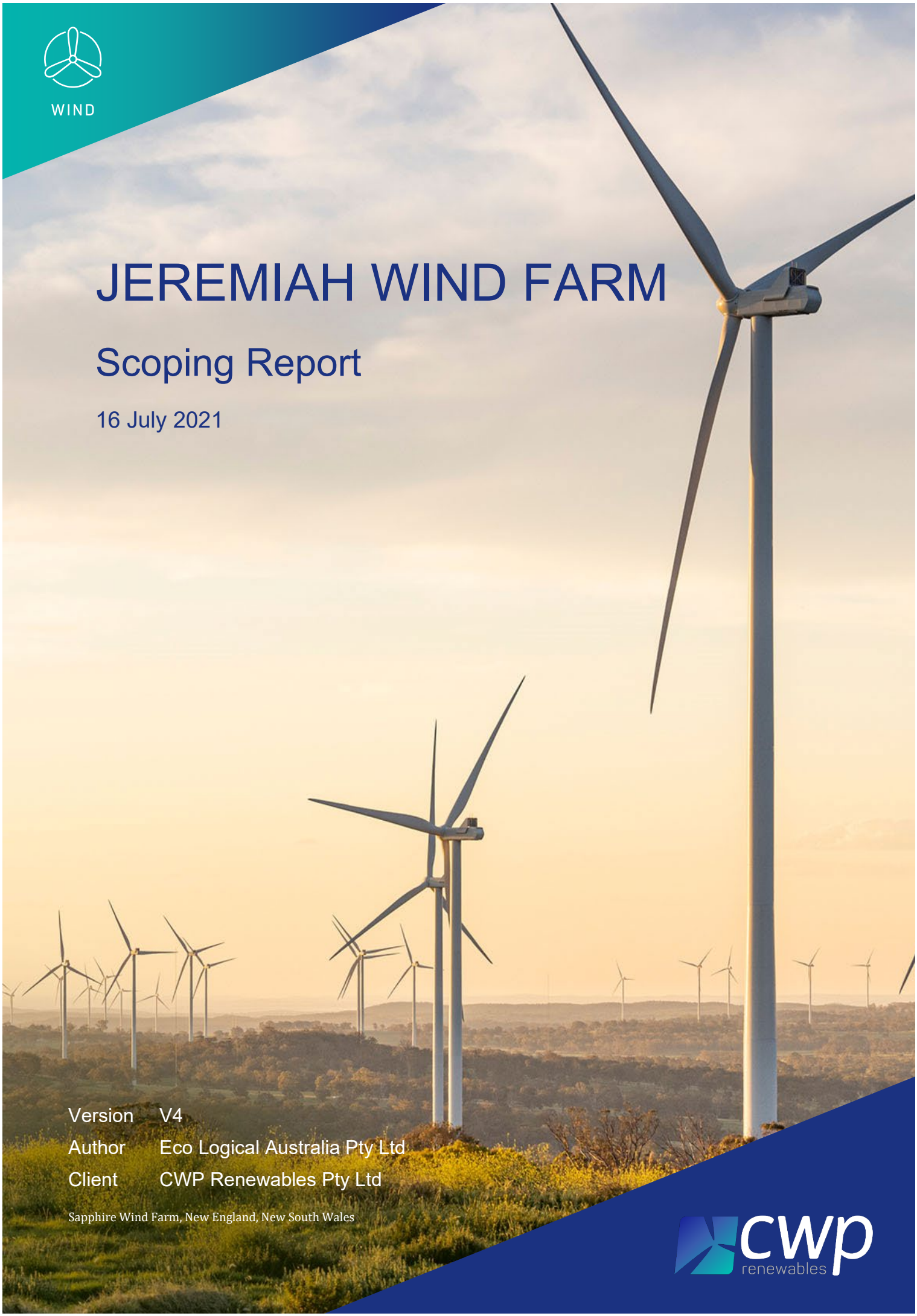
WIND

JEREMIAH WIND FARM

Scoping Report

16 July 2021



Version V4

Author Eco Logical Australia Pty Ltd

Client CWP Renewables Pty Ltd

Sapphire Wind Farm, New England, New South Wales

cwp renewables

1 REVISION CONTROL

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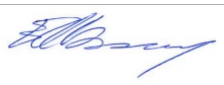
V3	11/06/21	Final/Issued	Skye O'Brien	Rachel Murray	Ed Mounsey	
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Executive Summary

Jeremiah Wind Farm Pty Ltd (the Proponent), a wholly owned subsidiary of CWP Renewables Pty Ltd (CWPR) is proposing to construct, maintain and operate a 65 wind turbine generator (WTG) wind farm and associated infrastructure collectively known as Jeremiah Wind Farm (the Project).

The Project is located in the NSW Riverina Local Land Services region, 29 km east of Gundagai, NSW and within the Local Government Area of Cootamundra-Gundagai Regional Council (**Figure 1**).

The Project is deemed a State Significant Development (SSD) by Clause 20 of Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011 and therefore the Proponent is seeking consent under Division 4.7 of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) for the Project. The Project will be referred to the Commonwealth Department of Agriculture, Water Environment (DAWE) for determination of whether a Controlled Action under the *Environment Protection & Biodiversity Conservation Act 1999* (EPBC Act) is likely.

This Scoping Report provides preliminary information on the Project and its potential impacts and supports a request for Secretary's Environmental Assessment Requirements (SEARs). The Scoping Report will further support the preparation of an Environmental Impact Statement (EIS) which will be lodged to the Department of Planning, Industry and Environment (DPIE) for assessment.

Project Justification

The Proponent commenced investigations into the Project feasibility and site selection over 15 years ago in 2005, with a strong focus on early community consultation and incorporating the principles of Ecologically Sustainable Development (ESD). Accordingly, the Proposed Development Area has been selected and refined based on a number of key factors, including:

- Local community support and ongoing community engagement
- Identification of a suitable wind resource based on long term monitoring
- Identification of biodiversity constraints and avoidance and minimisation of environmental impacts where possible
- Connection opportunity and capacity of the local electricity transmission network
- Geographic separation from other wind farm projects and consideration of reducing potential cumulative impacts
- Low population density land to assist in minimising operational visual and noise impacts
- Minimal change to current agricultural land uses post construction
- Overall positive economic impact

The development and evolution of the Project layout will follow an iterative process, with opportunity for further refinement and revision as more information is obtained from environmental studies, ongoing feedback from consultation and updated wind monitoring results.

Preliminary Environmental Assessment

A preliminary environmental assessment has been undertaken in accordance with the Scoping Worksheet as provided in the Department of Planning's guideline '*Draft scoping an environmental impact statement*' (DPE 2017). This worksheet, attached as Appendix A, categorises these matters as either 'Key Issues', 'Other Issues' or 'Scoping Only issues'. Preliminary assessments have subsequently been undertaken and are presented in this report. The following Key Issues will require detailed assessment in order to better understand the potential impacts:

- Landscape and visual amenity

- Noise
- Traffic and transport
- Biodiversity
- Aboriginal cultural heritage
- Historic heritage
- Watercourses and hydrology
- Hazards and Risks
- Community and socio-economic impacts

The Scoping Report has also identified the following Other Issues for assessment within the EIS document. These matters are those whose impacts can usually be managed by well understood and routinely used mitigation measures.

- Geology and soils
- Air quality, odour and dust
- Resource requirements and waste
- Decommissioning and refurbishment
- National Parks

All identified issues will be assessed in further detail as part of the preparation of the EIS in accordance with the SEARs to be issued for the Project. EIS studies will provide further information in determining the optimised locations for Project infrastructure.

Community and Other Stakeholder Engagement

Community engagement commenced in 2005 as part of the early Project scoping. In accordance with the Wind Guideline (DPE, 2016a), NSW Visual Assessment Bulletin (DPE, 2016b) and the Draft Social Impact Assessment Guidelines (DPIE, 2020), a draft Community Engagement Strategy (CES) has being prepared to drive early and meaningful consultation with the local community and other stakeholders. This has, and will continue to, enable feedback that can be incorporated into the design of the Project.

A variety of consultation methods have been implemented to date including meetings, phone calls and emails, letters, flyers and newsletters, survey and most recently, a public drop in session held at the Adjungbilly Community Hall in March 2021. Overall, based on community consultation to date, there is strong support for the Project within the local Adjungbilly community. This Scoping Report provides further detail regarding the consultation approach moving forward which will involve ongoing engagement with the local community and other stakeholders across all stages of the Project; preparation of the EIS, construction, commissioning and operation, and decommissioning.

In summary, the Jeremiah Wind Farm proposes to be an environmentally sensitive, sustainable development. It will contribute to meeting renewable energy targets for Australia's electricity supply. Through community and stakeholder consultation, meeting planning requirements, carrying out environmental assessments and employing mitigation measures where necessary, the Project aims to create minimal environmental impact during construction and operation while generating clean, renewable energy.

It is intended that this Scoping Report provides sufficient Project information to enable DPIE and other relevant Public Authorities to prepare the SEARs for the Project.

Skye O'Brien
Senior Environmental Consultant

Table 1: Glossary

Abbreviation	Definition
ACHA	Aboriginal Cultural Heritage Assessment
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
BAM	Biodiversity Assessment Method
BBAMP	Bird and Bat Adaptive Management Plan
BC Act	*Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
BoM	Bureau of Meteorology
BOS	Biodiversity Offset Scheme
CEEC	Critically Endangered Ecological Community
CES	Community Engagement Strategy
DAWE	Department of Agriculture, Water Environment (Commonwealth)
DCP	Development Control Plan
DEM	Digital Elevation Model
DPE	Department of Planning and Environment (now DPIE)
DPIE	Department of Planning, Industry and Environment (NSW)
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EMF	Electric and magnetic fields
EP&A Act	*Environmental Planning & Assessment Act 1979*
EPBC Act	*Environment Protection & Biodiversity Conservation Act 1999*
ESD	Ecologically Sustainable Development
ESF	Energy Storage Facility
GWA	Global Wind Atlas
IEC	International Electrotechnical Commission
LBB	Large Bent-winged Bat
LEP	Local Environmental Plan
LGA	Local Government Area
LSC	Land and Soil Capability
LSPS	Local Strategic Planning Statement
MNES	Matters of National Environmental Significance
NEM	National Energy Market
NT Act	Native Title Act 1993
OEH	Office of Environment and Heritage (now DPIE)
PBP	Planning for Bushfire Protection
PCT	Plant Community Type
PVIA	Preliminary Visual Impact Assessment

Abbreviation	Definition
RET	Renewable Energy Target
REZ	Renewable Energy Zone
RFS	NSW Rural Fire Service
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SHR	State Heritage Register
SIA	Social Impact Assessment
SoDAR	Sound Detection and Ranging
SoHI	Statement of Heritage Impact
SSD	State Significant Development
SSDA	State Significant Development Application
TEC	Threatened Ecological Community
WTG	Wind Turbine Generator
ZVI	Zone of Visual Influence

Table 2: Table of Terms

Term	Definition
The Project	Jeremiah Wind Farm
The Proponent	Jeremiah Wind Farm Pty Ltd
Proposed Development Area	The area shown in **Figure 2** within which project infrastructure is proposed.
Project Site	The land required for the Project as shown in **Figure 2**, and includes Crown land, Crown waterways, Crown roads and Council roads.
Wind Guideline	Wind Energy, Guideline (DPE, 2016a)
Visual Bulletin	Wind Energy, Visual Assessment Bulletin (DPE, 2016b)
Noise Bulletin	Wind Energy, Noise Assessment Bulletin (DPE, 2016c)
Key Issue	A matter that requires detailed assessment, such as a technical study, to better understand the potential impacts that are likely to arise and identify project specific mitigation.
Other Issue	A matter whose impacts can usually be managed by well understood and routinely used mitigation measures. Usually, further information will be required, but often without the need for a technical study.

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1 Introduction

1.1 Project Overview

The proposed Jeremiah Wind Farm (herein referred to as the 'Project'), will involve the construction, operation and decommissioning of approximately 65 Wind Turbine Generators (WTG) and associated ancillary infrastructure, with a total capacity around 400 MW. The Project Site is located approximately 29 km east of Gundagai around the Adjungbilly area, within the Riverina Local Land Services region. It sits within the Cootamundra-Gundagai Regional Council Local Government Area (LGA) (**Figure 1**). The proposed Project Site borders Bungongo State Forest in the north and south east and is located on privately owned land used for agricultural purposes.

A preliminary Project Site layout is provided in **Figure 2** however this will be further refined in response to identified environmental constraints and ongoing stakeholder consultation.

1.2 The Proponent

The proponent for the Project is Jeremiah Wind Farm Pty Ltd, a wholly owned subsidiary of CWP Renewables Pty Ltd (CWPR). Proponent details in relation to this Project are included in **Table 3**.

Table 3: Proponent details

Document	Details
Proponent name	Jeremiah Wind Farm Pty Ltd
Postal address	Suite 1.01 Level 1, 17 Moore Street, Canberra, ACT 2601
ABN	76 633 467 535
Project contact	Jessica Petersen CWP RENEWABLES PTY LTD jessica.petersen@cwprenewables.com
Report Author	Skye O'Brien, BSc - Environment Senior Environmental Consultant

1.3 About CWP Renewables Pty Ltd

CWPR is a renewable energy company that develops, operates and owns renewable energy assets in Australia.

CWPR was established in Australia in 2007 and has since developed an industry-leading development pipeline with a number of assets maturing into construction and operation. CWPRs development pipeline continues to grow with over 4 GW of wind, solar and battery projects currently under development in eastern Australia.

CWPR also provides dedicated asset management services with 758 MW of projects under construction and / or operations. This includes projects developed by CWPR as well as projects developed and owned by third parties.

In addition to Jeremiah Wind Farm, the following projects are currently in development, under construction or are operating under management by CWPR:

- Boco Rock Wind Farm 113 MW wind farm in the Snowy Mountains region of NSW (operating)
- Sapphire Wind farm 270 MW wind farm in the New England region of NSW (operating)
- Bango Wind Farm 240 MW wind farm in the Southern Tablelands of NSW (under construction)

- Crudine Ridge Wind Farm 135 MW wind farm in the Central West region of NSW (under construction)
- Uungula Wind Farm 400 MW wind farm in the Central West region of NSW (approved and in financing)
- Sapphire Battery Project 35 MW battery facility co-located with the Sapphire Wind Farm (approved and in financing)
- Sapphire Solar Farm 200 MW solar farm co-located with the Sapphire Wind Farm (approved)
- Spicers Creek Wind Farm an early stage development in the Central West region of NSW (early stage)

Further details can be found at the website www.cwprenewables.com.

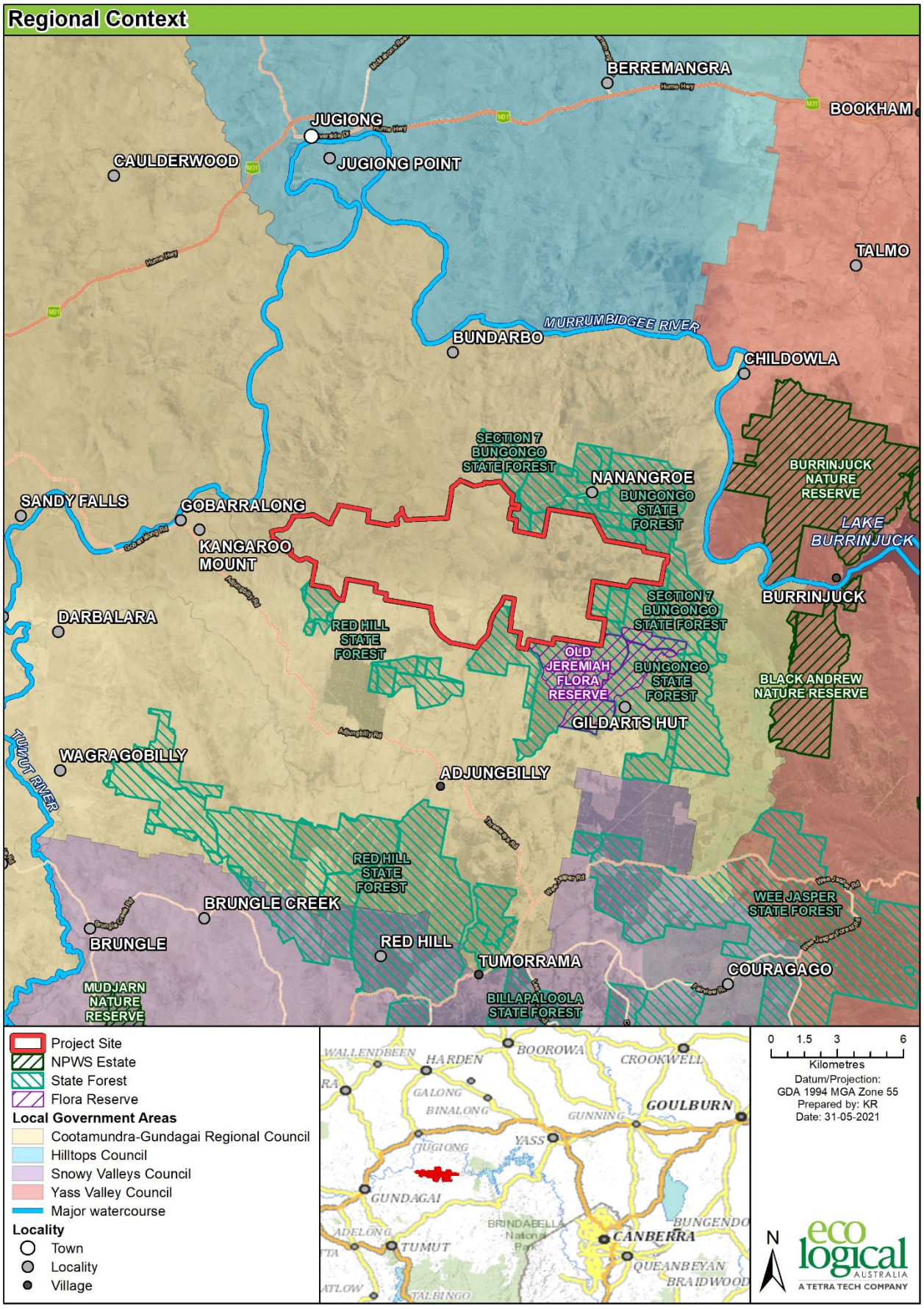

Figure 1: Project Site and Regional Context

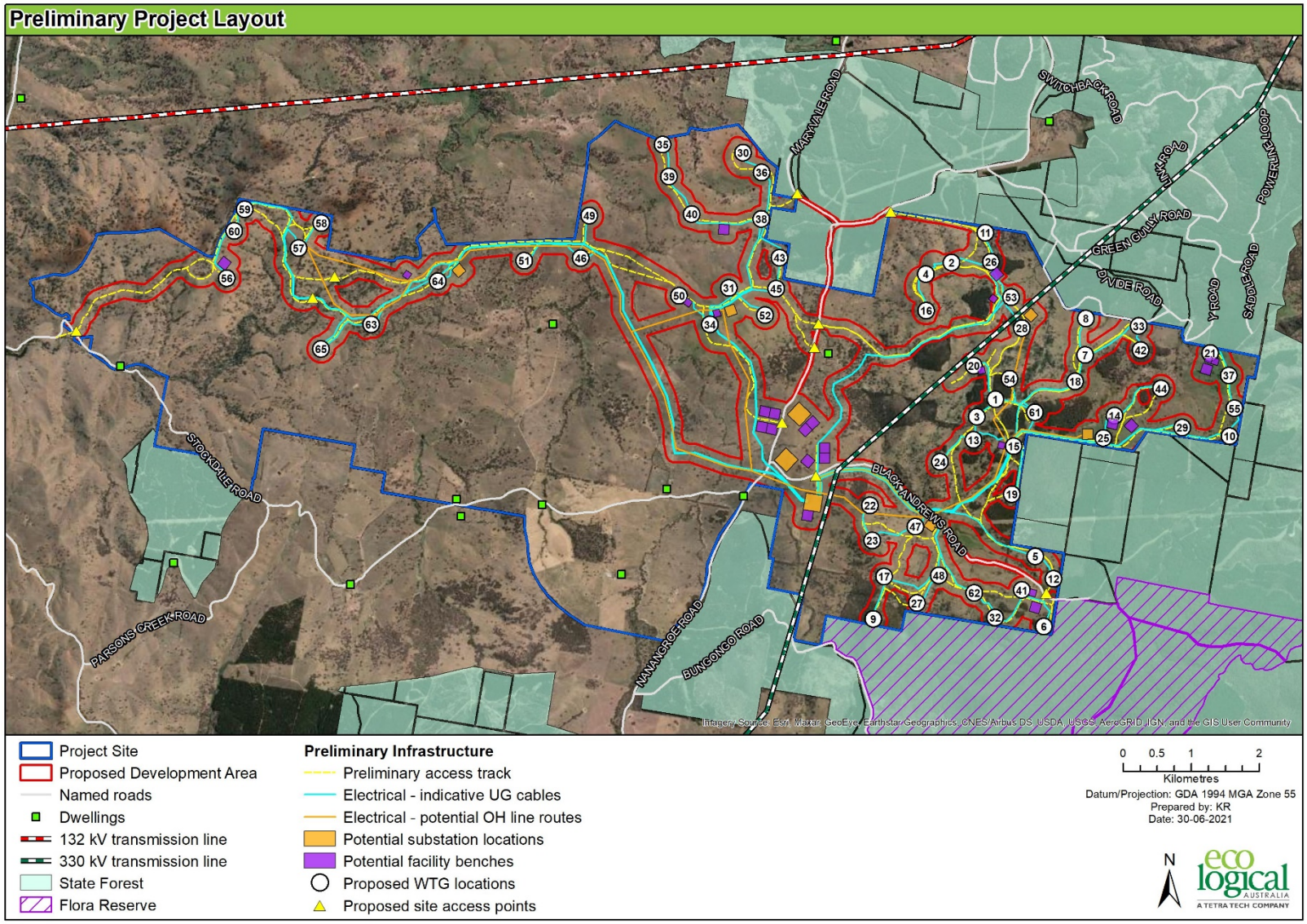

Figure 2: Preliminary Project Layout

1.4 Document Purpose

The Proponent is seeking State Significant Development (SSD) consent under Division 4.7 of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) for the Project.

This Scoping Report has been prepared to support an application to the Secretary of the Department of Planning, Industry and Environment (DPIE) for Secretary's Environmental Assessment Requirements (SEARs) to guide the preparation of the Environmental Impact Statement (EIS) for the Project. This Scoping Report has been prepared in consideration of the 'NSW Wind Energy Framework' which comprises:

- Wind Energy Guideline (Wind Guideline) (DPIE, 2016a)
- Wind Energy: Visual Assessment Bulletin (Visual Bulletin) (DPIE, 2016b)
- Wind Energy: Noise Assessment Bulletin (Noise Bulletin) (DPIE, 2016c)
- Standard SEARs
- Wind Energy Framework Q&As.

It has also been prepared in accordance with Section 4.2 (SEARs and Preliminary Environmental Assessment (PEA)) of the Wind Guideline and the DPIE's draft *Guideline 3 – Scoping an Environmental Impact Statement* (Guideline 3) (DPIE, 2017).

The Social Impact Assessment Guideline (DPIE, 2020) has also been used to guide the preparation of this Scoping Report. Although this document is in Draft, it is anticipated that the SEARs will likely refer to this Guideline.

Table 4 indicates where each requirement is addressed.

Table 4: Relevant guidelines where addressed

Item	Section
Wind Guideline PEA Requirements	
Describes the proposed wind energy project and its location in context (e.g. it should identify the preliminary turbine layout, nearby dwellings, key public viewpoints and other key landscape features). Proponents should demonstrate the suitability of their chosen location and the viability of wind resources in that area.	Section 3 Section 5
Describes steps taken to assist potentially affected people and groups in understanding the proposed development and what it could mean for them.	Section 8
Describes the proposed overall approach to stakeholder consultation for the EIS development process.	Section 8
Identified the key issues for the project.	Section 7
Includes the results of early consultation, including in relation to landscape values, and assesses the preliminary turbine layout against the preliminary assessment tools contained in the Visual Assessment Bulletin, including negotiations with landholders.	Section 7.1.2
Provides a high-level assessment of the environmental impacts of the Project (focussing on those key issues).	Section 7.1
Report on the outcomes of community consultation undertaken to date.	Section 8.5

Item	Section
DPIE Guideline 3 Process	
Describe the Project	Section 3
Identify the relevant strategic and statutory context.	Section 6
Summarise the results of any early community engagement.	Community and Stakeholder Engagement 8
Identify the scale and nature of the impacts of the Project.	Section 7
Outline the proposed approach to assessment and community engagement.	Section 7 Section8

1.5 Project Timeframe

The Proponent intends to submit an EIS for exhibition in late 2021 with the objective of receiving consent from both State and Commonwealth planning authorities in mid-2022. The Project would undergo a financing process with the intention of commencing construction in 2023. Construction would commence following the completion of all pre-construction consent commitments and the awarding of the final construction contract. Assuming satisfactory progress of financing and construction works, it is anticipated that the wind farm would start commissioning during the construction phase in 2024, becoming fully commissioned in 2025. **Table 5** identifies key project milestones.

Table 5: Anticipated Project Timeframe

Project Stage	Anticipated Date
Scoping Report lodged	Q2 2021
SEARs issued	Q2 2021
Environmental Assessment submission	Q3 2021
Consent authority approval	Q2 2022
Financing and contract negotiations complete	Q4 2021
Construction commencing	Q1 2023
Fully commissioned	2025
Decommissioning or re-powering	2055-2060

2 Site Location and Details

2.1 Regional Context

The Project Site is situated entirely within the Cootamundra-Gundagai Regional Council LGA in the NSW State electorate of Cootamundra and in the State suburb of Adjungbilly (**Figure 1**). Adjungbilly is a rural community in the central east part of the NSW Local Land Services Riverina region and on the north-western edge of the Snowy Mountains, directly situated 29 km south east of Gundagai and 35 km north east of Tumut. The Riverina is an agricultural region of south-western NSW, distinguished from other regions by the combination of flat plains, warm to hot climate and an ample supply of water for irrigation.

The Adjungbilly community has a community hall and a small primary school named the Bongongo Public School along with rural residences and structures associated with agricultural land uses. According to the 2016 Census, there were 81 people in Adjungbilly. Of these, 48.2 % were male and 51.8 % female with the median age of 36 (Australian Bureau of Statistics, 2021).

A number of other rural communities are present within a 10 km radius of the Site including:

- Burrinjuck
- Kangaroo Mount
- Gobarralong
- Bundarbo
- Childowla

The dominant land uses in this area are forestry and agriculture such as cattle and sheep grazing and cropping. The Project Site itself is comprised of a number of elevated ridges with nearby land mainly used for grazing and forestry.

2.1.1 Bioregional Context

The Project Site is located within two NSW bioregions as shown on **Figure 4**, comprising the South Western Slopes Bioregion, within the Upper Slopes Sub Region and the South Eastern Highlands Bioregion, within the Bondo Sub Region (Interim Biogeographic Regionalisation for Australia (IBRA7).

The South Western Slopes Bioregion is characterised by foothills and isolated ranges comprising the lower inland slopes associated with the Great Dividing Range. The Upper Slopes sub region in particular, is characterised by steep, hilly and undulating ranges and Granite basins and confined river valleys with terrace remnants.

The South Eastern Highlands Bioregion is typically characterised by rugged hills and stony slopes.

2.1.2 Key Landscape Features

In addition to the agricultural land uses, the region is characterised by scenic landscapes, natural environments and productive forests, including the following protected areas within a 10 km radius of the Site:

- Black Andrew Nature Reserve
- Burrinjuck Nature Reserve
- Wee Jasper Nature Reserve
- Bungongo State Forest (#582)
- Red Hill State Forest (#591)
- Section 7 Bungongo (State Forest, no SF Number)

The Project Site borders the Bungongo State Forest in the north and south east, and Red Hill State Forest in the south west.

The Project Site is within the Oak Creek catchment, which is a tributary of the Murrumbidgee River. Whilst the Murrumbidgee River does not enter the Project Site, numerous tributaries run through it. The Burrinjuck Dam and its impounded reservoir Lake Burrinjuck are also located to the east of the Project Site. Burrinjuck Dam provides water supplies for the Murrumbidgee Irrigation Area which has a combination of licensed agricultural, irrigation and stock use, with also town and domestic users.

Figure 3 provides a visual overview of the Project Site and key landscape features in the region, including watercourses and reserves.

2.1.3 Topography

The Project Site is characterised by steep to rolling hills, located between 357 m AHD to 814 m AHD and within numerous soil landscapes. **Figure 4** provides elevation information across the Project Site and **Figure 5** provides an overview of wind resources in the area as mapped by the Global Wind Atlas (GWA). The data from the GWA is intended to illustrate the wind resource potential of the Project Site for the purposes of this Scoping Report. The mapping indicates that the proposed Project Site has been located in areas where the mean wind speed is generally between 6 and 9 m/s (Global Wind Atlas, 2021).

The underlying geomorphology lies wholly in the eastern extent of the Lachlan Fold Belt, which consists of Cambrian to Early Carboniferous sedimentary and volcanic rocks (https://www.environment.nsw.gov.au/). These rocks are largely comprised of granites, often expressed as central basins surrounded by steep hills or as high plateaus with rock outcrops and tors (https://www.environment.nsw.gov.au/). The soils present within the bioregion are varied, reflecting the diversity of landform features: shallow, stony soils are found on ridges and hills, whilst texture contrast soils are located on lower slopes (https://www.environment.nsw.gov.au/). The native vegetation associated with these soils has largely been cleared, but likely comprised of woodlands and open woodlands of *Eucalyptus albens* (White box).

Figure 6 presents the Land and Soil Capability (LSC) across the Project Site. The mapping is based on an eight class system with values ranging between 1 and 8 which represent a decreasing capability of the land to sustain various types of agricultural land use. Class 1 represents land capable of sustaining most land uses including those that have a high impact on the soil (e.g., regular cultivation), whilst Class 8 represents land that is not suitable for agricultural production. (DPIE, 2020). . The Project Site contains land broadly classified as Class 4, 6 and 7. However, the Project Site is currently used for agricultural purposes (mainly for grazing).

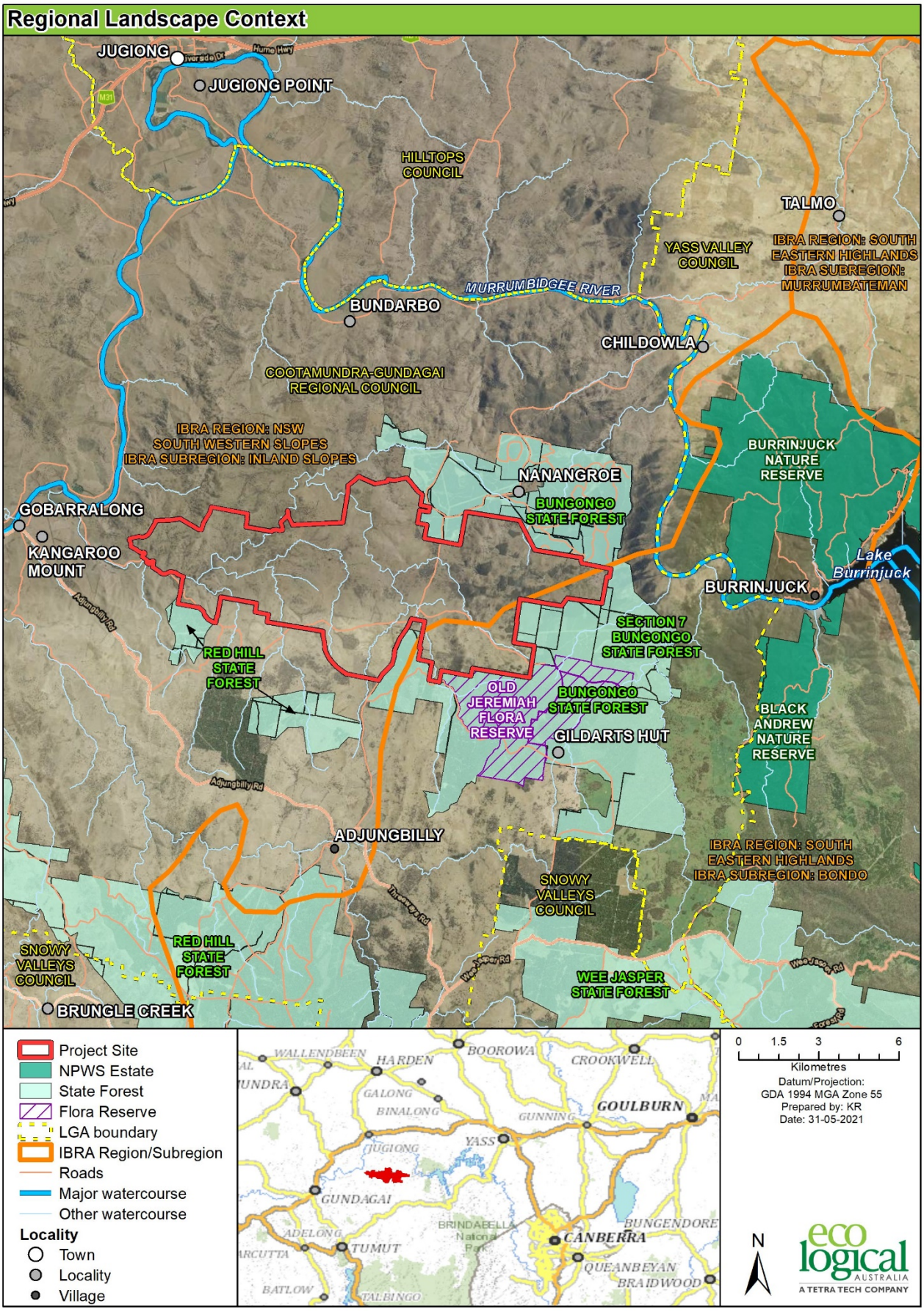

Figure 3: Regional Landscape Context

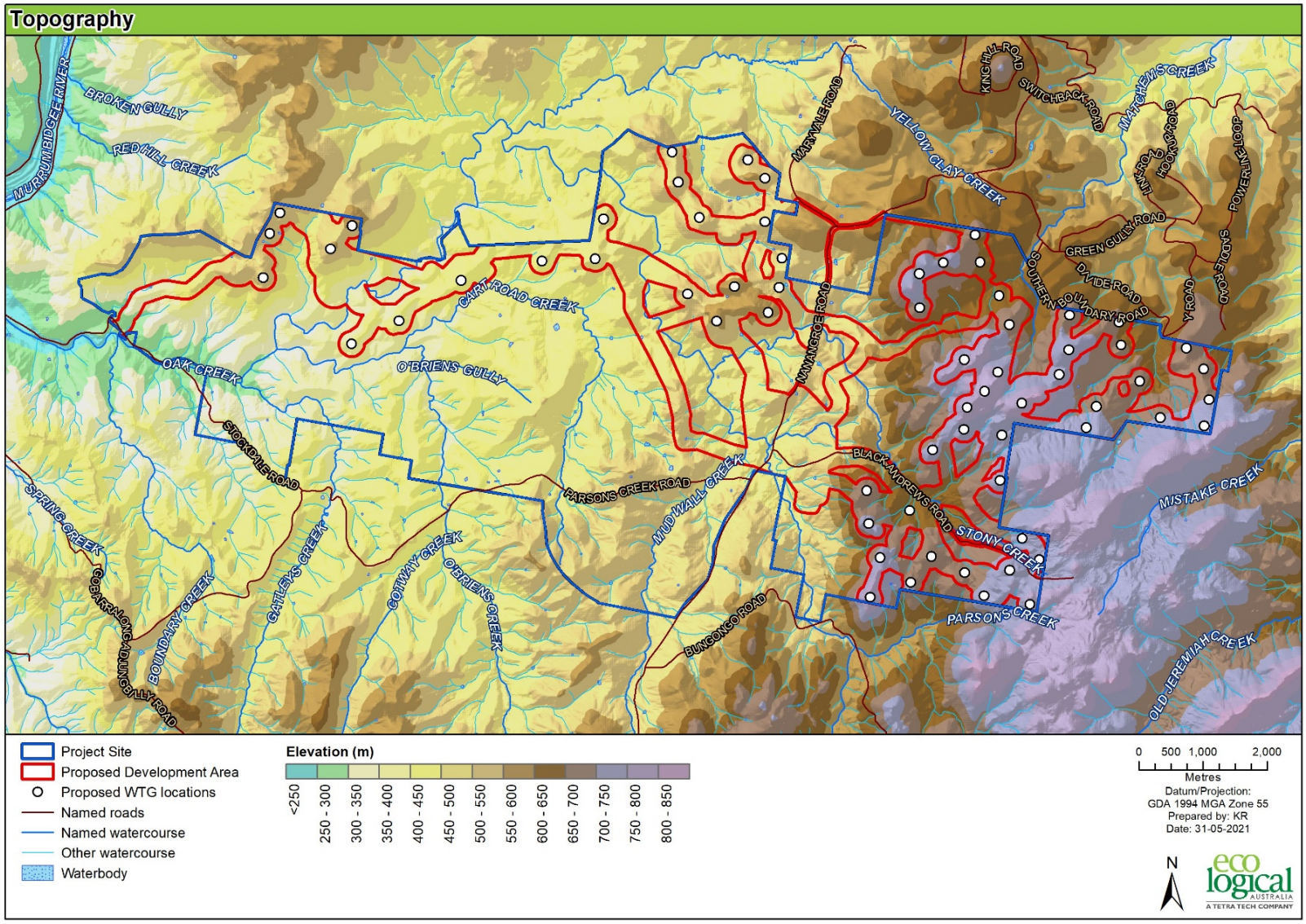

Figure 4: Project Site Topography

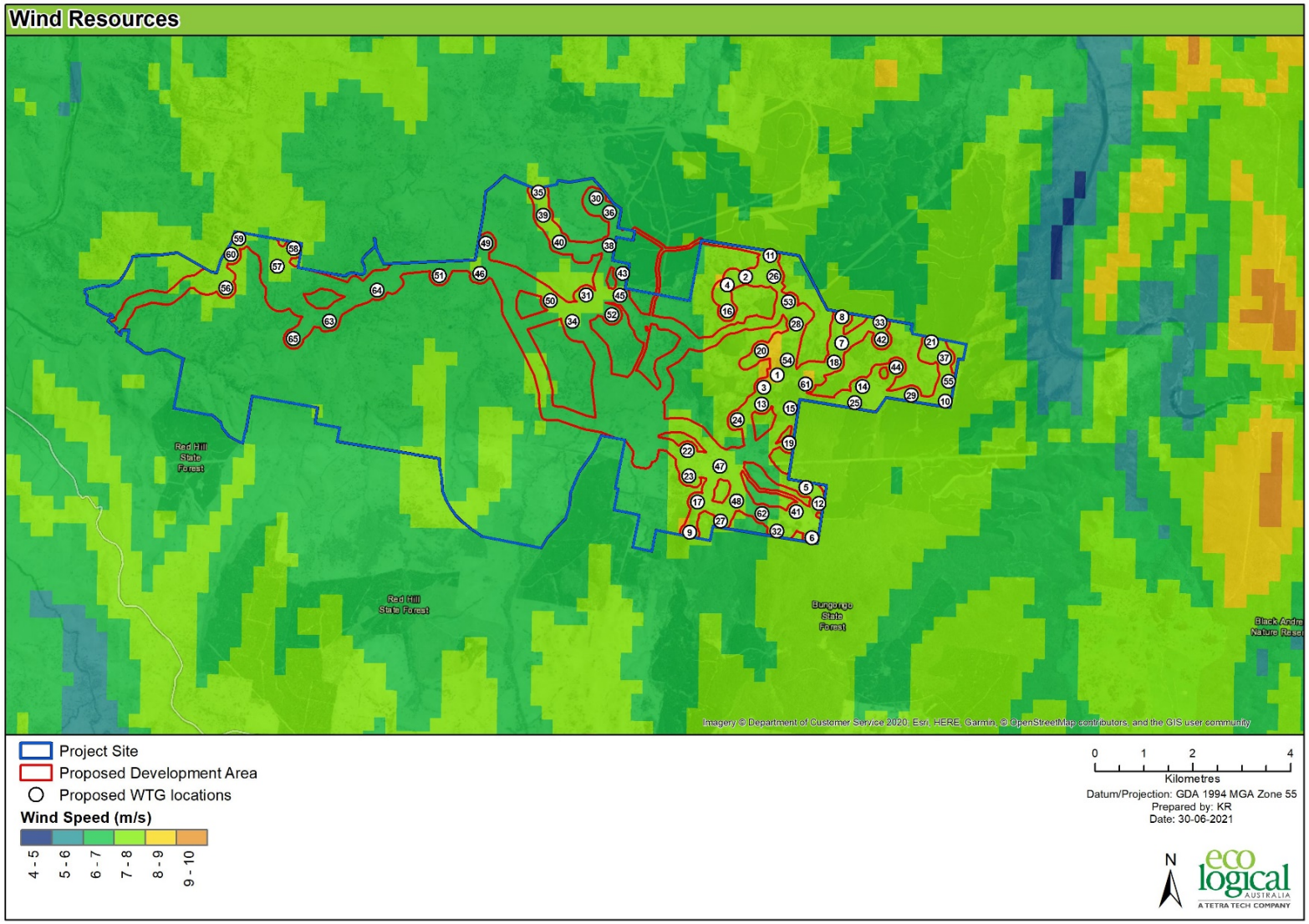

Figure 5: Wind Resources

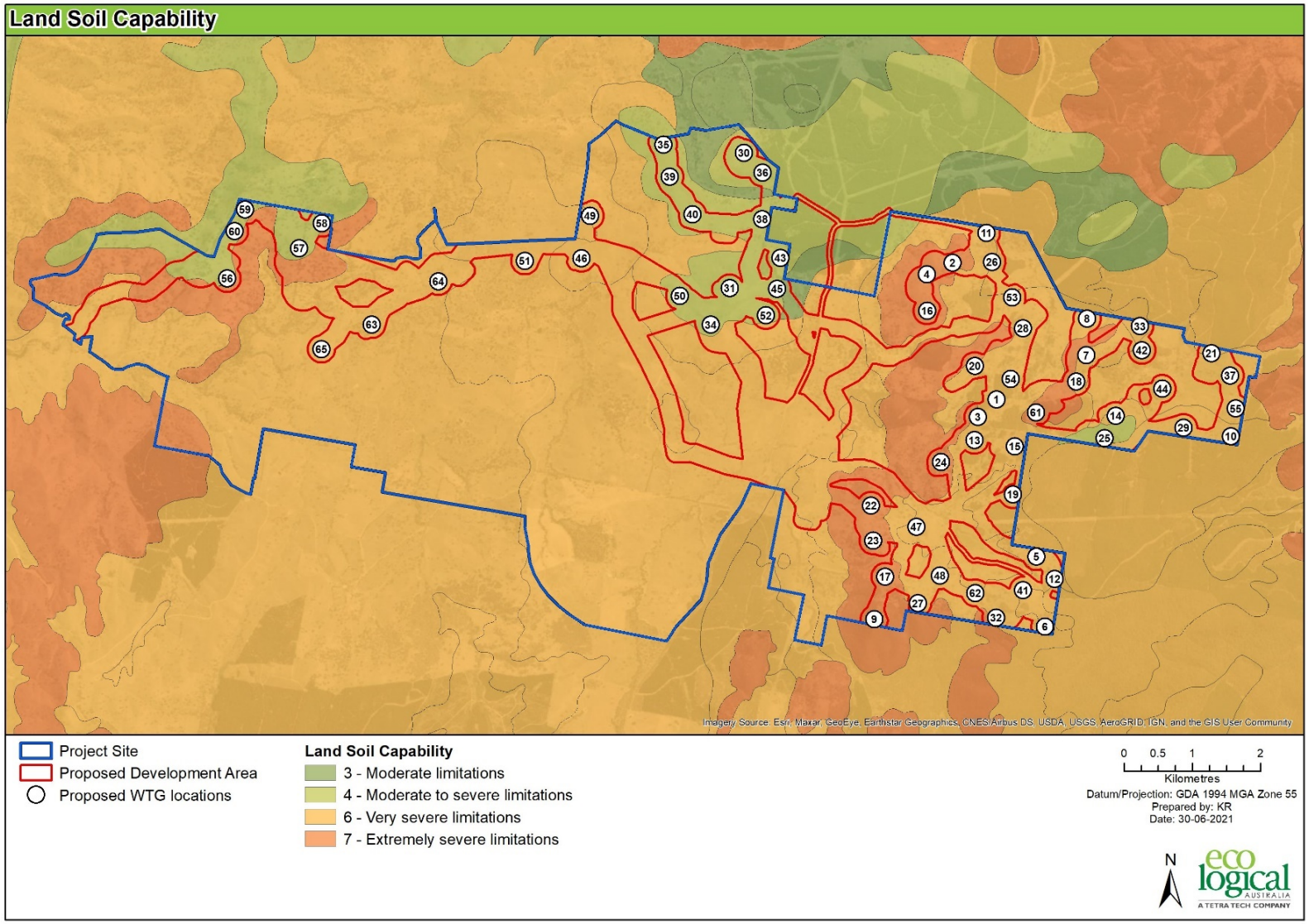

Figure 6: Land Soil Capability

2.1.4 Key Transport and Infrastructure

The Project Site is in proximity to the major centres of Wagga Wagga (140 km by road to the east) and Canberra (134 km by road to the south east) and is benefited by major road and rail routes that connect the LGA to the wider region, including the Hume Highway, Burley Griffin Way, Olympic Way and the Sydney to Melbourne Rail line. The Inland Rail, currently under construction, will traverse the north western part of the LGA through Stockinbingal, just north of Cootamundra. These strategic transport links will increase the prominence and strategic importance of the region as a freight interchange. The region is also serviced by regional airports including Tumut Airport, Harden Airport, Cootamundra Airport and the Junction Airstrip, all located within 30 nautical miles (nm) to the Project Site.

The WTG equipment may be supplied through domestic manufacturing or imported and arrive at port. The closest port of entry to the Project Site is Port Kembla, located 360 km by road. However, other NSW ports including (but not limited to) Port Botany and Port of Newcastle may be considered by the construction contractor. A route assessment has been prepared and the results are summarised in the Traffic and Transport section.

2.1.5 Renewable Energy Projects

The Project Site is not located within close proximity to other existing wind and solar renewable energy projects, as identified on **Figure 7**.

Bango Wind Farm, a CWPR project is currently under construction and is located approximately 140 km from the Project Site.

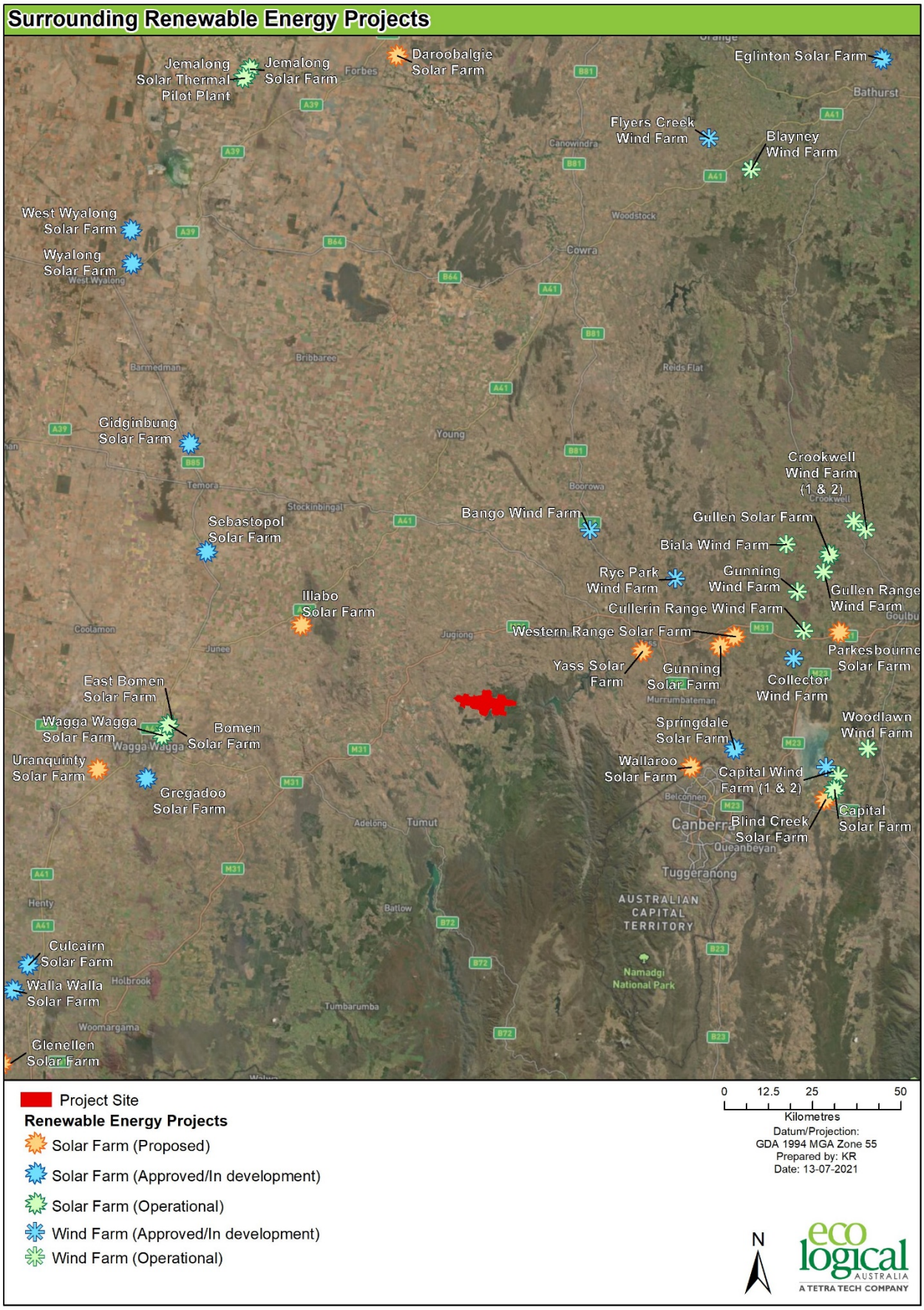

Figure 7: Proposed or approved wind farms in the broader region

2.2 Local Context

The Project Site is located in the RU1 Primary Production Land Zones (Gundagai LEP, 2011) and borders sections of RU3 Forestry land zone associated with the Bungongo State Forest (**Figure 8**). The Project Site is characterised by steep to rolling hills and is located between 357 m AHD to 814 m AHD. The Project Site will be accessed from the public road network at main site entries off Nanangroe Road and Black Andrews Road, approximately 55 km by road east of Gundagai. **Table 6** summarises the local context of the Project.

Table 6: Site Details

Project Location	Details
Size	Project Site – 7,092 hectares Proposed Development Area – 2,328 hectares
Local Government Area (LGA)	Cootamundra-Gundagai Regional Council
Land Zoning	RU1 Primary Production
Land Tenure	Freehold, Crown land, Crown waterways, Crown roads and Council roads
Land use	Farmland (grazing and cropping)
Water Catchment	Murrumbidgee River
Local Land Services Region	Riverina

A combination of desktop searches, ground truthing and community consultation has identified a total of 83 residential dwellings within 8 km of a proposed WTG location. Of these dwellings, a total of 22 are owned by landowners associated with the Project. Impacts to these dwellings will be assessed as part of the EIS and consultation with these landowners will be ongoing throughout the development.

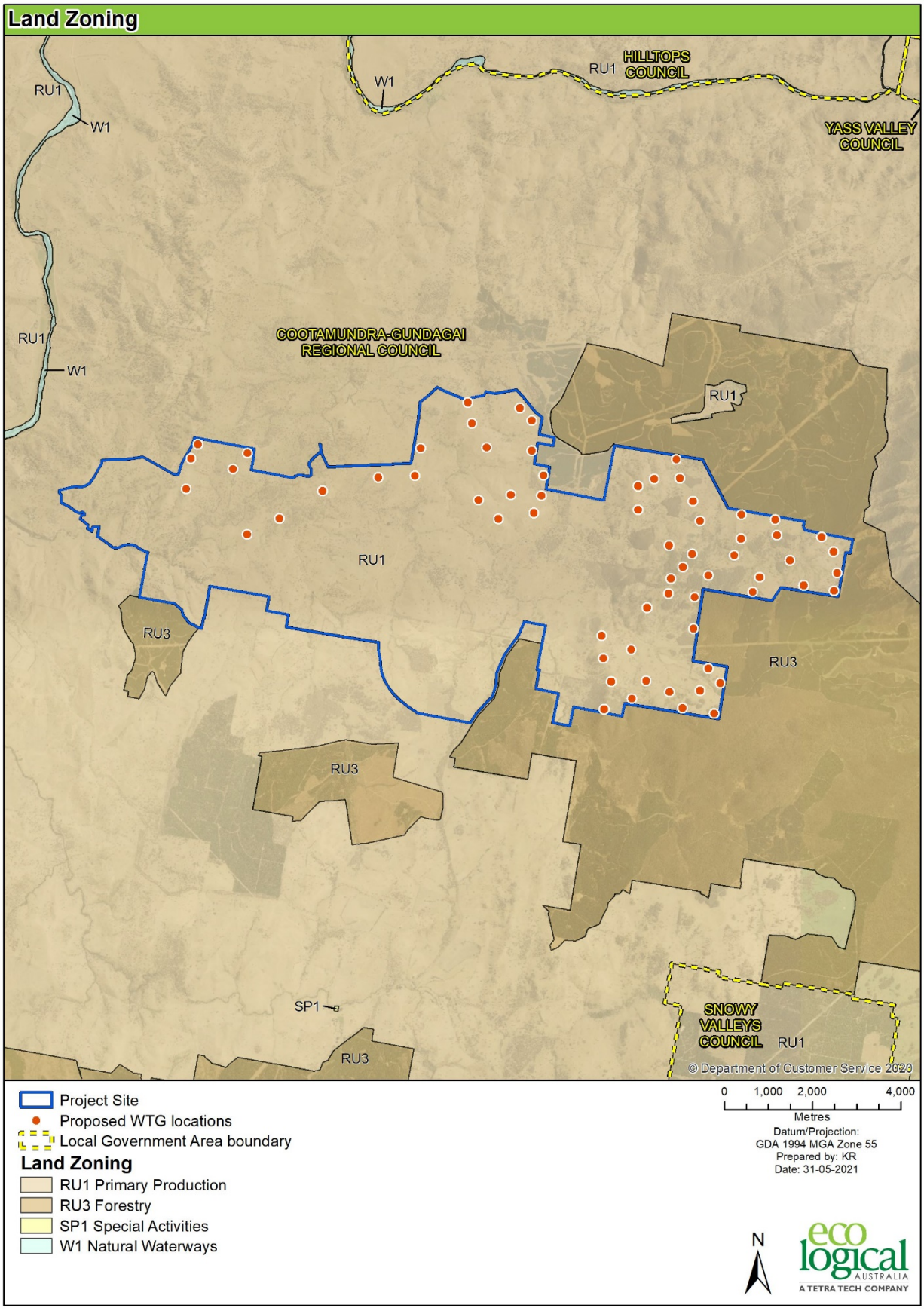

Figure 8: Land Zoning

3 Description of Project

3.1 Overview

The Project is generally comprised of the following:

- Approximately 65 Wind Turbine Generators (WTGs) to maximum tip height of 300 m
- Generating capacity of approximately 400 MW
- Provision for an Energy Storage Facility (ESF) (capacity and type yet to be determined)
- Permanent ancillary infrastructure including Site offices, internal roads, hardstands, underground and overhead cabling, wind monitoring masts, substation, a battery and a switching station
- Temporary facilities including Site compounds, laydown areas, stockpiles, rock crushing and concrete batch plants, temporary roads and up to 12 temporary monitoring masts

The proposal is to construct, operate, and ultimately decommission and rehabilitate a commercial-scale wind farm producing clean energy to power the equivalent of 200,000 average NSW households each year.

The proposed 400 MW Project would connect to the existing Lower Tumut to Yass 330 kV transmission line, a section of which passes the Project site. The inclusion of an Energy Storage Facility (ESF) is to allow for low-cost energy to be stored and dispatched to and from the Project or the National Electricity Market (NEM).

The electricity generated by the Project would provide significant carbon emission savings relative to the incumbent NSW electricity generation mix.

Approximately 250 full time equivalent job positions would be established during the two-year construction phase, requiring local services and amenities. A further 12 full time equivalent jobs would be required during the 30-year operational life of the project, typically utilising local professionals or professionals relocating to the region to fill these roles.

3.2 Project Elements

Descriptions of each Project element are provided in the following sections and accompanying figures. The infrastructure and components to be installed (i.e. WTG model) will be decided during detailed design, post consent and the most suitable type will be deployed for use in the Project.

3.2.1 Wind Turbine Generators

The Project is generally comprised of approximately 65, three-bladed WTG of up to 300 m in height and varying in generation capacity. This allows for a conservative assessment of a 'worst case' impact scenario, allowing for WTG advances between the time of this assessment and the commencement of construction. Final numbers and power output will be dependent on the final geographic footprint as well as outcomes of the various engineering, environmental and social studies and is subject to change. A WTG is made up of the foundation, tower, nacelle, rotor, blades and a generator transformer.

Figure 9 below displays a picture of the 200 m tall WTGs installed at Sapphire Wind Farm, for reference in detailing the component parts.

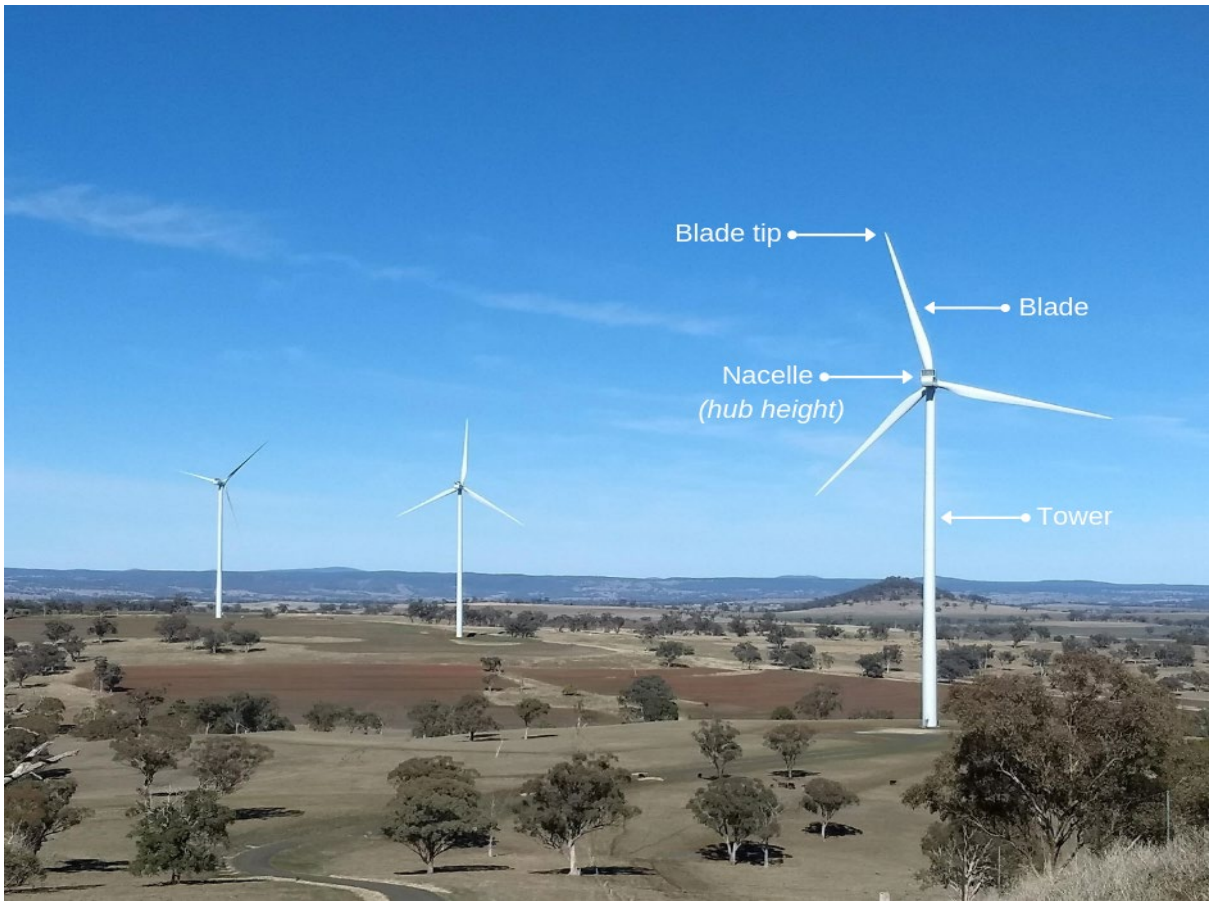

Figure 9: Components of a WTG as shown at Sapphire Wind Farm for reference

3.2.2 Energy Storage Facility

An ESF is designed to store and discharge energy. Storage of energy can add significant benefits to renewable generation because it allows for the dispatch of energy in accordance with market demand and overcomes potential issues associated with intermittency of output. The technology used (i.e. the type of energy storage) is not yet decided and the most commercially suitable type will be deployed for use in the Project depending on the detailed design and financial modelling process. The ESF will consist of buildings, shipping containers, or other infrastructure and will connect to the WTGs and Substations via underground and/or overhead cables.

3.2.3 Ancillary Infrastructure

Ancillary infrastructure refers to all permanent wind farm infrastructure (except the WTGs and ESF) and includes substations, operations, and maintenance compounds (including offices and car park), underground and overhead electricity transmission lines, permanent meteorological masts, hardstands and internal roads. The purpose of the meteorological masts is to provide necessary information on the performance monitoring of the WTGs.

Hardstand refers to the area required adjacent to each WTG location for the assembly, erection, maintenance, repowering and/or decommissioning of a WTG. Surrounding the hardstand is an area of disturbance which is not a hardstand area but will be used for WTG component laydown and crane structure assembly (among other WTG erection and construction related activities) as well as cut and fill.

Figure 10 shows a typical hardstand area adjacent to a WTG footing for reference.

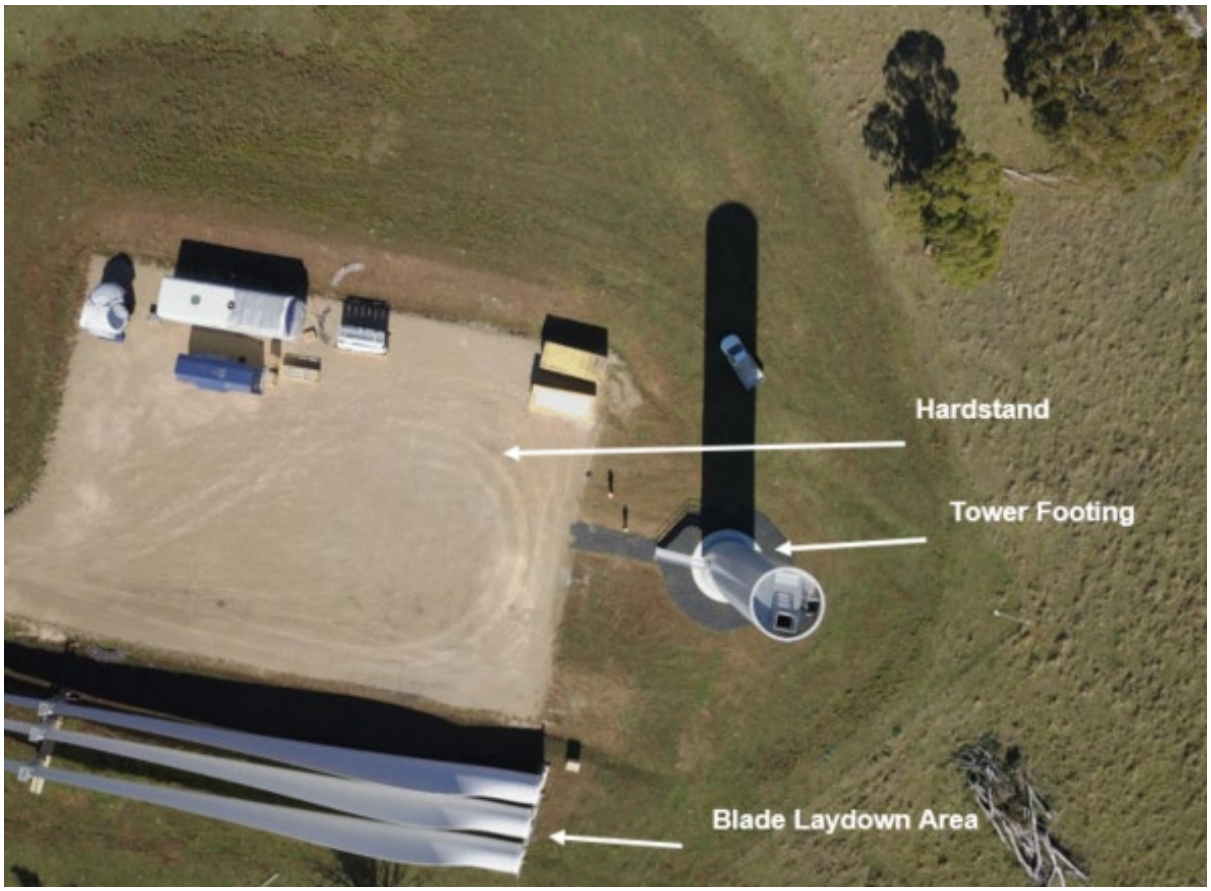

Figure 10: Hardstand, tower footing and blade laydown area at Sapphire Wind Farm

3.2.4 Temporary Facilities

Temporary facilities will consist of site offices and compounds, rock crushing facilities, concrete or asphalt batching plants, stockpiles and materials storage compounds, temporary field laydown areas, minor work front construction access roads and temporary meteorological masts. All temporary facilities will be rehabilitated once they are no longer required in accordance with detailed measures to be defined in the environmental management plan.

3.2.5 Electrical Connection

A series of underground and overground transmission lines are proposed to transmit electricity generated by the WTGs with the 330 kV transmission line transecting the Project Site from the south to the north east. The preliminary electrical layout includes both underground and overhead reticulation connecting the WTGs, the ESF and Substations to the existing transmission network.

3.3 Project Phases

It is anticipated that works will commence within one to five years of Development Consent being granted. The timing of construction will principally be driven by additional permits and authorisations, post-Development Consent tender, contractor selection, optimisation, detailed design and procurement processes and a final investment decision. An indicative Project timeline is presented in **Table 7** below.

Table 7: Anticipated Project timeline

Phase	Approximate Duration
Pre-Construction	**24 months**
Construction	**24-30 months**
Operation	**30 years**
Maintenance	**Annual and ongoing**
Repowering or Decommissioning	**At completion of Project life**

The Project has an operational life expectancy of 30 years, after which the Project would be decommissioned, or refurbished with upgrades to power generation infrastructure.

3.3.1 Pre-Construction

Pre-construction involves detailed design and contract development as well as pre-construction minor works. Pre-construction minor works will take place to further inform the detailed design and prepare the Project Site for construction and will involve the establishment of some temporary facilities as well as intersection and road upgrades on the public road network. Micro siting will be implemented on site during pre-construction to avoid and minimise vegetation clearing and other environmental impacts.

3.3.2 Construction

Construction includes all physical works to enable the operation, including, but not limited to, vegetation clearing, internal road construction, the construction and installation of WTGs, construction and installation of the ESF, construction of ancillary Infrastructure and establishment or construction of any temporary facilities which were not already established as part of the Pre-Construction phase.

Site restoration following construction works will focus on revegetation of disturbed ground, reduction of weed establishment and control of any erosion and sedimentation. In addition, any creek crossings constructed to support the machinery and not required for future maintenance activities will be decommissioned following the completion of construction works. Those that are required for ongoing use during operations will be designed and constructed in accordance with relevant guidelines.

3.3.2.1 Working Hours

The Project will generally only undertake construction or decommissioning activities between:

- 7 am to 6 pm Monday to Friday; and
- 8 am to 1 pm Saturdays.

Works undertaken outside these hours may occur where the activity is inaudible, for emergency works, delivery of certain materials, in accordance with *Environmental Planning and Assessment (COVID-19 Development – Construction Work Days) Order 2020* or where agreement from the Secretary has been provided.

Certain activities will require work to be conducted outside normal work hours to prevent damage to concrete tower bases and trenches, to reduce the safety risk of open trenches and to reduce the risk of tower self-oscillation. Some examples of these activities include:

- Concrete pours
- In-ground electrical works
- WTG installation

3.3.3 Commissioning

Pre-commissioning checks will be carried out on the high voltage electrical equipment prior to connection to the TransGrid transmission network. When the Project's electrical system has been energised, the WTGs and ESF will be commissioned and put into service. WTGs are commissioned sequentially enabling some WTGs to commence operation prior to the completion of wind farm construction.

3.3.4 Operations and Maintenance

Once operational, the Project would be monitored both by on-site staff and through remote monitoring. On site activities include safety management, environmental condition monitoring, landowner management, routine servicing, malfunction rectification and site visits. Remote monitoring activities include WTG and ESF performance assessment, project reporting, remote re-setting, and maintenance co-ordination.

Maintenance staff will be on-site throughout the year, making routine checks of the WTGs, ESF and Ancillary Infrastructure on an ongoing basis. Major planned servicing would be carried out approximately twice a year on each WTG. On-site maintenance will require permanent access to the WTGs and ESF to address technical and mechanical servicing requirements. Replacement of major components, such as WTG blades, may require the use of cranes and ancillary equipment. This can result in a WTG being offline for several weeks whilst the appropriate equipment and materials are sourced.

Management of regrowth and existing vegetation will be necessary within the overhead transmission line corridors to reduce the threat of fire and physical damage to the transmission line, and to allow access for maintenance vehicles. This will be carried out using mechanical, manual and chemical clearing methods prior to construction activities commencing and as part of ongoing maintenance activities for the duration of the Project.

Following construction of the overhead transmission line, maintenance will most likely be limited to yearly inspections in a 4WD vehicle to check the integrity of the transmission poles and other associated infrastructure. Occasionally, access by medium and heavy vehicles may be required to repair or maintain overhead transmission line components.

4 Project Alternatives

4.1 Site Selection and Feasibility

In 2005, CWPR commenced engagement in the Adjungbilly area, after being approached by local landholders expressing the desire to develop a wind project on their land and seeking the expertise of CWPR in this field. In the same year, wind monitoring started by installation of a wind monitoring mast.

Since this time, CWPR has continued to engage with landholders in the Adjungbilly area while continuing to monitor the wind regime.

With changing market conditions and new generation of wind turbine technology available, CWPR commenced scoping activities in the area in 2018. This included a wide area around Adjungbilly which offers an open, hilly and sparsely populated area, with various ridgelines potentially suitable for wind project development. Interest from landholders to assess the opportunity has been strong and CWPR have spent time building strong relationships in the community.

The early feedback received during this process was used to identify key locations for consideration. A wind monitoring campaign, including the existing mast and several portable monitoring devices, was established. In parallel, preliminary environmental studies were conducted in the wider area. Findings from those early assessments led to a refinement of the scoping area.

This scoping area (**Figure 11**) was used as the basis for early consultation activities and to get feedback from the community and other stakeholders over the Project. This feedback has been considered in the design of the preliminary layout.

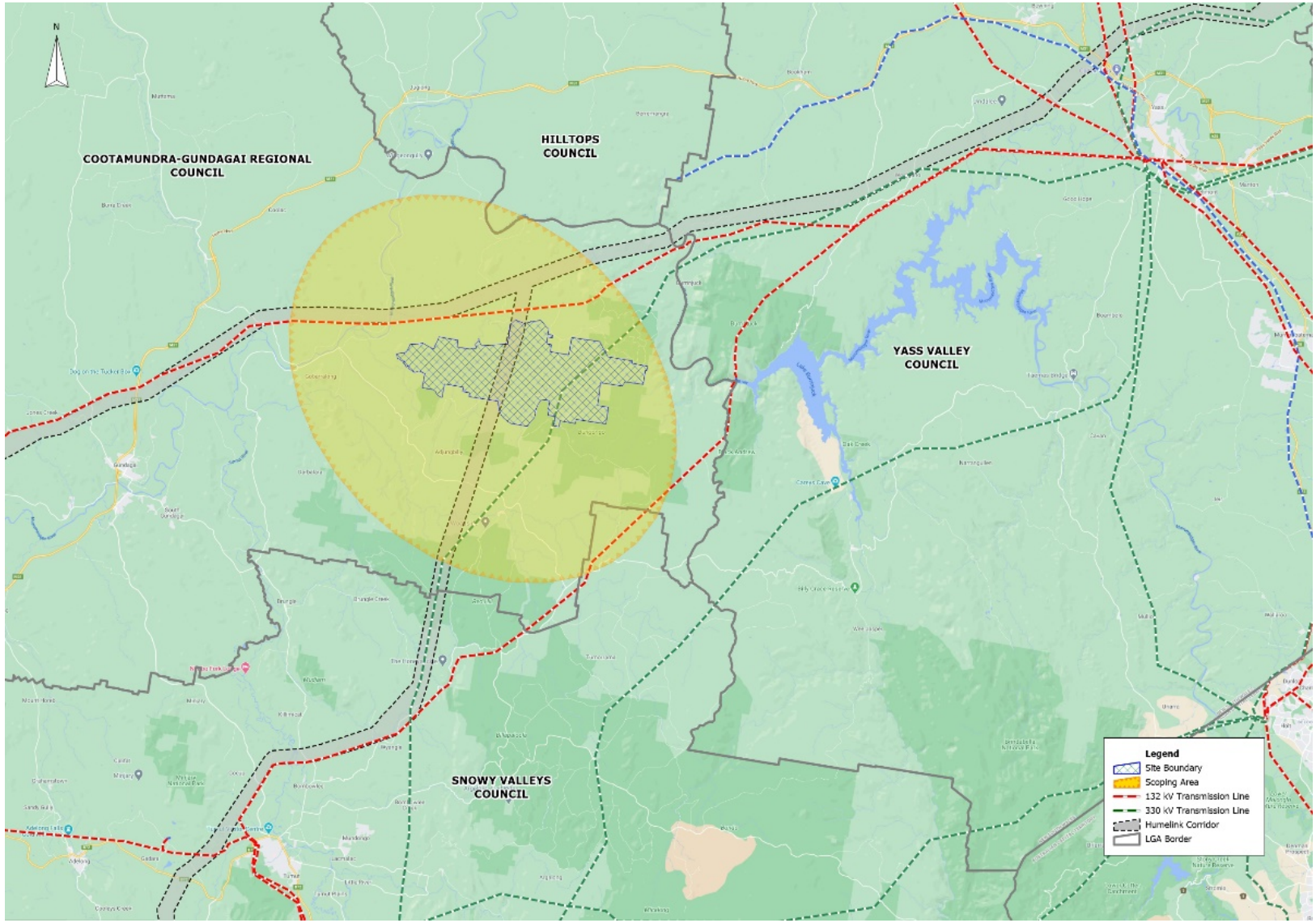

Figure 11: Project scoping area

4.2 Preliminary Layout

Using the scoping area as a starting point, a preliminary project layout comprising of 65 WTGs has been developed, as identified in **Figure 2** and informed by the following:

- The principles outlined in the Wind Guideline
- Landowner and community feedback in relation to the Project Site
- Wind speed assessments based on additional wind data
- Results from the preliminary noise assessment
- Results from the preliminary visual impact assessment (PVIA)
- Technical constraints including in relation to access (biodiversity and traffic and transport)
- Consideration of commercial viability.

4.3 Refinement and Revision

The development of a wind farm layout is, by nature an iterative process, with opportunity for refinement and revision as more information is obtained from environmental studies, ongoing feedback from consultation and updated wind monitoring. The evolution of the Project design will be focused around three core principles:

- Minimising and/or avoiding negative environmental and community impacts
- Maximising positive impacts (clean energy production resulting in greenhouse gas reduction)
- Incorporating practical and economic limitations in relation to the construction and operation of the Project

EIS studies will provide further information in determining the optimised locations for Project infrastructure. Additional considerations will include, but will not be limited to, the identification of any environmental constraints and the outcome of geotechnical investigations and the ongoing community and stakeholder consultation process.

5 Project Justification

5.1 Project Viability

In accordance with the principles of Ecologically Sustainable Development (ESD), the Proponent has integrated social, environmental and economic considerations in developing the Project to minimise potential impacts while maintaining or enhancing positive outcomes for the greater community. There are several key areas that have been considered in the selection of the Project Site, including:

- **Suitable Wind Resource:** The wind resource has been monitored using on-site wind monitoring equipment since 2005. The monitoring data has been modelled with long term reference data, and shows wind speeds that are high and consistent making this wind farm project viable in the selected location.
- **Environmental Impacts**: As much as possible the Project is located on land previously modified by agricultural development. The Proposal will adopt the hierarchy of avoid, minimise, mitigate, and offset to manage potential environmental impacts which will be studied in further detail as part of the EIS.
- **Ease of connecting to and capacity of the local electricity transmission network:** There are existing transmission lines in close proximity to the Project. The proposal currently includes three connection options to be considered during the development phase.
- **Site access:** There is good road access to the Project Site as discussed below, including highways, wide, sealed minor roads and numerous unsealed, graded minor roads which intersect the Project Site.
- **Proximity to residential properties and the nature of surrounding land uses:** The low population density of the surrounding area will assist in reducing any residual noise or visual impacts from the Project. The Project Site has been adjusted significantly to avoid impacts to rural sub-developments and lifestyle properties near the Murrumbidgee River. Impacts to landowners will be studied further in the EIS and consultation with landowners will remain ongoing throughout the Project. Post construction (i.e. during the operational phase), it is proposed that the balance of land would continue to be used for agricultural purposes such as sheep and cattle grazing, with grasses sown for ground cover and grazing fodder in disturbed areas, resulting in only a minor net change to the existing land-use.
- **Proximity to resources:** During the construction phase it will be necessary to source water and materials for the construction of roads, hardstands and turbine foundations. In the local area there are a number of active quarries and water sources that have the potential to provide the resource requirements for construction of a project of this size, although the source of resources for construction is a commercial procurement decision which will occur post-Development Consent through licenced sources.
- **Economic impact:** The local population centres of Gundagai, Tumut and Cootamundra are well established to cater for an increase in workforce having previously serviced the transport, manufacturing (Visy pulp and paper mill) and tourism industry.
- **Local community:** Based on community consultation to date, there is strong support for the project within the local Adjungbilly community.

5.2 Mandate

The social, economic and environmental benefits of developing renewable energy projects, and transitioning to a low carbon future are unequivocal, providing potential benefits to entire communities and helping to maintain quality of life. Indeed, increased adoption of renewable energy sources will assist Australia to transition away from traditional carbon intensive energy production which is linked to atmospheric pollution and carbon emissions associated with climate change (IPCC, 2018). Reduced carbon emissions have the potential to halt or slow the effects of climate change, benefitting current and future generations.

There is a growing realisation that the environmental impacts associated with the generation of energy through the use of fossil fuels requires serious and urgent mitigation. This realisation has been supported through the

development of international, national and state-wide commitments to support sustainable energy developments.

5.2.1 Current Global Response – The Paris Agreement

The Paris Agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

The central aim of the Paris Agreement is to strengthen the global response to the threat of climate change by keeping global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework is being put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework.

The Australian Government ratified the Paris Agreement in November 2016, committing to an unconditional Nationally Determined Contribution (NDC) to reduce emissions by 26-28% below 2005 levels by 2030. Under current policy, Australia is not on track to achieve its 2030 NDC target, with emissions levels projected to be well above the target by 2030 due to lack of climate policy (UNEP, 2018).

5.2.2 United Nations Sustainable Development Goals

The United Nations 2030 Agenda for Sustainable Development includes a set of 17 interdependent global Sustainable Development Goals (SDGs) to help build a more sustainable and resilient future for all. The SDGs are broken down into 169 individual targets to stimulate and measure action towards improving economic, social and environmental sustainability. All countries of the world have agreed to work towards achieving the SDGs by 2030.

The Project will respond positively to Goal 7 Affordable and Clean Energy and will contribute towards Target 7.2: 'By 2030, increase substantially the share of renewable energy in the global energy mix'. The UN explains:

> *"Transitioning the global economy towards clean and sustainable sources of energy is one of our greatest challenges in the coming decades. Sustainable energy is an opportunity – it transforms lives, economies and the planet."*

The primary function of the Project is to generate renewable energy and increase the amount of renewable energy in Australia's energy mix the project will improve affordability for all. The Project will also contribute towards *Goal 11 Sustainable Cities and Communities* (Target 11.6) by helping to reduce Australia's reliance on power from fossil fuels which will improve air quality and have positive impacts on health and wellbeing.

5.2.3 Australian Government Energy Policies

The Climate Solutions Fund was established in February 2019 by the Department of the Energy and Environment (DoEE), which is designed to help achieve Australia's emissions reduction target of 5% below 2000 levels by 2020 and 26-28% below 2005 emissions by 2030. The fund will operate alongside existing programmes working to reduce Australia's emissions growth such as the Renewable Energy Target (RET).

The *Renewable Energy Act 2000* (RE Act) was passed by Federal Parliament in August 2009 and aims to acquire 45,000 GWh of Australia's electricity from renewable sources by 2020. However, this was then reduced to 37,000 GWh in 2015. To meet the RET, it is estimated that approximately 6,400 MW of new large-scale renewable energy capacity is required to be built and connected to the National Energy Market (NEM) by 2020, with wind power expected to form most of this new generation capacity. The Project will therefore contribute to both the increasing local and global need for such renewable projects, as well as aid in mitigating the issues of global warming and climate change.

Most recently, in April 2021, Prime Minister Scott Morrison participated in the Virtual Leaders Summit on Climate, hosted by United States President Joe Biden, providing an update on Australia's progress towards achieving commitments to reduce greenhouse gas emissions. In advance of the summit during a speech to the Business Council of Australia, the Prime Minister indicated a preference to achieving a net zero economy by 2050, noting that '*the key to meeting our climate change ambitions is commercialisation of low emissions technology*' (Glenday, 2021). Whilst these statements are not mandated policies, they may indicate that Australia is on a path to committing to achieving net zero emissions by 2050.

5.2.4 NSW Commitments

5.2.4.1 NSW Net Zero Plan Stage 1: 2020 – 2030

The Net Zero Plan Stage 1: 2020-2030 is the foundation for NSW's action on climate change and goal to reach net zero emissions by 2050. It outlines the NSW Government's plan to grow the economy, create jobs and reduce emissions over the next decade. The plan aims to enhance the prosperity and quality of life of the people of NSW, while helping the state to deliver a 35% cut in emissions by 2030 compared to 2005 levels (**Figure 12**) (DPIE, 2020). Currently the majority of emissions in NSW are derived from electricity generation. The plan will support a range of initiatives targeting electricity and energy efficiency, electric vehicles, hydrogen, primary industries, coal innovation, organic waste and carbon financing.

The implementation of the Net Zero Plan, together with the NSW Electricity Strategy, will result in more than $11.6 billion of new investment for NSW, including $7 billion in regional NSW. This will support the creation of almost 2400 new jobs, including 1700 jobs located in the regions.

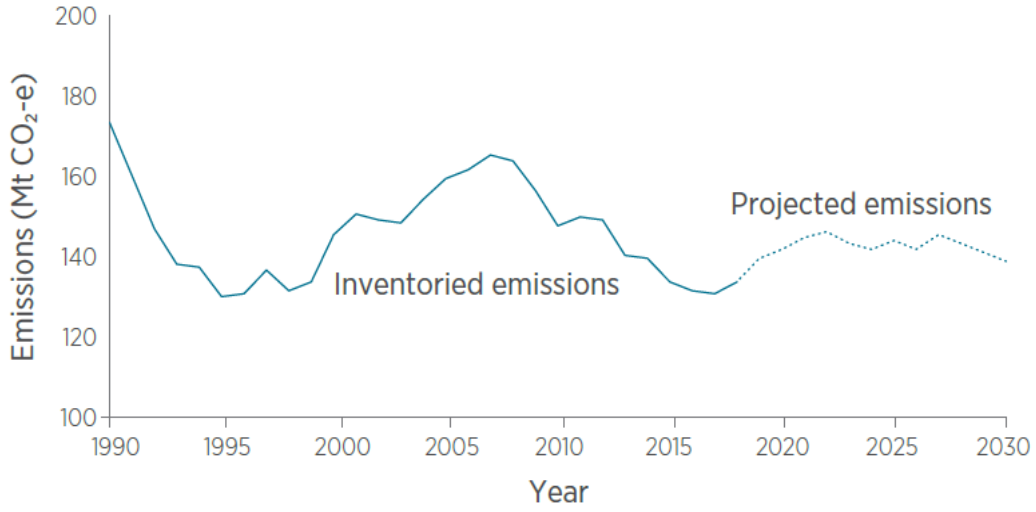

Figure 12: NSW total annual emissions to 2030 (DPIE, 2020). Note MtCO2-e = Mega tonnes of carbon dioxide equivalent (DPIE, 2020)

5.2.4.2 Electricity Strategy

The NSW Electricity Strategy is the NSW Government's plan for a reliable, affordable and sustainable electricity future that supports a growing economy. The strategy encourages an estimated $8 billion of new private investment in NSW's electricity system over the next decade, including $5.6 billion in regional NSW. It will also support an estimated 1,200 jobs, mostly in regional NSW. The strategy aligns closely with the NSW Government's Net Zero Plan Stage 1: 2020 – 2030.

5.2.4.3 Renewable Energy Zones and Central-West Renewable Energy Zone Pilot

The NSW Government's Electricity Strategy sets out a plan to deliver five Renewable Energy Zones (REZs) in the State's Central-West Orana, New England, South-West, Hunter Central Coast and Illawarra regions. These REZs will play a vital role in delivering affordable, reliable energy generation to help replace the State's existing power stations as they come to their scheduled end of operational life.

The NSW Government is in the planning stage for the state's first REZ, the Central-West Orana REZ with construction expected to commence in 2022. A second REZ, the New England REZ is also in the early stages of planning and will take several years to design. A third South West REZ has been earmarked and its indicative location is approximately 190 km west of the Project Site. The Project Site is not within the indicative locations for the first three REZ; although importantly, these REZs do not preclude the development of energy projects in other parts of the State which may already have enough grid capacity to connect new projects. It is noted that whilst the fourth and fifth Hunter-Central Coast and Illawarra REZs are in the early planning stages, indicative map locations have not been released.

The REZ will play a vital role in delivering affordable energy to help replace the state's existing power stations as they retire over the coming decades.

5.3 Benefits of the Project

In summary, the Project will provide numerous benefits, including to:

- Provide sustainable, renewable energy in turn, reducing greenhouse gas emissions and the impacts of climate change
- Aid in assisting both the State and Federal Government achieve renewable energy targets
- Provide additional generation capacity to the grid to assist in meeting future load demands as thermal generators retire
- Provide local and regional economic benefits through investment opportunities and direct and indirect full-time employment construction and operation jobs
- Maximise local business participation through contracted work
- Provide ongoing economic stimulus through payments to associated landholders.

6 Strategic and Statutory Context

6.1 Approval Pathway

The Project is deemed a State Significant Development (SSD) by Clause 20 of Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011 and therefore the Proponent is seeking consent under Division 4.7 of Part 4 of the EP&A Act for the Project.

6.2 Commonwealth Legislation

6.2.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act is the Australian Government's key piece of environmental legislation. The EPBC Act applies to developments and associated activities that have the potential to significantly impact on matters of national environmental significance (MNES) protected under the Act. Nine MNES are identified under the Act:

- World heritage properties
- National heritage places
- Wetlands of international importance
- Nationally threatened species and ecological communities
- Migratory species
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions (including uranium mining)
- A water resource, in relation to coal seam gas development and large coal mining development.

Activities that have potential to result in significant impacts on MNES must be referred to the Commonwealth Department of Agriculture, Water and the Environment (DAWE). An activity that is determined to have a significant impact on a MNES will be regarded as a 'controlled action' requiring further approval under the Act. A bilateral agreement exists between the Commonwealth and the State government, that allows the Commonwealth Minister for the Environment to rely on a specified environmental impact assessment process, by accrediting the State process and eliminating duplication. Therefore, if the Project is determined to be a controlled action the Proponent would seek for an assessment under the bilateral agreement.

As is typical of most large-scale, regional, greenfield developments, some MNES have been identified as potentially occurring on or near the Project Site, including Threatened Ecological Communities (TEC) and nationally threatened species. Further consideration of these is required in the EIS through a biodiversity assessment. If during the preparation of the biodiversity assessment it becomes apparent that a significant impact on any MNES is likely, a referral will be made. If the Commonwealth determine that the development would have a significant impact on a MNES, the development will become a 'Controlled Action', and assessed under the recently signed NSW Bilateral Agreement with the Commonwealth.

The Project will not impact on a world heritage property, national heritage place, wetlands of international importance, Commonwealth marine areas or the Great Barrier Reef Marine Park. The Project is not a nuclear action, coal seam gas development or a large coal mining development.

6.2.2 Native Title Act 1993 (NT Act)

The Native Title Act 1993 recognises the rights and interests of Indigenous people to land and aims to provide for the recognition and protection of common law native title rights. Areas of land within the Project Site where native title may exist include public road reserves and other Crown land.

A search of the National Native Title Tribunal Register was undertaken in October 2020. There were no native title applications, determinations of native title, or Indigenous Land Use Agreements existing over the Site. As such, the Project Site is not subject to any native title claims at this time.

6.3 State Legislation

6.3.1 Environmental Planning and Assessment Act 1979 (EP&A Act)

The EP&A Act is the principal planning legislation for NSW, and it provides a framework for the overall environmental planning and assessment of proposals in the State. The Proponent is seeking consent under Division 4.7 of Part 4 of the Act for the Project as an SSD.

Under the provisions of section 4.15 of the EP&A Act, the consent authority is required to consider several matters pertaining to the relevant Plans and Policies that apply to any development application for SSD. These matters will be identified and assessed through the preparation of the EIS and include other statutory environmental planning instruments such as State Environmental Planning Policies (SEPP) and Local Environmental Plans (LEP).

6.3.2 State Environmental Planning Policy (State and Regional Development) 2011

The State and Regional Development SEPP states that development for the purpose of electricity generating works using wind power, that has a capital investment value of more than $30 million is declared as an SSD according to Clause 20 of Schedule 1.

As the Project exceeds the capital investment value of $30 million, the Project is declared an SSD and will be assessed accordingly and further preparation of an EIS will be required.

6.3.3 State Environmental Planning Policy (Infrastructure) 2007

The State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) was introduced to facilitate the effective delivery of infrastructure across NSW. ISEPP provides the permissibility and development assessment provisions which apply across the State for infrastructure sectors.

Part 3, Division 4 of the ISEPP applies to the Project as it is 'electricity generating works' which is defined as a building or place used for the purpose of making or generating electricity. Pursuant to Clause 34(1b) of the ISEPP, development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed rural, industrial or special use zone. The prescribed zone relevant to this Project is RU1 (Primary Production). The other zones within the Project Site are not prescribed zones. This issue is discussed further below within the Local Planning Instruments section.

6.3.4 Other State Environmental Planning Policies

Other State Environmental Planning Policy's (SEPP) which will be considered in the preparation of the EIS include (but is not limited to):

- SEPP (Primary Production and Rural Development) 2019
- SEPP (Koala Habitat Protection) 2021
- SEPP No. 33 – Hazardous and Offensive Development
- SEPP No. 55 – Remediation of Land.

6.3.5 Biodiversity Conservation Act 2016 (BC Act)

The BC Act provides protection and conservation of biodiversity in NSW through the listing of threatened species and communities and key threatening processes. The BC Act also sets up a framework for assessing and offsetting impacts to biodiversity through the Biodiversity Assessment Methodology (BAM).

An assessment under the Biodiversity Offset Scheme (BOS) using the NSW Biodiversity Assessment Method (BAM) will be undertaken and a Biodiversity Development Assessment Report (BDAR) will be prepared and included in the EIS to address impacts to threatened ecological communities and species protected by the BC Act.

6.4 Local Planning Instruments

6.4.1 Gundagai Local Environmental Plan 2011 (Gundagai LEP)

The Project Site is located within the Cootamundra-Gundagai Regional Council LGA. The Cootamundra-Gundagai Regional Council was formed in 2016 through a merger of the Cootamundra and Gundagai shires. The land on which the Project is proposed to be located is within the former Gundagai LGA to which the Gundagai LEP applies.

The Project Site is situated on land zoned as RU1 (Primary Production) and adjacent to land zoned as RU3 Forestry (**Figure 8**). Wind energy systems are permitted with consent in the RU1 zone and prohibited in the RU3 zone under the LEP.

As discussed, pursuant to clause 34(1b) of the ISEPP, development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed rural, industrial or special use zone, which in this case is the RU1 (Primary Production) zone.

Given that the Project is located on prescribed rural land (RU1), and the proposed activity is to generate electricity from wind, the Project is permissible with consent.

The Project Site is not subject to a Development Control Plan (DCP). Currently, Cootamundra-Gundagai Regional Council has a DCP that applies only to the area covered by the Cootamundra LEP 2013. The area covered by the Gundagai LEP 2011 (and including the Project Site) does not have a DCP, however a single comprehensive DCP for the entire LGA will be developed once a single LEP is developed. Whilst the single LEP has not yet been developed, Council have undertaken a variety of studies to inform the development of the new LEP.

Section 3.42 (1) of the EP&A Act states the principal purpose of DCPs is to provide 'guidance' to development proponents and consent authorities and to assist 'facilitating development that is permissible'. Accordingly, local provisions under the relevant DCP are not statutory requirements. Should a DCP come into effect over the Project Site prior to lodgement of any State Significant Development Application (SSDA), it should be consulted to provide guidance.

No planning (or draft planning) agreements related to the Project have been (or may be) entered into under section 7.4 of the EP&A Act.

6.5 Other Relevant Policies

6.5.1 State Policies

6.5.1.1 Riverina Murray Regional Plan 2036

The *Riverina Murray Regional Plan 2036* (Regional Plan) (DPIE, 2017) is a 20-year blueprint for the future of the Riverina Murray region. The Plan seeks to build prosperity and resilience in the region through developing a strong, diverse and competitive economy whilst supporting the protection of high-value environmental assets and growing the regions cities and local centres. The 'vision' of the Regional Plan seeks, in part to promote renewable energy through its identification as a 'priority growth sector' under the Goal 1 A Growing and Diverse Economy. The Plan identifies that the Riverina Murray area has significant potential for renewable energy industries, with vast open spaces. Areas in the Tumut and Wagga Wagga regions are listed as having potential for wind generated energy. Under the Plan, it is identified that new renewable energy projects require a

strategic approach and should, where possible, incorporate small-scale co-generation measures into their design.

The Project, which seeks consent for a wind farm using modern renewable energy technology, complies with the actions of Direction 11 of the Regional Plan which seeks to:

- Identify locations with renewable energy generation potential and ready access to connect with the electricity network
- Promote appropriate smaller-scale renewable energy projects using bioenergy, solar, wind, small-scale hydro, geothermal or innovative storage technologies
- Promote best practice community engagement and maximise community benefits from all utility-scale renewable energy projects.

6.5.2 Local Policies

6.5.2.1 Local Strategic Planning Statement 2020

The Cootamundra-Gundagai Regional Council Local Strategic Planning Statement (LSPS) plans for the economic, social and environmental land use needs of the community over the next 20 years. It sets land use planning priorities to ensure that the future development within the LGA is appropriate for the local context. The LSPS is closely linked to Council's plans, studies, strategies, both the Gundagai LEP 2011 and the Cootamundra LEP 2013 and DCPs, as well as the Regional Plan.

The five themes of the LSPS include *Liveability*, *Sustainability*, *Productivity*, *Technology*, and *Infrastructure and Planning*. The LSPS does not directly acknowledge renewable energy as having a key role in a sustainable future. *Planning Priority 5 Opportunities to adapt to the changing climate* includes actions that are focused on a smaller scale, for example solar street lighting, sensitive stormwater management and wastewater reuse and electrical vehicle charging stations. However, the LSPS acknowledges that these will contribute to the long term viability and growth of renewable and sustainable industries.

6.5.2.2 Draft Rural Lands Strategy 2020

The Draft Rural Lands Strategy 2020 creates a framework for Council's new LEP and DCP to dictate what development is permissible on rural lands and under what circumstances. It aims to serve both as a land use planning document as well as a plan for economic success and growth through the shared identity of agriculture. Renewable energy forms a key consideration of *Direction 3: Encourage Diversity of Rural Industries* which seeks to encourage innovation and allow choice for farmers and other land holders of rural land. Specifically, whilst acknowledging that wind farms have become an emerging land use, the Strategy raises potential concerns relating to pest and weed management impacts due to the low level of supervision of the facilities and the potential for resulting neighbourhood conflicts. It recommends through Action 3.8 that controls specific to electricity generating works (100kW or greater) be included in the DCP, including site maintenance through grazing (this includes providing infrastructure for the sustainment of onsite grazing), fencing and clearance areas along boundaries.

The EIS will address these concerns including mitigating impacts to the current land uses and incorporating measures to minimise the spread of weeds and other pests.

6.5.2.3 Villages Strategy 2018

The Villages Strategy 2018 aims to provide clear, strategic indicators for the development of the villages of Cootamundra-Gundagai Regional Council LGA over the next 30 years and beyond. The plan aims to inform residential and economic growth, whilst still being flexible and responsive to opportunities.

Adjungbilly is the closest rural community to the Project Site and is specifically addressed in the Villages Strategy. The Strategy notes that Adjungbilly is set atop a picturesque hill scape serving agricultural purpose and is generally assumed to centre on the Bongongo Public School.

Accessibility and access to services are a challenge for residents. Forestry is a major industry in this community with the plantations often causing friction with adjoining landholders who battle weeds and feral animals that shelter in the forests. Opportunities for economic expansion in Adjungbilly were not identified as part of the plan. Whilst renewable energy is not identified within the Villages Strategy 2018, the EIS will address potential impacts to this community as well as potential interactions between the agricultural and forestry land uses and wind farm including weed and pest management.

6.6 Other legislation

Other legislation that may be applicable to the project is included below and will be addressed in the EIS:

- *Renewable Energy (Electricity) Act 2000*
- *Hazardous Waste (Regulation of Exports and Imports) Act 1989*
- *Radiocommunications Act 1992*
- *Biosecurity Act 2015*
- *Civil Aviation Safety Regulations 1988*
- *Contaminated Land Management Act 1997*
- *Fisheries Management Act 1994*
- *Water Management Act 2000*
- *Local Land Services Act 2013*
- *Crown Land Management Act 2016*
- *Conveyancing Act 1919*
- *Roads Act 1993*
- *Protection of the Environment and Operations Act 1997*
- *Rural Fires Act 1997*
- *Waste Avoidance and Resource Recovery Act 2001*
- *Mining Act 1992*
- *Forestry Act 2012*
- *Heritage Act 1977*
- *National Parks and Wildlife Act 1974*
- Heavy Vehicle National Law
- National Airports Safeguarding Framework

7 Matters and Impacts

A key objective of scoping the Project is to focus the eventual EIS on relevant matters and associated environmental impacts, and to tailor the level of assessment to the importance of the matter. Identification of relevant matters and the level of assessment is an iterative process, likely to be revised following stakeholder engagement or following any changes to the Project description.

The Guideline 3 (DPIE, 2017) and associated Scoping Worksheet have been used to inform this Scoping Report through identification of environmental matters, characterisation of the impacts and identification of the level of assessment required for the Project. More specifically, the Scoping Worksheet provides the following:

- Checklist of matters to be considered
- Summary of activities likely to cause an impact on a matter (natural or human)
- Basic method for estimating if the impact will have a material effect in order to identify relevant matters to be assessed in the EIS
- Indication of potential cumulative impacts
- Record of the community and other stakeholder concerns
- Level of mitigation proposed
- Resulting level of assessment required for the matter and the impact.

The resulting level of assessment for each matter is categorised as either a Key Issue, Other Issue or Scoping only issue. These terms are defined as follows:

- **'Key issue'** - A matter that requires detailed assessment, such as a technical study, to better understand the potential impacts that are likely to arise and identify project specific mitigation.
- **'Other issue'** - A matter whose impacts can usually be managed by well understood and routinely used mitigation measures. Usually, further information will be required, but often without the need for a technical study.
- **'Scoping only issue'** - These are other matters which were considered during scoping, but it was concluded that the project activities are unlikely to have any impacts on them.

A preliminary environmental risk assessment has been undertaken for all potential environmental impacts using the Scoping Worksheet, attached in **Appendix A**. This assessment has been undertaken prior to detailed assessment, or any mitigation being applied and is therefore precautionary and worst-case for the purposes of this Scoping Report. The assessment has been based upon experience with other wind farm approvals, together with a preliminary assessment of the Project Site, to identify the key issues to be assessed in relation to the Project.

It should be noted that columns A to C in the Scoping Worksheet provide a generic but detailed checklist of matters. There are numerous instances where multiple individual matters in column C of the worksheet relate and would be combined into one technical assessment for the EIS. In this case, these have been grouped together accordingly in the following sections.

7.1 Key Issues

7.1.1 Noise and Vibration

7.1.1.1 Potential Impacts

Potential impacts can be categorised as construction noise and vibration and operational noise. Construction related noise and vibration impacts expected will be associated with construction processes including site clearing works, access road construction, civil construction and installation and the use of plant and machinery. Operational impacts are related to the ongoing operation of the WTGs and the impact on sensitive receivers including landowners, both associated and non-associated receivers.

7.1.1.2 Preliminary Noise Assessment

Marshall Day Acoustics (MDA) have undertaken a Preliminary Noise Assessment (**Appendix B**) in accordance with the NSW Noise Assessment Bulletin (DPE, 2016c) based on:

- The minimum (base) operational noise limit determined in accordance the NSW Noise Assessment Bulletin (DPE, 2016c)
- Preliminary noise modelling for the Project based on the current proposed preliminary site layout, three candidate turbine models and one conceptual turbine model, representative of the size and type of turbine being considered for the Site
- A comparison of the predicted noise levels with the base noise criteria.

Construction noise and cumulative noise impacts were not assessed as part of the Preliminary Noise Assessment, however, will be completed as part of the EIS.

Assessment Parameters

Sensitive Noise Receivers

A total of 94 noise sensitive receivers are located within 8 km of a proposed WTG location including 12 associated receivers (**Figure 13**).

Candidate Wind Turbine Models

Three representative WTG candidate models have been considered, in the generation capacity range of 5.5 MW to 6 MW and are typical of the size and type of turbines which are being considered for the site. While three leading WTG manufacturers data has been utilised for this assessment, the WTG make and model has not been specified at this stage for commercial reasons.

Conceptual Wind Turbine Model

In addition to the three candidate models, one conceptual turbine model with a tip height of 300 m has been modelled to account for the envelope of WTG tip heights being considered by CWPR. Market trends and forecasts from WTG manufacturers indicate that WTGs entering the Australian market in 2022 will rise to up to 250 - 300 m from the ground to upper blade tip. However, as a 300 m tip height WTG is not currently available, neither is the manufacturer's noise data. To approximate a 300 m tip height WTG model the hub height of Candidate Turbine 3 has been adjusted such that the rotor tip height corresponds with 300 m. The noise data associated with Candidate Turbine 3 has also been used for predictions.

Details of the candidate and conceptual models assessed are provided in **Table 8.**

Table 8: Candidate WTG model details (Source: MDA)

Item	Candidate Turbine 1	Candidate Turbine 2	Candidate Turbine 3	Conceptual Turbine 1
Rated power	5.6 MW	5.5 MW	6.0 MW	6.0 MW
Rotor diameter	162 m	158 m	170 m	170 m
Modelled hub height	166 m	161 m	165 m	215 m
Modelled tip height	247 m	240 m	250 m	300 m
Operating mode	Standard	Standard	Standard	Standard
Serrated trailing edge	Yes	Yes	Yes	Yes

A wind turbine model (or models) with suitable specifications will be used in the EIS, to reflect the candidate wind turbine models under consideration at the time. Accordingly, the noise assessment undertaken for the EIS would reflect those wind turbine models.

Results

In accordance with the NSW Noise Assessment Bulletin (DPE, 2016c), the predicted equivalent noise level ($L_{Aeq,10\ minute}$) should not exceed 35 dB(A) or the background noise ($L_{A90(10\ minute)}$) by more than 5 dB(A), whichever is the greater, at all relevant non-associated receivers.

The predicted noise levels for the Project are below the NSW Noise Assessment Bulletin (DPE, 2016c) criterion of 35 dB L_{Aeq} at all of the assessed non-associated receiver locations (including for both candidate and conceptual models). These results confirm that the Project can be designed and operated to comply with operational noise requirements.

Similarly, the predicted noise levels for the Project are below the reference level of 45 dB L_{Aeq} for all associated receivers (including for both candidate and conceptual models). This is consistent with the NSW Noise Assessment Bulletin (DPE, 2016c) which presents a reference level of 45 dB L_{Aeq} as a base criterion for associated receivers in order to provide context to the predicted noise levels for these locations for associated receivers.

The location of the total predicted 30 dB, 35 dB, 40 dB and 45 dB L_{Aeq} noise contours is shown in **Figure 13** for Conceptual Turbine 1. Conceptual Turbine 1 has the highest modelled tip height and has been selected for visual reference as it is the model with parameters most related to the expected turbine selected for the Project.

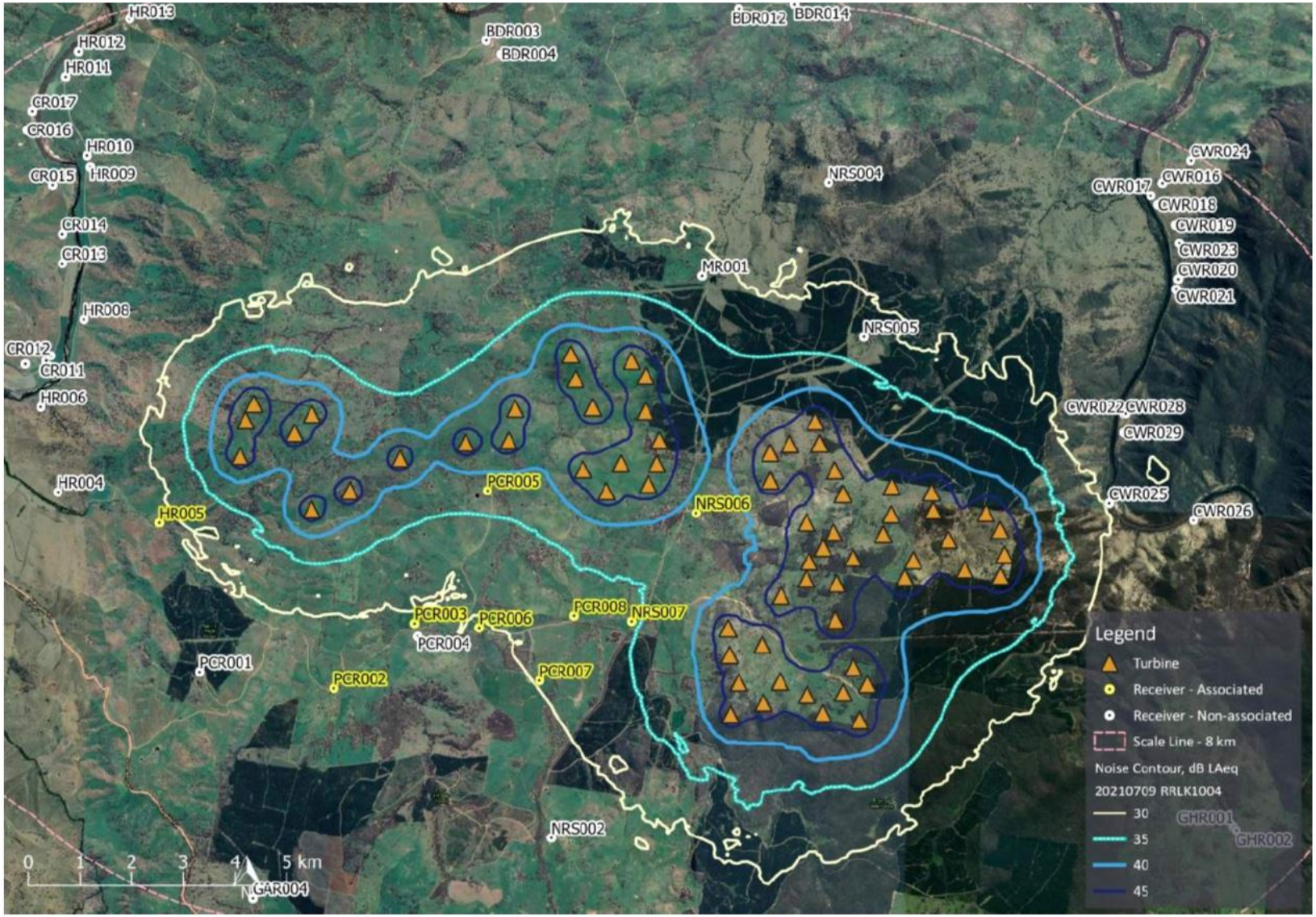

Figure 13: Conceptual Turbine 1 Highest predicted noise level contours (corresponding to hub height wind speeds of 9 m/s or greater) (Source: MDA)

7.1.1.3 EIS Assessment Approach

Further noise modelling and assessment works are to be undertaken to accompany the EIS in accordance with the NSW Noise Assessment Bulletin (DPE, 2016c). This is expected to include an assessment of other noise considerations including background noise monitoring, revised modelling for selected WTG and, if required, layout refinements to demonstrate compliance. The assessment of other noise considerations including special noise characteristics (tonality and low frequency), construction and ancillary infrastructure, and review of cumulative noise considerations will also be undertaken, if required.

7.1.2 Landscape and Visual Amenity

7.1.2.1 Potential Impacts

Wind turbine generators are large structures which are often located on ridgelines and elevated positions to capture wind resources (DPE, 2016b). Visual impacts may include loss of landscape scenic integrity across the broader landscape of a region, disruption of key features (i.e. visually prominent mountain peaks, waterfalls, rivers or crees etc.), effects of multiple turbines visible from individual viewpoints, shadow, flicker and blade glint and aviation hazard lighting. Potential mitigations include removal, re-siting, resizing, recolouring of WTGs and vegetation screening.

7.1.2.2 Preliminary Visual Impact Assessment

Moir Landscape Architecture have prepared a Preliminary Visual Impact Assessment (PVIA) (**Appendix C**) in accordance with the 'Wind Energy: Visual Assessment Bulletin' (DPE, 2016b). Preliminary assessment tools have been used to provide an early indication of where WTGs require careful consideration due to potential visual impacts. The tools were applied to both dwellings and key public viewpoints in the study area (approximate 15 km radius from the Project Site). The tools provide an early indication of where placement of WTGs will require further assessment and justification, and where further consultation with potentially affected landowners needs to be focused (DPE, 2016b). The PVIA was undertaken based on a tip height of 300 m.

Visual Magnitude Assessment (Preliminary Assessment Tool 1)

The assessment of visual magnitude was undertaken in two steps:

1. Map the proposed WTG locations, non-associated dwellings and key public viewpoints within a GIS
2. Identify non-associated dwellings and key public viewpoint locations that fall within the calculated proximity threshold of 4 km.

The results indicate that there are:

- Eleven (11) non-involved dwellings and two possible dwelling locations within 4 km of the nearest WTG
- Nine (9) involved dwellings located within 4 km of the nearest WTG
- Fourteen (14) non-involved dwellings located between 4 km and 5.9 km of the nearest WTG
- Three (3) involved dwellings between 4 km and 5.9 km of the nearest WTG

Table 9 identifies the WTGs within 4 km of a dwelling or viewpoint location. **Figure 14** presents this information visually, providing a 4 km offset from dwellings within 4 km of WTG. **Figure 15** identifies the proposed WTG locations, receptor locations and illustrates the results of the visual magnitude assessment.

Table 9: Non-associated dwellings within 4 km (Source: Moir Landscape Architecture)

House ID	Closest WTG (km)	Number of WTGs (based on ZVI)	Number of 60 sectors (based on 2D assessment)	Total Number of WTG within 4 km
MR001	2.12	45–55	2 (120°)	13
NRS005	1.86	35–45	3 (180°)	14
CR012	3.96	1–15	1	2
HR004	3.95	1–15	1	2
HR006	3.60	1–15	1	1
PCR001	3.80	55-65	1	4
PCR004	3.19	35-45	3 (180°)	4
CWR022	3.27	1-15	1	1
HR008	3.66	1-15	1	2
CWR025	2.17	1-15	1	9
CWR026	3.72	1-15	1	3
CWR028	3.31	1-15	1	4
CWR029	3.04	1-15	1	7

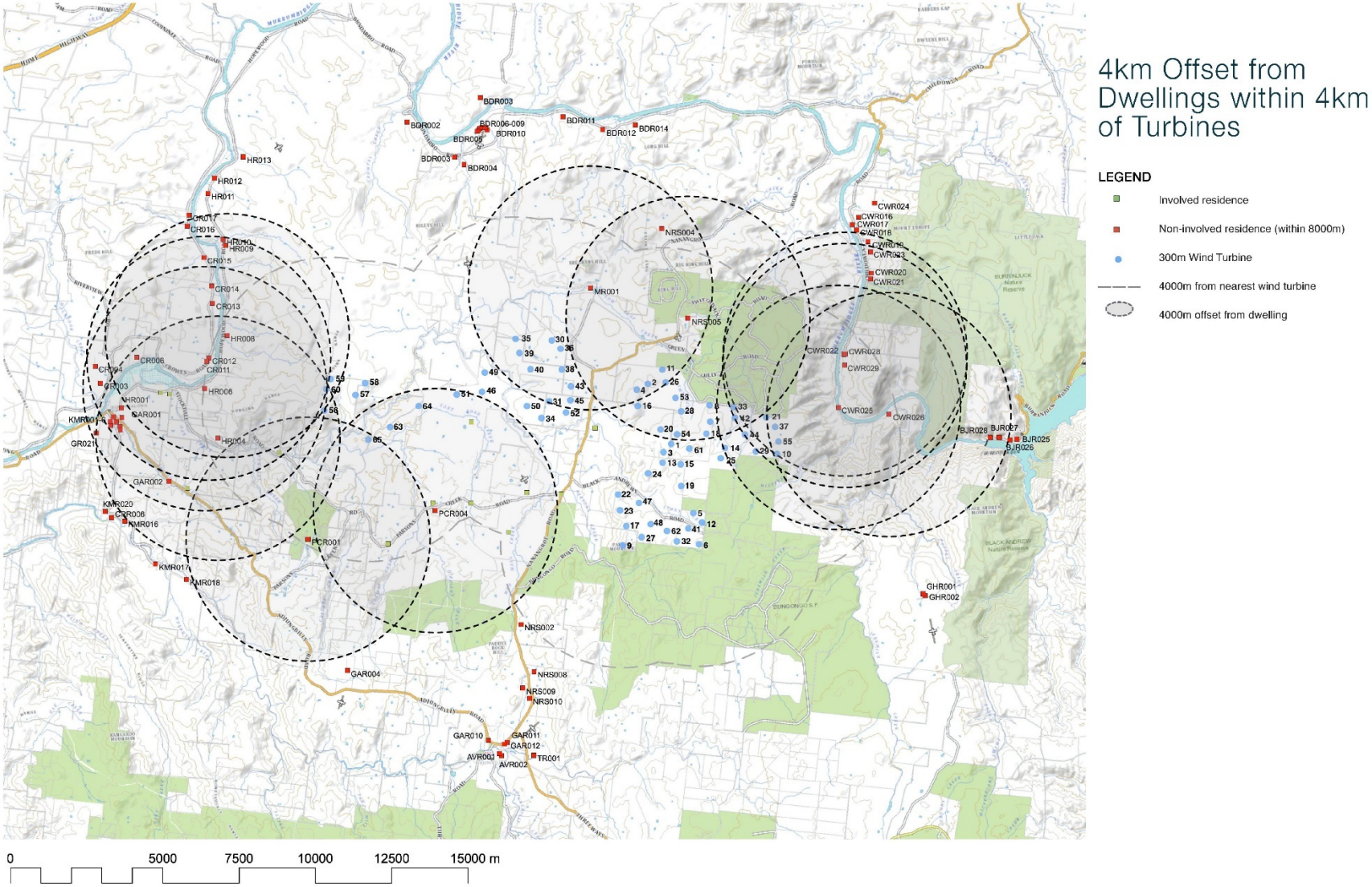

Figure 14: 4 km offset from dwellings within 4 km of WTG (Source: Moir Landscape Architecture)

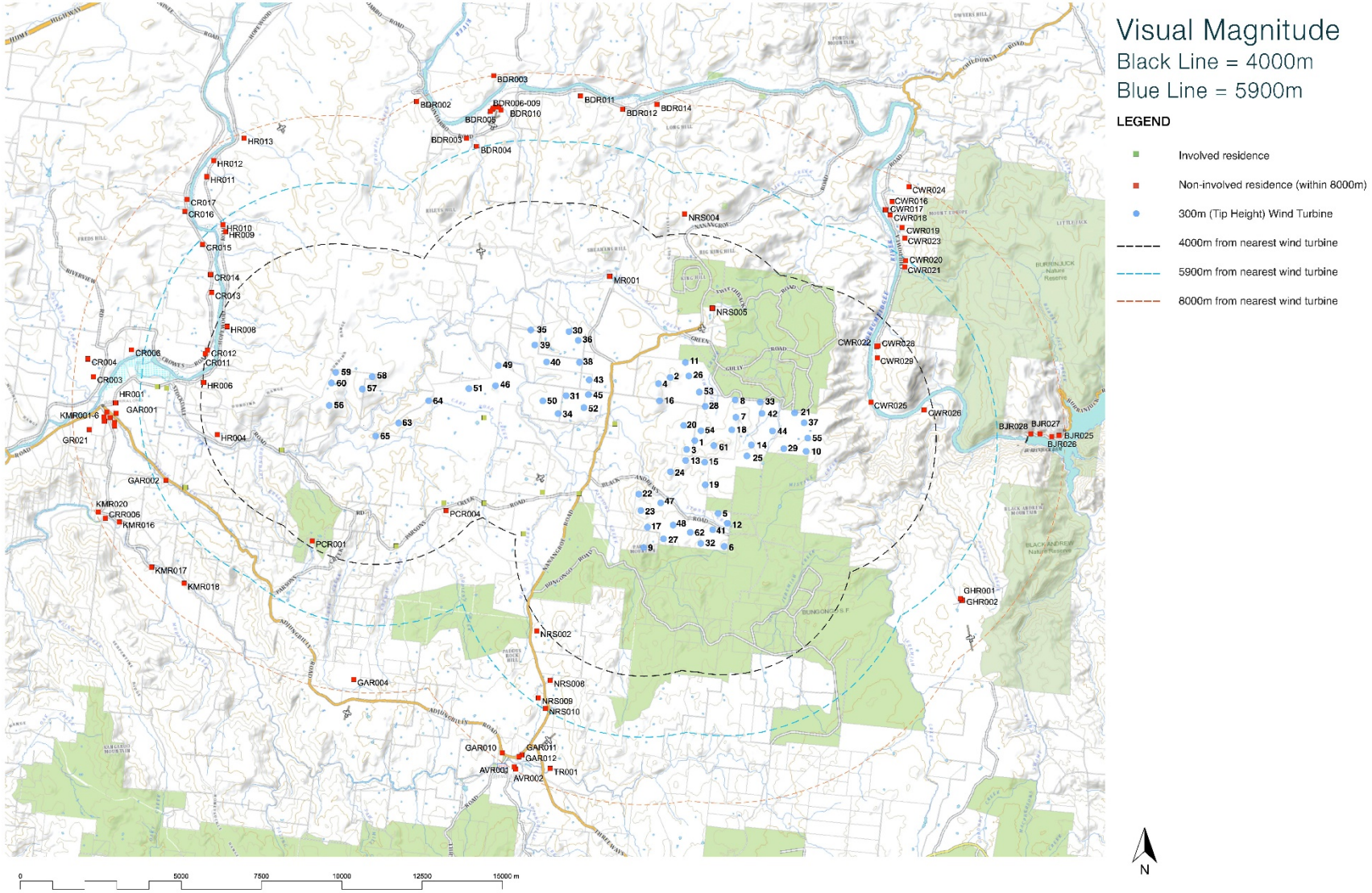

Figure 15: Visual Magnitude Analysis (Source: Moir Landscape Architecture)

Multiple Wind Turbine Assessment (Preliminary Assessment Tool 2)

This assessment provides a preliminary indication of potential cumulative impacts arising from the proposed WTGs on the non-associated dwellings and key public viewpoints located within 8 km of the proposed WTG locations. The Multiple Wind Turbine Tool considers turbines visible within 60° view sectors and located within a distance of 8 km of the receptor location.

In accordance with the Visual Bulletin, where wind turbines are visible within the horizontal views of the dwelling or key public viewpoints in three or more 60 sectors, the proponents must identify the turbines, relative dwelling and key public viewpoint, along with the relative distance and submit these to DPIE as part of the request for SEARs. These turbines will become a focus for assessment in the EIS (DPE, 2016b).

Three dwellings have WTGs in up to two 60° sectors (up to 120°). This is deemed acceptable in accordance with the Visual Bulletin.

- MR001
- NRS004
- NRS002

Two dwellings have WTGs in up to three 60° sectors (up to 180°). These dwellings will require detailed assessment.

- PCR004
- NRS005

Detailed assessment will be undertaken during the EIS phase of the Project.

The PVIA (**Appendix C**) contains the mapping results illustrating the dwelling, viewpoint and WTG locations in relation to the Multiple Wind Turbine analysis.

Preliminary Zone of Visual Influence

Although not stipulated as a preliminary assessment tool (DPE, 2016b), a preliminary Zone of Visual Influence (ZVI) was computed for the Project to visualise the potential number of WTGs that may be visible from dwellings and key public viewpoints.

ZVI mapping is based on a locally available Digital Elevation Model (DEM) provided by the NSW Government, comprising a mosaic of 1 m, 2 m and 5 m cell resolution. The ZVI mapping assumes a bare ground scenario (where buildings, infrstructure, and vegetation does not obscure views). **Figure 16** shows the result of the analysis.

The ZVI has been determined through the use of digtal topographic information and 3D modelling software WindPro. The ZVI has been assessed to approximately 10 km from the Project.

7.1.2.3 EIS Assessment Approach

Further visual and landscape assessment works are to be undertaken to accompany the EIS in accordance with the Visual Bulletin (DPE, 2016c). This is expected to include the following components:

- Preparation of a Visual Baseline Study as part of the EIS
- Undertake community consultation on aspects of the Visual Baseline Study and describe mitigation and management options in the EIS
- Establish Visual Influence Zones from viewpoints using inputs from the visual baseline study
- Undertake an evaluation of the project against the Visual Performance Objectives.

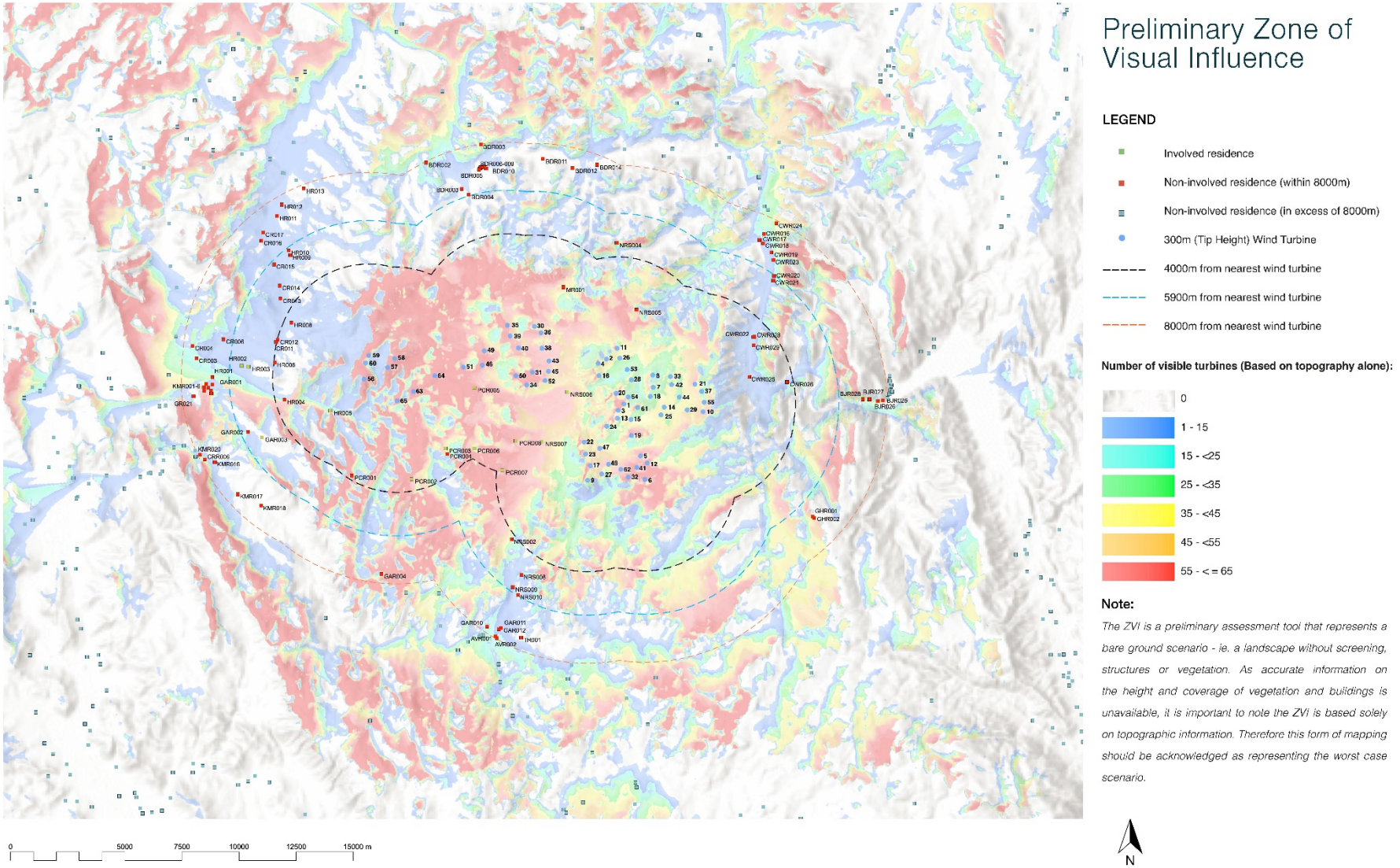

Figure 16: Zone of Visual Influence (Source: Moir Landscape Architecture)

7.1.3 Traffic and Transport

7.1.3.1 Potential Impacts

Traffic associated with the construction phase of the Project will consist of both light vehicles for transporting workers and heavy and over-sized vehicles for delivery of materials, plant and WTG components. The Project will generate increased local traffic volumes during the construction phase, with minimal traffic impacts anticipated during ongoing operations.

To allow for the advancements in available blade lengths within the assessed impacts, this Scoping Report has used a predicted blade and hub section, that makes a rotor of 220 m in diameter. Multi-piece blades are currently available in the market and can greatly improve transport logistics and reduce traffic and transport impacts. Whether the Project installs single or multi-piece blades is dependent on detailed design and the Project's engineering and procurement processes which will not be undertaken until after the Project would receive Development Consent.

Impacts will be assessed for a 220 m rotor diameter WTG and are likely to include traffic disruptions along all routes detailed below, as well as some vegetation clearing to facilitate access and delivery of equipment. Upgrades to the existing road network will likely be required to facilitate the delivery of WTG components with upgrade works expected to impact on existing infrastructure such as roads, bridges and fencing.

7.1.3.2 Preliminary Route Study

OSOM Vehicle Transport Route from Port of Entry

Over-size, over-mass (OSOM) vehicle transport to the Project Site from the Port of Newcastle has been assessed in a route study undertaken by Rex J Andrews Engineered Transportation. It is notable that although future commercial procurement decisions will determine the most suitable port(s) of entry, other ports of entry would link with the assessed route at the Hume Highway.

For the purposes of this Scoping Report, the results of the 110 m blade length route study have been summarised. This allows for a conservative assessment of a 'worst case' impact scenario in relation to route upgrades potentially required.

The preferred road transport route (see Route A **Figure 17**) from the Port of Newcastle to the Project Site for all components including OSOM and standard construction vehicles that do not exceed 5.25 metres in overall height would likely be via:

- Selwyn street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, M1, Pennant Hills Road, M2, M7, M5, Hume Highway, Gobarralong Road, Gobarralong Adjungbilly Road, Nanangroe Road, Black Andrews Road, Hopewood Road and Stockdale Road.

Figure 18 depicts Route B which allows for components that exceed 5.25 m in overall height (such as WTG tower sections).

- Selwyn Street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, Hunter Expressway, New England Highway, Golden Highway, Denman Road, Bengalla Road, Wybong Road, Golden Highway, Boothenba Road, Troy Bridge Road, Bunglegumbie Road, Mitchell Highway, Manildra Street, Derribing Avenue, Algalah Street, Tomingley Road, Newell Highway, Thomas Street, Moulden Street, Henry Parkes Way, Westlime Road, Hartigan Avenue, Newell Highway, Goldfields Way, Kitchener Road, Bundawarrah Road, Milvale Road, Waratah Street, Burley Griffin Way, Hume Highway, Muttama Road, Hume Highway, Gobarralong Road, Gobarralong Adjungbilly Road Nanangroe Road, Hopewood Road and Stockdale Road.

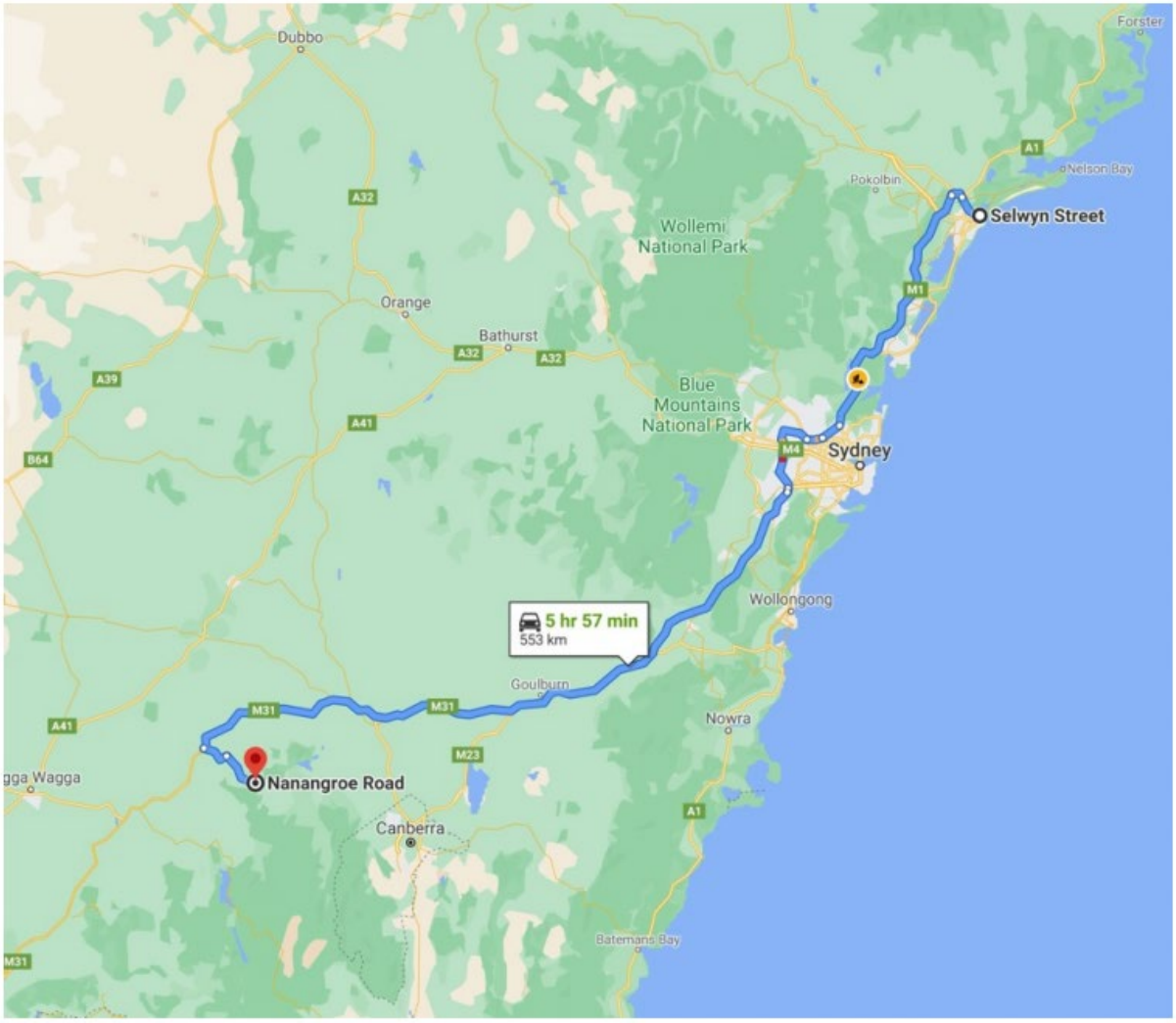

Figure 17: Route A - main route for all blade lengths and components up to 5.25 m in overall vehicle height

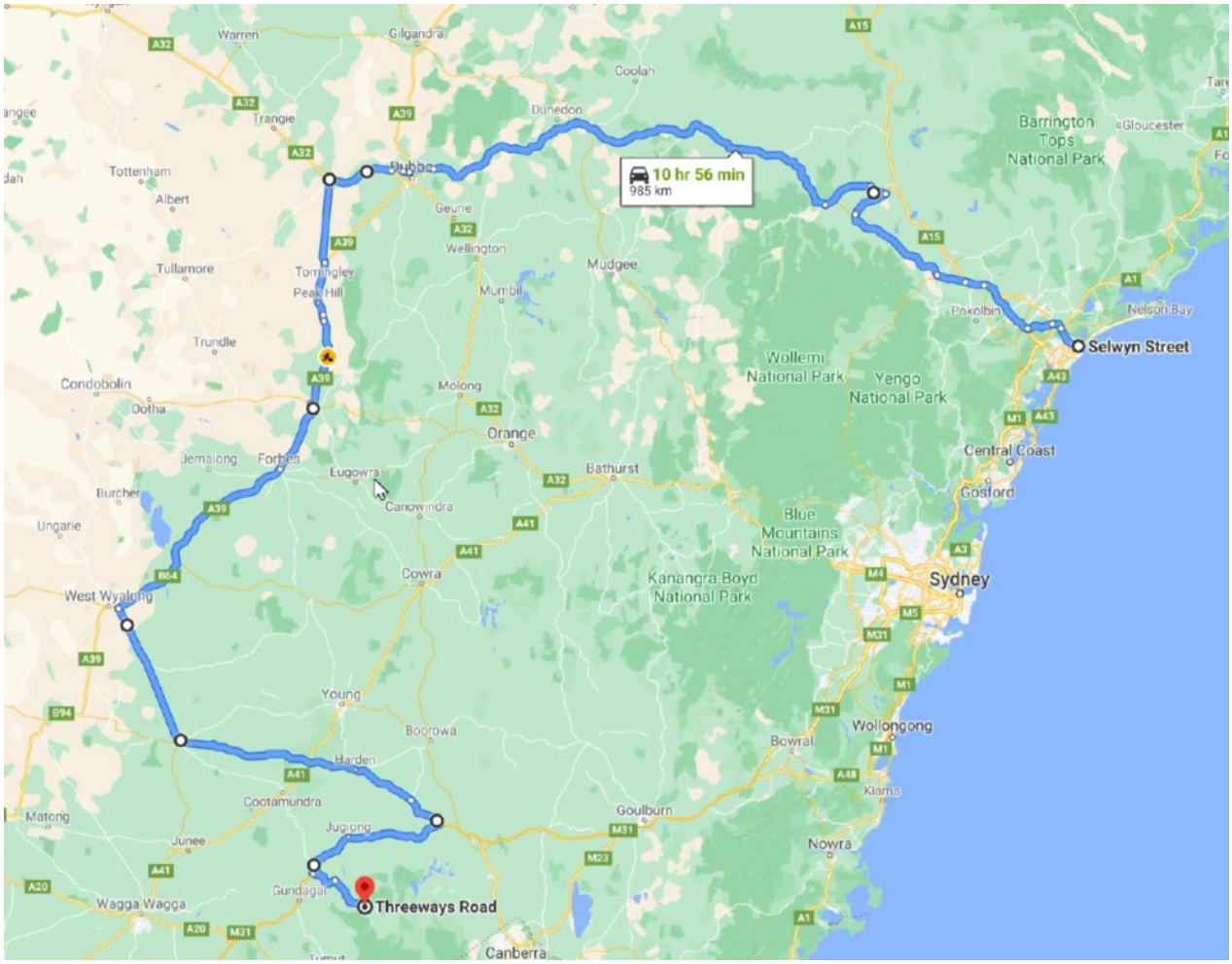

Figure 18: Route B - high load route up to 5.7 m in overall vehicle height

OSOM, Heavy and Light Vehicle routes will be further refined in the EIS and during the post-Development Consent period in the preparation of the Traffic Management Plan (TMP), in consultation with the relevant roads authorities and Councils.

7.1.3.3 Site Access

The Project Site will be accessed from the public road network at the following locations during construction and operation:

- Main Site entry locations as identified on Figure 2 are located off Nanangroe Road, Black Andrews Road and Stockdale Road. The Project is approximately 55 km east of Gundagai (by road). These will be the main access points for OSOM vehicles and heavy and light vehicles.
- Secondary intersections and cross-over locations on Stockdale Road, Nanangroe Road, and Black Andrews Road will facilitate the routes of Internal Roads throughout the Project Site required for construction and operational vehicles and may include access for OSOM, heavy and light vehicles as required.

Figure 2 depicts locations of the Project Site access points which would be gated and secured, and appropriate warning signs erected.

To limit impacts to road users and the surrounding community, it is proposed that the main Project Site entries on Nanangroe Road and Black Andrews Road will only be accessed from a southerly direction from Adjungbilly Road as shown by the dashed black lines in **Figure 19** below. The public road network surrounding the Project (i.e. Parsons Creek Road, Hopewood Road, Maryvale Road and Nanangroe Road north of the Project) is not

to be used by any construction vehicles, except to allow local service and/or resource suppliers the opportunity to participate in the Project.

Therefore, an exception is sought to not prohibit Heavy and Light Vehicles to use any other public roads, except to:

- undertake Pre-construction Minor Works
- construct intersection upgrades on Stockdale Road, Nanangroe Road, and Black Andrews Road
- undertake dust suppression
- utilise the secondary intersections and cross overs identified above to facilitate construction and operational vehicles; and
- procure resources from licensed operators which are located along these roads.

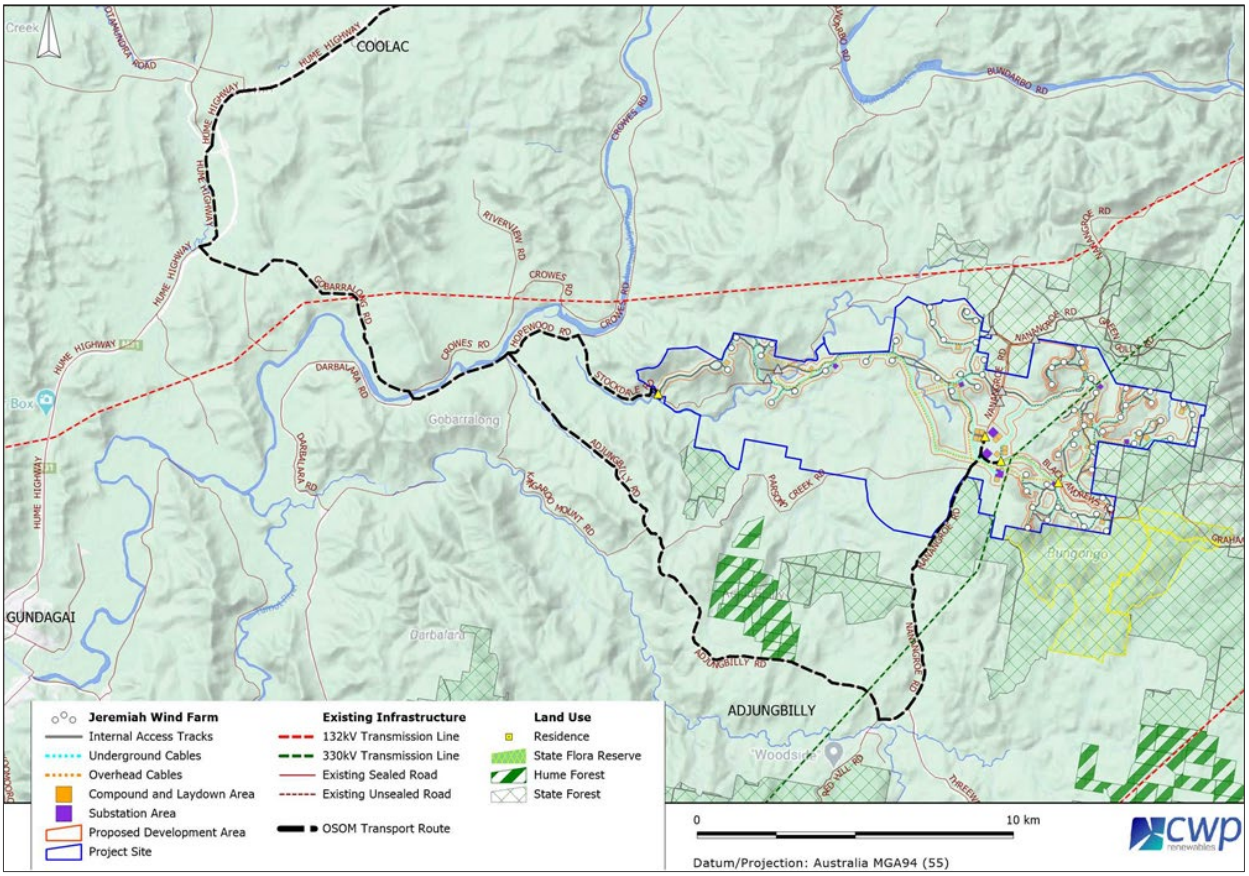

Figure 19: Access to Project Site entries from Gobarralong Adjungbilly Road south of Project Site

7.1.3.4 EIS Assessment Approach

A detailed Traffic and Transport Impact Assessment will be undertaken as part of the EIS and will focus primarily on the preferred transportation route for construction traffic generally in accordance with the '*Guide to Traffic Generating Developments*' (RTA, 2002), Road Design Guide and relevant Austroads Standards and 'Austroads Guide to Traffic management' (Austroads, No Date).

The EIS will also include a review of the suitability of roads that can be used to access the Site and any potential impacts on road safety and local traffic movements. This will include an assessment of the location and availability of local materials and resources in terms of providing guidance on determining suitability of roads for OSOM and heavy vehicles. Where necessary, mitigation measures will be proposed and incorporated within a traffic management plan.

A detailed route assessment including required road upgrades or modifications will be included in the EIS. The final road design, and extent of pruning and clearing for any external road upgrades, is subject to the post-Development Consent process which includes tender, contractor selection, optimisation, detailed design and procurement process undertaken where applicable in consultation with the relevant roads authorities. It is intended that the impacts of road upgrades would remain within the broad impacts considered in the EIS.

7.1.4 Biodiversity

7.1.4.1 Potential Impacts

Impacts on native vegetation, native fauna and aquatic and terrestrial ecosystems are likely to occur as a result of the Project. Direct and indirect impacts during the construction phase are likely to include clearing, sedimentation, dust deposition, erosion, weed introduction and/or spread, introduction of competitive feral fauna, vehicle/machinery strike, light and noise pollution and vibration from the movement of equipment and vehicles.

Operational phase impacts include potential for fauna injury and mortality through direct collision of bird and bat species with the WTG or barotrauma. Indirect impacts may also include a continuation of indirect impacts associated with weed spread during operation as well as noise and vibration associated with WTG operation.

7.1.4.2 Biodiversity Constraints Assessment

Methodology

A desktop literature review and data audit was undertaken to identify the potential presence of any biodiversity constraints within the Project Site and surrounds which could be affected by the Project, including threatened species, populations and ecological communities listed under the BC Act and the EPBC Act. Specifically, a NSW BioNet Atlas search and Commonwealth Protected Matters Search Tool (PMST) report was generated, along with a review of broad scale Plant Community Type (PCT) mapping for the area. Additional species were added to the list based on Eco Logical Australia databases, Biodiversity Assessment Method (BAM) Calculator predicted species report and local knowledge.

A five-day rapid site inspection was initially completed by ELA Principal Ecologist Matthew Dowle in October 2019 to build on the desktop assessment and identify biodiversity constraints within the Project Site. Matthew is an Accredited Assessor under the NSW Biodiversity Offset Scheme (#BAAS17043). Additional site inspections have since be undertaken with results of the field surveys to inform the Project BDAR and EIS.

The field survey has included:

- Determinations of vegetation communities present, where possible assigning PCTs in accordance with the PCT criteria set out in the Vegetation Information System (VIS) database (OEH 2019)
- Preliminary determination of the potential for vegetation communities identified to meet the listing criteria of Threatened Ecological Communities (TEC) under the BC Act and/or EPBC Act
- Assessment of the potential habitat for threatened flora and fauna
- Targeted survey for threatened flora species, namely Yass Daisy (*Ammobium craspedioides)*
- Targeted survey for threatened fauna listed as Candidate species under BAM
- Records of opportunistic fauna observations and important habitat features.

Results

The Proposed Development Area occurs across a hilly landscape and contains a number of creeks and drainage lines. The majority of the study area is modified or degraded, and predominantly consists of exotic pasture with some scattered paddock trees in the west, and disturbed agricultural land with some stands of intact vegetation in the east. The eastern extent of the Project Site is bordered by State Forest with known biodiversity values, such as the Greater Glider (*Petauroides volans*) and Yass Daisy (*Ammobium*

craspedioides) listed as Vulnerable under the EPBC Act as well as the LBB listed as Vulnerable under the BC Act. The LBB maternity roost located in proximity to the Project Site is also a known key biodiversity value.

Plant Community Types

The identification of PCTs within the survey area was based on the results of the broad-scale PCT mapping, rapid vegetation surveys and BAM Plots. PCTs are defined on a combination of quantitative (floristic data) and qualitative (landscape) features, such as dominant canopy species and position within the landscape. However, parts of the survey area have few defining features, making confident PCT allocation difficult. For example, native vegetation in parts is limited to canopy species only as the understorey has been cleared for agricultural purposes, and it is therefore difficult to assign to PCTs based on vegetative characteristics alone. There are similarities within PCTs known in the area, with some comprising similar canopy and ground species; these similarities also create challenges in allocating PCTs.

The PCTs mapped within the Proposed Development Area to date, based primarily on dominant canopy species and landscape features are shown in **Figure 20** and listed below:

- PCT 266: *White Box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion*
- PCT 277: *Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion*
- PCT 299: *Riparian Ribbon Gum - Robertsons Peppermint - Apple Box riverine very tall open forest of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion*
- PCT 305: *Apple Box - Broad-leaved Peppermint - Red Stringybark shrubby hill open forest in the upper NSW South Western Slopes Bioregion and adjacent South Eastern Highlands Bioregion*
- PCT 306: *Red Box - Red Stringybark - Nortons Box hill heath shrub - tussock grass open forest of the Tumut region*
- Paddock Trees: Combination of PCTs listed above.

Threatened Ecological Communities

Two PCTs mapped correspond with a Critically Endangered Ecological Community (CEEC) listed under the BC Act. However, no TECs listed under the EPBC Act were observed during the field inspections due to the disturbed and degraded nature of the vegetation present.

The listed TEC under the BC Act (in italics) and their potential PCT within the Proposed Development Area is listed below:

- White Box Yellow Box Blakely's Red Gum Woodland (Box-Gum Woodland):
  - PCT 266 – *a common PCT and typically found in the west of the study area on slopes and ridge tops containing rocky outcrops. Contains a single canopy species; White Box (Eucalyptus albens) over a disturbed and previously cleared ground layer dominated by exotic and improved pasture grasses and forbs. Often grades into PCT 277 on the lower slopes and gully's where Blakely's Red Gum (Eucalyptus blakelyi) and Yellow Box (Eucalyptus melliodora) become dominant (rather than White Box). Contains a high occurrence of hollow-bearing or paddock trees over an exotic understorey. One of the dominant PCTs within the study area.*
  - PCT 277 – *occurs on the flatter and lower slopes (and gully's) within the study area. Contains an exotic understorey and a high occurrence of hollow-bearing / paddock trees. One of the dominant PCTs within the study area, mostly occurring in the west half of the Project Site.*

Threatened Species Habitat

Based on the PCTs and desktop review of the NSW BioNet Atlas and Commonwealth PMST report, 28 threatened flora and 29 threatened fauna species are considered as having the potential to occur within the Proposed Development Area. Of these species, the Yass Daisy (*Ammobium craspedioides*), Gang-Gang Cockatoo (*Callocephalon fimbriatum*), LBB and Greater Glider (*Petauroides volans*) have been recorded. Other species known to occur within the general vicinity include the Superb Parrot (*Polytelis swainsonii*) and Booroolong Frog (*Litoria booroolongensis*) however these have not yet been recorded. The Wee Jasper LBB

maternity roost is also known threatened species habitat located in proximity to the Proposed Development Area.

There are a large number of hollow-bearing / paddock trees (western half), drainage lines and dense stands of forest (eastern half) mapped within the Proposed Development Area. These features are the dominant habitat for potential threatened species within the Site and important resources for the species listed above. Further targeted surveys will be undertaken in accordance with the BAM during the preparation of the BDAR and EIS to determine the presence of threatened (and non-threatened) species not yet surveyed or recorded (such as Forest Owls and Raptors), as well as detailed bird utilisation surveys for consideration of prescribed impacts required by the BAM.

Impact avoidance, mitigation and offset obligations in relation to biodiversity will be provided in the BDAR and EIS.

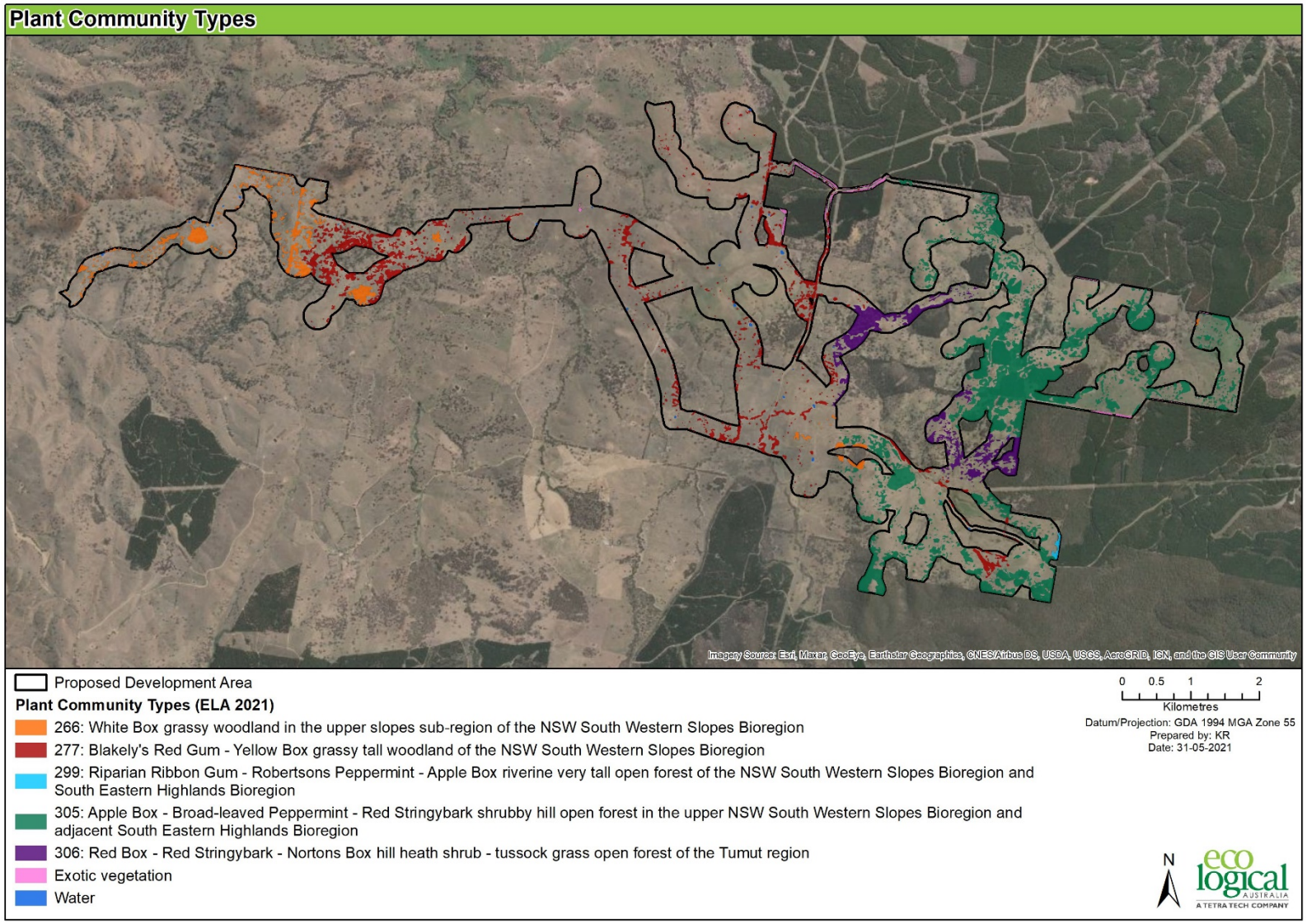

Figure 20: Plant Community Types within the Proposed Development Area

7.1.4.3 Microbat surveys

Methodology

Above and beyond the requirements of the BAM, extensive and ongoing microbat surveys within and adjacent to the survey area have been conducted since February 2020, targeting the Large Bent-winged Bat (LBB) (*Miniopterus orianae oceanensis*), as a maternity roost for this species is located at Wee Jasper less than 20 km from the eastern end of the Project Site. No direct impacts to the maternity roost (a known breeding site) will occur as a result of the Project. However, consideration to impacts on the population are a requirement of the BOS due to the potential for Prescribed impacts (e.g. turbine strikes from a Wind Farm) and the species being listed as a candidate Serious and Irreversible Impact (SAII) species.

Ultrasonic detectors to monitor bat activity were placed at six sites in the Project scoping area (**Figure 21**) at either ground level (approx. 1.5 m height), 50 m or 100 m height.

The monitoring program that is underway seeks to determine if:

- There are locations in the Proposed Development Area that show consistently higher levels of LBB calling activity
- There is evidence of significant LBB activity at different heights (ground, 50 m and 100m height)
- LBB activity is uniform across the months or are there peaks associated with seasonal migration
- Wind conditions influence bat activity
- There are other bat species recorded that may need consideration in relation to bat strike

Results

The following provides a summary of the results of the microbat monitoring program for the Jeremiah Wind Farm that commenced in February 2020, noting that the monitoring program and subsequent analyses remain ongoing.

- *Are there locations that show higher levels of LBB activity (hot spots)?*
  LBB calling activity has been recorded across all sites. Detectors located on the immediate edge of vegetated forests provide the highest LBB levels of calling (considered higher than typical). Calling activity 100 m from the forest drops back to typical call rates seen at the other sites (open paddocks), suggesting that Sites 5 and 6 (but not other sites) are in the foraging range for bats from Wee Jasper. The LBB conducts foraging mainly over forest areas and not across open fields. WTG locations have incorporated a minimum 110 m distance from state forest boundaries.
- *Is there evidence of significant bat activity at different heights?*
  LBB are rarely known to fly at heights of 50 m (or higher), so only rarely fly at rotor height. The microbat call analyses from the 50 m and 100 m high detectors supports this knowledge, with fewer than expected calls recorded.
- *Does LBB activity peak due to seasonal migration?*
  Based on the analysis of results of bat call data collected between February and mid-September 2020, bat activity varied across the sites, which is likely a reflection of changes in local conditions. Activity associated with all species declined across all sites through winter and started to increase again in spring (as expected). Analysis of LBB bat activity through the spring period has not yet been completed. This analysis should indicate if there is any spike in activity in spring and later summer that would imply a migration of LBB through the study area to the Wee Jasper roost.
- *Do Wind conditions influence bat activity?*
  Analyses of the influence of wind conditions on bat activity will be included in the EIS.
- *Are other bat species recorded that may need consideration in relation to bat strike?*
  Calls have been recorded from Free-tailed Bats (*Ozimops* spp.) at 50 m and 100 m height in all areas and across all seasons (reduced in winter). These are high flying non-threatened species and could be subject

to WTG strike. Potential impacts to these species will be a consideration for the prescribed impact assessments of the BDAR.

7.1.4.4 EIS Assessment Approach

An assessment under the Biodiversity Offset Scheme using the NSW Biodiversity Assessment Method will be undertaken and a BDAR will be prepared and included in the EIS to address impacts to threatened ecological communities and species protected by the BC Act. It is noted that access to the Project Site, including upgrading public roads to facilitate the movement of turbines onto the Site, may require road widening, realignment and track clearing with this activity to be assessed in the BDAR.

Some MNES under the Commonwealth EPBC Act have been identified as potentially occurring on or near the Project Site, including TEC and nationally threatened species. Further consideration will be undertaken in the EIS through the BDAR. If during the preparation of the BDAR it becomes apparent that a significant impact on any MNES is likely, a referral will be made. If the Commonwealth determine that the development would have a significant impact on a MNES, the development will become a 'Controlled Action', and assessed under the recently signed NSW Bilateral Agreement with the Commonwealth.

A Bird and Bat Adaptive Management Plan (BBAMP) is likely to be required as a condition of approval. This will provide an overall strategy for managing and mitigating any significant bird and bat strikes arising from operations of the wind energy facility. Studies have shown that 'at-risk' species such as *Haliaeetus leucogaster* (White-Bellied Sea Eagles), *Pteropus poliocephalus* (Grey Headed Flying foxes) and microbats can be impacted by blade strike or barotrauma.

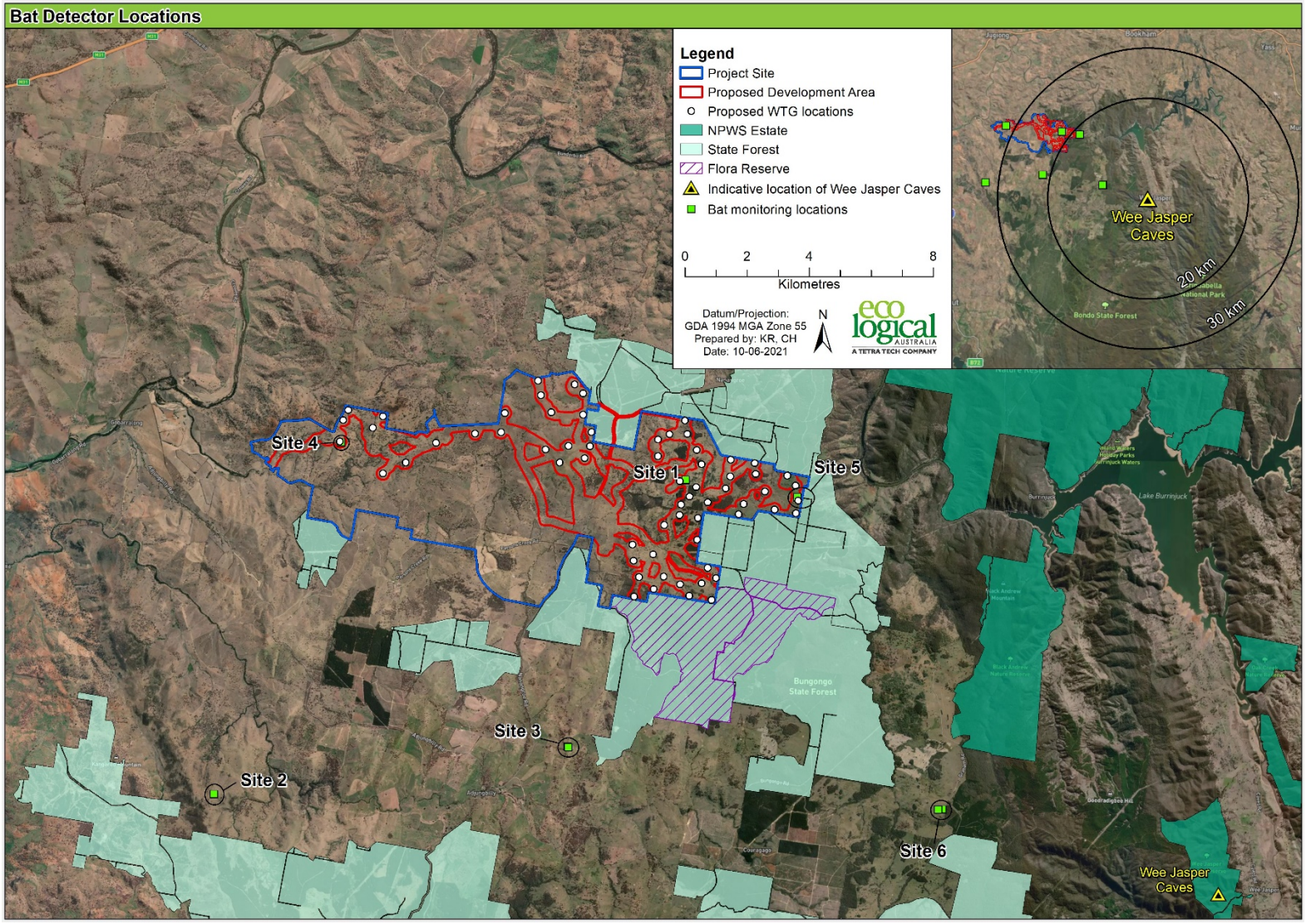

Figure 21: Bat Monitoring Locations

7.1.5 Aboriginal Cultural Heritage

7.1.5.1 Potential Impacts

All Aboriginal cultural heritage Sites, whether recorded or not, are protected under the *NP&W Act*. It is an offence to disturb or damage these Sites without first having obtained an Aboriginal Heritage Impact Permit (AHIP). Works or activities that could potentially disturb the ground surface include earthworks, access road construction / upgrades, WTG foundation construction, associated building construction, services installation, repetitive vehicular movement, and landscaping. These works have the potential to disturb surface and *in situ* subsurface Aboriginal sites.

7.1.5.2 Preliminary Heritage Assessment

An Aboriginal Heritage Information Management System (AHIMS) database search was undertaken on 6 April 2021 for the area within and surrounding the Project Site. Note that areas external to the Project Site that may require ground disturbance to facilitate road upgrades along the route have not been assessed as part of this preliminary assessment but will be included in the EIS.

The AHIMS search revealed 115 Aboriginal Sites and 1 Aboriginal place recorded within the search parameters, which is inclusive of an 18 km radius from the approximate centre of the Project Site. Six AHIMS Sites are located within the Project Site (AHIMS ID 56-3-0214, AHIMS ID 56-3-0213, AHIMS ID, 56-3-0216, AHIMS ID 55-1-0047, AHIMS ID 56-3-0215 and AHIMS ID 56-3-0217), all of which are artefact sites. A further 24 sites have been recorded in the vicinity of the Project Site (**Figure 22**).

The identified Aboriginal Place ('Brungle Cemetery' – NPW Gazette No. 70) is located 18 km south-west of the study area boundary and will not be impacted by the Project.

Searches of the Australian Heritage Database, the New South Wales State Heritage Register (SHR), and the Gundagai LEP Schedule 5 (Environmental Heritage) were also conducted on 6 April 2021 using the terms "Adjungbilly/Gobarralong". No heritage items with Aboriginal significance or Aboriginal Places were recorded within the Project Site on these databases.

A survey of the Project Site was not conducted during the course of this preliminary assessment.

Based on the findings of this assessment, it is highly likely that further Aboriginal heritage sites will be present within the Proposed Development Area. Based on the landforms and the site features of AHIMS sites in the region, the most likely Aboriginal heritage site types include low density open artefact scatters, isolated artefacts, and culturally modified or scarred trees. Sites are most likely to be present on lower slopes, ridgelines, and terraces associated with creek lines, particularly higher order watercourses such as Oak Creek, Gatleys Creek and O'Briens Creek.

7.1.5.3 EIS Assessment Approach

An Aboriginal Cultural Heritage Assessment (ACHA) for the proposed Project will be required to be prepared in accordance with the requirements of the *National Parks and Wildlife Act 1974*.

As a component of the ACHA process, consultation with the Aboriginal Community will be undertaken in accordance with the *'Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010'* (DECCW, 2010a). In addition, it is likely that archaeological test excavation will be required in accordance with the *'Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW'* (OEH, 2011), the *'Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW'* (DECCW, 2010b). The scope of the ACHA will include:

- Desktop review, including an extensive AHIMS database search, Native Title Search, and a review of previously completed studies conducted in the area to assist in the development of a predictive model
- Aboriginal stakeholder consultation in line with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a)

- A comprehensive field inspection with members of the local Aboriginal community to identify and record any sites of Aboriginal Cultural Heritage (social, historical, scientific and aesthetic values) both within and external to the site, specifically within areas proposed to be impacted by the Project, as well as relocating and rerecording existing sites registered on the AHIMS database within the Project Site
- Archaeological test excavation of areas of archaeological potential identified during desktop and field assessment, undertaken in partnership with members of the local Aboriginal community
- Preparation of an ACHA to meet the Heritage NSW guidelines and provide to the local Aboriginal community for comment
- This will include an assessment of any additional Aboriginal Cultural Heritage issues or places identified during the field work
- Development of appropriate management and mitigation strategies for any Aboriginal sites or areas identified as culturally significant by the located Aboriginal community that are identified to be directly or indirectly impacted by the proposed Project.

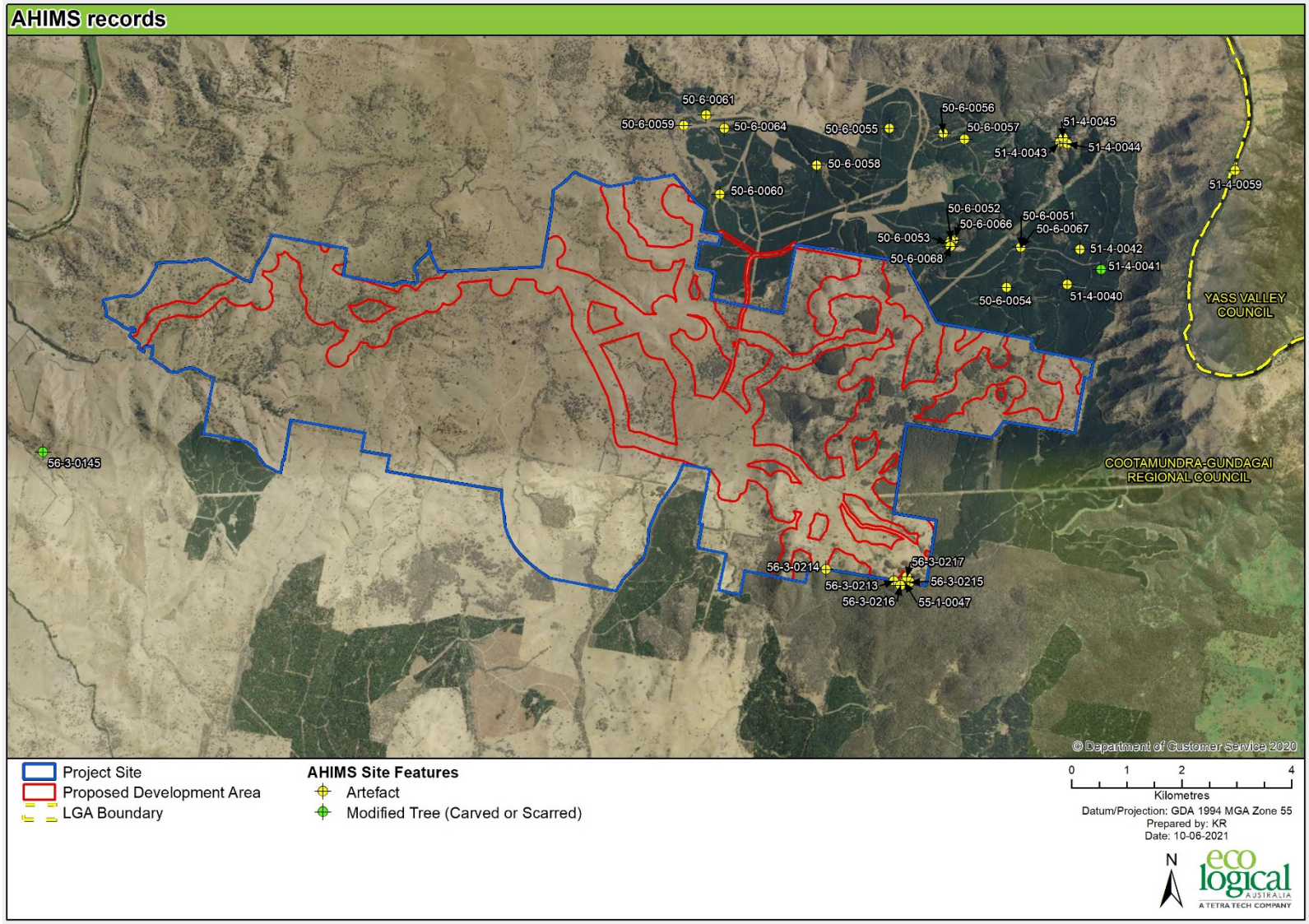

Figure 22: AHIMS Sites in the vicinity of the Proposed Development Area

7.1.6 Historic Heritage

7.1.6.1 Potential Impacts

All environmental heritage in New South Wales is afforded protection under the *Heritage Act 1977*. The *Heritage Act 1977* regulates the impact of development on places, buildings, works, relics, moveable objects, and precincts that are significant to the heritage of New South Wales. Under Section 140 of the *Heritage Act 1977*, a person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a 'relic' being discovered, exposed, moved, damage or destroyed unless the disturbance or excavation is carried out in accordance with a Section 140 permit. Section 4(1) of the *Heritage Act 1977* (as amended 2009) defines 'relic' as "any deposit, artefact, object or material that relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and is of State or Local heritage significance". The Heritage Council must be notified on the discovery of a relic under Section 146 of the *Heritage Act 1977*.

7.1.6.2 Preliminary Heritage Assessment

A search of available heritage registers was undertaken within and surrounding the Project Site including:

- Commonwealth Heritage List
- National Heritage List
- NSW State Heritage Register (SHR)
- Gundegai LEP 2011

There were no World, Commonwealth, National, State, or locally listed heritage items identified as being within the Project Site. The closest heritage item to the Project Site is the Burrinjuck Dam Site (Greater) (SHR 00959), listed on the State Heritage Register and is located approximately 4 km east (**Figure 23**). The heritage curtilage extends into the Cootamundra-Gundagai LGA; however, it is listed on the State Heritage Register only within the Yass Valley LGA. The statement of significance is as follows:

> *The Burrinjuck Dam Site is significant for its natural and cultural resources. It is the site of the first irrigation water storage in NSW. It contains many rare species of native flora and fauna, as well as many structures and artefacts (both above and under water) associated with the construction of the Burrinjuck Dam. The Site contains European archaeological Sites, and probably Aboriginal Sites.* (SHR, 2013)

Within the curtilage of Burrinjuck Dam Site (Greater) (SHR 00959), there are two additional SHR items. Burrinjuck Dam (SHR 00958) and Burrinjuck Dam Site – Barren Jack Creek Water Supply Dam (SHR 00960). On the Yass Valley LEP (2013), Burrinjuck Dam (LEP I058) also overlaps with Burrinjuck Dam Site (Greater) heritage curtilage.

Despite no items being listed in the Project Site, several archaeological assessments have identified the presence of remains from mid- and late-nineteenth century mining and settlements (Carter 2001; Smith 2002). It is possible that historical items will be present within the proposed area for the Project. These are most likely to be related to mid- and late-nineteenth century mining activities and associated settlements, although items or sites with agricultural and pastoral links are also likely to be present. Sites associated with mining are most likely to be present on the banks of Adjungbilly Creek and where there is a known mineral source. Sites associated with agriculture and pastoralism may be located anywhere in the landscape. If identified, historical mining and agricultural items are likely to be of local significance or will not meet the heritage criterion to be listed items.

As there is potential for historic heritage to be present within the study area, there may be impacts to historic heritage due to the Project.

7.1.6.3 EIS Assessment Approach

If required, a Statement of Heritage Impact (SoHI) will be completed for the Project in accordance with the NSW Heritage Council *Statements of Heritage Impact Guidelines 2002*. The scope of the SoHI will include:

- A review of any relevant existing heritage assessment reports and other sources of information regarding heritage items in the region
- A field survey of the Proposed Development Area in conjunction with the Aboriginal heritage survey, with an emphasis on sites identified during preliminary research and areas with archaeological potential and the recording of any items located
- Preparation of a SoHI which considers the potential for impacts on any significant adjacent heritage items
- Identification of any necessary impact mitigation and management measures.

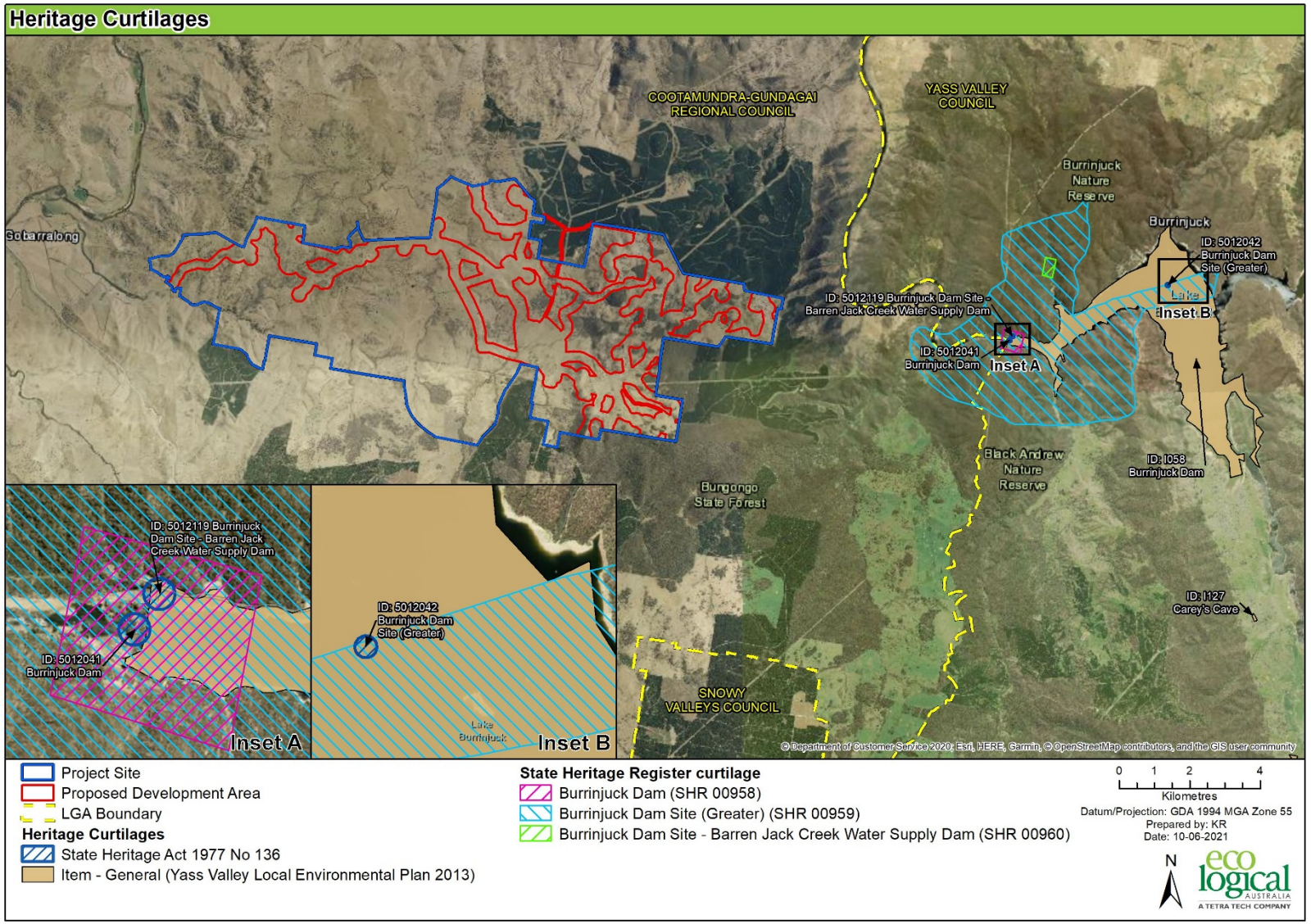

Figure 23: Heritage items near the Project Site

7.1.7 Water

7.1.7.1 Potential Impacts

The potential impacts from the development can be categorised as changes to surface water quantity, surface water quality, groundwater, flood passage and aquatic ecology. These potential impacts will be most prevalent during construction with a reduced potential for impact during operations.

There is the potential for degradation of surface water quality related to sediment and erosion, dust deposition, pollution from spills and contamination from waste. Depending on the local groundwater conditions this could also lead to degradation of groundwater quality through infiltration processes or construction intersecting aquifers. For water quantity and water availability (surface water and groundwater), potential impacts are altered water availability due to construction water requirements, alteration of overland flow paths and reduction in environment health from groundwater drawdown or reduced streamflow. With the requirements for access tracks traversing creek lines, riparian corridors and their connectivity may be impacted along with the ability for the movement upstream and downstream of aquatic species.

The key receptors for these impacts are groundwater aquifers, surface water streams, licenced users, aquatic fauna, riparian vegetation, downstream users and the community.

7.1.7.2 Existing Environment

The Project Site is within the Murrumbidgee River catchment area. The Burrinjuck Dam and its impounded reservoir Lake Burrinjuck are also located to the east of the Project Site. From Burrinjuck Dam, the Murrumbidgee River flows through a rugged narrow gorge and is joined by Jugiong and Muttama Creeks from the north and the Tumut River from the south, before emerging onto the western plains near Gundagai. The Murrumbidgee River does not enter the Project Site. Oak Creek and Stony Creek, both 5th Strahler order watercourses and tributaries of the Murrumbidgee River, run through the Project Site with several smaller tributaries running through the landscape comprising 1st, 2nd, 3rd and 4th order Strahler streams and ephemeral creeks.

Surface water in the Project Site is regulated by the Water Sharing Plan for the Murrumbidgee Regulated River Water Source 2003 which covers some 1,200 kilometres of regulated rivers and creeks below Burrinjuck and Blowering Dams, including the Yanco-Billabong Creek system.

Groundwater is regulated by the Lower Murrumbidgee Groundwater Sharing Plan, which is managed by the Water Sharing Plan for the Macquarie and Cudgegong Regulated Rivers Water Source 2016 and the NSW Government, who manages licensed water for the environment.

Several creeks and drainage lines, which occur in or around the Project Site have been identified as Key Fish Habitat, including Stoney Creek, Oak Creek and Matchems Creek. These are aquatic areas that have been identified as important to the sustainability of the maintenance of fish populations.

7.1.7.3 EIS Assessment Approach

A water impact assessment will be undertaken as part of the EIS and will include, but not be limited to:

- Quantification of approximate water demand and identification of potential surface and groundwater sources and potential impacts regarding water usage (through a water balance assessment) and water quality (through a water quality modelling assessment)
- Recent dialogue with regulators has indicated that flood modelling may not be required for windfarms, given the location of these developments (predominantly on the top of hills). However, depending on the routes chosen for the access tracks, some flood modelling may be required depending on the Strahler order of the creek (i.e. the likely flood extents expected).
- Assessment of potential impacts to riparian land and aquatic habitat.

7.1.8 Hazards and Risks

7.1.8.1 Aviation

Tumut Airport, Harden Airport, Cootamundra Airport and the Junction Airstrip are all located within 30 nautical miles (nm) to the Project Site. There is also a probability for other aviation activities such as unlicensed private air strips to be within proximity to the Project Site. Agricultural aerial spraying for pest management and pasture top dressing may occur in the Project Site.

An Aeronautical Impact Assessment will be undertaken in accordance with the National Airports Safeguarding Framework Guideline D: Managing Wind Turbine Risk to Aircraft (DIRDC, 2012). This assessment will identify existing aviation activity in the locality of the Project Site, consult with relevant stakeholders including Airservices Australia, identify potential impacts to aviation safety based on the final proposed layout and recommend mitigation measures to address those impacts.

7.1.8.2 Telecommunications and Electromagnetic Interference

Electromagnetic signals (or radio waves) are transmitted throughout the country as part of telecommunication systems by a wide range of operators. Such systems are used for radar, radio broadcast, television, mobile phones and mobile and fixed radio transmitters. Electromagnetic signals generally work best if a clear path exists between the transmitting and receiving locations, known as line of sight.

There is the potential for interference from any large structure, including wind turbines, which occur within or close to the signal path. Signals can be interfered with or reflected by the rotating blades of a wind turbine, which could degrade the performance of the signal (Bacon 2002). Electromagnetic emissions from generators and other machinery also have the potential to affect signals; however, with modern wind turbine generators and strict International Electrotechnical Commission (IEC) regulations for manufacturers, there are now negligible electromagnetic emissions from wind turbines (Auswind 2006).

A Telecommunications and Electromagnetic Interference Assessment will be undertaken to identify all telecommunication infrastructure in proximity to the Project Site, an assessment of impacts and potential interference. If the Project does cause any interference, the Proponent will investigate with the afflicted parties and implement a suitable solution to the problem.

7.1.8.3 Electromagnetic Field Assessment

Electric and magnetic fields (EMFs) are associated with a wide range of sources and occur both naturally and because of human activity. Naturally occurring EMFs are those associated with lightning or the Earth's magnetic field. Human induced EMFs occur wherever electricity is present, meaning we are constantly exposed to EMFs in our home and work environments.

Wind farms create EMFs from operational electrical equipment, such as transmission lines, substations and the electrical components found within the wind turbines. This equipment has the potential to produce Extremely Low Frequency (ELF) EMFs, which means the current will alternate direction between 30 and 300 times per second, or at 30 to 300 Hertz (Hz).

The measurements of electromagnetic fields can vary within a wind farm, depending on the placement of equipment such as wind turbines, substations and internal electrical cables.

The typical strategy for reducing electromagnetic fields is distance from the source. Other strategies also include burying cables and placing cables together to cancel the emitted fields. As most of the wind turbine electrical equipment is encased within the wind turbine, in housing at the base of the tower or located up to 120 m above ground level, the distance and shielding from electromagnetic fields decreases the impact from emitting sources.

Electromagnetic fields can have the highest recorded levels at substations; however, appropriate fencing and remote placement of the substation within the landscape can greatly reduce any exposure to electromagnetic fields.

7.1.8.4 Battery Hazards Assessment / the Energy Storage Facility

The Project incorporates an ESF which would (among other functions) enable electricity generated by the Project to be stored for later dispatch to the NEM. The electrical capacity of the ESF has been considered nominally as 150 MW / 150 MWh but it is not intended as an upper limit.

The technology used (i.e. the type of energy storage) is not yet decided and the most commercially suitable type will be deployed for use in the Project depending on the outputs of the detailed design and financial modelling process. A range of technologies have been considered, including lithium-ion, lead acid, sodium sulphur, sodium or nickel hydride, electrochemical technology (i.e. flow batteries), cryogenic storage and compressed air.

A preliminary risk screening in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011) will be undertaken, and if the preliminary risk screening indicates the development is "potentially hazardous", a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazard Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011).

7.1.8.5 Bushfire and Electrical Fire

The Project is in an area of low to medium bushfire risk due to the vegetation and agricultural practices in the area. The Project has the potential to be exposed to bushfire risk from grasslands and nearby areas of dense vegetation as well as carrying the risk of a potential fire starting within the Project Site.

By reviewing the possible ignition sources from the wind farm and analysing bushfire risk assessments on life and property, it is possible to create mitigation and management strategies to minimise the Project's impact on fire and bushfire risk during all Project phases. Through implementing these strategies in an Emergency Response Plan, it is possible to increase the awareness of the procedures of bushfire emergencies, increase the preparedness of construction and maintenance staff, and facilitate orderly and safe evacuation and refuge during times of bushfire. The consideration of these mitigation and management strategies will allow the Project to decrease its impact on fire and bushfire hazards.

The construction of a wind farm has potential benefits in tackling bushfires which occur close to and within the Project area, including improved access from new tracks, fire breaks and reduced lightning strike to vegetation.

Construction contractors will, in consultation with the NSW Rural Fire Service (RFS), implement fire prevention procedures during the wind farm construction phase. Firefighting equipment will be located onsite, and all site vehicles will have diesel engines to minimise fire risk. Construction activities will be modified to suit any fire bans when appropriate to do so.

To ensure there is minimal risk of the Project causing a bushfire and that the Project doesn't impact on aerial fighting of bushfires, a Bushfire Risk Assessment will be undertaken in accordance with Planning for Bush Fire Protection (PBP), A guide for councils, planners, fire authorities and developers 2019 (NSW RFS, 2019).

7.1.8.6 Other Hazards and Risks

Other potential hazards and risks such as public health regarding electromagnetic fields, low frequency and noise infrasound and shadow flicker will also be assessed as part of the EIS, as well as blade throw.

7.1.9 Social and Economic

7.1.9.1 Community Engagement Strategy

The Proponent has been engaging with the community since 2005, as discussed further in the Community and Stakeholder Engagement chapter.

In October 2020, DPIE exhibited a Draft Social Impact Assessment Guideline that is proposed to apply to all SSD projects. AAP Consulting were engaged to align the Proponent's existing Community Engagement Strategy (CES) to reflect DPIE's draft guidelines. The CES outlines how the Proponent will engage with the

community to identify and assess related social impacts. The CES is a live document and will be updated through the Project lifecycle, from scoping phase through to post approvals, construction and operations. It has been developed in accordance with the Draft Social Impact Assessment Guidelines (DPIE, 2020) and accounts for Phases 1 and 2 of the Social Impact Assessment (SIA), summarised below. Phase 1 and 2 together form the process of analysing and responding to likely social impacts. Phase 3 is a process for social impact management and is adaptively managed to be completed post approval.

Phase 1: SIA

- Desktop assessment to identify the Project's social locality.
- Uses the DPIE Scoping Worksheet as a tool to identify and evaluate social impacts
- Influences Project refinement
- Influences the engagement strategy by identifying stakeholders and analysing impacts
- Proposes an approach for undertaking the remainder of the SIA process

Phase 2: SIA

- Finalisation of the social baseline resulting from engagement
- Finalisation of impact identification and responses completed
- Project refinements completed
- Engagement activities continue
- Development of a Draft Social Impact Management Plan (SIMP)

Phase 3: Social Impact Management

- Monitoring and engagement ongoing post approval
- Development and submission of a SIMP, if required

7.1.9.2 Potential Impacts

Social impacts are considered to be the consequences that people (individuals, households, groups, communities, businesses or organisations) may experience when a new project brings change. A SIA will identify and understand the social impacts, both negative and positive with Proponents working closely with stakeholders to avoid, mitigate or reduce negative impacts and promote positive impacts from the project.

Potential or typical EIS issues, such as dust, noise, economic, visual, biodiversity, traffic, access, heritage and land use management may impact upon people. These impacts as categorised in the SIA guidelines may occur to a person's way of life, surroundings, health and wellbeing, livelihoods, accessibility and culture. Each of these potential impacts will be addressed as part of the engagement process and the ongoing SIA process (including Phases 2 and 3).

7.1.9.3 EIS Assessment Approach

A SIA will be undertaken in accordance with the Social Impact Assessment Guideline (DPIE, 2020) to review, identify, predict, evaluate and develop responses to social impacts, the impacts and benefits of the Project for the region and State as a whole, including consideration of any increase in demand for local services such as accommodation. It will be based upon the Phase 1 SIA undertaken to date and will be used to inform the ongoing management of social impacts.

The SIA report will complement other technical studies by examining how people might experience these environmental and economic changes and identify opportunities to respond. The results of relevant studies will be incorporated into the SIA.

The Proponent is committed to the ongoing management of social impacts and the therefore the SIA will propose arrangements to monitor and manage residual social impacts, including unanticipated impacts over the life of the Project including decommissioning.

A SIMP is an adaptive management process and likely to be a condition of consent and will be developed to describe the measures and mitigations to be implemented.

7.2 Other Issues

The EIS will consider further aspects as required under the SEARs, including:

- Geology and soils
- Air quality, odour and dust
- Resource requirements and waste
- Decommissioning and refurbishment
- National Parks

A discussion of potential impacts on these aspects will be provided and, where necessary, management and mitigation measures identified.

7.3 Scoping Only Issues

The following have been identified as Scoping Only issues in the Scoping Spreadsheet. These are other matters which were considered during scoping, but it was concluded that the project activities are unlikely to have negative impacts on them. Brief justifications are provided below.

- Atmospheric Emissions
  - The Project is unlikely to cause a long-term change in the pattern of weather. However, the Project aims to reduce atmospheric emissions attributed to other forms of energy production and as such, the EIS will include a discussion in this regard.
- Community Services
  - The Project is unlikely to impact on the availability of or access to education, health care, open space and recreation facilities for the affected community. Despite this, the community impact will be addressed in the project specific Social Impact Assessment and within the EIS itself.
- Coastal Hazards
  - The Project is not within, nor in proximity to a Coastal Zone, as defined in the Coastal Management SEPP.

7.4 Cumulative Impacts

Cumulative impacts refer to the combined effect of impacts from several activities on a particular value or receiver. They may occur concurrently or sequentially. Considering the Project, the relevant cumulative impacts are those associated with other known or foreseeable developments occurring in proximity to the Project.

Major projects listed on the Major Projects Register within the Cootamundra-Gundagai LGA and within parts of the Hilltops, Snowy Valley and Yass Valley LGAs (and their current status) are:

- Inland Rail – Illabo to Stockinbingal (Amend SEARs)
- Young – Wagga Wagga Gas Pipeline – Stage 1 (Determined)
- Bango Wind Farm (Determined)
- Bald Hill Quarry and Landfill (Determined)

- Yass Valley Wind Farm (Determined)
- Conroy's Gap Wind Farm (Determined)
- Visy Pulp and Paper Mill (Determined)
- Tumut Paper Mill Expansion (Determined)

Potential cumulative impacts of overlapping construction periods are primarily associated with traffic impacts, pressures on local facilities, goods and services, natural resources and vegetation clearing. Potential operational cumulative impacts are associated with acoustic and landscape and visual amenity matters.

The EIS will assess cumulative impacts of the proposal in relation to other major projects occurring in the vicinity, as well as the potential cumulative impact of nearby renewable energy projects.

8 Community and Stakeholder Engagement

The following section describes the community and stakeholder consultation and engagement undertaken for this Project to date and the ongoing approach to engaging with stakeholders. The Wind Energy Guideline (DPE, 2016a), Wind Energy: Visual Assessment Bulletin (DPE, 2016b), Wind Energy: Noise Assessment Bulletin (DPE, 2016) and the Draft Social Impact Assessment Guidelines (DPIE, 2020) outline an expectation for early and meaningful consultation with the local community and other stakeholders to enable feedback that can be incorporated into the design of the Project. Specifically, the SIA Guideline details the methodology for community engagement.

Further to these guidelines, CWPR is also a signatory to the Clean Energy Council's Community Engagement Best Practice Charter for Renewable Energy Developments. This involves a voluntary set of commitments that the Proponent will uphold when developing and operating clean energy projects to engage respectfully with the communities in which they plan and operate projects, to be sensitive to environmental and cultural values and to make a positive contribution to the regions in which they operate.

8.1 Consultation Approach

Community awareness and input are fundamental to responsible and sustainable development. CWPR understands the importance of effective and broad community consultation and is committed to genuine and meaningful engagement with the community and all stakeholders interested or impacted by the Project, developing long-term relationships and maintaining open lines of communication. Specific objectives of CWPR are to:

- Establish a strong network of positive, long-term relationships within the community
- Stay attuned and respond to community needs wherever possible
- Contribute to community growth – creating value and opportunity
- Demonstrate an ongoing commitment across the life of the asset

CWPR have been engaging with the community since 2005 and have built strong relationships within the local community over the past 16 years. Community engagement is predominantly undertaken by the Jeremiah Wind Farm Project team of three CWPR staff. The Project team are based in CWPR's Newcastle office, but spend time in the Project area regularly engaging with the local community to build and maintain genuine, trusting relationships with stakeholders. The overall approach to consultation with local community is to be flexible, inclusive, open, and responsive.

CWPR develop and own utility-scale renewable energy facilities incorporating wind, solar and storage technologies, oversee project delivery and commissioning, and provide long-term operational asset management services. The unique full lifecycle approach to own and manage each project from inception through to full operation ensures genuine engagement with all stakeholders at every stage of the development.

In October 2020, DPIE exhibited a Draft Social Impact Assessment Guideline that is proposed to apply to all SSD projects. AAP Consulting were engaged to refine the Proponent's CES to reflect DPIE's draft guidelines. The CES outlines how the Proponent will engage with the community to identify and assess related social impacts. The CES is a live document and will be updated through the project lifecycle, from scoping phase through to post approvals and operations.

8.2 Communication and Engagement Objectives

The objectives of the CES are to:

- Keep the community informed about the Project, its likely impacts and likely benefits, through the provision of accurate and timely information
- Provide multiple opportunities and mechanisms for meaningful information exchange with stakeholders

- Ensure that the team developing the Project fully understands the local context, including any local impacts that it may have or opportunities that it could provide
- Integrate feedback received into the Project planning and design as far as possible
- Build and maintain positive, trust-based relationships with the local community.

Due to the general requirements of wind farms, such as good wind speeds, elevated land and the need to be in proximity to transmission lines, they are generally situated within rural areas close to rural dwellings and regional communities. This is known to cause conflict with local communities, who may feel they are impacted by the development, however, do not directly benefit.

Accordingly, the CES for the Project is focused on mitigating direct impacts of the Project, while at the same time creating benefits for the local community. In particular, the consultation has the following objectives (AAP Consulting, 2021):

- Facilitate meaningful information exchange and involvement of stakeholders in the preliminary design and assessment process
- Collaborate with the community, to ensure local advice and insights are effectively integrated in the project planning and design
- Maintain and enhance existing relationships between CWPR and stakeholders
- Engage with a diversity of people, including vulnerable and marginalised groups
- Use appropriate and specific levels and techniques of engagement based on analysis of the community and how the community is best engaged.

8.3 Stakeholders

A stakeholder analysis has been undertaken to identify communities and stakeholders who have an interest in the Project (Draft CES, 2021). **Table 10** categorises stakeholders including any group or individual that might have an interest and/or be impacted by the Project construction, operations or decommissioning. This includes people and groups:

- That are impacted by possible construction, maintenance or operational activities
- With an interest in policy or operational decisions
- With an interest in major project development proposals.

Table 10: Identified stakeholders (AAP Consulting, 2021)

Stakeholder Group	Stakeholder
Host Landholders	• Properties that will host infrastructure related to the Project
Neighbours	• Landholders and residents residing adjacent to the Project area
Government-elected representatives	• NSW Premier • NSW Minister for Planning and Public Spaces • NSW Minister for Energy and Environment • Federal Member for the Riverina • State Member for Cootamundra • Mayor and Councilors, Cootamundra-Gundagai Regional Council
Government - State	• NSW DPIE including: – Biodiversity, Conservation and Science Directorate

Stakeholder Group	Stakeholder
	– Water Group • WaterNSW • Heritage NSW • Department of Primary Industries • NSW Environment Protection Authority • Transport for NSW • Crown Lands • Regional NSW – Mining, Exploration and Geoscience (MEG) • Local Lands Services – Riverina region • Department of Finance, Services and Innovation – Telco Authority • Fire and Rescue NSW • Commonwealth Department of Defence • Civil Aviation Safety Authority; and • Airservices Australia
Local Council	• Cootamundra-Gundagai Regional Council • Yass Valley Council (adjacent to Site)
Projects / Industry	• NSW Farmers Association • State Forest • NSW National Parks & Wildlife Service • NSW Forestry Corporation
Emergency Services	• NSW Police, 101 Cooper Street, Cootamundra • NSW Police, 16 Byron Street, Gundagai • NSW Fire Service, 14-16 Adams Street Cootamundra • NSW Fire Service 30 Otway Street, Gundagai • NSW Ambulance, Parker Street, Cootamundra • NSW Ambulance, Tor Street, Gundagai • NSW Rural Fire Service Units at 52 Redhill Road, Adjungbilly • State Emergency Services – Gundagai and Cootamundra
Utilities and Service providers	• TransGrid / Humelink • Goldenfields Water • Telstra • Optus
Local Community	• Property owners, tenants and real estates in the suburbs of: – Adjungbilly – Gobarralong – Bongongo
Local business and industry	• Local businesses (most likely in Gundagai and Tumut) including: • Accommodation, retail, food and beverage and entertainment providers; medical services, fuel/vehicle maintenance services; as well as a range of business geared to servicing large civil construction projects • Coolac Store • Eulonga Quarries

Stakeholder Group	Stakeholder
	• The Junction Air Strip
CWP Renewables	• Direct Employees • Consultants engaged by CWP Renewables to conduct work
Community interest groups and community services	• Adjungbilly to Batlow Humelink Action Group • Adjungbilly Cooperative Wild Dog and Fox Management • Adjungbilly Hall – run by Bongongo P&C • Landcare • Bongongo Public School • Puggles Mobile Preschool • Church of St Patrick, Adjungbilly • Gundagai Anglers Club • Gundagai Community Environment Impact Group • Muttama Creek Regeneration Group • Cootamundra Tourism Action Group • Brungle-Tumut Local Aboriginal Land Council • Onerwal Local Aboriginal Land Council • Gundagai Historical Museum • Wires • Gundagai Youth Council
Road Users	• Road users using the existing local roads • Local taxi, bus, tour and transport operators
Media	• Tumut and Adelong Times • Gundagai Independent • Twin Town Times • Bongongo Public School weekly newsletter
Regional Community	• Larger regional centres close to the Project, including Gundagai, Cootamundra and Tumut

8.4 Key Issues

Consultation has been undertaken in accordance with the Visual Bulletin with the purpose of understanding the community perception towards the Project. Consultation has been undertaken through face to face meetings, a community open day held in March 2020 and a questionnaire survey which was made available via post, at the open day and online. As at 26 April 2021, the results of the community values survey have revealed that the main concerns surrounding the Project include visual, noise, and effects on flora and fauna (Moir, 2021). Specifically, the participants noted that they value the landscape particularly their sense of isolation from the built environment, the presence of wildlife, the Murrumbidgee River and its associated valley, existing vegetation, bushland and the hills and undulating topography. Specific key public viewpoints identified as part of consultation include Childowla Road, Burrinjuck Nature Reserve, kayaking along the Murrumbidgee River and surrounding private property.

These key landscape features and public viewpoints, noise and biodiversity have all been identified as key issues as part of this Scoping Report and will be assessed in further detail in the EIS phase of the Project. Consultation with the community remains ongoing.

8.5 Methods and Outcomes of Community Consultation to Date

The Proponent has been consulting with the local landowners since 2005 and the broader community since 2018. The Project has been refined from the scoping area to the preliminary site layout, by incorporating feedback received during the consultation processes to date. Community consultation will continue throughout the planning and approvals process and throughout the post consent and operations phases (if approved). The Proponent remains committed to an open and transparent process that maximises public good, while minimising negative impacts and undue burden on certain parts of the community and/or individuals.

A variety of methods have been implemented to consult with the stakeholders above to date and are proposed going forward. Multiple opportunities and mechanisms for meaningful engagement with stakeholders is key. A summary is provided below:

- Face to face meetings, phone calls and emails
- Introductory letters and maps
- Community flyers and newsletters (provided as hardcopy and via email, all newsletters available on the website).
- Community values survey (provided as hardcopy, via email and available on the website).
- Public drop in session held at the Adjungbilly Community Hall on the 30 March 2021, advertised in the local media in the weeks leading up to the event, as well as invitations provided to neighbours surrounding the project.
- Website
- E-newsletter subscription available via website

To date, the community has been provided information including the scoping area, Project Site location preliminary site layout (**Figure 2**), description of the Project, planning and assessment requirements and indicative Project timeline. In addition, a summary of key issues has been presented, including a list of all site specific technical studies to be undertaken. The majority of stakeholders listed in Table 10, including the Forestry Corporation have been sent the newsletters; these are also available on the Project website.

8.6 Aboriginal Consultation

CWPR will engage with Aboriginal people throughout the Project phases in accordance with the relevant guidelines, including:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011)
- The *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* (DECCW, 2010b)

- The *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a).

As part of the Project scoping phase, the process of Aboriginal community consultation has commenced in accordance with the guidelines as set out in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (NSW DECCW 2010b). In order to identify, notify and register Aboriginal people who may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the project, the following consultation procedure has been implemented:

- Correspondence up to 20 April 2021 was sent to:
  - Heritage NSW Queanbeyan office
  - Brungle Tumut Local Aboriginal Land Council
  - the Registrar, *Aboriginal Land Rights Act 1983*
  - the National Native Title Tribunal, requesting a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements
  - Native Title Services Corporation Limited (NTSCORP Limited)
  - Shire Cootamundra-Gundagai Regional Council
  - South East Local Land Services.
- An advertisement was placed in the local newspaper (Cootamundra Herald) on 28 April 2021.
- Correspondence dated 23 April 2021 was issued to ten Aboriginal parties listed by Heritage NSW who may have an interest in the area.

There are five Registered Aboriginal Parties (RAPs) in the formal process of consultation. Brungle Tumut Local Aboriginal Land Council (LALC) has been consulted and has been invited to assist in cultural heritage field work. It is noted that Onerwal LALC is not part of the Project area, however, will be notified and consulted should any external road and / or intersection areas proposed fall within the areas.

8.7 Ongoing Consultation

Ongoing engagement with the local community and other stakeholders will be undertaken during the preparation of the EIS, and moving forward during the construction, commissioning and operation, and decommissioning stages of the Project. Community engagement activities will be ongoing for the life of the Project and will be tailored according to each of the key stages of the development including:

1. Site selection
2. Feasibility and design
3. Project planning and approval
4. Construction
5. Commissioning and operation
6. Repowering or decommissioning

The CES details the engagement approach links to the project milestones and the SIA phases outlined in the Guideline, with reference to the Wind Energy Guide (DPIE, 2016).

The proposed approach to engagement during the EIS preparation phase and beyond is summarised in **Table 11**.

Table 11: EIS engagement approach (excerpt taken from AAP Consulting, 2021)

EIS / SIA Phase	Engagement Goal	Target Stakeholder	Engagement Technique	Project Stage
Project Scoping	• Identify local landholders within the potential project area • Introduce the project concept and obtain initial feedback about the prospect of a wind farm development • Seek agreements regarding access for further project feasibility investigations • Introduce the wind farm development process	• Potential host landowners • Potential neighbouring landowners	• Phone calls • Face to face visits • Introductory letters • Gather contact details for future communications	• Site selection
Project Scoping and Request for SEARS / Phase 1 SIA	• Identify potential social impacts using the SIA Scoping tool.	• N/A	• N/A	• Project feasibility
Project Scoping and Request for SEARS / Phase 1 SIA	• Identify community values, potential constraints and opportunities in the project area, and inform the design process. • Identify and appropriately respond to community concerns	• Host landholders • Neighbours • Local council • Service providers • Vulnerable groups including indigenous.	• One on one meetings with potential host landholders, neighbours and key government stakeholders • Project fact sheet 1 and visuals to help inform above meetings. • Ongoing direct communication, (face to face meetings, mail, email, and/or SMS (as appropriate))	• Project feasibility and design
Project Scoping and Request for SEARS / Phase 1 SIA	• Maintain communication channels for enquiries and information • Continue to proactively gather feedback to inform the project design • Listen to the community's concerns and suggestions about proposed project area and discuss issues regarding landholder agreements	• "potential" Host Landholders • Neighbours	• As above • Establish project website and e-newsletter	• Project feasibility and design
Project Scoping and Request for SEARS / Phase 1 SIA	• Identify landscape values, as required by the Wind Energy: Visual Assessment Bulletin (DPE, 2016b).	• Host landholders • neighbours • Community interest	• As above • Community information drop-in session #1	• Project Planning and Approvals (Scoping Phase)

EIS / SIA Phase	Engagement Goal	Target Stakeholder	Engagement Technique	Project Stage
	• Engage with landholders about the proposed project area, likely corridors for development, or preliminary turbine layouts, access routes and potential location of ancillary infrastructure	groups and indigenous stakeholders • Local Council	• Community Newsletter • Survey #1	
Project Scoping and Request for SEARS / Phase 1 SIA	• Identify affected and interested people, groups, organisations and communities and helping people to understand the proposal and the social impact assessment	• Local Community • Wider community • Community interest groups and community services	• Project website • Direct Contact • Door knock • Community Newsletter (sent via email and post) • Advise community of potential contractor opportunities (EOIs available on website)	• Project Planning and Approvals (Scoping Phase)
Project Scoping and Request for SEARS / Phase 1 SIA	• Identify community values, potential constraints and opportunities in the project area, and inform the design process.	• Local Community • Wider community • Community interest groups and community services • Local Council	• As above	• Project Planning and Approvals (Scoping Phase)
SEARS Issued / Phase 2 SIA	• Identify and appropriately respond to community concerns	• Host Landholders / nearby neighbours • Local Council • Community Interest Groups	• Direct contact • Establish Community Consultative Committee (CCC) • Update and maintain project website	• Project Planning and Approvals (EIS Preparation and Lodgement)
Prepare EIS / Phase 2 SIA	• Identify and predict social impact • Collect data, evidence and insights for the SIA • Confirm data, assumptions and findings for the SIA • Involve marginalised groups	• All	• Community Newsletter • Project briefings for Local Council and government stakeholders • Quarterly CCC meetings • Community drop-in day #2 • Face to face meetings with Key stakeholders	• Project Planning and Approvals (EIS Preparation and Lodgement)

EIS / SIA Phase	Engagement Goal	Target Stakeholder	Engagement Technique	Project Stage
			• Impact assessment and prediction • Direct contact	
Lodge EIS / Phase 2 SIA	• Inform community of a formal opportunity to express their views on the proposed project. • Educate community regarding outcomes of the EIS and contents of the EIS Technical papers.	• All	• Community Newsletter– advise of exhibition period and methods of providing input • Community drop-in session #3 • Direct contact	• Project Planning and Approvals (EIS Preparation and Lodgement)
Approvals Assessment	• Inform the community of progress of the approvals process and outcomes. • Inform and involve community in planning of benefit sharing scheme	• All	• Community Newsletter– advise of assessment outcomes • Direct contact	• Project Planning and Approvals (EIS Assessment)
Approvals Assessment	• Inform local community regarding construction program and relevant impacts (such as deliveries of large project components) • Reduce community concerns by open dialogue and continuing to acknowledge and respond to issues in a timely manner • Demonstrate commitment to the wellbeing of the community • Avoid, minimise and remediate impacts	• All	• Update and maintain project website • Community newsletters • direct contact with affected landowners	• Construction
Post Approvals	• Inform the community of ongoing engagement mechanisms throughout the operational life of the Project • Ongoing monitoring and management process • Educate and involve community regarding the Project specific benefit sharing process.	• All	• Update and Maintain Project website and/or social media • Direct communication with affected landowners • Social Impact Management Plan • Operational Community Engagement Plan	• Operations

EIS / SIA Phase	Engagement Goal	Target Stakeholder	Engagement Technique	Project Stage
	• Strengthen relationships and collaboration with local community through sponsorships and partnerships • Be an active member of the community		• Complaints and Enquires Management Procedure	
Post Approvals	• Communicate refurbishment or decommissioning and rehabilitation process	• All	As above	• Repowering / Decommissioning

8.8 Scoping Meeting

A preliminary meeting was held with DPIE on 16 March 2021. DPIE requested a discussion on the topics listed in **Table 12**. The table indicates where each requirement is addressed within this report.

Table 12: Topics discussed during meeting with DPIE, March 2021

Item	Section
Nature and scale of the development in a regional context	Section 2
Assessment pathway	Section 6
Engagement approach in accordance with the SIA guidelines	Section 8
Level of assessment required	Section 7
Forecast date for the Scoping Report submission	Section 1.5
Preliminary WTG layout, development corridor and potential site access locations	Figure 2
Sensitive receivers and land uses located in proximity to the Project Site	Section 2.2 Section 7.1.2
Any key constraints already identified	Section 7.1
LBB monitoring for over 1 year (potentially presented on a map)	Section 7.1.4
Constraints map	Section 7

9 Conclusion

This report has outlined the proposed Jeremiah Wind Farm and established the planning context of the proposal, which is currently in the early planning stage. The proposal would be assessed under Part 4 of the EP&A Act and classed as State Significant Development under State Environmental Planning Policy (State and Regional Development) 2011.

The proposal has the potential to result in a number of local and broader benefits as follows:

- Provide sustainable, renewable energy in turn, reducing greenhouse gas emissions and the impacts of climate change
- Aid in assisting both the State and Federal Government achieve renewable energy targets
- Provide additional generation capacity to the grid to assist in meeting future load demands as thermal generators retire
- Provide local and regional economic benefits through investment opportunities and direct and indirect full-time employment construction and operation jobs
- Provide ongoing economic stimulus through payments to associated landholders.

Preliminary consultation with Cootamundra-Gundagai Regional Council, landowners and local stakeholders has identified a mostly positive outlook for the Project.

Based on this Preliminary Environmental Assessment, an indicative scope for the EIS has been developed, focusing on the key issues:

- Landscape and visual amenity
- Noise
- Traffic and transport
- Biodiversity
- Aboriginal cultural heritage
- Historic heritage
- Watercourses and hydrology
- Hazards and Risks
- Community and socio-economic impacts

Other issues will also be investigated, commensurate with risk, through desktop investigation for assessment and inclusion within the EIS.

The EIS would be prepared in accordance with the proposal-specific SEARs, once received. Mitigation measures will be developed for inclusion in the EIS and will address the management of key issues and other issues identified in the assessment process.

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