation Category 1 and Vegetation Category 2 bushfire prone land throughout the rest of the Project area. These areas are largely associated with patches of remnant woody vegetation.

Vegetation Category 1 represents the highest risk vegetation for bushfires.

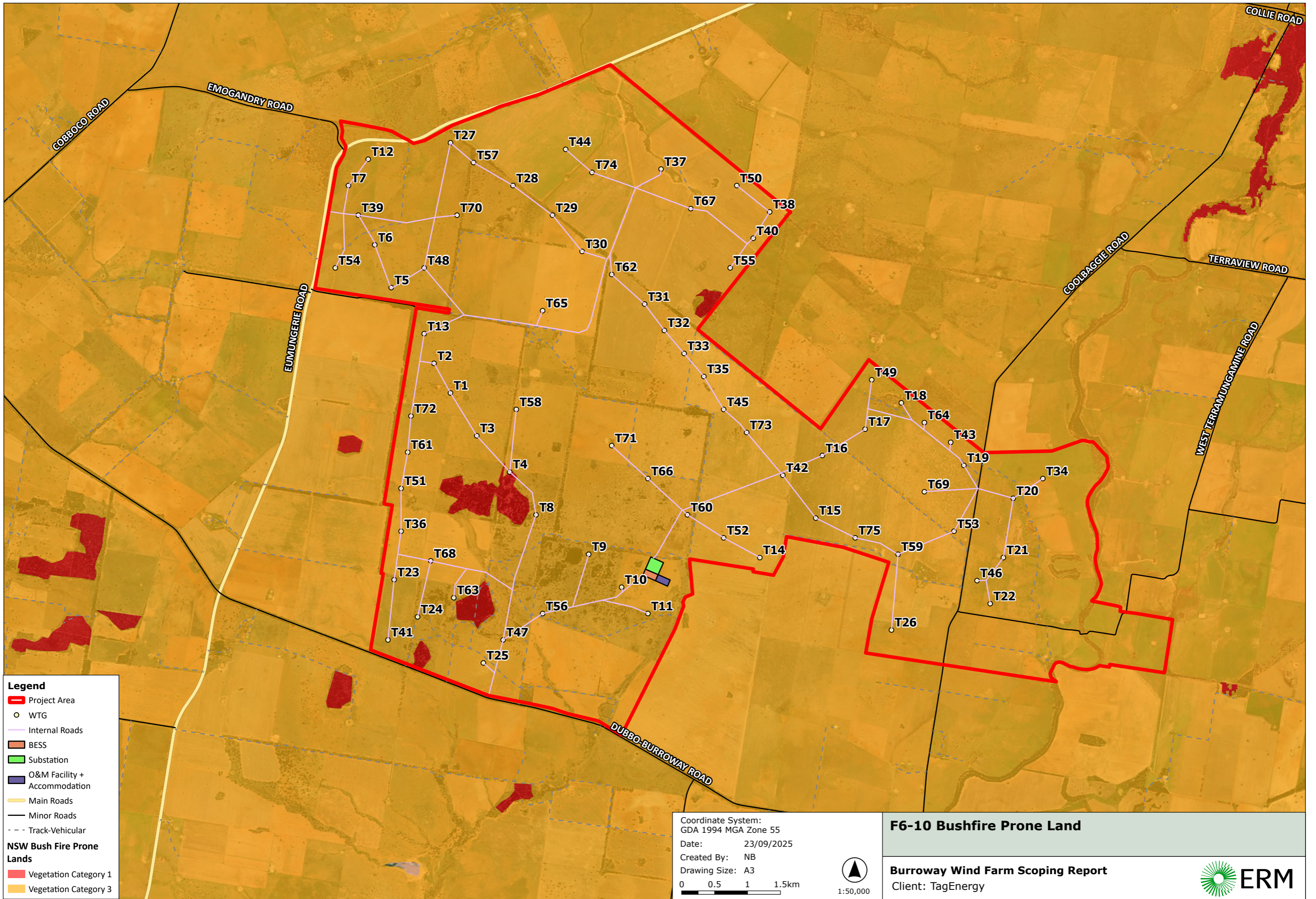
The EIS will include a Bushfire Risk Assessment which will aim to identify potential hazards and risks associated with bushfires and the use of bushfire prone land.

The assessment will describe how the proposed wind farm can be designed, constructed, and operated to minimise ignition risks and provide for asset protection consistent with the NSW Rural Fire Service Guidelines – 'Planning for Bushfire Protection' (NSW RFS, 2019).

The Bushfire Risk Assessment and mitigation strategies will be guided by the following factors:

- Fuels, weather, topography, predicted fire behaviour and local bushfire history;
- Suppression resources, access (roads, tracks) and water supply; and
- Values and assets.

Mitigation will be a combination of complementary strategies, all of which are required to provide the best possible protection outcome for the Project and the community.



Legend

- ▬ Project Area
- WTG
- ▬ Internal Roads
- ▬ BESS
- ▬ Substation
- ▬ O&M Facility + Accommodation
- ▬ Main Roads
- ▬ Minor Roads
- - - Track-Vehicular

NSW Bush Fire Prone Lands

- ▬ Vegetation Category 1
- ▬ Vegetation Category 3

Coordinate System:
GDA 1994 MGA Zone 55
Date: 23/09/2025
Created By: NB
Drawing Size: A3

0 0.5 1 1.5km

1:50,000

F6-10 Bushfire Prone Land

Burroway Wind Farm Scoping Report
Client: TagEnergy



6.13.4 BLADE THROW

Blade throw refers to the risk of wind turbine blade breaking during operation, which may result in human injury or potential damage to infrastructure. Blade throw is generally considered to be a low risk during the operation phase of the Project, which will use WTG technology that has been proven to be both safe and reliable.

A blade throw can occur when an entire WTG blade becomes separated from its hub at the metal-to-metal root joint. If this occurs and the WTG in-built control systems fail to detect an abnormality (e.g., vibrations, imbalance, under power), a blade could be thrown from the hub. However, the progression of such a failure is generally slow enough that the control system will detect an abnormality, and the machine will default to shut-down, preventing a blade throw event.

Preventing structural failures such as fatigue resistance of WTG sub-assemblages can prevent the possibility of a blade throw event, and recent data has shown that sub-assembly failures are reducing.

Published literature on blade throw indicates that there are many approaches to modelling blade throw potential, whether theoretical or incident based. An often-cited publication by Sarlak and Sorenson (2015) calculated maximum blade throw distances for several size WTGs and is appropriate to estimate likely maximum distances of blade throw for the Project. Sarlak and Sorenson (2015) predict this to be less than 200 m under normal operating conditions and up to 500 m under overspeed conditions. The nearest dwelling (associated dwelling ID 3) is 515 m from the nearest WTG. The BESS is located 367 m to the nearest WTG.

A Blade Throw Risk Assessment will be prepared as part of the EIS, which will describe the potential impacts associated with blade throw to nearby residential receptors during operation of the Project. The assessment will be completed with consideration to applicable international standards concerning the design of wind turbine components.

The Blade Throw Risk Assessment will likely include the following scope of works:

- Assessment of the likelihood of occurrence for a blade throw event;
- Assessment of theoretical distance radii for a blade throw event;
- Review of distances between turbines and nearby dwellings;
- Review of historical blade throw occurrences in Australian wind farms; and
- Provision of relevant mitigation measures for Project implementation.

6.13.5 ELECTROMAGNETIC FIELD

EMF is potentially associated with all electrical wiring and equipment. Electrical fields are caused by the voltage of the equipment, while magnetic fields are caused by the current flowing (amperage). Electric fields and magnetic fields are independent of one another and, in combination, cause energy to be transferred along electric wires.

The Project will generate extremely low frequency (ELF) EMFs during operation of the transmission lines and substations. Over the past 50 years, concerns have been expressed that the EMFs associated with electrical equipment might have adverse health effects. There are well-known health effects where there are very high levels of EMFs and health standards have been established to protect against these effects.

However, the WHO advises that no adverse health effects from long-term exposure to ELF EMF have been confirmed (WHO, 2016).

An EMF assessment will be prepared to inform the EIS and will consider and document the potential impacts and risks to human health associated with the EMF generated by the WTGs and associated electrical infrastructure. While adverse health effects from exposure to ELF EMFs have not been established, the possibility remains that such effects may exist, and it remains a risk during the construction and operational phases of the Project.

6.14 AIR QUALITY AND GREENHOUSE GAS

6.14.1 BACKGROUND

The air quality within and surrounding the Project is influenced by existing land use practices. Land use within and surrounding the Project is predominantly agricultural. There are no heavy-emitting industries in proximity to the Project.

Air quality in the region is therefore expected to be of good quality and typical of what is expected in a rural setting, due to factors including existing land use, low population density, low traffic volumes, and the absence of heavy-emitting industries.

Existing sources of air pollution are likely related to dust, vehicle and machinery use during agricultural production, and vehicle exhaust emissions from traffic along major transport routes.

6.14.2 PRELIMINARY ASSESSMENT

The closest air quality monitoring station to the Project is Dubbo, approximately 20 km southeast of the Project. The following air pollutants and meteorological variables are measured at this station:

- Total suspended particles (tsp);
- Fine particles as PM10; and
- Fine particles as PM2.5.

This station provides hourly pollutant concentration data, 24-hour pollution summary data, and air quality category ratings (AQC). The AQC for Tamworth is generally "good". The exception to this was during the 'Black Summer' bushfires of 2019–20, when AQC was "extremely poor".

The Project is not expected to have significant impacts on air quality in the region. Emissions into the atmosphere from the Project are predominantly associated with construction phase activities which will be temporary and limited to:

- Localised dust emissions generated by land disturbance; and
- Exhaust emissions of civil construction and vehicle, plant and machinery.

During the temporary construction phase, dust particles and other air quality emissions could potentially be released from activities including:

- Construction of new / upgraded access tracks and roads;
- Vegetation clearing and creation of open exposed areas;
- Excavation works and stockpile management;
- Mobile concrete batching plants;
- Rock crushing;

- Transport of material and equipment;
- Processing and handling of material;
- Construction activities and associated earthmoving and construction equipment;
- Transfer points;
- Loading and unloading of material; and
- Haulage activities along unsealed roads.

During the operations, the Project will generate electricity without directly emitting air pollutants that are known to affect the climate and human health. The Project will contribute to the improvement of air quality through the displacement of emissions that would otherwise be generated through the burning of fossil fuels used to generate electricity from traditional coal fired power stations.

6.14.3 EIS ASSESSMENT APPROACH

The EIS will qualitatively assess the potential impacts to air quality and recommend appropriate management and mitigation measures for the construction, operations and decommissioning phases of the Project. Air quality and dust management will generally be assessed in accordance with relevant guidelines and policies.

6.15 WASTE MANAGEMENT

The EIS will quantify and classify the likely waste streams to be generated during construction, operation and decommission phases of the Project.

The EIS will consider the following guidelines and strategies to ensure resources are used effectively and impact on the environment due to waste generation from the Project are minimised:

- 'NSW EPA Waste Classification Guidelines – Part 1: classifying waste' (NSW EPA, 2014) and Addendum (NSW EPA, 2016);
- 'NSW Waste and Sustainable Materials Strategy 2041 - Stage 1: 2021-2027' (NSW DPIE, 2021); and
- 'NSW EPA Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012' (NSW EPA, 2012).

During the preparation of the EIS the Applicant will engage with waste management facilities in the region to identify suitable and available recycling, landfill and wastewater disposal options.

The waste assessment in the EIS will:

- Identify waste types;
- Estimate the quantities of waste that will be generated during each phase of the Project;
- Identify potential end markets for waste streams, noting that some end-of-life options will be dependent on technological advancements;
- Outline how the Applicant will ensure all recyclable materials are sent to an appropriate recovery facility(s) to minimise waste directed to landfill;
- Consider circular design principles to minimise waste generation from the Project;
- Consider end-of-life reuse, refurbishment and recycling options for WTG components, with consideration of industry best practice; and
- Outline relevant management and mitigation measures.

6.16 CUMULATIVE IMPACTS

The 'Cumulative Impact Assessment Guidelines for State Significant Projects' (NSW DPIE, 2022) (CIA Guidelines) provides a framework for assessing and managing cumulative impacts.

6.16.1 SCOPE OF ASSESSMENT

The Project is to consider past, present and reasonably foreseeable future projects. Projects considered in the cumulative impact assessment are limited to those specified in section 3.4 of the CIA Guidelines. This includes approved projects, approved projects that are undergoing modifications, projects under assessment, and related development to any of these.

The cumulative impact assessment will focus on the construction and operational impacts of the Project in conjunction with projects within, generally, 100 km of the Project. This will include assessment of traffic routes, noise and visual amenity, and social impacts including availability of workforce, workers accommodation, access to goods and services, health and wellbeing.

6.16.2 STUDY AREA

The study area for the cumulative impact assessment encompasses an area of, generally, a 100 km radius from the Project. The assessment will consider how potentially overlapping construction timeframes of projects could impact the local and regional population and resources (natural and other). This will include the Social Locality of the Project and the identification of impacts relating to construction workforce accommodation within the Narromine Shire and Dubbo Regional LGAs as well as surrounding LGAs. Note that the Project is proposing to include workforce accommodation for approximately 200 FTE.

While the study area extends out to 100 km, not all assessments will consider projects within this area. For example, the study area for environmental aspects such as noise, air quality and amenity will use smaller areas varying from 2 – 8 km from the Project area to capture potential impacts on the nearest receivers related to those aspects. Biodiversity may consider a larger area to include assessment of issues relating to habitat and connectivity. Heritage, hydrology and other environmental aspects will generally be limited to the Project area and immediate surrounds. Whereas transport, social and economic impacts may consider all projects within the 100 km radius.

The potential cumulative impacts associated with Project staging are detailed in **Table 6-21**.

6.16.3 TIMEFRAMES

Construction of the Project is expected to commence in 2028 with commissioning and operational activities expected by 2029 or 2030. Other projects that may overlap this timeframe will be considered in the cumulative impact assessment.

TABLE 6-21 CUMULATIVE IMPACTS ASSOCIATED WITH PROJECT STAGING

Project Phase	Estimated Timeframe	Likely Scale of Impacts	Duration of Impact	Potential Cumulative Impact
Planning and Approvals	2024-2027	Minor	Temporary	Social – community wellbeing

Project Phase	Estimated Timeframe	Likely Scale of Impacts	Duration of Impact	Potential Cumulative Impact
Construction	2028-2029	Moderate	Temporary	Amenity – noise, vibration, air quality Traffic and transport – increased traffic volumes Social – community wellbeing
Operation	From 2029/30	Minor	Ongoing until end of Project lifetime	Amenity – noise Hazards and risk Social – community wellbeing

6.16.4 PROJECTS TO ASSESS

The relevant SSD projects that are proposed, approved, under construction and operational that are within 100 km of the Project, and are therefore included in the CIA, are shown in **Table 6-22**.

TABLE 6-22 REASONABLY FORESEEABLE FUTURE PROJECTS

Project	Status	Proximity (km)
Inland Rail Narromine to Narrabri	Approved	Adjacent
Burroway Solar Farm	Assessment	Adjacent
Forest Glen Solar Farm	Approved	16 km
Narromine BESS	Prepare EIS	18 km
Gilgandra Solar Farm	Approved	23 km
Wallaby Creek Wind Farm	Prepare EIS	24 km
Milpulling Wind Farm	Prepare EIS	27 km
Tallawang Solar Farm	Recommendation	50 km
Wellington North Solar Farm	Approved	60 km
Bodangora Wind Farm	Approved	62 km
Wellington South BESS	Approved	64 km
Spicers Creek Wind Farm	Approved	64 km
Dapper Solar Farm	Prepare EIS	69 km
Apsley BESS	Approved	72 km
Avonside Solar Farm	Prepare EIS	73 km
Cobbora Solar Farm	Collate submissions	73 km
Sandy Creek Solar Farm	Assessment	73 km
Uungula Wind Farm	Approved	85 km
Orana Wind Farm	Prepare EIS	85 km

Project	Status	Proximity (km)
Dunnedoo Solar Farm	Approved	87 km
Piambong Wind Farm	Prepare EIS	92 km
Central West Orana REZ Transmission	Approved	141 km

6.16.5 ASSESSMENT APPROACH

The assessment of cumulative impacts is outlined in **Table 6-23**. Further assessment of the cumulative impacts relating to environmental impacts such as noise, traffic, visual, and social will be completed to inform the EIS. These assessments will be conducted in accordance with the CIA Guidelines. Outcomes of the cumulative impact assessment will be used to develop environmental mitigation measures to minimise any potential cumulative impacts due to the Project.

Table 6-24 outlines the scoping summary table for this assessment.

Limitations to this is that there is uncertainty with the timeframes for approval, construction, and operation with nearby projects. The cumulative impact assessment assumes a worst-case scenario that all the projects will be constructed and operated at the same time.

TABLE 6-23 CUMULATIVE IMPACT ASSESSMENT APPROACH

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

TABLE 6-24 CUMULATIVE IMPACT ASSESSMENT SCOPING SUMMARY

Project	Project Status	Distance from Project	Potential Overlap of Impacts				
			Traffic and Transport	Visual Amenity	Noise Amenity	Social Impacts	Hazards and Risk
Inland Rail Narromine to Narrabri	Approved	0 Km	Potential overlap in traffic and transport impacts	Potential overlap in visual impacts	Potential overlap in noise impacts	Potential risk of cumulative social impacts	Potential overlap hazard risk
Burroway Solar Farm	Assessment	0 km	Construction to commence 2026/27 and unlikely to overlap	Potential overlap in visual impacts	Potential overlap in noise impacts	Potential overlap in social impacts	Potential overlap in hazard risk
Forest Glen Solar Farm	Approved	16 km	Potential overlap in traffic and transport impacts	No potential overlap	No potential overlap	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Narromine BESS	Prepare EIS	18 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk

Project	Project Status	Distance from Project	Potential Overlap of Impacts				
			Traffic and Transport	Visual Amenity	Noise Amenity	Social Impacts	Hazards and Risk
Gilgandra Solar Farm	Approved	23 km	No potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Wallaby Creek Wind Farm	Prepare EIS	24 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Milpulling Wind Farm	Prepare EIS	27 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Tallawang Solar Farm	Recommendation	50 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Boree Solar Farm	Prepare EIS	54 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap between in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk

Project	Project Status	Distance from Project	Potential Overlap of Impacts				
			Traffic and Transport	Visual Amenity	Noise Amenity	Social Impacts	Hazards and Risk
Wellington North Solar Farm	Approved	60 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Bodangora Wind Farm	Approved	62 km	No overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	No risk of cumulative social impacts	No potential overlap in hazard risk
Wellington South Battery Energy Storage System	Approved	66 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Spicers Creek Wind Farm	Approved	64 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Dapper Solar Farm	Prepare EIS	64 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk

Project	Project Status	Distance from Project	Potential Overlap of Impacts				
			Traffic and Transport	Visual Amenity	Noise Amenity	Social Impacts	Hazards and Risk
Apsley Battery Energy Storage System	Approved	73 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Avonside Solar Farm	Prepare EIS	73 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Cobbora Solar Farm	Collate submissions	73 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Sandy Creek Solar Farm	Assessment	73 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Uungula Wind Farm	Approved	73 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk Project

Project	Project Status	Distance from Project	Potential Overlap of Impacts				
			Traffic and Transport	Visual Amenity	Noise Amenity	Social Impacts	Hazards and Risk
Orana Wind Farm	Prepare EIS	85 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Dunnedoo Solar Farm	Approved	87 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Piambong Wind Farm	Prepare EIS	92 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk
Central West REZ Transmission	Approved	141 km	Potential overlap in traffic and transport impacts	No potential overlap in visual impacts	No potential overlap in noise impacts	Potential risk of cumulative social impacts	No potential overlap in hazard risk

7. CONCLUSION

The Applicant is proposing to construct, operate, maintain, and decommission the Burroway Wind Farm (the Project) located northeast of Narromine in NSW.

The Project will include:

- Up to 75 WTGs, with a generation capacity of approximately 400 MW, and each WTG having a hub height of up to 180 m and tip height of up to 280 m;
- Electrical reticulation network:
 - Substations and associated transformers, switch room, and reactive plant;
 - High voltage overhead transmission line connecting the Project to the grid;
 - A 33 kV underground and overhead electrical reticulation connecting the WTGs to the substations;
 - Feeder at the proposed substation area and other electrical equipment to connect to;
- Other infrastructure including internal access tracks and road turning head connecting Project infrastructure, hardstands, car parking, concrete batching plants, crushing facilities, gravel / borrow pits, construction laydown areas, construction, and operational compounds (including Project area office and maintenance and storage facilities) and security fencing;
- Ancillary activities including sourcing of materials for construction; sourcing of water for construction; subdivision and boundary adjustments relating to lease arrangements, visual screening and associated ancillary works; and
- Access road use and upgrades.

The preliminary environmental assessment undertaken for this Scoping Report found that the Project area is suitable to accommodate the Project due to:

- It's location within the CWO REZ and the contribution the Project will make to the future development of the REZ;
- The wind resource of the Project site is sufficient to support the viable operation of a wind farm;
- The Project area being intersected by the existing Dubbo-Nevertire 132 kV transmission line (Line #94W/1) operated by Essential Energy;
- Accessibility via Eumungerie Rd, Dubbo Burroway Rd, and Coolbaggie Rd;
- Consistency with the RU1 Primary Production zoning objectives;
- Compatibility with the existing land uses of the land and its surrounding areas, as wind farms have a relatively small footprint, it would allow for existing grazing activities to continue with limited impact;
- Host landholders expressing strong interest in being involved in a renewable energy project; and
- There are other existing and proposed renewable energy projects located within the region and in proximity to the Project.

This Scoping Report has considered:

- The scale and nature of environmental impacts associated with construction and operation of the Project;

- Whether the Project will contribute to cumulative impacts associated with other nearby SSD projects;
- The Projects ability to avoid, mitigate and offset any potential impacts; and
- The complexity of technical assessments required for the Project EIS.

The Project EIS will be prepared in accordance with the requirements of the SEARs issued by DPHI. All assessments will be completed in accordance with the relevant legislation, guidelines and standards, as well as consultation with relevant stakeholders.

8. ACRONYMS AND ABBREVIATIONS

8.1 TERMINOLOGIES

Terminology	Description
Applicant	TAGENERGY AUSTRALIA PTY LTD
Project area	Red boundary to which the Application applies as shown on Figure 1-2
Project	The development to which the Application applies generally as described in Section 3 of the Scoping Report.
Application	Application for Development Consent under Division 4.7 of Part 4 of EP&A Act and Section 75 of EPBC Act.
Preliminary Disturbance Footprint	The area of land that is directly impacted by the Project: whereby clearing, infrastructure and potential impacts will occur; all temporary and permanent disturbance areas.
Micro-siting Corridor	A 125 m micro-siting buffer applied to the Preliminary Disturbance Footprint.
Temporary Disturbance	The area of land that will be temporarily disturbed during construction of the Project and later rehabilitated.
Permanent Disturbance	The area of land that will be subject to permanent alteration because of construction and operation of the Project's infrastructure until decommissioning.
Study Area	The area which applies to each technical study.
Associated	Owners and occupiers of land proposed to host wind turbines or related infrastructure, owners and occupiers of land required for access during construction and/or maintenance, or landowners who have reached a financial or in-kind agreement in relation to the Project, as per Wind Energy Guideline (DPIE, 2016a).
Non-Associated	Landowners who have not reached a financial or in-kind agreement in relation to the Project, as per Wind Energy Guideline (NSW DPFI, 2024a).

8.2 LEGISLATION

Abbreviation	Title
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
BC Act	<i>Biodiversity Conservation Act 2016</i>
CMS Act	<i>Coal Mine Subsidence Compensation Act 2017</i>
Conveyancing Act	<i>Conveyancing Act 1919</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FM Act	<i>Fisheries Management Act 1994</i>
Heritage Act	<i>Heritage Act 1977</i>
LLS Act	<i>Local Land Services Act 2013</i>
NP&W Act	<i>National Parks and Wildlife Act 1974</i>

Abbreviation	Title
NT Act	<i>Native Title Act 1993</i>
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
RF Act	<i>Rural Fires Act 1997</i>
WM Act	<i>Water Management Act 2000</i>

8.3 GUIDELINES, MANUALS, POLICIES, AND PLANS

Abbreviation	Title
CHMP	Cultural Heritage Management Plan
CIA Guidelines	Cumulative Impact Assessment Guidelines for State Significant Projects
Engagement Guidelines	Undertaking Engagement Guidelines for State Significant Projects
Hazards SEPP	State Environmental Planning Policy (Resilience and Hazards) 2021
LUCRA Guide	Land Use Conflict Risk Assessment Guide
Noise Bulletin	Wind Energy: Noise Assessment Bulletin (2016)
Noise Supplement	Wind Energy: Technical Supplement for Noise Assessment (2024)
Planning Systems SEPP	State Environmental Planning Policy (Planning Systems) 2021
Regional Plan	Central West and Orana Regional Plan 2041
SIA Guideline	Social Impact Assessment Guideline: For State Significant Projects
SIA Technical Supplement	Technical Supplement: Social Impact Assessment Guideline for State Significant Projects
Scoping Report Guideline	State Significant Development Guidelines - Preparing a Scoping Report: Appendix A to the State Significant Development Guidelines
Transport and Infrastructure SEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021
Visual Bulletin	Wind Energy: Visual Bulletin (2016)
Visual Supplement	Wind Energy: Technical Supplement for Landscape Character and Visual Impact Assessment (2024)
Wind Energy Guideline	Wind Energy Guideline for State Significant Wind Energy Development

8.4 ABBREVIATIONS – GENERAL

Abbreviation	Description
ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACMA	Australian Communications and Media Authority
AEMO	Australian Energy Market Operator's
AHD	Australian Height Datum

Abbreviation	Description
AHIMS	Aboriginal Heritage Information Management System
ASL	Above Sea Level
AIA	Aviation Impact Assessment
ALA	Aircraft Landing Area
AOI	Areas of Investigation
APAC	Asia-Pacific
APZ	Asset Protection Zone
ASC	Australian Soil Classification
BAM	Biodiversity Assessment Method
BAM-C	Biodiversity Assessment Method Calculator
BCS	Biodiversity, Conservation and Science Directorate
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
BoM	Bureau of Meteorology
BSAL	Biophysical Strategic Agricultural Land
CASA	Civil Aviation Safety Authority
CBF	Community Benefit Fund
CIA	Cumulative Impact Assessment
CIV	Capital Investment Value
CH	Chromosols
CHMP	Cultural Heritage Management Plan
COP	Conference of Parties
CSP	Community Strategic Plan
DA	Development Application
DCCEEW	Department of Climate Change, Energy, the Environment and Water
dB	Decibel
dB(A)	A-weighted Decibels
DCP	Development Control Plan
DE	Dermosols
DP	Deposited Plan

Abbreviation	Description
EIS	Environmental Impact Statement
EL	Exploration Licence
ELF	Extremely Low Frequency
EMF	Electromagnetic Field
EMI	Electromagnetic Interference
EPI	Environmental Planning Instrument
EPL	Environmental Protection Licence
ERM	Environmental Resources Management Australia Pty Ltd
ESD	Ecologically Sustainable Development
ESG	Environmental, Social and Governance
ESOO	Electricity Statement of Opportunities
FRNSW	Fire and Rescue NSW
FTE	Full Time Equivalent
GDE	Groundwater dependent ecosystems
GHG	Greenhouse Gas
GOS	Goonoo Slopes
GW	Gigawatts
ha	Hectares
HHDD	Historical Heritage Due Diligence
IBRA	Interim Biogeographic Regionalisation for Australia
ICNIRP	International Commission on Non-Ionizing Radiation Protection
ISP	Integrated System Plan
km	Kilometre
Km/h	Kilometres per hour
kV	Kilovolt
LCA	Local Categorisation Assessment
LEP	Local Environmental Plan
LGA	Local Government Area
LGC	Large-scale Generation Certificate
LRET	Large-scale Renewable Energy Target

Abbreviation	Description
LSC	Land and Soil Capability
LSPS	Local Strategic Planning Statement
LVIA	Landscape and Visual Impact Assessment
m	Metres
MCP	Macquarie Alluvial Plains
MEG	Mining, Exploration and Geoscience
MNES	Matters of National Environmental Significance
MW	Megawatt
MWh	Megawatt hour
NEM	National Electricity Market
NIA	Noise Impact Assessment
NPWS	National Parks and Wildlife Service
NSW	New South Wales
NVR Map	Native Regulatory Map
O&M	Operation and Maintenance
OSOM	Oversize and Overmass
PCT	Plant Community Type
PHA	Preliminary Hazard Analysis
PVIA	Preliminary Visual Impact Assessment
RAP	Registered Aboriginal Party
RET	Renewable Energy Target
REZ	Renewable Energy Zone
RFS	NSW Rural Fire Service
Roadmap	NSW Electricity Infrastructure Roadmap
SAII	Serious and Irreversible Impacts
SDG	Sustainable Development Goals
SEARs	Secretary's Environmental Assessment Requirements
SEP	Stakeholder Engagement Plan
SEPP	State Environmental Planning Policy
SHI	State Heritage Inventory

Abbreviation	Description
SIA	Social Impact Assessment
SSD	State Significant Development
SVTM	State Vegetation Type Map
t CO ₂ -e	Tonnes of Carbon Dioxide Equivalent
TEC	Threatened Ecological Communities
TTIA	Traffic and Transport Impact Assessment
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organisation
WTG	Wind turbine generator
ZVI	Zone of Visual Influence

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<https://www.who.int/news-room/questions-and-answers/item/radiation-electromagnetic-fields>



APPENDIX A SCOPING SUMMARY TABLE

Level of Assessment	Aspect	Scale of Impact	Nature of Impact	Sensitivity of Receiving Environment	Mitigation Measures Required	Cumulative Impact Assessment	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Detailed	Biodiversity	Moderate	Direct Indirect Cumulative	Sensitive – local flora and fauna, vegetation communities.	Yes	Yes	General	<ul style="list-style-type: none"> Biodiversity Assessment Methodology (DPE 2020) Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (Commonwealth of Australia, 2013) Commonwealth Department of the Environment Survey Guidelines for Threatened Species (various) 	Section 6.2 Biodiversity
Detailed	Aboriginal Cultural Heritage	Low-Moderate	Direct Indirect Cumulative Perceived	Sensitive – cultural value	Yes	Yes	Specific	<ul style="list-style-type: none"> Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011) Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010) Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010c) Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010b) 	Section 6.3
Detailed	Historic Heritage	Low	Direct Indirect Cumulative	Sensitive – heritage values	Yes	Yes	General	<ul style="list-style-type: none"> Historical Archaeology Code of Practice (Heritage Council, 2006) 	Section 6.4
Detailed	Landscape and Visual	Moderate-High	Direct Cumulative Perceived	Sensitive receivers, landscape, community	Yes	Yes	Specific	<ul style="list-style-type: none"> NSW Wind Energy: Visual Assessment Bulletin (DPE, 2016) Wind Energy Guideline – Technical Supplement for Landscape and Visual Impact Assessment (NSW DPHI, 2024a) 	Section 6.5
Detailed	Noise Amenity	Moderate	Direct Cumulative Perceived	Sensitive – receivers	Yes	Yes	General	<ul style="list-style-type: none"> NSW DPHI 'Wind Energy Guideline, Technical Supplement for Noise Assessment' (NSW DPHI, 2024b) ('Noise Technical Supplement') South Australia (SA) Environment Protection Authority's (EPA's) 'Wind Farms Environmental Noise Guidelines' (SA EPA) (updated in 2021) ('SA Guidelines') 	Section 6.6
Detailed	Social and Economic	Low-Moderate	Direct Cumulative Perceived	Sensitive – community, environmental, economic	Yes	Yes	Specific	<ul style="list-style-type: none"> DPHI 'Social Impact Assessment Guideline for SSD Projects' (SIA Guideline) (NSW DPHI, 2025) Technical Supplement: Social Impact Assessment Guideline for State Significant Projects (SIA Technical Supplement) (DPHI, 2025b) 	Section 6.12
Detailed	Agriculture and Land Resources	Low	Direct Indirect Cumulative	Sensitive – agricultural land	Yes	Yes	General	<ul style="list-style-type: none"> 'Soil and Landscape Issues in Environmental Impact Assessment' (OEH, 2000) 'Land Use Conflict Risk Assessment Guide' (LUCRA Guide) (DPI, 2011) 'Landslide Risk Management Guidelines' (AGS, No Date) 'Site Investigations for Urban Salinity' (OEH, 2002) 'Guidelines for surveying Soil and Land Resources' (NJ McKenzie, 2008) 'The Australian Soil Classification' (Isbell N. C., 2016) 	Section 6.116.11
Detailed	Water Resources and Flooding	Low	Direct Indirect Cumulative	Sensitive – Local watercourses and water quality	Yes	Yes	General	<ul style="list-style-type: none"> Managing Urban Stormwater; Soils & Construction (Landcom, 2004) Guidelines for Controlled Activities on Waterfront Land (DPI Water, 2018) Relevant Water Sharing Plans (DPI Water) Guidelines for Watercourse Crossings on Waterfront Land (DPI Water, 2012) 	Section 6.10

Level of Assessment	Aspect	Scale of Impact	Nature of Impact	Sensitivity of Receiving Environment	Mitigation Measures Required	Cumulative Impact Assessment	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
								<ul style="list-style-type: none"> Floodplain Risk Management Guidelines (Department of Environment and Climate Change, 2016) Floodplain Development Manual: The management of flood liable land (NSW Government, 2005) 	
Detailed	Hazards – Aviation	Moderate-High	Direct Cumulative	Sensitive – aviation facilities	Yes	Yes	General	<ul style="list-style-type: none"> National Airports Safeguarding Framework Guideline D: Managing Wind Turbine Risk to Aircraft (NASAG 2012) 	Section 6.8.3
Standard	Hazards - Bushfire	Low	Direct Cumulative	Sensitive – community safety, health and wellbeing	Yes	Yes	General	<ul style="list-style-type: none"> Planning for Bushfire Protection 2019 – NSW Rural Fire Service (RFS, 2019) NSW Rural Fire Service Guideline for Bushfire Prone Land Mapping (NSW RFS 2015) AS 3959-2018 Construction of Buildings in Bushfire Prone Areas 	Section 6.13.3
Standard	Hazards – Preliminary Hazards Analysis	Low	Direct Indirect Perceived	Sensitive	Yes	No	General	<ul style="list-style-type: none"> Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (DoP 2011a) Hazardous Industry Planning Advisory Paper No. 6 – Guideline for Hazard Analysis (DoP, 2011b) Assessment Guideline – Multi-level Risk Assessment (DoP, 2011c) Hazardous Industry Planning Advisory Paper No. 4 Land Use Safety Planning (DoP 2011d) 	Section 6.13.2
Standard	Hazards – EMI/EMF, Telecommunications	Low	Direct Indirect Perceived	Sensitive - receivers	Yes	No	General	<ul style="list-style-type: none"> NSW Wind Energy Guideline for State Significant Wind Development (DPIE 2016) Best Practice Charter for Renewable Energy Projects (Clean Energy Council 2021) Electromagnetic Fields Management Handbook (Energy Networks Australia, 2016) Guidelines for limiting exposure to Timevarying Electric, magnetic and Electromagnetic Fields (ICNIRP, 2010) 	Section 6.13.5
Standard	Hazards – Blade Throw	Low	Direct Perceived	Sensitive – receivers, infrastructure	Yes	No	General	<ul style="list-style-type: none"> Relevant international studies and standards for design of wind turbine components and blade throw 	Section 6.13.4
Standard	Air Quality & Greenhouse Gases	Low	Direct Indirect	Sensitive – local amenity	Yes	No	General	<ul style="list-style-type: none"> National Greenhouse Accounts Factors (Australian Government, 2021) NSW Climate Change Policy Framework (Office of Environment and Heritage, 2016). 	Section 6.14
Standard	Waste Management	Low	Direct Indirect	Sensitive – local environment and local infrastructure	Yes	No	General	<ul style="list-style-type: none"> 'NSW EPA Waste Classification Guidelines – Part 1: classifying waste' (NSW EPA, 2014) and Addendum (NSW EPA, 2016) 'NSW Waste and Sustainable Materials Strategy 2041 - Stage 1: 2021-2027' (NSW DPIE, 2021) 'NSW EPA Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012' (NSW EPA, 2012) 	Section 6.156.15



APPENDIX B

VISUAL SCOPING REPORT



Burroway Wind Farm

Visual Scoping Report



We at Moir Studio acknowledge the traditional custodians of the lands and waters of Australia - most notably the Awabakal Nation in which our office resides and the Wiradjuri, on whose traditional land this Project resides. As a practice, we recognise First Nations' ongoing contribution to Country and deep spiritual connection to Place. We pay our respects to Elders both past and present.

Burroway Wind Farm

Visual Scoping Report

Prepared for

ERM on behalf of Burroway Energy Hub Pty Ltd

Project Number

2693

Revision	Date	Author	Checked	Comment
A	06/03/2025	TS	AR	Draft for review
B	04/04/2025	AS/TS	AR	Draft for Review
C	11/04/2025	TS	AR	For Submission
D	28/04/2025	TS	AR	For Submission
E	12/09/2025	CD	-	For Submission
F	15/12/2025	CD	-	For Submission

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1.0 Overview

1.1 Overview

Moir Landscape Architecture Pty Ltd (Moir Studio) was engaged by Environmental Resources Management Australia Pty Ltd (ERM) on behalf of Burroway Energy Hub Pty Ltd (the Applicant) to conduct a Visual Scoping Report (VSR) to support the Scoping Report for Burroway Wind Farm (the Project).

The Project includes the construction, operation and decommissioning of an up to 400MW wind farm with up to 75 turbines and associated infrastructure including a 200MW / 800MWh Battery Energy Storage System. The Project is located 21km northeast of Dubbo.

The VSR for the Project has been prepared in accordance with the Department of Planning Housing and Infrastructure's *Wind Energy Guideline: Technical Supplement for Landscape Character and Visual Impact Assessment*, November 2024, (referred to hereafter as 'the Technical Supplement') to identify Project constraints and high-level risks prior to undertaking the Landscape Character and Visual Impact Assessment (LCVIA) reporting. This VSR will support the Scoping Report seeking the Secretary's Environmental Assessment Requirements (SEARs).



Project Area

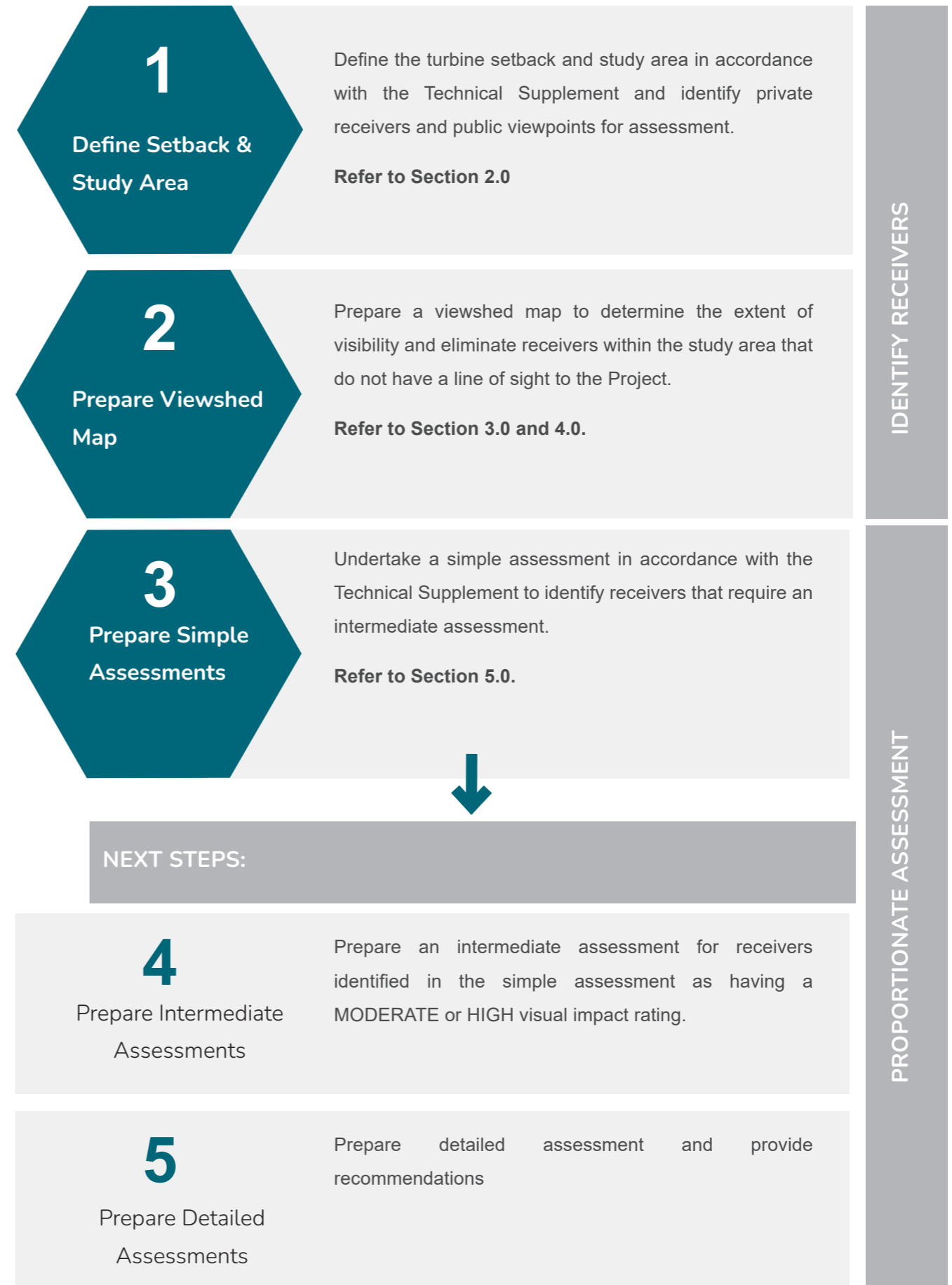
Figure 01 Regional Context
Basemap Source: ESRI 2024

1.2 Overview of Study Method

The first step of the assessment is to identify public viewpoints and private receivers (privately owned or used viewpoints) that will require consideration in the assessment process. This process involves defining study areas through distance thresholds and application of viewshed mapping.

Once the receivers have been identified, further refinement is undertaken through a proportionate assessment process to ensure that the detailed assessments are focused on the dwellings with potential impacts.

An overview of the structure is shown adjacent.



2.0 Setback and Study Area

2.1 Overview

In accordance with the Technical Supplement, the Applicant is to identify the Turbine Setback and Study Area for the Project relative to the maximum turbine height (tip height). For this Project, the maximum proposed turbine height (at vertical tip height) is **280m**.

2.2 Turbine Setback

The Turbine Setback is equivalent to 9° of a person's vertical field of view. As outlined in the Technical Supplement: *If a sensitive receiver is located within the setback distance it will trigger a high visual impact unless the turbine(s) would be largely screened by topography or vegetation (as outlined in setback exemptions).*

- The Turbine Setback for the Project is **1,768m** (based on 9° vertical field of view)
- There were no non-associated receivers identified within the Turbine Setback.

Refer to Figure 02.

2.3 Study Area

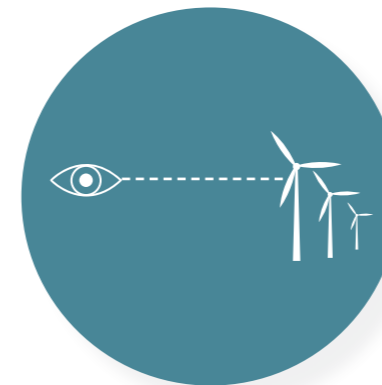
Since the magnitude of wind turbines decreases over distance, there is a point at which they become inconsequential to the overall visual impact and become difficult to discern against the background. Consequently, any turbine that would be less than 2° in vertical field of view should not be counted when calculating magnitude.

For the purposes of this report, the Study Area refers to the Project Area and the surrounding land, calculated by the maximum proposed turbine height to be **8,018m** for Private Receivers and Other Public Viewpoints (based on 2° vertical field of view). This report identifies **90** non-associated receivers within the Study Area **Refer to Figure 03.**



**Turbine Setback =
1,768m**

$$X = 280\text{m} \times \frac{\sin(81^\circ)}{\sin(9^\circ)}$$



**Study Area =
8,018m Private Receivers & Public Viewpoints**

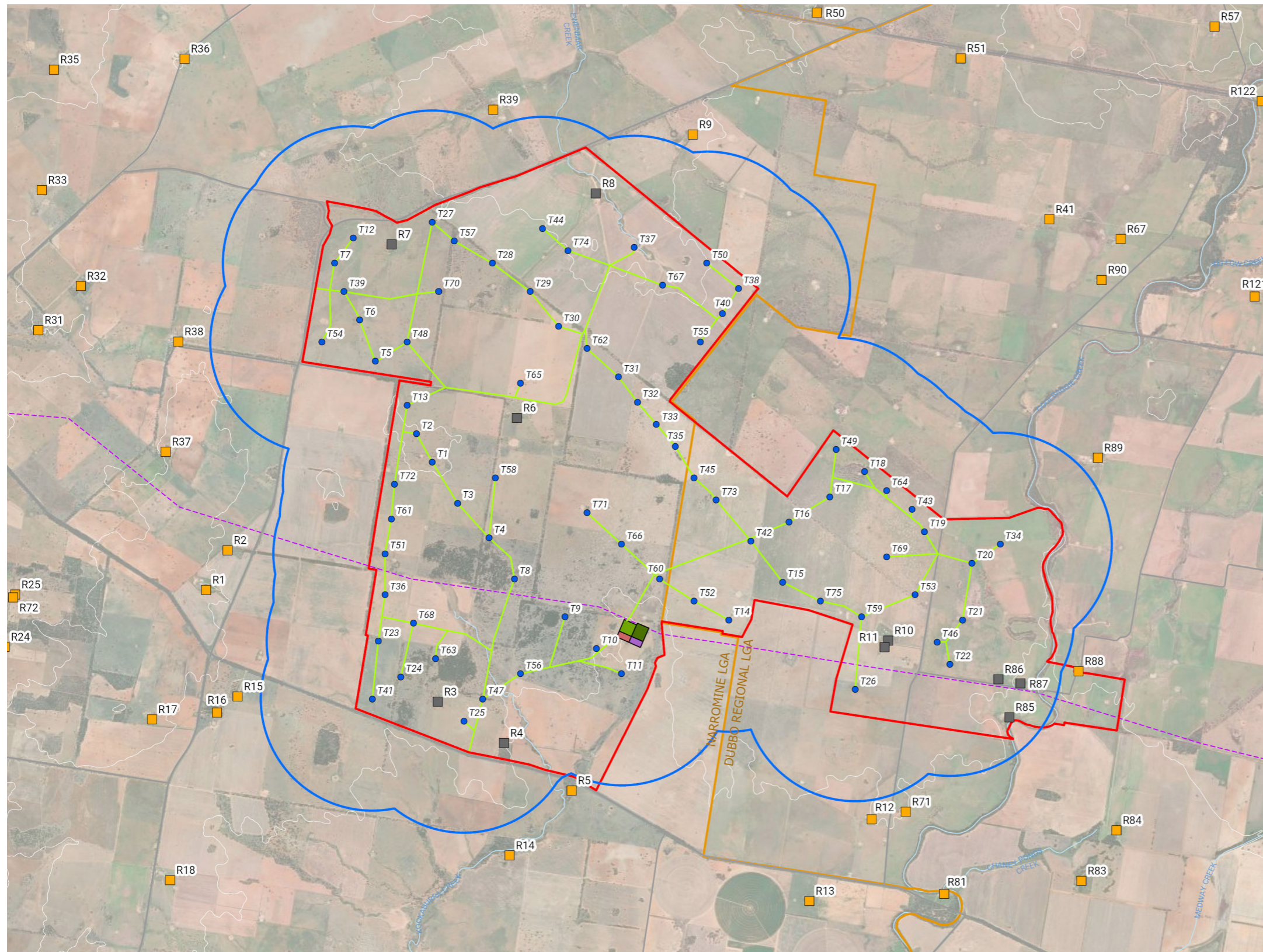
$$X = 280\text{m} \times \frac{\sin(88^\circ)}{\sin(2^\circ)}$$

2.4 Existing Landscape Character

The Project is located within the Brigalow Belt South bioregion in central-western NSW, approximately 265m above sea level. The existing landscape surrounding the Study Area is typically flat with expanses of cleared farmland and native riparian vegetation corridors along creeks.

Turbine Setback

Refer to Section 2.2

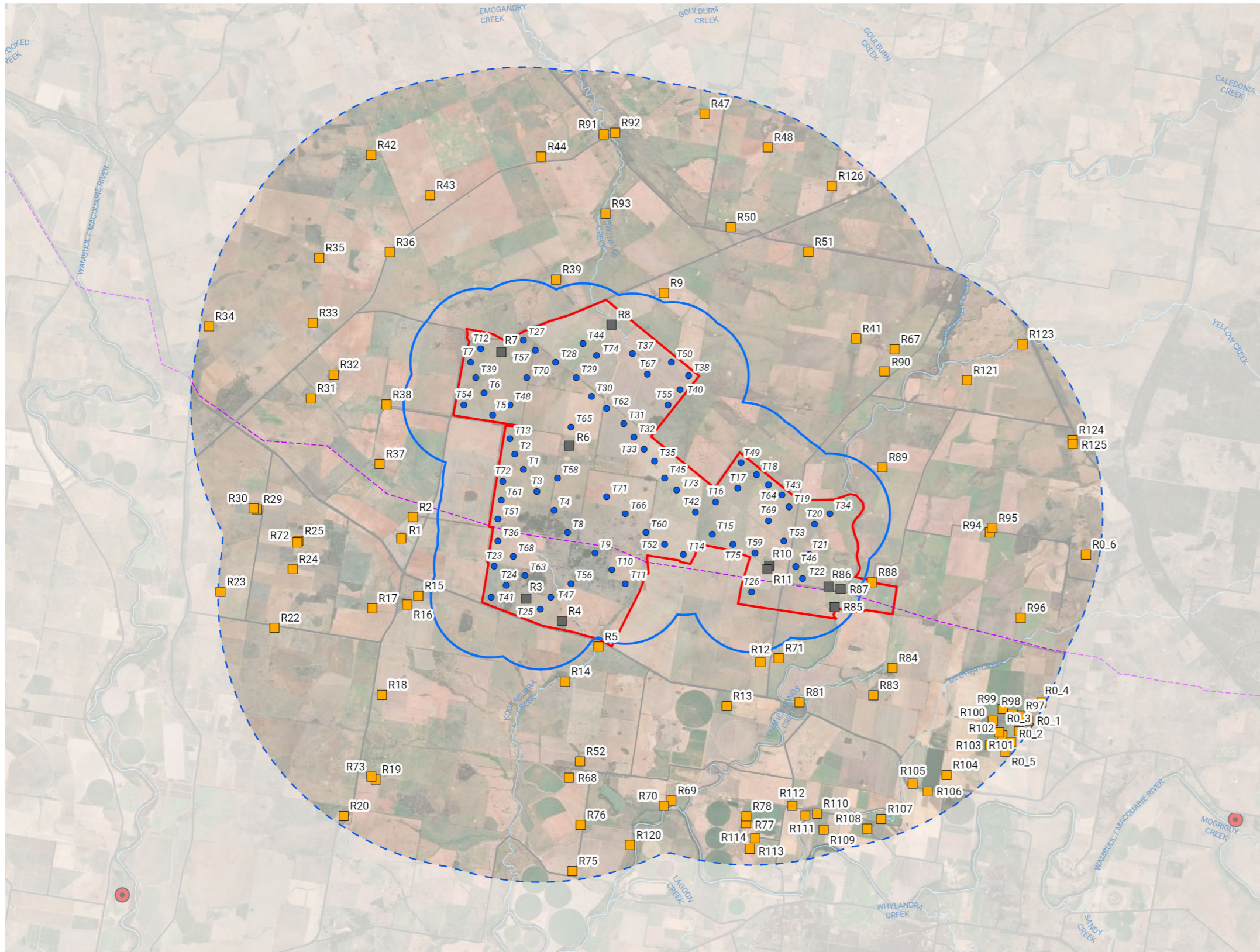


LEGEND

- Project Area
- Setback (1768m from nearest turbine)
- Proposed 280m turbine
- Proposed Road Network
- BESS
- Substation
- Essential Energy Substation
- O&M Facility + Accommodation
- Non-associated Dwelling
- Associated Dwelling
- Local Government Area
- Road
- Electricity Transmission Line
- Watercourse
- Contour

Figure 02 Turbine Setback
Basemap Source - ESRI 2024





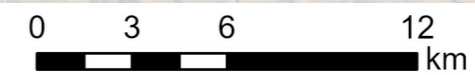
Study Area

Refer to Section 2.3

LEGEND

- Project Area
- Study Area (8018m from nearest turbine)
- Setback (1768m from nearest turbine)
- Proposed 280m turbine
- Road
- Aboriginal Place
- Electricity Transmission Line
- Watercourse

Figure 03 Study Area
Basemap Source - ESRI 2024



3.0 Viewshed Mapping

3.1 Viewshed Mapping Process

Moir have undertaken Viewshed Mapping (VSM) to determine the areas with potential visibility of the Project. The VSM has been prepared for the Project to illustrate the theoretical visibility based on topography alone. **Figure 04** presents the viewshed for the wind turbines based on the tip height of **280m**.

The VSM represents the area over which a development can theoretically be seen, and is based on a Digital Terrain Model (DTM). It presents a bare ground scenario - ie. a landscape without screening, structures or vegetation, and is usually presented on a base map (Scottish Natural Heritage, 2017). Receivers that do not have a line of sight to the project (due to topography) are excluded from the assessment.

3.2 Viewshed Mapping Results

- Due to the flat topographic character of the region, views of the Project are likely to be available across the entire Study Area.
- As per the VSM of the Project, all 90 non-associated receivers within the Study Area (**8,018m**) are identified as having potential visibility.

It is important to restate a preliminary VSM is based on a worst case scenario where the assessment does not consider vegetation or structures. Ground truthing during field work will ascertain potential visibility from receivers taking into account structures and vegetation.

Refer to Figure 04.

4.0 Receivers

4.1 Public Viewpoints

Key public viewing corridors identified include:

- Dubbo Burroway Road
- Eumungerie Road
- Cobboco Road
- Collie Road

Outside of the Study Area are the Newell Highway and Mitchell Highway.

No key public viewpoints have been identified.

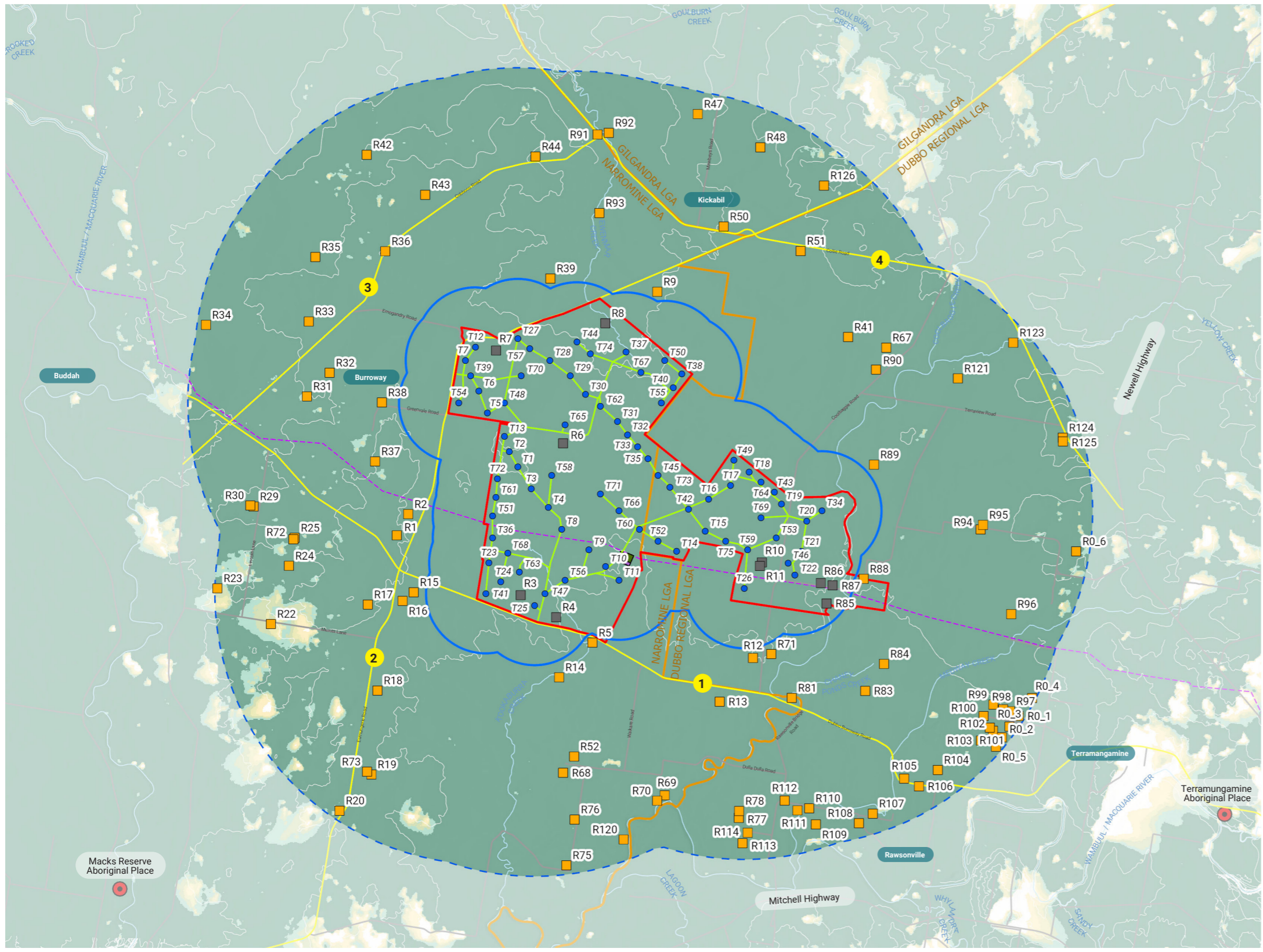
4.2 Private Receivers

- **No** non-associated receivers were identified within the Turbine Setback (1,768 m)
- **90** non-associated receivers were identified within the Study Area (8,018m)

Refer to Figure 04.

Viewshed Mapping

Refer to Section 3.0 and 4.0



LEGEND

- Project Area
- Study Area (8018m from nearest turbine)
- Setback (1768m from nearest turbine)
- Proposed 280m turbine
- Proposed Road Network
- BESS
- Substation
- Essential Energy Substation
- O&M Facility + Accommodation
- Local Government Area
- Road
- Public Viewing Corridors
- Aboriginal Place
- Electricity Transmission Line
- Watercourse
- Contour

Viewshed Mapping - 280m

- No visibility
- 1 - 15 turbines visible
- 15 - 30 turbines visible
- 30 - 45 turbines visible
- 45 - 60 turbines visible
- 60 - 75 turbines visible

Public Viewpoints

- 1 Dubbo Burroway Road
- 2 Eumungerie Road
- 3 Cobboco Road
- 4 Colлие Road

Figure 04 Viewshed Mapping
Basemap Source - ESRI 2024



5.0 Visual Impact Assessment Process

5.1 Overview of Proportionate Assessment Process

A visual impact assessment must be undertaken for all individual viewpoints and private receivers identified as being within the Study Area and having a line of sight to the Project.

The level of assessment required should be proportionate to the likely impacts. Applicants can begin by carrying out a simple assessment based on desktop data and high-level assumptions. Further assessment should then be undertaken if impacts are likely to be moderate or higher.

Simple Assessment

Conduct a basic assessment using worst-case assumptions about the likely magnitude and visual sensitivity.



Low or Very Low =
No further action



Moderate or High =
Proceed to Intermediate Assessment

Intermediate Assessment

Produce wire frame diagrams to determine the magnitude rating. Proceed to undertake a detailed assessment if impacts continue to be moderate or higher.



Low or Very Low =
No further action



Moderate or High =
Proceed to Detailed Assessment

Detailed Assessment

Undertake field visits and prepare photomontages to accurately assess scenic quality, and determine the effectiveness of existing or proposed screening.



Low or Very Low =
No further action



Moderate or High =
Consider mitigation / layout changes / Neighbour agreement

5.2 Overview of Visual Impact Assessment Process

The overall visual impact rating of each viewpoint must be determined for each assessable viewpoint by combining the visual magnitude and visual sensitivity using the matrix shown in **Figure 05**.

Step 1 - Determine Visual Sensitivity



The visual sensitivity is determined by identifying the sensitivity of each viewpoint and receiver and categorising the scenic quality of the area in view. At this stage, the characterisation of viewpoint sensitivity and scenic quality have been informed by conservative assumptions.

Step 2 - Determine Visual Magnitude



Visual magnitude is determined by analysing the volume of the field of view that a project would occupy. This can be determined by splitting the wire frame diagram into a grid comprising cells 1 degree high and 10 degrees wide and counting the number of cells that would be occupied by a project.

Step 3 - Determine Visual Impact Rating



The overall visual impact rating of each viewpoint must be determined for each assessable viewpoint by combining the visual magnitude and visual sensitivity using the matrix below.

Visual Magnitude (Number of Occupied Cells)	Visual Sensitivity			
	High	Moderate	Low	Very Low
Very High More Than 37	High	High	Moderate	Moderate
High 26-36	High	Moderate	Moderate	Low
Moderate 15-25	Moderate	Moderate	Low	Low
Low 8-14	Moderate	Low	Low	Low
Very Low 1-7	Low	Low	Low	Low

Figure 05 Visual Impact Rating Matrix

6.0 Simple Assessment

6.1 Simple Assessment Summary

The simple assessment is a basic assessment undertaken through a desktop assessment using worst-case assumptions about the likely magnitude and visual sensitivity. This is undertaken through a calculation of the theoretical extent of visibility of the Project from each dwelling. This is calculated based on the vertical and horizontal field of view.

90 non-associated dwellings were identified within 8,018m of the nearest turbine with a theoretical line of sight to the Project (based on the VSM). In accordance with the Technical Supplement, a simple assessment was undertaken for all these dwellings.

The outcome of the Simple Assessment identified that **39** non-associated dwellings were identified as having a moderate or high visual impact rating. These dwellings will require an intermediate assessment (to be undertaken during the EIS phase).

- R1
- R12
- R13
- R14
- R15
- R16
- R17
- R18
- R2
- R24
- R25
- R31
- R32
- R33
- R36
- R37
- R38
- R39
- R41
- R43
- R44
- R5
- R50
- R51
- R52
- R67
- R68
- R69
- R70
- R71
- R72
- R81
- R83
- R84
- R88
- R89
- R9
- R90
- R93

Dwelling ID	VSM Percentage	Receiver Elevation (m)	Distance to Nearest Turbine (m)	Overall Visual Sensitivity	Vertical Field of View (degree)	Horizontal Field of View (degree)	Horizontal Cells	Occupied Cells	Visual Magnitude	Visual Impact Rating	Intermediate Assessment Required?
R0_1	81%-100%	259	7833	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R0_2	81%-100%	257	7787	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R0_3	81%-100%	256	7778	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R0_4	81%-100%	265	7912	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R0_5	81%-100%	260	7830	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R0_9	81%-100%	290	7623	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R1	81%-100%	281	2835	Moderate	6	102	11	62	Very High	High	Intermediate Assessment Required
R100	81%-100%	258	6978	Moderate	2	15	2	5	Very Low	Low	No Further Assessment Required
R101	81%-100%	257	7330	Moderate	2	5	1	2	Very Low	Low	No Further Assessment Required
R102	81%-100%	257	7462	Moderate	2	5	1	2	Very Low	Low	No Further Assessment Required
R103	81%-100%	256	7372	Moderate	2	5	1	2	Very Low	Low	No Further Assessment Required
R104	81%-100%	256	7156	Moderate	2	15	2	4	Very Low	Low	No Further Assessment Required
R105	81%-100%	256	6839	Moderate	2	16	2	5	Very Low	Low	No Further Assessment Required
R106	81%-100%	257	7257	Moderate	2	15	2	4	Very Low	Low	No Further Assessment Required
R107	81%-100%	252	7432	Moderate	2	12	2	4	Very Low	Low	No Further Assessment Required
R108	81%-100%	253	7586	Moderate	2	12	2	4	Very Low	Low	No Further Assessment Required
R109	81%-100%	254	7297	Moderate	2	12	2	4	Very Low	Low	No Further Assessment Required
R110	81%-100%	253	6783	Moderate	2	15	2	5	Very Low	Low	No Further Assessment Required
R111	81%-100%	252	6753	Moderate	2	14	2	5	Very Low	Low	No Further Assessment Required
R112	81%-100%	253	6390	Moderate	3	17	2	5	Very Low	Low	No Further Assessment Required
R113	81%-100%	252	7541	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R114	81%-100%	251	7229	Moderate	2	11	2	4	Very Low	Low	No Further Assessment Required
R12	81%-100%	258	2072	Moderate	8	103	11	85	Very High	High	Intermediate Assessment Required
R120	81%-100%	249	7411	Moderate	2	20	2	4	Very Low	Low	No Further Assessment Required
R121	81%-100%	277	5624	Moderate	3	30	4	11	Low	Low	No Further Assessment Required
R123	81%-100%	277	7543	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R124	81%-100%	292	7453	Moderate	2	1	1	2	Very Low	Low	No Further Assessment Required
R125	81%-100%	291	7427	Moderate	2	1	1	2	Very Low	Low	No Further Assessment Required
R126	81%-100%	295	6992	Moderate	2	13	2	5	Very Low	Low	No Further Assessment Required
R13	81%-100%	252	3425	Moderate	5	96	10	47	Very High	High	Intermediate Assessment Required
R14	81%-100%	253	2246	Moderate	7	108	11	78	Very High	High	Intermediate Assessment Required
R15	81%-100%	273	2135	Moderate	7	84	9	67	Very High	High	Intermediate Assessment Required
R16	81%-100%	272	2471	Moderate	6	77	8	52	Very High	High	Intermediate Assessment Required
R17	81%-100%	285	3505	Moderate	5	69	7	32	High	Moderate	Intermediate Assessment Required
R18	81%-100%	266	4301	Moderate	4	36	4	15	Moderate	Moderate	Intermediate Assessment Required
R19	81%-100%	263	6333	Moderate	3	17	2	5	Very Low	Low	No Further Assessment Required
R2	81%-100%	277	2496	Moderate	6	115	12	77	Very High	High	Intermediate Assessment Required
R20	81%-100%	265	7747	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required

Dwelling ID	VSM Percentage	Receiver Elevation (m)	Distance to Nearest Turbine (m)	Overall Visual Sensitivity	Vertical Field of View (degree)	Horizontal Field of View (degree)	Horizontal Cells	Occupied Cells	Visual Magnitude	Visual Impact Rating	Intermediate Assessment Required?
R22	41%-60%	251	6424	Moderate	2	29	3	7	Very Low	Low	No Further Assessment Required
R23	61%-80%	242	7948	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R24	81%-100%	267	5884	Moderate	3	58	6	16	Moderate	Moderate	Intermediate Assessment Required
R25	81%-100%	268	5800	Moderate	3	63	7	19	Moderate	Moderate	Intermediate Assessment Required
R29	81%-100%	267	6804	Moderate	2	55	6	14	Low	Low	No Further Assessment Required
R30	81%-100%	266	6878	Moderate	2	54	6	14	Low	Low	No Further Assessment Required
R31	81%-100%	256	4497	Moderate	4	64	7	25	Moderate	Moderate	Intermediate Assessment Required
R32	81%-100%	266	3922	Moderate	4	65	7	29	High	Moderate	Intermediate Assessment Required
R33	81%-100%	265	4780	Moderate	3	42	5	17	Moderate	Moderate	Intermediate Assessment Required
R34	81%-100%	244	7756	Moderate	2	12	2	4	Very Low	Low	No Further Assessment Required
R35	81%-100%	256	5400	Moderate	3	24	3	9	Low	Low	No Further Assessment Required
R36	81%-100%	278	3898	Moderate	4	43	5	21	Moderate	Moderate	Intermediate Assessment Required
R37	81%-100%	280	3022	Moderate	5	99	10	53	Very High	High	Intermediate Assessment Required
R38	81%-100%	274	2275	Moderate	7	92	10	70	Very High	High	Intermediate Assessment Required
R39	81%-100%	254	2024	Moderate	8	102	11	87	Very High	High	Intermediate Assessment Required
R41	81%-100%	274	4954	Moderate	3	78	8	26	High	Moderate	Intermediate Assessment Required
R42	81%-100%	253	6540	Moderate	2	20	2	5	Very Low	Low	No Further Assessment Required
R43	81%-100%	266	4748	Moderate	3	43	5	17	Moderate	Moderate	Intermediate Assessment Required
R44	81%-100%	260	5417	Moderate	3	53	6	18	Moderate	Moderate	Intermediate Assessment Required
R47	81%-100%	258	7363	Moderate	2	24	3	7	Very Low	Low	No Further Assessment Required
R48	81%-100%	270	6917	Moderate	2	24	3	7	Very Low	Low	No Further Assessment Required
R5	81%-100%	252	2013	Moderate	8	137	14	111	Very High	High	Intermediate Assessment Required
R50	81%-100%	260	4333	Moderate	4	72	8	30	High	High	Intermediate Assessment Required
R51	81%-100%	276	5068	Moderate	3	73	8	25	Moderate	Moderate	Intermediate Assessment Required
R52	81%-100%	255	4620	Moderate	3	74	8	28	Very High	High	Intermediate Assessment Required
R67	81%-100%	272	5197	Moderate	3	67	7	22	Moderate	Moderate	Intermediate Assessment Required
R68	81%-100%	254	5023	Moderate	3	68	7	22	Moderate	Moderate	Intermediate Assessment Required
R69	81%-100%	250	6511	Moderate	2	72	8	20	Moderate	Moderate	Intermediate Assessment Required
R70	81%-100%	250	6627	Moderate	2	71	8	19	Moderate	Moderate	Intermediate Assessment Required
R71	81%-100%	260	2095	Moderate	8	98	10	76	Very High	High	Intermediate Assessment Required
R72	81%-100%	267	5828	Moderate	3	62	7	19	Moderate	Moderate	Intermediate Assessment Required
R73	81%-100%	264	6334	Moderate	3	17	2	5	Very Low	Low	No Further Assessment Required
R75	81%-100%	250	7750	Moderate	2	10	1	2	Very Low	Low	No Further Assessment Required
R76	81%-100%	252	6449	Moderate	2	32	4	10	Low	Low	No Further Assessment Required
R77	81%-100%	254	6788	Moderate	2	40	4	9	Low	Low	No Further Assessment Required
R78	81%-100%	252	6587	Moderate	2	41	5	12	Low	Low	No Further Assessment Required
R81	81%-100%	255	3529	Moderate	5	76	8	36	High	High	Intermediate Assessment Required
R83	81%-100%	260	4014	Moderate	4	52	6	24	Moderate	Moderate	Intermediate Assessment Required
R84	81%-100%	259	3727	Moderate	4	40	4	17	Moderate	Moderate	Intermediate Assessment Required
R88	81%-100%	261	2010	Moderate	8	63	7	56	Very High	High	Intermediate Assessment Required

Dwelling ID	VSM Percentage	Receiver Elevation (m)	Distance to Nearest Turbine (m)	Overall Visual Sensitivity	Vertical Field of View (degree)	Horizontal Field of View (degree)	Horizontal Cells	Occupied Cells	Visual Magnitude	Visual Impact Rating	Intermediate Assessment Required?
R89	81%-100%	268	2065	Moderate	8	81	9	69	Very High	High	Intermediate Assessment Required
R9	81%-100%	256	2015	Moderate	8	103	11	87	Very High	High	Intermediate Assessment Required
R90	81%-100%	269	4482	Moderate	4	73	8	29	High	High	Intermediate Assessment Required
R91	81%-100%	248	6172	Moderate	3	50	5	13	Low	Low	No Further Assessment Required
R92	81%-100%	246	6261	Moderate	3	49	5	13	Low	Low	No Further Assessment Required
R93	81%-100%	250	3875	Moderate	4	70	7	29	High	High	Intermediate Assessment Required
R94	81%-100%	273	4733	Moderate	3	30	3	10	Low	Low	No Further Assessment Required
R95	81%-100%	275	4790	Moderate	3	29	3	10	Low	Low	No Further Assessment Required
R96	81%-100%	270	6387	Moderate	3	23	3	8	Low	Low	No Further Assessment Required
R97	81%-100%	259	7539	Moderate	2	5	1	2	Very Low	Low	No Further Assessment Required
R98	81%-100%	258	7338	Moderate	2	15	2	4	Very Low	Low	No Further Assessment Required
R99	81%-100%	258	7020	Moderate	2	15	2	5	Very Low	Low	No Further Assessment Required

Table 01 Simple Assessment

6.2 Simple Assessment Conclusion

This Visual Scoping Report will aid the Applicant in the selection of sites, designs and layouts to avoid and mitigate significant visual impacts. It may also identify where the Applicant should focus consultation with landowners and the local community.

All public viewpoints and private receivers identified in the VSR need to be assessed in some level in the environmental impact statement. A full visual impact assessment is not required if features completely obstruct the view of the project. In such cases, applicants must provide evidence that intervening topography, screening or structures would eliminate any impact.

Following the outcome of the simple assessment, **39** non-associated dwellings were identified as requiring an intermediate assessment. An intermediate assessment accounts for many of the factors that influence magnitude including intervening topography, the different distances at which turbines will be visible, and spacing between individual and clusters of turbines. It involves 3D modelling of existing topography and the Project's proposed turbines.

If the intermediate assessment indicates that a 'moderate' or 'high' impact continues to be likely, then the applicant must conduct a detailed assessment.



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