

Prepared for Narrandera Solar Hybrid Pty Ltd

Scoping Report

Narrandera Solar Farm

December 2025

Project Number: 250061

Narrandera
WIRADJURI COUNTRY

NARRUNGDERA CLAN – Place of many lizards

Document verification

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We acknowledge the Traditional Owners of this land and pay our respect to Elders past, present and emerging. We recognise that the First Nations peoples of Australia have traditionally managed the resources of this land in a sustainable way, and that they are the original custodians of the Australian environment.

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Acronyms and abbreviations

AHIMS	Aboriginal Heritage Information Management System
AWS	Automatic weather station
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
BESS	<i>Battery Energy Storage System</i>
BOM	Australian Bureau of Meteorology
CE	Critically endangered
Cth	Commonwealth
DPE	(Former) Department of Planning and Environment (NSW) (now DCCEE and DPHI)
DPHI	Department of Planning, Housing and Infrastructure (NSW) (formerly DPE)
DPIE	(Former) Department of Planning, Industry and Environment (NSW) (now DPE)
E	Endangered
EES	(Former) Environment, Energy and Science (NSW), Division of DPE
EIS	Environmental impact statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
FM Act	<i>Fisheries Management Act 1994 (NSW)</i>
GIS	Geographic information system
ha	hectares
Heritage Act	<i>Heritage Act 1977 (NSW)</i>
ISEPP	State Environmental Planning Policy (Infrastructure) 2007 (NSW)
km	kilometres
LEP	Local Environment Plan
LGA	Local government area

m	metres
MW	Megawatt
NES	Matters of National Environmental Significance under the EPBC Act (<i>c.f.</i>)
NPW Act	<i>National Parks and Wildlife Act 1974</i> (NSW)
NVR	Native vegetation risk
OEH	(Former) Office of Environment and Heritage (NSW) (now EES)
REF	Review of Environmental Factors
SF	Solar Farm
SHS	Solar Hybrid System
TEC	Threatened ecological community
Vic	Victoria
V	Vulnerable

Terms and definitions

Term	Description
Narrandera Solar Farm (NSF)	The construction, operation and decommissioning of approximately 200 megawatt (MW) Alternating Current (AC) (260 MW Direct Current (DC)) solar farm. Project comprised of solar PV modules, trackers, piles, inverters, transformers, access roads, cabling (above and below ground), onsite substations, associated operational facilities and a 400MW AC Battery Energy Storage System (BESS) with up to 8 hours (3,200MWh) of storage duration.
The Project	Narrandera Solar Farm
Applicant	Narrandera Solar Hybrid Pty Ltd
Project Area	All lots and easements that are intersected by the Subject Land (described below). All lots and easements are listed in Section 1.4.2.
Subject Land	The area of land that is being investigated in detail for siting of the Project. For the purposes of the Scoping Report, the Subject Land is any land that could be subject to development/disturbance by the Project. In total, the Subject Land covers an area of approximately 1085ha .
Infrastructure Layout	The Infrastructure Layout is currently indicative. It would be established within the Subject Land and be subject to the consideration of constraints identified through further detailed assessment and consultation.
Receiver	A 'receiver' is typically a residential dwelling that may be impacted by the Project.
Associated receiver	An 'associated' receiver is one where the land holder has reached an 'impact agreement' with the Applicant in relation to the development and management of impacts. These are also referred to as 'Project Associated'.
Non-Associated receiver	A residence on privately-owned land in respect of which the owner has not reached an agreement with the applicant in relation to the development. Non-associated receivers are fully assessed for all environmental impacts, such as noise, vibration and visual impacts.

1. Introduction

1.1. Project outline

Narrandera Solar Hybrid Pty Ltd (the Applicant) is proposing the construction, operation and decommissioning of the Narrandera Solar Farm, (the Project). The Project would consist of an approximately 200 megawatt (MW) Alternating Current (AC)/260MW Direct Current (DC) solar farm with a 400MW AC Battery Energy Storage System (BESS) at the point of connection. The anticipated storage duration would be 8 hours (3,200MWh). It would supply electricity to the National Electricity Market (NEM) primarily during peak periods.

The Applicant is proposing to implement Agri-Solar practices within the Subject Land, continuing the existing sheep grazing operations. Section 6.1 of this report further details the practices and integration of agriculture and solar power generation.

This Scoping Report provides a high-level description of the Project, including its alignment with key strategic and statutory policies. It identifies key environmental issues relevant to the Project and proposed investigation strategies for them.

1.2. Project objectives

New South Wales (NSW) is facing the increasing need to replace its ageing coal-fired power stations, which are becoming less reliable. The need to explore and invest in renewable energy and reduce energy unreliability has become more prevalent to enable a more affordable, secure and stable statewide electricity grid. By combining renewables with energy storage technologies like the Narrandera Solar Farm, a reliable, secure and affordable electricity supply will be delivered to help replace/offset ageing and increasingly unreliable coal-fired power generating systems.

The Project aims to provide a meaningful contribution to NSW's net-zero transition by 2050 and its alignment with Federal, state and local land use policies (refer to Section 2).

Specifically, the Project will seek to:

- Be responsive to the site's environmental constraints
- Be responsive, transparent and sensitive to local social concerns
- Optimise the generation and storage of renewable energy along an existing high voltage transmission line that passes through the southern section of the Subject Land
- Help address a real and current need that the national and NSW electricity market has for new generation capacity
- Displace Carbon Dioxide (CO₂) and reduce emissions associated with energy production.
- Assist Australia's energy transition from fossil fuels to renewable energy and contribute to achieving the legislated target of net zero greenhouse gas emissions by 2050.

Strategies to minimise impacts and reflect local values will be further investigated as part of detailed environmental assessments and community engagement processes during the Project's Environmental Impact Statement (EIS) phase.

1.3. Applicant details

The Project is being developed by Potentia Energy on behalf of the Narrandera Solar Hybrid Pty Ltd (the Applicant), supported by Green Switch Energy Pty Ltd during the Development Application (DA) process. (refer to Table 1-1 below).

Table 1-1 Applicant details

Condition	Detail
Applicant/Company Name	Narrandera Solar Hybrid Pty Ltd
Address	Suite 07 Level 23, 100 Barangaroo Avenue, Barangaroo NSW 2000
ACN	693 137 021
Contact	Aditya Singh Aditya.singh@potentiaenergy.com.au

1.3.1. Potentia Energy

Potentia Energy (PE) is a renewable energy company that develops and operates high-quality assets across Australia, with a mission to power the nation's energy future through collaboration, innovation, and sustainability. PE is committed to clean, reliable energy that supports economic growth, community wellbeing, and environmental stewardship. Guided by values of collaboration, authenticity, responsibility, and excellence, PE aims to set new standards in Australia's renewables sector. PE's renewable portfolio is provided in Table 1-2.

Table 1-2 Potentia Energy Existing Projects

Project Location	Project Type	Project Status
Mologa Solar Hybrid (Vic)	Solar Farm & BESS (250MW/1000MWh)	Under Development
Royalla Solar Farm (ACT)	Solar Farm (24MW)	Operational
Albany Grasmere Wind Farm (WA)	Wind Farm (35MW)	Operational
Greenough River Solar Farm (WA)	Solar Farm (40MW)	Operational

Project Location	Project Type	Project Status
Warradarge Wind Farm (WA)	Wind Farm (180MW)	Operational
Clare Solar Farm (Qld)	Solar Farm (128MW)	Operational
Harrogate BESS (SA)	BESS (270MW/1080MWh)	Under Development
Ridgey Creek BESS (NSW)	BESS (130MW/260MWh)	Under Development
Bungala Solar Farm 1 and 2 (SA)	Solar Farm (275MW)	Operational
Cohuna Solar Farm (Vic)	Solar Farm (34MW)	Operational
Flat Rocks Stage 1 Wind Farm (WA)	Wind Farm (75MW)	Operational
Girgarre Solar Farm (Vic)	Solar Farm (93MW)	Operational
Quorn Park Solar Hybrid (NSW)	Solar Farm & BESS (98MW/20MWh)	Construction
Blanche BESS (SA)	BESS (125MW/500MWh)	Under Development
Capricorn BESS (Qld)	BESS (300MW/1200MWh)	Under Development
Emeroo BESS (SA)	BESS (225MW/900MWh)	Under Development
Tallawang SF (NSW)	Solar Farm (500MW)	Under Development

1.3.2. Green Switch Energy

Green Switch Energy (GSE) is a provider of both renewable energy and energy storage solutions with over 20 years of renewable industry experience within the United Kingdom, Europe, Africa, and Australia. GSE's team has significant experience in developing, building, owning/funding, and operating renewable projects specialising in utility scale solar and battery storage systems. The current renewable portfolio of GSE spans across NSW, Victoria (Vic), and the Australian Capital Territory (ACT) (refer to Table 1-3).

Table 1-3 Green Switch Energy Existing Projects

Project	Project Type	Project Status
Kerang Solar Farm (Vic)	Solar Farm & BESS (36MW/30MWh)	In construction
Jindera Solar Farm (NSW)	Solar Farm & BESS (155MW/60MWh)	Approved
Gregadoo Solar Farm (NSW)	Solar Farm & BESS (75MW/500MWh)	Approved
Tragowel BESS (Vic)	BESS (250MW/500MWh)	Under Development
Williamsdale Solar Farm (ACT)	Solar Farm (11MW)	Commissioned 2017

1.4. Site overview

1.4.1. The locality

Regional context

The Project would be located approximately 15 kilometres (km) south of the regional town of Narrandera, approximately 38km southeast from Leeton, approximately 80km northwest from the regional city of Wagga Wagga, and approximately 80km southeast from Griffith. The Project is located within the Narrandera Local Government Area (LGA).

Works for the Project would be located at **Currajong, 1002 The Gap Road, Gillenbah, NSW 2700**.

Enabling infrastructure

The Project is currently considering connection directly into the existing overhead high voltage 330kV Wagga Wagga – Darlington Point transmission line that runs in a northwest/southeast direction and intersects the lower southwestern corner of the Subject Land. This connection will be achieved via a new dedicated 330kV/33kV onsite grid substation proposed for the Project.

Two smaller onsite substations are also proposed to support the solar farm and BESS infrastructure. These may, however, be incorporated into the larger substation yard (pending further modelling and design).

A discussion around related development is included in Section 1.6 below. The actual point of connection and infrastructure needed to complete the connection will be discussed with Transgrid and detailed further in the EIS.

Roads and access

At this stage, primary access to the Project Area has not been confirmed. Access via Kangaroo Plains Road or via The Gap Road are both being investigated as a potential routes. It's noted that either access point would require upgrading to enable safe entry and exit from the site for all vehicles.

Kangaroo Plains Road is accessible off the Sturt Highway via Strontian Road and The Gap Road to the east of the Project Area, or off the Newell Highway to the west. The Gap Road is accessible via Strontian Road and the Sturt Highway to the east. A recent request for SEARs for the adjacent Strontian Solar Farm project noted that Strontian Road is being considered as the project's access point. Cumulative access and traffic impacts are discussed in Section 6.46.4 with further traffic analysis and haulage assessment to be undertaken within the EIS phase.

Nearby residential considerations

There are potentially 8 receivers within the 4km visual line of the Project Area (discussed below in Section 2.2.2 and Section 6.2). The closest mapped dwelling is approx. 56.8m north of the Project Area boundary. However, this has been identified as the associated landholder.

There are 9 potentially impacted receivers mapped at the intersection of the Newell Highway/ Kangaroo Plains Road and along Kangaroo Plains Road heading towards the Subject Land. These receivers have been added due to broader traffic and haulage and transport route considerations and associated impacts.

There are no additionally mapped impacted receivers along the secondary access route outside of the 4km visual line via Sturt Highway/Strontian Road onto Kangaroo Plains Road to the east of the Project Area.

Further consideration towards the potential impacts to for all non-associated receivers and potentially impacted receivers would be assessed in detail.

1.4.2. Tenure

All lots and easements that are intersected by the Project has been classified as the **Project Area**. The area currently being investigated for siting of project elements has been classified as the **Subject Land**. These elements are detailed in Table 1-4 and Figure 1-2.

While the entirety of the Subject Land is being assessed for potential development, an early indicative Infrastructure Layout has been developed.

While an indicative Infrastructure Layout provides a clearer understanding of what could be constructed, the delineation of a broader Subject Land at this stage provides necessary flexibility for the Project to respond to the results of detailed investigations and consultation activities during the EIS stage. 'Upper limit' or 'worst case' assumptions will likely also be included in the EIS to provide flexibility into the detailed design stage, that occurs after approval. This builds conservatism into the environmental assessment and mitigation measures.

This approach will over-estimate impacts and over-scope mitigation strategies and is therefore considered conservative. It is underpinned by the Project's commitment to capture a higher level of Project-specific detail within environmental management plans, developed in tandem with the final detailed design.

Lots and easements that are intersected by the Project, (termed the Project Area) that is being investigated for the sitting of the Project, are detailed in Table 1-4, Figure 1-1, and Figure 1-2.

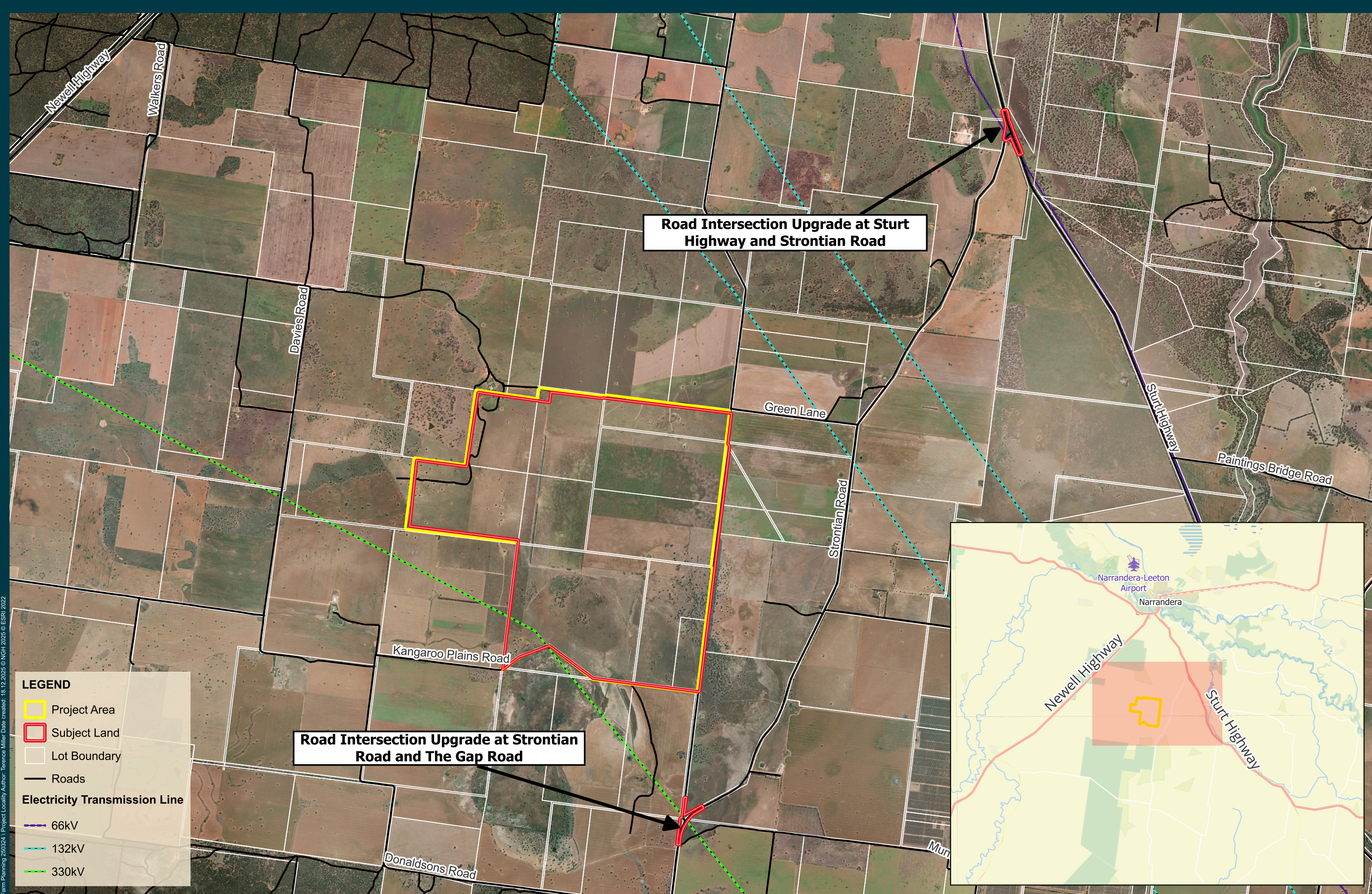
Table 1-4 Lots and easements being investigated for the Project

Owner	Proposed usage for the Project	Lot/Reserve	Deposited Plan (DP)	Area of Subject Land (ha)
Associated landowner (freehold)	Area investigated for Project infrastructure	1, 3, 4, 5, 6, 17, 18, 32, 33, 42, and 46	754571	~1064ha
		1, 4, and 5	1088320	
		1	1227032	
		1	254031	
		1	665080	
Crown Lands	Area investigated for Project infrastructure	Series of enclosure permits	--	~11ha
Narrandera Shire Council / TfNSW	Main Site Access and potential intersection works	Kangaroo Plains Road, the Gap Road, Strontian Road / Newell Highway Sturt Highway	--	~10
TOTAL				~1085ha

The Applicant would enter into a long-term lease for the Project Area with the host landholders for the operation of the Project. As such, subdivision is not required for the Project at this stage.

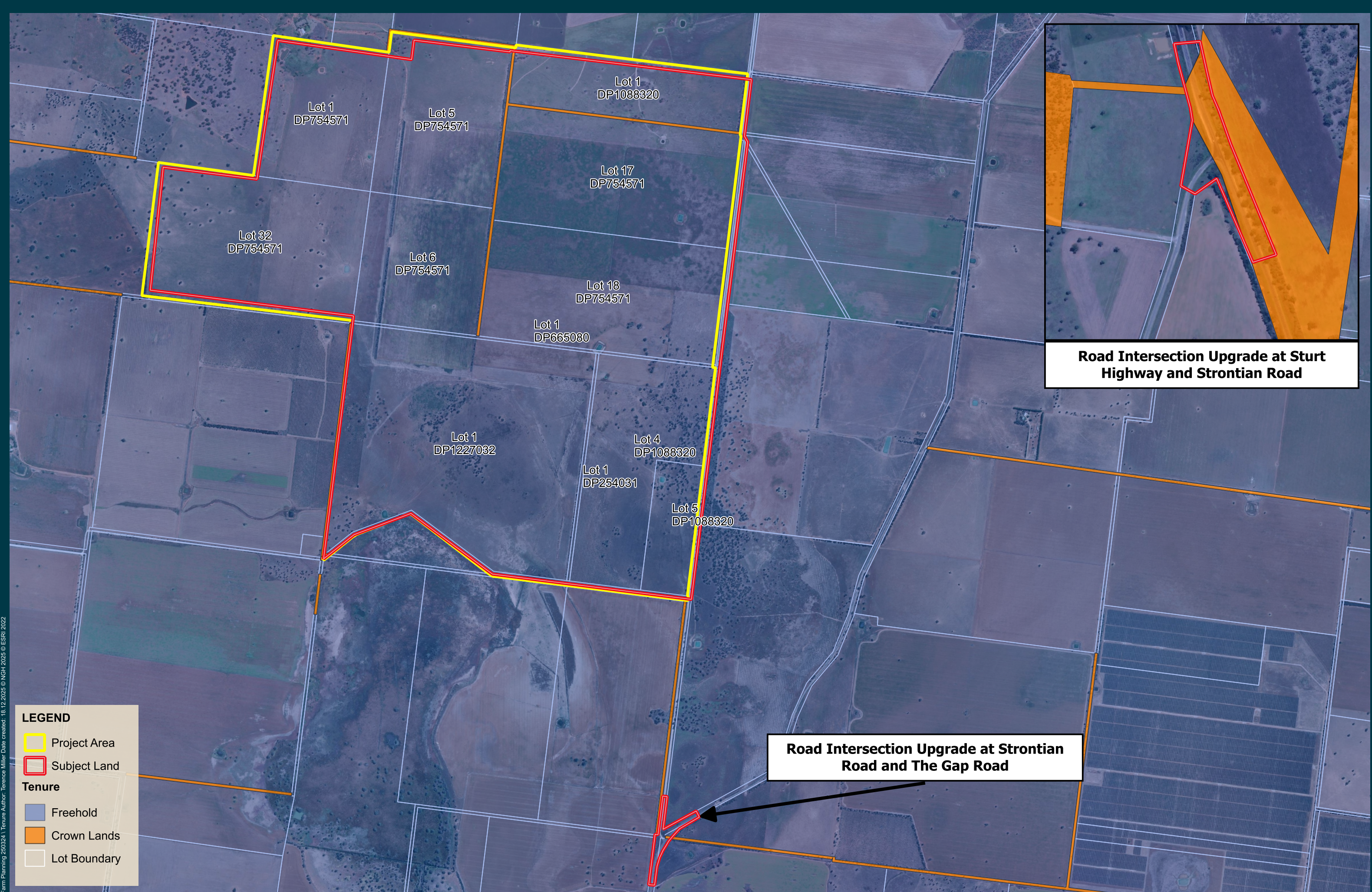
However, electrical substations are treated as premises rather than fixtures due to the substantial and permanent nature of their construction. The need for subdivision, particularly in relation to the onsite substation, would be confirmed and detailed in the EIS following further engagement with Transgrid, the Applicant and the landowner.

Consultation with NSW Crown Lands would be undertaken during the EIS to determine the best option to managed Crown paper roads that currently form enclosure permits that cross the Project Area.



Datum: GDA2020 / MGA Zone 55

Ref: 260061_Curralong Solar Farm Planning 260324 \Tenure Author: Terence Miller Date created: 18.12.2025 © NGH 2025 © ESRI 2022



Datum: GDA2020 / MGA Zone 55



1.5. Project design development

An indicative Infrastructure Layout within the identified Subject Land has been prepared based on early identified constraints. As constraints were identified through analysis and consultation, the layout was refined to reflect these findings and reduce potential impacts (discussed further in Section 3). The indicative Infrastructure Layout and overall project design will continue to be refined in response to ongoing and future environmental assessments, ongoing consultation with the community as well as key government agencies throughout the EIS process. Further environmental assessment details and issues for consideration are discussed in Section 6.

The key matters identified to date that have influenced the Project are detailed in Section 3.4 – Analysis of alternatives. The Infrastructure Layout has not yet been finalised in detail, as key parameters such as neighbour impacts, Aboriginal heritage, biodiversity, visual, land and soil capability and noise impacts require further consideration before appropriate buffers and exclusions can be applied.

1.6. Related development

There is no additional development related to the Project at this stage. All works associated with the construction and operation of the Project, including connection to the 330kV transmission line, will be assessed under this Development Application (DA).

1.7. Purpose of this document

This Scoping Report has been prepared to support the lodgement of a DA to the Department of Planning, Housing and Infrastructure (DPHI). An EIS is required to support the DA under Section 4.12(8) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The EIS is required, as the Project has an estimated development cost (EDC) exceeding \$30 million and is therefore classed as State Significant Development (SSD).

This Scoping Report provides a high-level description of the Project, including its alignment with key strategic and statutory policies. It identifies key environmental issues relevant to the Project and proposed investigation strategies for them.

The format and content within this scoping report is guided by the:

- *State significant development guidelines – preparing a scoping report* (DPE, 2022)
- *Large Scale Solar Energy Guideline* (DPE, 2022)
- *Technical Supplement for Landscape Character and Visual Impact Assessment* (DPHI, 2022)
- *Undertaking engagement guidelines for state significant projects* (DPHI, 2024)
- *Social impact assessment guideline for state significant projects* (DPIE, 2023)
- *Cumulative impact assessment guidelines for state significant projects* (DPIE, 2022).

A detailed breakdown of the requirements from the State significant development guidelines – preparing a scoping report is included in Appendix B.

2. Strategic context

Context important to the development of this Project includes:

- Regional and local setting, zoning and key environmental features.
- Strategic need for energy generation and storage in NSW.

Together, these support the justification for the Project as set out below.

2.1. Regional setting

The Subject Land is located within the Narrandera LGA in the Riverina region of NSW. The town of Narrandera is centred between the regional hubs of Griffith (approx. 98km to the northwest) and Wagga Wagga (approx. 99km to the east) both of which provide supporting health and educational services (Narrandera Shire Council , 2025). As per the 2021 census the Narrandera LGA had a population of 5,698 (Australian Bureau of Statistics, 2025).

Narrandera is home to two-thirds of the LGA's population and is the retail centre for the regional area. It features an urban centre that has a concentration of services and facilities including the Narrandera Art and Community Centre, Narrandera District Hospital, Adventure Park, public and private schools, TAFE, a police station, post office, courthouse, Marie Bashir Park, council buildings and the Narrandera Showground (Narrandera Shire Council , 2025).

The Narrandera Airport (also known as the Narrandera-Leeton Airport) is located on the outskirts of the township and is serviced by regional airlines with daily return flights connecting to larger cities and regional areas such as Sydney and Griffith. The Australian Narrandera Leeton Air League NSW (based out of the airport) promotes aviation development in local youth providing membership and cadetship (Narrandera Shire Council , 2025). As such the airport is a valuable socio-economic asset for the region and Section 6.5 further details the socio-economic impacts and considerations regarding the Project.

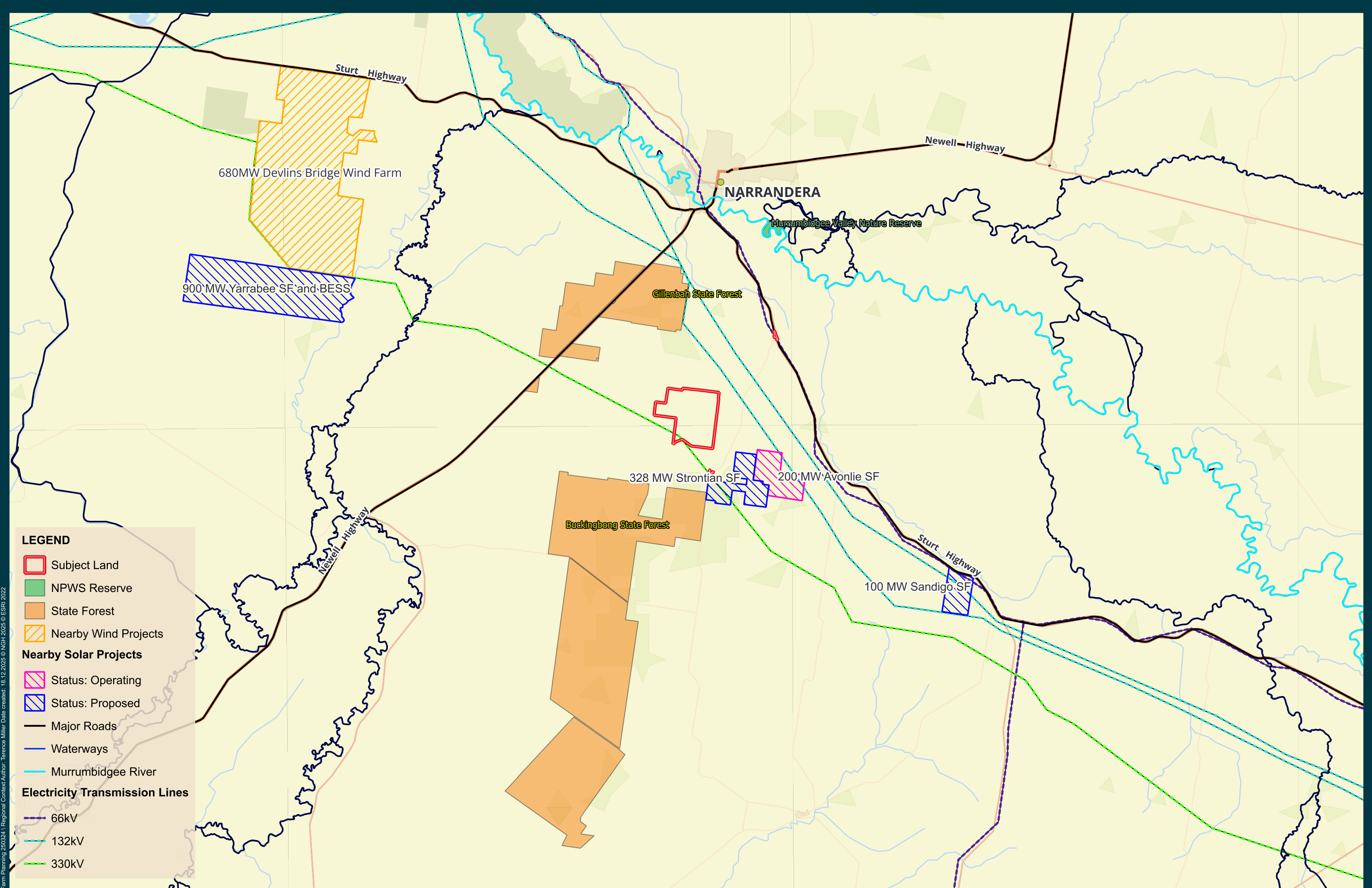


Figure 2-1 East Street – Narrandera (Narrandera Shire Council , 2025)

Narrandera is located on the Murrumbidgee River, which was named and associated to the Wiradjuri peoples, in the Riverina region of NSW. The river holds both high cultural and environmental value for the region. The Murrumbidgee River also has a high geographical significance for the region, providing water for irrigation and agricultural practices to the communities along its banks. The Subject Land is approximately 10km south from the Murrumbidgee River's closest point. Section 6.9 details hydrology and water management impacts and considerations associated with the Project.

The Project is located in a regional agricultural area that is near to the boundary (approx. 80km east) of the demarcated South-West Renewable Energy Zone (REZ). The REZ have been strategically identified by the NSW Government as particular regional areas that have strong potential to accommodate renewable energy systems, because of their existing power infrastructure, land use, and solar conditions. The South-West REZ encompasses a large section of southwestern NSW or Riverina region.

Noting the strong potential for renewable energy in the area, consideration of cumulative impacts in relation to the Project are discussed further in Section 2.5 and Section 6.12. The Project's regional context is shown in Figure 2-2 below.



LEGEND

- Subject Land
- NPWS Reserve
- State Forest
- Nearby Wind Projects

Nearby Solar Projects

- Status: Operating
- Status: Proposed

Major Roads

- Waterways
- Murrumbidgee River

Electricity Transmission Lines

- 66kV
- 132kV
- 330kV

2.2. Local setting

2.2.1. Zoning

The Subject Land is zoned Primary Production (RU1) under the *Narrandera Local Environmental Plan 2013* (Narrandera LEP) (NSW Government, n.d.) (refer to Figure 2-3). The objectives of this zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

As part of the Project, the Applicant is proposing to implement Agri-Solar practices within the Subject Land, such as continued sheep grazing under the solar panels.

- The Project encourages diversity in primary industry enterprises through the proposed Agri-Solar.
- The Project will closely consider and assess potential impacts or conflict towards surrounding land uses or landholders.
- By nature of its construction and operation, the land is easily rehabilitated and can revert to its current agricultural capacity on decommissioning.
- Through limiting/no subdivision, the land will also not be fragmented or alienated from proposed and future resource use.

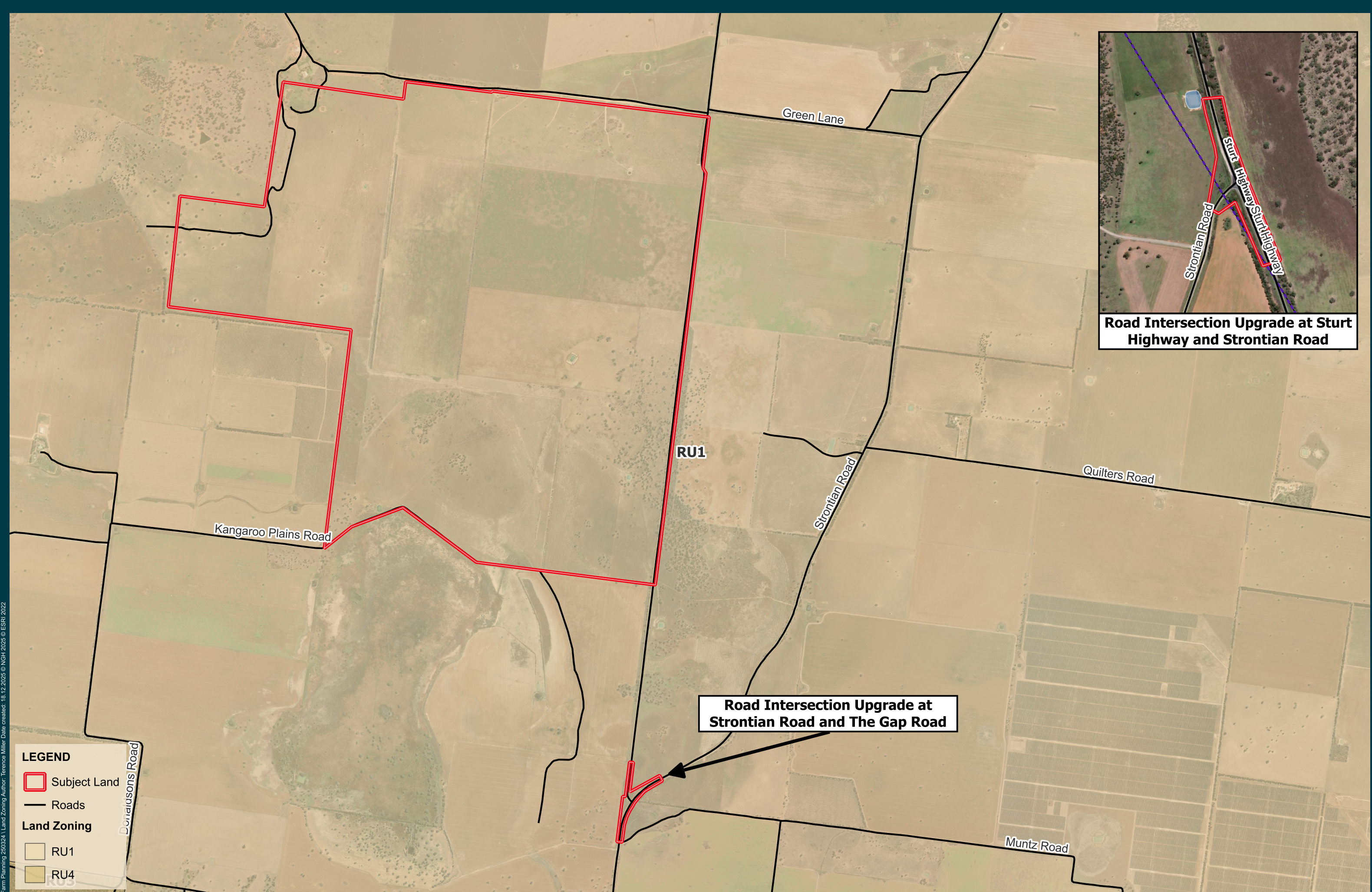
This would allow the Project to remain aligned with the objectives of the RU1 land zoning as stated above, while being well placed to generate efficient renewable energy, supporting the transition of the network away from coal and gas generation.

Development of electricity generating works is prohibited under the Narrandera LEP. Part 2.3 Division 4 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) provides that development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed non-residential zone. The TISEPP prevails over the Narrandera LEP, and as such, the Project is permissible with consent under the provisions of the TISEPP, however close consultation will be undertaken with Council and it's planning team as the Project is further assessed.

The selection of the Subject Land to develop an energy facility supports the above objectives and it will:

- Be highly compatible with the existing 330kV transmission line that intersects the Subject Land.
- Encourage employment opportunities during construction and operational phases.
- Be located on land zoned that supports electricity generation.
- Implement Agri-Solar practices on land that is currently used for sheep grazing.
- Provide diversified farming income to support and continue multi-generational farming of the property.
- Support development and investment for the region, through a Voluntary Planning Agreement (VPA), or similar, with Council.
- Support development and investment for the region by adding to existing solar farms and creating a cluster of knowledge and excellence

Ref: 260061_Curralong Solar Farm Planning 260324 \ Land Zoning Author: Terence Miller Date created: 18.12.2025 © NGH 2025



LEGEND

Subject Land

Roads

Land Zoning

RU1

RU4

RU3

Datum: GDA2020 / MGA Zone 55



2.2.2. Subject Land Values

The Project Area includes an existing above ground transmission line (and easement), residential dwellings of the associated landowners, farming land (predominantly grazing), and several farm dams (see Figure 2-4 and Figure 2-5 below).



Figure 2-4 Existing Subject Land characteristics including grazed land, electrical infrastructure, and site vegetation



Figure 2-5 Farm dam within the Subject Land

There are two mapped waterways within the Project Area. An unnamed ephemeral (only flows temporary) 1st order stream (under the Strahler Stream Order) and a 2nd order stream mapped across the Subject Land.

There are three farm dams located within the Project Area.

The Project Area is not mapped as flood prone land based off the available statewide mapping data and the local Council flood studies. However, the southern portion of the Subject Land has historically been subject to shallow water inundation. This would be subject to further assessment in the EIS via a detailed hydrology study.

The Project Area is mapped as predominately Class 4 in accordance with the Land and Soil Capability (refer to Figure 6-1) (LSC) Scheme (NSW OEH, 2012), with a small section mapped as Class 3:

- Class 3 land has inherent moderate limitations that can still support high-impact land uses, such as cultivation, but requires more intensive management practices to maintain appropriate groundcover.
- Class 4 land has higher limitations that restrict land uses to low-impact agricultural activities to prevent soil and long-term land degradation.

There are no areas of the Project Area mapped as potential Biophysical Strategic Agricultural Land (BSAL) or State Significant Agricultural Land (SSAL). This is discussed further below in Section 6.1.

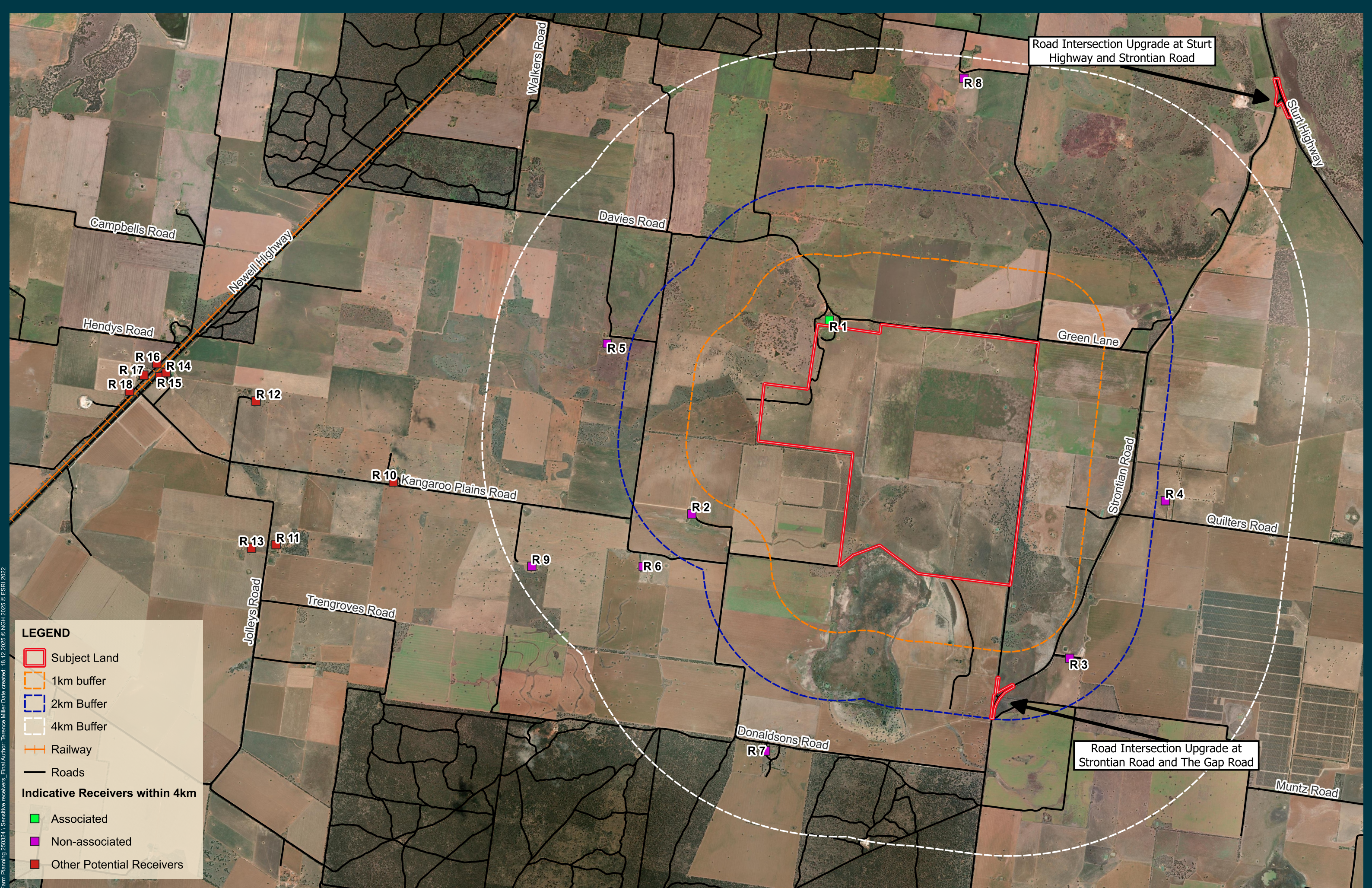
There are minimal areas of the Project Area mapped as bushfire prone land. The northern boundary of the Buckingbong State Forest is situated approximately 2.79km south of the Subject Land and is mapped as

Category 1 (high bushfire risk)). There is a small area of mapped vegetation buffer that separates the state forest and the Subject Land.

There are no current exploration and mining title leases across the Project Area.

The Project Area, in its current setting, contains approximately 8 sensitive receivers within the 4km visual line (refer to Figure 2-6). The 4km visual line is a legislative study area as per the *Technical Supplement* of the *Revised Large-Scale Solar Energy Guidelines* (DPHI, 2022) where sensitive receivers within the 4km visual line should be considered during assessment in the EIS. A Preliminary Visual Impact Assessment (PVIA) has been undertaken as part of the Scoping phase and is summarised in Section 6.2.

There are also nine (9) potentially impacted receivers mapped at the intersection of the Newell Highway/Kangaroo Plains Road and along Kangaroo Plains Road heading towards the Project Area (refer to Figure 2-6). These receivers have been considered due to the potential of broader Project related traffic and haulage and noise associated impacts. There are no potential receivers identified along the access route off the Sturt Highway via Strontian Road. Social considerations and consultation in combination with detailed traffic and noise assessments will extend to all sensitive (and potentially impacted) receivers within the 4km and in proximity to the haulage route as part of the Scoping phase and is summarised in Section 6.



Datum: GDA2020 / MGA Zone 55



Narrandera Solar Farm
Figure 2-6 Sensitive Receivers within 4km

2.3. Policy context

The Project addresses key federal, state and local planning policies as set out below.

2.3.1. Federal

The Paris Agreement

The COP21, also known as the 2015 Paris Climate Conference, achieved a legally binding and universal agreement on climate with the aim of keeping global warming below 2 degrees Celsius, chiefly by reducing greenhouse gas emissions.

On September 8, 2022, the Government's *Climate Change Bill 2022* passed the Senate and the House of Representatives.

The Bill enshrined into law (as the *Climate Change Act 2022*) an emissions reduction target of 43 percent from 2005 levels by 2030, and net zero emissions by 2050. In addition, the legislation ensures a whole-of-government approach to drive towards the target. The government has formally lodged this target as an enhanced Nationally Determined Contribution under the Paris Agreement.

The Act backs onto the Government's Powering Australia plan, which is focused on creating jobs, cutting power bills and reducing emissions by boosting renewable energy.

The Project would form part of the Australian effort to help meet this target. The development of large-scale renewable energy generation is an important contribution to:

- Providing for further reductions in Green House Gas (GHG) emission intensity for generation in the National Energy Market (NEM).
- Supporting the Government's Renewable Target (RET) of 20 percent renewable energy by 2020. While the Large-scale RET target was met in January 2021 (see below), the scheme will continue to require high-energy users to meet their obligations under the policy until 2030.

Large-scale Renewable Energy Target

The Australian Government Clean Energy Regulator administers the Large-scale Renewable Energy Target (LRET) which encourages investment in renewable energy power stations such as wind and solar farms. The LRET of 33,000-Gigawatt target (GW hours of additional renewable electricity generation) was met at the end of January 2021 (Clean Energy Regulator 2021). The annual target will remain at 33,000GW hours until the scheme ends in 2030.

The goal of the LRET is to significantly increase the proportion of Australia's electricity generated from renewable sources, thereby reducing greenhouse gas emissions and promoting a sustainable energy future.

The Project will contribute to meeting the renewable energy target.

Reduction Plan (2021) and Nationally Determined Contribution (2022)

Australia's long term emissions reduction plan and the Nationally determined contribution to the United Nations via the Paris Agreement (developed during United Nations Framework Convention on Climate

Change (UNFCCC) COP21) sets the nations goals towards zero emissions by 2050 and 43% below 2005 levels by 2030 (Department of Industry, Science, Energy and Resources, 2021). This was set to achieve the goal of avoiding a 1.5°C rise (from pre-industrial levels) in temperature by the end of the 21st century. The Project assists in this reduction through the generation and storage of electricity to optimise energy capture and renewable energy utilisation. Under the forecast energy transition plan, stored electricity should be primarily sourced from renewable generation and not fossil fuel infrastructure.

There have been seven COP's since COP21. The latest outcomes from COP28 highlighted the need to triple global renewable energy capacity globally to meet the goals of the Paris agreement (see The Paris Agreement above).

2024 Integrated Systems Plan

Published every two years, the Integrated Systems Plan (ISP) details what, when, where, and how much electricity transmission, generation and storage is required in the NEM. This assists governments and industry to plan and invest to meet people's current and future energy needs.

The 2024 ISP confirms that urgent investment is needed in new renewable energy generation, transmission, storage and flexible gas generation to continue to deliver secure, reliable and affordable energy, and reach the renewable electricity generation targets of NEM jurisdictions.

The key messages from the plan include:

- Household and business electricity consumption from the grid is forecast to nearly double by 2050.
- With coal expected to retire faster than currently announced, the NEM is forecast to need a seven-fold increase in large-scale wind and solar generation by 2050. The 2024 ISP predicts a 90% (or 21 GW) closure of all coal plants by 2030, a significant increase from the forecast two-thirds of coal plants (or 14GW) from the 2022 ISP.
- It also requires building close to 10,000km of new transmission lines and upgrades to existing networks by 2050 to connect new generation across the power system.
- Delivering the transmission projects identified in this plan are expected to avoid \$17 billion in additional costs to consumers if those projects were not delivered.

The 2024 ISP sets out how the Australian Energy Market Operator (AEMO) has identified the optimal development path for the NEM and is a roadmap through the energy transition. In contrast to the 2022 ISP the 2024 ISP highlights adjustments being implemented in response to economic, physical and environmental policy changes. The AEMO states that "there will be a demand for 82GW of utility-scale wind and solar in the NEM by 2034-35, and 126GW by 2049-50. 34GW of this energy would need to come from NSW".

In response to an accelerated timeline for the closure of coal fired energy plants, the optimal development path is Step Change. Step Change is predicted to be the lowest cost, resilient and practical path to the NEM's energy future rather than Progressive Change which reflects slower economic growth and energy investment or Green Energy exports which is focused on strong industrial decarbonisation and low emission energy exports. Under forecasts for the Step Change scenario (AEMO, 2021) the optimal development path requires investment that would:

- Triple grid scale variable renewable energy by 2030 and increase it seven-fold by 2050. Focus grid scale generation in REZs. Almost quadruple the firming capacity using utility scale batteries, hydro and gas-powered generation and storage. Support a fourfold increase in rooftop solar capacity.
- Leverage system security services and operational approaches.

The 2024 ISP indicates an earlier demand for renewable energy with a need for 6GW of new renewable energy per year compared to 4GW in the 2022 ISP. This is to replace the coal generation capacity that is exiting faster than originally expected, and to meet the higher demand forecast compared to the 2022 ISP.

2.3.2. New South Wales Government

NSW Climate Change (Net Zero Future) Act 2023

The NSW Climate Change (Net Zero Future) Act 2023 was agreed on 11 December 2023. It aims to ‘set objective for New South Wales to be more resilient to a changing climate; and to establish the Net Zero Commission to monitor, review and report on progress towards the 2030 and 2050 targets and the objective and to exercise other related functions’.

The Act commits the NSW government to effective action on climate change to ensure a sustainable and fair future for the people, economy and environment of NSW. It legislates:

- Guiding principles for action to address climate change that consider the impacts, opportunities and need for action in NSW.
- Emission reduction targets for NSW:
 - 50% reduction of 2005 levels by 2030
 - 70% reduction on 2005 levels by 2035
 - Net zero by 2050.
- An object for NSW to be more resilient to a changing climate.
- Establishing an independent, expert Net Zero Commission to monitor, review, report on and advise on progress towards these targets (NSW Government, 2023).

This Act supports the Commonwealth governments’ *Climate Change Act 2022*.

NSW Net Zero Plan

In March 2020, the NSW Government released the NSW Net Zero Plan Stage 1 2020-2030. This plan sets out how the NSW Government will deliver on these objectives over the next decade. The Net Zero Priorities include to:

- Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living.
- Empower consumers and businesses to make sustainable choices.
- Invest in the next wave of emissions reduction innovation to ensure economic prosperity from decarbonisation beyond 2030.
- Ensure the NSW Government leads by example.

The Net Zero Plan Stage 1:2020-2030 is the foundation for NSW’s action on climate change and goal to reach net zero emissions by 2050.

The Project aligns with this goal.

Renewable Energy Zones (REZ's)

To strategically maximise benefits and smooth the transition to greater renewable energy development, the ISP identified REZ locations that can connect to the existing transmission network and:

- Reduce the need to build transmission lines into new areas.
- Reduce project connection costs and risks.
- Optimise the mix of generation, storage and transmission line investment across multiple connecting parties.
- Co-locate and optimise the otherwise 'lumpy' investments in network and system support infrastructure.
- Promote regional expertise and employment at scale.

The South West REZ covers approximately 27,792.5 square kilometres, with an initial capacity of 3.6 GW proposed to be unlocked (EnergyCo, 2025). The REZ aims to bring renewable energy generation projects (such as wind and solar) together with energy storage (such as batteries) and connect them to the electricity network. EnergyCo is working closely with the developers of major generation projects with planned connections to the REZ transmission project.

The indicative location of the South-West REZ was chosen following a detailed statewide geospatial mapping exercise undertaken by the NSW Government in 2018. This initial analysis sought to identify optimal locations to host renewable energy generation around the State, including areas with strong renewable energy resource potential, proximity to the existing electricity network, and consideration of potential interactions with existing land uses, including agricultural lands and biodiversity conservation.

The Subject Land is located approximately 80km east of the South-West REZ and is strategically co-located with an existing 330kV transmission line (Wagga Wagga – Darlington transmission line), which distributes electricity across the region.

While the Project is not located within a REZ, it is recognised that renewable projects outside a REZ will be required to meet state and federal energy transition targets. The generation and storage capabilities of the Project would support the increased renewable energy input into the grid and help with balancing electricity demands while coal fired power stations are decommissioned. The existing 330kV transmission line and BESS will be an important component in managing power flows from the generators in the region through the 330kV line to Wagga Wagga and beyond to the major electricity load/demand population centres.

NSW Electricity Infrastructure Roadmap

The NSW Electricity Infrastructure Roadmap ('The Roadmap') aims to redefine NSW as a modern, global energy superpower by delivering the electricity infrastructure needed to support a modern prosperous economy (NSW DPIE, 2020). The roadmap sets out a plan to transition the electricity sector from the existing power sources that are coming to the end of their lives, to cleaner, cheaper and more reliable energy sources including wind, solar, batteries and pumped hydro.

The Roadmap aims to:

- Deliver approximately 12GW of new transmission capacity through the established Central-West Orana, New England and South-West Renewable Energy Zones by 2030.

- Support an estimated 3GW of new firm capacity in the NSW grid by 2030.
- Attract up to \$32 billion in private investment in regional energy infrastructure investment by 2030.
- Support over 6,300 construction and 2,800 ongoing jobs by 2030, primarily in regional Australia.
- Save around \$130 a year on the average NSW household electricity bill and \$430 a year on the average small business electricity bill between 2023 and 2040.
- Contribute to the NSW Governments' Net Zero Plan by delivering 90 million tonnes of reduced carbon emissions by 2030 (NSW Energy, 2020).

The Roadmap reiterates the need to act now given four of the five coal fired power stations in NSW are anticipated to close within 15 years, starting with the Liddell power station that closed in 2023 and Eraring that is planned to close in 2027. These power stations provide, as of 2020 power mix generation, around three quarters of NSW's electricity supply and two thirds of the firm capacity needed during summer heat waves, and as they age, tend to fail more frequently resulting in reliability problems. The infrastructure needed to replace coal fired power stations has long lead times, further justifying the need for action to coordinate and unlock investment before they close.

The Project is strongly justified due to its potential to contribute to the aims of the Roadmap by providing reliable energy supply and storage to the NEM.

NSW Network Infrastructure Strategy 2023

The NSW Network Infrastructure Strategy 2023 is the NSW Government's 20-year plan aimed at coordinating and enhancing the state's energy infrastructure to support renewable energy integration and ensure energy resilience (EnergyCo, 2023). The NSW Network Infrastructure Strategy is designed to focus on connecting new generation and storage capabilities within the state's five REZ's. This strategy is part of the broader objectives outlined in the *Electricity Infrastructure Investment Act 2020*.

The strategy proposes options to deliver a total capacity of 14GW of network infrastructure by 2033, with additional options for further capacity to enhance energy resilience and support a net-zero future. The strategy aims to ensure that all new network infrastructure undergoes rigorous coordination and planning in order to be developed in a timely and efficient manner, while balancing flexibility with the need for certainty, especially for communities. The key principles of the NSW Network Strategy are as follows:

- Coordination and integration to connect infrastructure to support state and federal energy targets outside of REZs
- Building capacity of the network and bolstering energy resilience
- Development through extensive stakeholder engagement
- Strategic planning to guide investment in generation, storage and firming infrastructure.

The Project would assist in supplying and providing energy storage and firming infrastructure to the region.

NSW Transmission Infrastructure Strategy 2018

The NSW Transmission Infrastructure Strategy is the NSW Government's plan to unlock private sector investment in priority energy infrastructure projects, which can deliver least-cost energy to customers to 2040 and beyond (NSW Department of Planning and Environment, 2018). The strategy states that for every 20 projects looking to connect to the grid, only one can. This comes despite the fact that in October 2018 more than 20,000MW of large-scale projects were progressing through the planning system, representing

more than \$27 billion in potential investment, mostly in regional NSW. The NSW Transmission Infrastructure Strategy sets a plan to facilitate private sector investment in energy projects throughout the state. The NSW Transmission Infrastructure Strategy sets out the following guiding principles:

- Supporting projects that may contribute to lowering energy bills
- Taking a technology neutral approach to energy generation projects
- Private sector led investment
- Regional economic growth and increased job opportunities
- Ongoing secure and reliable energy to power the NSW economy.

The strategy also outlines the aim to boost NSW connectivity through large-scale transmission connections with surrounding states and regional areas. This would be primarily spearheaded by upgrades and infrastructure in defined energy zones.

NSW Electrical Strategy 2019

The three objectives of the NSW Government for the state's electricity system, as stated in the NSW Electricity Strategy (NSW DPIE, 2019), are reliability, affordability and sustainability.

The NSW Government's Electricity Strategy would:

- Improve the efficiency and competitiveness of the NSW electricity market by reducing risk, cost, Government caused delays and by encouraging investment in new price-reducing generation and energy saving technology
- Prompt Government to act if there is a forecast breach of the Energy Security Target which private sector projects are unlikely to address. This should be done in a way that minimises costs to consumers and taxpayers and does not give rise to moral hazard risk
- Ensure that there are appropriate powers available for Government to analyse and respond to electricity supply emergencies if they arise.

Renewables are now the most economic form of new generation and battery storage is a critical part of this transition.

2.3.3. Regional/local policy

Narrandera Community Strategic Plan 2040

The Narrandera Community Strategic Plan 2040 (CSP) is the highest strategy that will guide and influence the direction of Narrandera Shire Council, the community and other levels of Government through to 2040. This strategic plan aims to provide a comprehensive blueprint for sustainable development and community well-being in the Narrandera region. The Project aligns with the following objectives:

Objective 3 – Our environment of the CSP outlines the strategies to protect and enhance the natural environment of the area, building resilience and sustainability within the LGA.

"Our natural environment is a huge asset. We need to protect our bushland, river, and wildlife..."
(Narrandera Shire Council, 2025).

Objective 4 – Our economy speaks to enhancing the LGA through boosting tourism, supporting local businesses and creating job opportunities.

“...Narrandera needs more industries beyond agriculture to provide diverse job opportunities...”

The Project supports objectives 3 and 4 through providing renewable energy opportunities within the region, actively responding to the impacts of climate change, and supporting the economic growth of the region through job opportunities and supporting businesses.

Narrandera Local Strategic Planning Statement (LSPS) 2020

The Narrandera Local Strategic Planning Statement (LSPS) outlines Narrandera Regional Council's 20-year vision for land use planning within the Narrandera Regional LGA. It sets the strategic direction, considering economic, social, and environmental factors, and details how future changes will be managed. The LSPS also specifies the actions needed to achieve this vision.

The LSPS guides the evolution of development controls in the Narrandera LEP and Development Control Plans to meet community needs. Any proposals to amend zoning and planning controls in the Narrandera LEP must align with the LSPS's priorities and actions.

The Narrandera LSPS outlines Planning Themes and Priorities that will shape the next 20 years within the Narrandera LGA. The Planning Themes are as follows:

- An Attractive Region
- A Region that Celebrates its Assets
- A Progressive Region

The Project aligns directly with two of the Planning Themes and the associated Planning Priorities.

- **A Region that Celebrates its Assets – Priority 3: A sustainable region adaptive to climate change.** The Project would aid in reducing CO2 emissions through solar renewable energy and mitigate the effects of climate change
- **A Region that Celebrates its Assets – Priority 4: Protection and management of our environment and heritage.** The Project is committed to avoiding or minimising the potential impacts on the environment and heritage as a result of the Project. The Project layout would remain flexible while detailed assessments are undertaken during the EIS phase.
- **A Progressive Region – Priority 6: Industry growth and diversification.** The Project would help Narrandera reduce the reliance on non-renewable energy sources and diversify the industries within the LGA. The Project will also offer the region an alternative source of employment whilst also helping to support the continued use of land for farming.

While the Subject Land is located within land zoned RU1 – Primary Production, the implementation of Agri-Solar practices would allow for agricultural production to occur throughout the life of the Project. Furthermore, the Project is finite, and could be decommissioned at the end of life, meaning it would not interfere with any future growth in the area. As no permanent subdivision is proposed (potentially excluding key infrastructure such as the onsite substation), fragmentation of land zoning would not impact any potential future activities for the area.

Narrandera Local Environmental Plan 2013

The Narrandera Local Environmental Plan (LEP) 2013 is a statutory document that guides land use planning and development.

The Subject Land is zoned Primary Production (RU1) under the Narrandera LEP. Electricity generating works are prohibited within this zone under the LEP. As stated in Section 2.2.1 above, the development of a prescribed non-residential zone is permissible with consent under the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP). As such, the TISEPP prevails over the Narrandera LEP, and the Project is permissible with consent on land zoned RU1.

2.4. Project justification

In addition to its important contribution to national and NSW electricity markets, providing new generation capacity and storage to assist the market transition from coal to renewable generation, the Project has clear socio-economic and environmental benefits.

2.4.1. Socio-economic benefits

Socio-economic benefits of the Project would accrue through:

- Providing diversification of land use and additional income stream within the rural economy
- Providing employment and economic stimulus, primarily through the construction phase
- Providing ongoing community benefits to spread the economic benefits of the project through the operational phase
- Putting downward pressure on electricity prices.

Regional Australia leads the world in agricultural and resource productivity. Solar is another valuable natural resource and a way of diversifying regional economies. Solar farms can be developed to have a minor and largely reversible impact on the agricultural capacity of the sites they occupy, while providing an additional income stream to associated landholders, that can support continued agricultural practices even through periods of drought, for example. The proposed dual land-use would allow a continued agricultural production and capacity for the host landowners during operation.

In addition to providing an additional income stream to associated landholders, the Project is expected to create approximately 100 – 200 full time equivalent (FTE) jobs during the key construction period and approximately five to six permanent jobs during operation. Largely due to the influx of workers, the Project would generate economic stimulus in Narrandera and the surrounding regional towns. These areas would provide accommodation, food, fuel and trade equipment and services, mostly during the construction phase. During operation of the Project, economic benefits would be less, focussing on monitoring and inspections, maintenance, repair and upgrade of infrastructure, much of which is likely to be provided by the resident labour force.

To spread the economic benefits of the Project through the operational phase and to address those members of the community which may be impacted but not directly involved with the Project, the Project will include a firm and clear commitment to a Community Benefit Scheme and Benefit-Sharing Program as indicated in the Department of Planning, Housing and Infrastructure Guidelines (DPHI, 2024). This would be developed with input from the community to consider how best to meet these objectives and may include:

- A Voluntary Planning Agreement (VPA) in negotiation with Narrandera Shire Council that may include but would not be limited to:
 - Community Benefit Scheme
 - Investment to address specific local issues.

Finally, the Australian Energy Market Commissions (AEMC) analysis indicated that multiple renewable energy projects are also likely to put downward pressure on the wholesale electricity prices, which has the potential to reduce electricity bills for households and businesses across NSW. As a utility scale solar project with ancillary storage, the Project is well placed to make a meaningful contribution to lowering electricity prices for consumers.

2.4.2. Environmental benefits and impact minimisation

The development of the Project will result in clear environmental benefits through its contribution to the electricity market's transition away from coal to less polluting, renewable generation options. This is important to reduce greenhouse gas emissions and the harmful effects of climate change.

Climate change presents specific risks to regional rural economies and biodiversity. The 2022 Intergovernmental Panel on Climate Change (IPCC) report (IPCC, 2022) states with a high level of confidence that energy diversification, including with decentralised renewable generation can reduce vulnerabilities to climate change especially for rural communities.

The Project will have the ability to produce approximately 350,000MWh of renewable energy per year, which will:

- Displace about 200,000 tonnes of CO₂ emissions per year
- Power 64,000 typical Australian homes based on typical Australian home using 15kWh per day (Ausgrid, 2025).

The Project would be designed to reflect the environmental values of the site. Soil resources, landscape character and visual amenity, important habitat and heritage values are all being investigated at this early planning stage to consider avoidance and protection of these values and will continue through all stages of the project. Specific management commitments would accompany the final project description to ensure that impacts that cannot be avoided would be minimised to an acceptable degree.

Specific management practices and commitments to the environmental values stated above are included below:

- Soil resources, amelioration and rehabilitation objectives prior to construction, during operations and decommissioning phase, advised by an agricultural impact assessment, soil impact assessment and soil nutrient analysis
- Preservation and monitoring of soil quality informed by soil nutrient analysis
- Appropriate landscape and visual amenity mitigation measures as recommended by an appropriate technical specialist
- Avoidance of important biodiversity features
- Buffers on waterways and commitments to best practice design and rehabilitation where water way crossings are required
- Buffers on important heritage items and salvage programmes to be developed in line with an Aboriginal Cultural Heritage Assessment (ACHA) report and in consultation with Aboriginal stakeholders.

2.4.3. Subject Land suitability

The Project is well placed to generate efficient renewable energy, supporting the transition of the network away from coal generation. Narrandera receives on average 4.6kWh/m² of solar exposure per day (BOM, 2025) and the 330kV power line passes through the site allowing this good solar resource to be captured and introduced into the transmission grid for the benefit of all the good people of New South Wales!

The Subject Land has been evaluated against the Large-Scale Solar Energy Guidelines for State Significant Development (DPE, 2022). This process allows the opportunity to avoid or minimise negative impacts at the outset. Design and assessment of the Project can then be undertaken with a focus on mitigating and managing unavoidable impacts. Table 2-1 and Table 2-2 outline the suitability of the site for the Project. On this basis, the site is considered to have favourable conditions for solar development.

Table 2-1 Site selection criteria – Site Conditions

Process of site selection	Site condition
Proximity to the existing transmission infrastructure	The Project has an existing 330kV transmission line connection option situated within the Subject Land.
Available connection capacity	Transgrid has currently advised the network has available grid capacity. The connection will utilise the Transgrid 330kV network.
Level of solar radiation	The Narrandera Airport Automated Weather Station (AWS) (station number 074148) approximately 20km from the Subject Land, shows a good average daily mean solar irradiance of 4.6kWh/m ² . This is further supported by the solar resource map of Global Solar Atlas which indicates that the range of daily irradiance is between the average annual lowest of 4.092kWh/m ² and average annual highest irradiation of 5.783kWh/m ² (source (BOM, 2025)) and an annual average Global horizontal irradiation of 1857.8kWh/m ² Annual average global exposure – 2283.0kWh m ⁻² (Global Solar Atlas, 2025)
Distance to major towns, cities or other major energy users	The Subject Land is located: • approx. 15km south of the regional town of Narrandera • approx. 38km southeast from Leeton • approx. 80km northwest from the regional city of Wagga Wagga • approx. 80km southeast from Griffith. The Project would provide renewable energy that would support the surrounding area.
Proximity to major roads and transport infrastructure	The Subject Land is located off Kangaroo Plains Road and the Gap Road and well situated between major state roads including the Sturt and Newell Highways.
Size and shape of land	The indicative Infrastructure Layout is approximately 820ha, that is currently used

Process of site selection	Site condition
parcels	for agricultural purposes (currently cropping and sheep/cattle grazing). The indicative Infrastructure Layout comprised of multiple large lots that ideally suit solar energy generation developments. The Subject Land relatively flat with a slight decreasing gradient from west to east.
Development restrictions including land use zoning and proximity to regional cities.	The Subject Land is zoned RU1 – Primary Production. The Applicant is exploring options that would allow for continuation of existing sheep grazing. This has been used successfully on other solar farm projects across the state as a solution for ground cover management. The Project would be designed and constructed to be highly reversible, protecting important site values and restoring the site to existing agricultural capability during the decommissioning stage. • Pile driven array mounts for the solar array are proposed, which result in minimal ground disturbance • Groundcover beneath panels would be retained and managed; extensive landform modification is not proposed beneath the arrays. • Ground cover management would include rehabilitation with species selected to support grazing enterprises, regular monitoring and weed control • Best practice design and rehabilitation would be undertaken specific to water ways, where impacts are required. • Grazing would be utilised to manage the groundcover, while also allowing continued agricultural production onsite.

While site investigations are preliminary at this stage, early results indicate the following key constraints outline in Table 2-2. These will be the subject of further detailed investigations as the project description is refined. This will ensure the project is responsive to its site context and acceptable to the community.

Table 2-2 Site selection criteria – Constraints

Areas of constraint	Applicability to the Project
Land and Soil	The Subject Land is mapped as predominately Class 4 with small section of Class 3 in accordance with the LSC Scheme. There are no areas of mapped Biophysical Strategic Agricultural Land (BSAL) or State Significant Agricultural Land within the Subject Land. Impacts to land and soil capability are discussed in Section 6.1 below and would be covered in detail in the Agricultural Impact Assessment (AIA) as part of the EIS.
Native vegetation	The majority of the Project Area comprises highly modified groundcover and mapped under the draft Native Vegetation Regulatory mapping as Category 1

Areas of constraint	Applicability to the Project
	land. However, this requires confirmation through completion of a land category assessment (LCA). Areas that are not confirmed Category 1 land require assessment under the Biodiversity Assessment Method (BAM). At this early stage, the Project has given priority to the lowest quality vegetation within the Project Area for development with avoidance of larger standing vegetation/woodlands. Impacts to threatened entities would be covered in detail in the Biodiversity Development Assessment Report (BDAR).
Potential residences	Approximately 8 receivers are located within 4km of the Subject Land and 9 potentially impacted receivers mapped at the intersection of the Newell Highway/Kangaroo Plains Road and along Kangaroo Plains Road heading towards the Project Area. No receivers have been identified along Strontian Road from the Sturt Highway to the Project. Detailed assessment and consultation will be undertaken to understand amenity impacts and effectiveness of mitigation.
Waterways	There are two unnamed ephemeral Strahler 1st and 2nd order streams and three farm dams within the Subject Land.
Aboriginal/Heritage significance	An extensive Aboriginal Heritage Information Management System (AHIMS) search (July 2025) identified 20 Aboriginal sites within a 30km x 30km search area of the Subject Land (refer to Section 6.8). There are no sites within the Subject Land. A detailed assessment including consultation with Registered Aboriginal Parties will be undertaken in the EIS.
Land zoning	The land is zoned under RU1 (Primary Production) which allows development for the purpose of electricity generating works under the TISEPP.

2.5. Likelihood for cumulative impacts

The Project has the potential to result in cumulative impacts, most notably other current or potential proposed state significant developments in close proximity to the region. Key impacts for consideration have been identified as social and economic impacts and traffic and access impacts. These are discussed in Section 6.12 and would be assessed in detail in the EIS in accordance with the *Cumulative Impact Assessment Guidelines for State Significant Projects* (NSW Department of Planning, Industry and Environment, 2021).

2.6. Projects agreements

An agreement has been made with the host landholder. At this stage, no other agreements have been entered into with neighbouring properties or other groups. The Applicant may seek to enter into additional benefit sharing agreements in consultation with nearby neighbours, or if relevant EIS assessments identify that relevant impact criteria cannot be met at non-associated receiver.

Associated and non-associated receivers within and surrounding the Subject Land are shown in Figure 2-6.

The Applicant is committed to investigating appropriate local benefits as a result of the Project and will continue to consult with landowners, Narrandera Shire Council and the local community throughout development of the EIS.

3. The Project

The Project would consist of a solar and energy storage system with a capacity of approximately 200 megawatt (MW) Alternating Current (AC) / 260MW Direct Current (DC) solar farm and will also include a 400MW AC Battery Energy Storage System (BESS) at the point of connection. The anticipated storage duration would be up to 8 hours (3,200MWh). The Project would supply electricity to the NEM.

The Subject Land (i.e. the area under investigation) is approximately 1085ha in total, with the current indicative Infrastructure Layout excluding high-constraint areas (refer to Table 2-2 above). The main access to the Project Area has not been confirmed, however is likely to be via Kangaroo Plains Road or the Gap Road

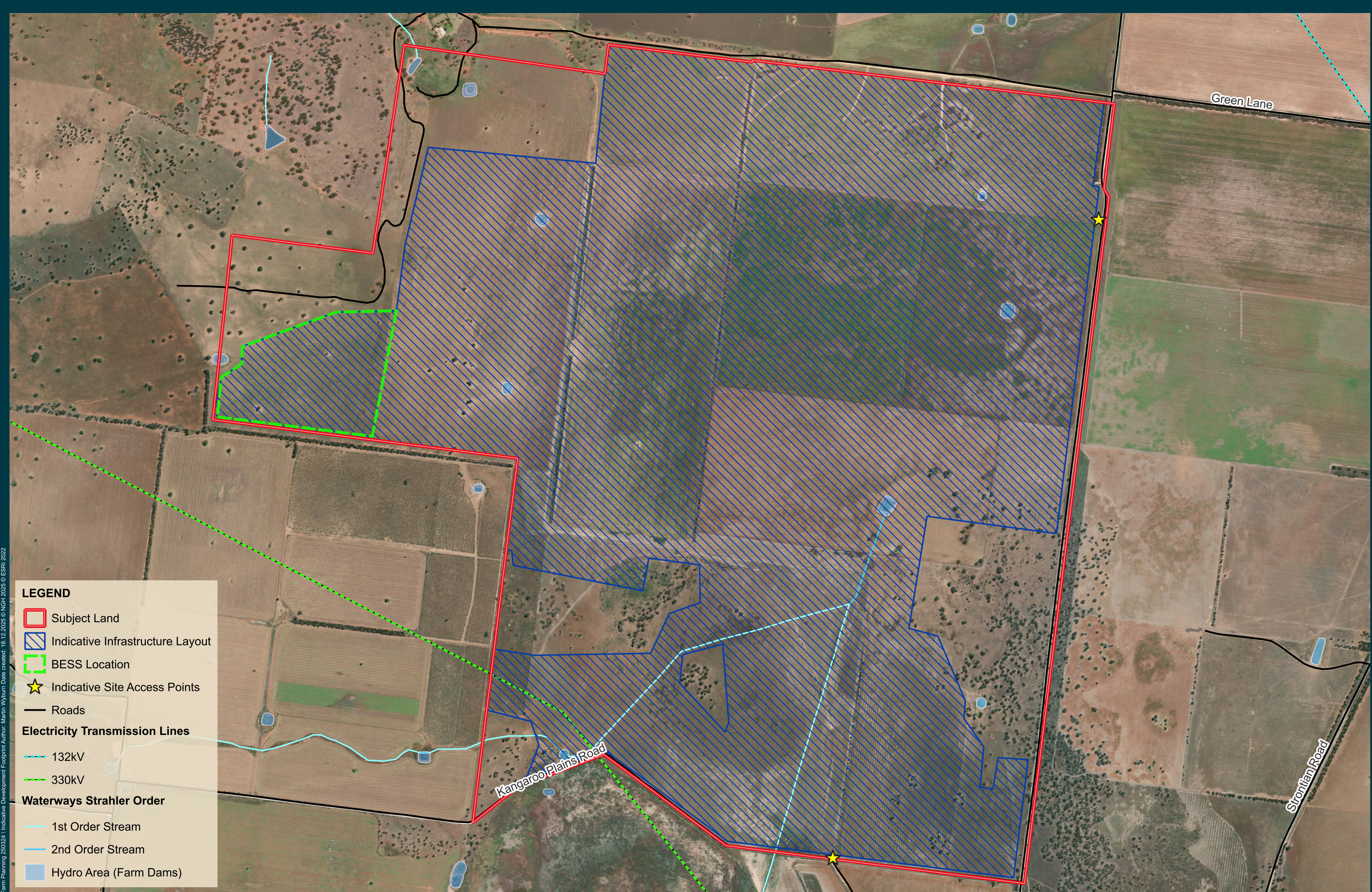
3.1. Project description

The Project is likely to include the following infrastructure:

- Approximately 500,000 single bifacial PV modules supported by single axis tracker units. The modules may reach a peak height of 6.5m at full tilt.
- Approximately 35 solar inverters
- Medium voltage transformers
- Centralised BESS alongside the solar array with a combined storage duration of approximately 8 hours
- Substations, control room, maintenance facility (some minor components (i.e. lightning rods and transmission poles) within the substation plan would be approximately 8 - 10m high)
- Site access off Kangaroo Plains Road or The Gap Road (indicative)
- Internal access track and underground/overhead cabling
- Watercourse crossings for internal access tracks, as required
- Intersection and road upgrades, as required.
- Landscape plantings to soften the view of expansive infrastructure.

The Subject Land boundary and Indicative Infrastructure Layout is provided in Figure 3-1. A development footprint that will be assessed in the EIS will be informed by community and stakeholder consultation, and detailed environmental investigations. The layout, as presented below, is a high-level approximation of the Project and is still subject to further ongoing investigations of constraints and finalisation of design and optimum positioning.

Ref: 260061_Curralong Solar Farm Planning 260324 \ Indicative Development Footprint Author: Martin Wyburn Date created: 18.12.2025 © NGH 2022



LEGEND

- Subject Land
- Indicative Infrastructure Layout
- BESS Location
- Indicative Site Access Points
- Roads
- Electricity Transmission Lines**
 - 132kV
 - 330kV
- Waterways Strahler Order**
 - 1st Order Stream
 - 2nd Order Stream
 - Hydro Area (Farm Dams)

3.1.1. Project delivery

The Project has been in development since early-2024. The undertaking of environmental studies and the ongoing consultation program will shape the Project and inform the Project approval process.

Pending Project approval, the Project delivery post approval can be separated into four key phases: Site establishment, construction, operation and decommissioning. The details of these phases are outlined below in Table 3-1 and would be described in more detail during the EIS phase.

Staging of the Project is currently considered unlikely.

Table 3-1 Indicative timing

Phase	Approximate commencement	Approximate duration
Project Approval	Q4 2026	12-18 months
1. Site establishment	Q2 2027	3 months
2. Construction (including commissioning)	Q4 2028	18 - 24 months
3. Operation	Q3 2029	Approximately 40 years
4. Decommissioning	Project expected to be operational for 40 years with potential for extension	Within 18 months of the cessation of operations

Construction hours

Construction hours will be limited to:

- 7am to 6pm Monday to Friday
- 8am to 1pm Saturday
- No work on Sunday or public holidays.

The delivery of materials requiring an escort and/or emergency works may occur outside of the above construction hours. Any additional planned outside hours work would be considered in the EIS.

3.1.2. Site establishment – Pre-construction

The site establishment phase would include the establishment of the site access and associated road treatments required to facilitate the traffic movements for the construction phase. This period would be undertaken over approximately 3 months. The details of the access treatments would be covered in the EIS and informed by the Traffic Impact Assessment.

During this stage, activities such as marking no go zones and compound area marking would occur. Additional pre-construction works that may be undertaken also include installation of fencing, installation of vegetative screening, artefact survey and/or salvage, overhead line safety marking and geotechnical drilling and/or surveying.

The Applicant would also undertake groundcover management practices and regenerative agriculture procedures during the pre-construction stage. Soil sampling would be undertaken to inform soil amelioration practices to improve soil quality before any soil disturbance works commence.

3.1.3. Construction

The construction phase would begin following the road upgrades and is expected to take approximately 24 months. During peak construction there would be approximately 100 – 200 FTE workers onsite. The construction program may be staged, with further detail to be provided in the EIS. Construction will involve the following key activities:

- Contractor mobilisation
- Site establishment including site access, access treatments (if required), clearing and grubbing, security fencing, temporary construction facilities/laydown, safety controls and environmental controls
- Earthworks and internal access roads as required
- Construction of foundations for ancillary infrastructure and battery pads
- Delivery of module components and trackers
- Delivery of cabling, communication, and earthing components
- Trenching
- Piling and installation of PV array and module components
- Delivery and installation of inverter-transformer stations
- Delivery of battery units
- Overhead transmission connection
- Construction of ancillary buildings and structures
- Testing and commissioning
- Removal of construction facilities/laydown and reinstatement of temporary construction areas.

Materials

The following materials would be required to construct the Project. More information on material quantities will be provided in the EIS with final Project design.

- Aggregates, gravel road base, and concrete
- Fencing, gates and lighting
- Cabling, and conduit
- PV array modules and tracker units
- Container-based modules containing the battery units

Construction equipment

The following typical plant and equipment would be used during the construction of the Project. Further detail on specifications and quantities of the equipment will be provided in the EIS:

- Excavators
- Mobile cranes
- Graders
- Concrete truck and pumps
- Potential temporary concrete batching plant
- Truck and dogs
- Telehandlers
- Forklifts
- Drum / padfoot rollers
- Wheeled loader
- Trencher
- Water truck
- Hand tools

3.1.4. Groundcover

Leading up to the commencement of construction, the existing continuous groundcover would be maintained across the Subject Land within the PV array areas. Groundcover would be monitored to ensure all areas are maintained and consistent throughout the Subject Land. During construction, any disturbed areas would be monitored and progressively rehabilitated to remain at a high level of groundcover.

Ongoing pest and weed control practices would be implemented during construction to eradicate existing priority weeds and minimise any potential weed infestations.

3.1.5. Operation

It is anticipated that the Project would operate for approximately 40 years. The Narrandera SHS would be operational 24/7 with energy production from the solar farm and battery charging and discharging occurring during the day and battery charging and discharging (potentially) occurring during the day and the night. Battery discharge timing and duration would be dictated by energy demand and grid capacity. Much of the Project operations would be operated remotely, but emergency response, inspections and regular maintenance (e.g. vegetation management) would be carried out by on-site workers. Approximately five – six FTE employees would work on the site during operation.

Strategic management practices would be implemented during the operation of the Project to maintain active sheep grazing and groundcover (pasture) within the Subject Land, as part of the associated landholder lease agreement. Groundcover would be monitored and maintained to a high standard throughout the lifespan of the Project. Operational weed management would reduce any potential occurrence of priority weeds.

3.1.6. Decommissioning

If the Project is not repowered at the end of its operational life, then it will be decommissioned. The decommissioning phase would involve removal of above and below ground infrastructure and return of the Subject Land to the existing, or an improved state.

The full decommissioning process will be at the expense of the Project owner in accordance with the DA conditions of consent. Potential impacts associated with Project decommissioning process will be assessed and reported on in the EIS Decommissioning commitments will be set out within contracts with the associated landowner and the development consent.

3.2. Estimated development cost

The Estimated Development Cost (EDC) of the Project would be in excess of \$30 million. The final EDC figure would be subject to a detailed EDC report would be submitted to the assessment agency with the EIS. The EDC will consider the full cost of the Project, excluding the land value but including any mitigation measures necessary to construct and operate the Project.

3.3. Restrictions or covenants over the land

As detailed above, the Subject Land is intersected (in the southwestern corner of the Subject Land) by a 330kV transmission line that runs in an east/west direction.

The Subject Land also falls within the Defence Communication Facility Buffer, as detailed in the Narrandera LEP. It should be noted that consultation with the Department of Defence (DoD) has been commenced (pending outcomes) to obtain clarification regarding potential impacts and issues that could impede the approval process.

3.4. Analysis of alternatives

Alternatives considered below include statements regarding alternative site locations and alternative energy generating/storage technologies. Alternative technologies were not extensively considered as the site was selected on the grounds of solar capability and grid connection. As such, this section provides a deeper analysis of site selection than alternative technologies.

3.4.1. Site location

The site for placement of the Project was selected on the basis of ease of connection to the grid having a 330kV transmission line intersecting the Subject Land. It has been used for an extended period for grazing and will have the ability to retain grazing enterprises during operation. The Narrandera area is considered as being suitable for large scale solar with a township that is able to support the development by providing labour, accommodation and supplies and high solar irradiance numbers. Initial fieldwork highlighted limited ecological constraints that cannot be avoided, minimised or mitigated, with the majority of the site being mapped as highly modified and Category 1 Land under the NSW draft Native Vegetation Regulatory (NVR) mapping.

Once the general area was selected, the Applicant considered all options including the option not to continue with the proposed development.

3.4.2. Site layout

The Project Area and infrastructure layout incorporates results from a Preliminary Biodiversity Technical Assessment (refer to Appendix F) and accompanying species (flora and fauna) surveys to understand and identify biodiversity constraints and implement avoidance areas within the Project's development and design phases. The details of the Preliminary Biodiversity Technical Assessment are discussed below in Section 6.7, whereby areas of high value biodiversity land have been accounted for within the Project Area layout and excluded from the Infrastructure Layout. Identification of biodiversity constraints and exclusion areas are subject to future studies and will be assessed in further detail during the EIS phase.

Furthermore, there is a primary and secondary BESS infrastructure sitting location within the Project Area and infrastructure layout. This is due to early flood and hydrology mapping indicating that the southern portion (along Kangaroo Plains Road) of the Subject Land has been prone to historical flood inundation (refer to Section 6.9). As such the BESS infrastructure sitting location is subject to potential refinement and will be assessed in further detail during the EIS phase.

3.4.3. Site access and haulage

There are currently two alternative route options being explored for infrastructure haulage and potential site access points (off Kangaroo Plains Road and off The Gap Road) directly onto the Subject Land. Access along Kangaroo Plains Road is available by both the Sturt Highway and Strontian Road to the east of the Subject Land, and the Newell Highway to the west. Access via The Gap Road is available from the Sturt Highway via Strontian Road. Both site access points (as shown in Figure 3-1) are indicative, and are subject to change based on further assessment to be undertaken in the EIS phase.

Preliminary sensitive receiver mapping has indicated the presence of nine (9) potentially impacted receivers along Kangaroo Plains Road heading (west to east) towards the Subject Land and also at the intersection of the Newell Highway/Kangaroo Plains Road (refer to Figure 2-6). These receivers have been considered due to the potential of broader Project associated impacts particularly related to traffic, haulage, and noise.

A significant consideration in the haulage and access investigation for the Project relates to the viability of heavy haulage vehicles utilising the existing road corridors. Unlike access via the Sturt Highway/Strontian Road, which is a fully sealed carriageway, Kangaroo Plains Road is unsealed along its entirety. Early consultation with NSC has indicated a preference for access off Strontian Road based on previous experience with dust and the already constructed Avonlie Solar Farm. As stated previously, there are no identified receivers along Strontian Road to the Project Area, in comparison to 9 receivers along Kangaroo Plains Road.

3.4.4. Generation technology

PV solar technology was chosen for electricity generation because it is cost-effective, low profile, durable, utilises non-toxic metal composition and flexible regarding layout and siting. It is a proven and mature technology which is readily available for broad scale deployment at the Subject Land. Solar generation is well suited to the particular characteristics of the Subject Land (refer to Section 2.4.3) and can be rapidly deployed to assist in meeting both state and national climate change targets.

There are two common PV array technologies that are used in the development of solar farms. They are:

- Cadmium telluride photovoltaics (CdTe)
- Crystalline silicon.

As technologies are evolving, developers, including the Applicant, are moving away from the CdTe PV arrays which contain heavy metals that have the potential to contaminate the local environment if the panels were to break.

The Applicant has chosen to go with the Crystalline silicon technology, which does not contain toxic heavy metals, and are made of simpler materials. The materials that typically make up Crystalline Silicon PV panel are:

- Solar cells comprised of silicon

- Aluminium metal framing
- Toughened glass sheet
- Copper wiring
- Back sheet comprised of ultra-durable plastic.

3.4.5. Storage technology

Over recent years, the underlying technology surrounding BESS development has been evolving at an increasingly rapid rate. The Applicant would utilise the latest technical and cost-efficient, proven, technology available at the time of construction. At this stage, it is proposed to utilise a Lithium-iron phosphate (LFP) chemistry.

While other battery technology exists, LFP battery technology is currently selected as the preferred option based on the following criteria:

- Minimal risk of thermal runaway
- Safety, fire management and containment
- Ability to support the network to increase renewable energy penetration
- Ability to provide energy during periods of peak demands
- Minimal environmental impact
- Safety and ease of integration
- Demonstration and maturity of technology
- Value for money

3.4.6. Grid connection

The Project is currently considering connection directly into the existing overhead high voltage 330kV Wagga Wagga – Darlington Point transmission line via a new dedicated 330kV/ 33kV grid substation for the Project.

The location of the point of connection and infrastructure needed to complete the connection has not been finalised and will be discussed with Transgrid in detail.

3.4.7. Alternative technologies or components

The critical components of a solar hybrid system include:

- Solar panels to generate DC electricity from sunlight.
- Inverters to convert the DC electricity into AC electricity.
- Energy storage facility.

Over recent years, the underlying technology surrounding solar farm development has been evolving at an increasingly rapid rate. The Applicant would utilise the latest technical and cost-efficient technology available at the time of construction.

3.4.8. Strategic need – options considered

Option 1: The ‘do nothing’ option

The do-nothing option considers the consequences of not carrying out the Project. The strategic need for the Project is outlined in Section 2 of this report. In summary, the Project is needed to address the state’s current need for new generation methods that address climate change commitments that are moving away from reliance on fossil fuels. Not undertaken, the Project would not assist in the transition away from fossil fuel reliant energy production.

The do-nothing option would not have any of the potential environmental impacts associated with a solar farm project. However, would also not have any of the project benefits as described above.

Option 2: Constructing the Narrandera Solar Project

The Project is proposed and designed to connect into the existing overhead 330kV transmission line via an onsite grid substation. The key advantages and disadvantages of this option are summarised in Table 3-2 below. Mitigation measures were considered to avoid environmental impacts associated with the construction, operation and decommissioning of the Project.

Table 3-2 The advantages and disadvantages of constructing the Project

Advantages of Option 2	Disadvantages of Option 2
- Aligns with the strategic needs and Project justification. - At a 300MW DC capacity this option could displace about 200,000 tonnes of CO₂ per year emissions compared to typical coal fired production - Ability to avoid key environmental impacts such as high value biodiversity and traffic upgrades. - Broader benefits to the community through the community benefits fund to be developed in consultation with Narrandera Shire Council. - Grazing enterprises can continue during operation.	- Select environmental impacts: - Higher class agricultural lands - Areas of native vegetation - Impact on waterways - Water inundation - Identified impacts will be minimised through mitigation measures to be developed in the EIS

4. Statutory context

The following table sets out the statutory context of the Project. It is categorised in accordance with Table 1 of the DPHI Scoping report guidelines (DPHI, 2022) (refer to Table 4-1).

Table 4-1 Statutory context

Category	Statutory requirements	Relevance to Project
Power to grant consent	State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) Environmental Planning and Assessment Act 1979 (EP&A Act) & Environmental Planning and Assessment Regulation 2021	Section 20 of Schedule 1 of the Planning Systems SEPP states that the following is considered an SSD: <i>Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that:</i> <i>(a) has an estimated development cost of more than \$30 million...</i> The Project would have an EDC of more than \$30 million. Therefore, the Project is classified as “State Significant Development” under division 4.7 of the EP&A Act. The Minister for Planning and Public Spaces is the consent authority for SSD, and SSD applications are assessed by DPHI (unless specific conditions occur e.g., where 50 or more people have objected to the application, the local council has objected to the application; and/or the applicant has disclosed a reportable political donation), whereby the Independent Planning Commission (IPC) would be the consent authority. The provisions of the EP&A Act are regulated by the control authority through the application of the Environmental Planning and Assessment Regulation 2021.
Permissibility	State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP), Narrandera Local Environmental	The Subject Land is located within land zoned RU1 (Primary Production), under the Narrandera LEP. Section 2.36(1)(b) of the TISEPP states development for the purpose of electricity generating works may be carried out by any person with consent on any land in a non-prescribed residential zone. The land is zoned

Category	Statutory requirements	Relevance to Project
	Plan 2013 (Narrandera LEP)	RU1 and under Section 2.35 of the TISEPP, a non-prescribed residential zone. Under the Narrandera LEP, works for the purpose of electricity generation are prohibited. However, the provisions of the TISEPP prevail over the Narrandera LEP.
Other approvals	<i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act),</i> <i>Environmental Planning and Assessment Act 1979 (EP&A Act),</i> <i>Roads Act 1993 (Roads Act),</i> <i>Conveyancing Act 1919,</i> State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP), <i>Fisheries Management Act 1994 (FM Act)</i> <i>Heritage Act 1977,</i> <i>National Parks and Wildlife Act 1974 (NPW Act),</i> <i>Rural Fires Act 1997,</i> <i>Water Management Act 2000</i>	EPBC Act approval If a matter of national environmental significance is impacted by the Project, an EPBC Act referral would be undertaken. At this stage of the assessment process, four potential Threatened Ecological Communities (TECs) have been identified within the Subject Land as potentially being impacted by the Project. The wooded areas associated with Plant Community Type 75 within the Subject Land may also conform to a TEC listed as Serious and Irreversible Impact (SAIL) under the BC Act. Without avoidance or minimal impact to the TECs, referral is considered likely. Additional surveys during the EIS would be required to confirm the presence of the TEC. Consistent approvals - Section 4.42 of the EP&A Act states “An authorisation of the following kind cannot be refused if it is necessary for carrying out State significant development that is authorised by a development consent under this Division and is to be substantially consistent with the consent” - Consent under section 138 of the Roads Act for road upgrades to the public road network - Part 8 Division 5 of the EP&A Reg specifies the form and content of EISs, which provide the basis for the Secretary’s Environmental Assessment Requirements (SEARs) issued for Projects - Section 59 of the EP&A Reg addresses public participation for SSD - Section 251 of the EP&A Reg requires an EDC of a DA in order for the Planning Secretary to make their determination. Approvals not required Section 4.41 of the EP&A Act excludes the following approvals when the project is an SSD.

Category	Statutory requirements	Relevance to Project
	(WM Act).	• A Fisheries permit under the Section 201 and 219 of the <i>Fisheries Management Act 1994</i> • An excavation permit for details heritage surveys under Section 139 of the <i>Heritage Act 1977</i> • An Aboriginal heritage impact permit under Section 90 of the <i>National Parks and Wildlife Act 1974</i>¹ • The Project would not require a bushfire safety authority under Section 100B of the <i>Rural Fires Act 1997</i> • A water use approval (Section 89), a water management work approval (Section 90) and an activity approval (Section 91) under the <i>Water Management Act 2000</i> would not be required • Subdivision under the <i>Real Property Act 1900</i>.
Pre-condition to exercising the power to grant consent	State Environmental Planning Policy (Transport and Infrastructure) 2021	• In accordance with Section 2.119, the consent authority must not grant consent unless it is satisfied of certain matters relating to vehicular access to the classified road, impacts on the safety, efficiency and operation of the classified road and sensitivity of development fronting the classified road • Section 2.122 of the Transport and Infrastructure SEPP requires ‘traffic generating development’ to be referred to TfNSW.
Mandatory matters for consideration	Consideration under the EP&A Act and EP&A Regulation	The EIS would consider the following objects of the EP&A Act in detail. Section 1.3 - Relevant objects of the Act: • To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State’s natural and other resources • To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment • To promote the orderly and economic use and development of land • To protect the environment, including the conservation of threatened and other species of native

¹ Note that the Project will comprehensively assess impacts to Aboriginal heritage as part of an Aboriginal Cultural Heritage Assessment (ACHA) during the EIS.

Category	Statutory requirements	Relevance to Project
		animals and plants, ecological communities and their habitats. Section 4.15 - Relevant environmental planning instruments and any proposed instruments: • State Environmental Planning Policy (Transport and Infrastructure) 2021 • State Environmental Planning Policy (Planning Systems) 2021 • State Environmental Planning Policy (Resilience and Hazards) 2021 • State Environmental Planning Policy (Biodiversity and Conservation) 2021 • State Environmental Planning Policy (Primary Production and Rural Development) 2021 • Narrandera Local Environmental Plan 2013 Note: The provisions of the TISEPP prevail over the provisions of the Narrandera LEP 2013, however specific relevant provisions of the LEP would be considered in the EIS. Relevant planning agreement or draft planning agreements: • The Applicant is undertaking planning agreement discussions with Council, with more detail to be provided at the EIS stage. Regulations • EP&A Regulation 2021 • Environment Protection and Biodiversity Conservation Regulations 2000. Under the provisions of the Act the Project would also consider: • Likely impacts of the development (environmental, social and economic) • Suitability of the site for development • Submissions made in accordance with the Act or regulations • Public interest.
Mandatory	<i>Biodiversity Conservation Act</i>	• The Project would require a Biodiversity Development Assessment Report (BDAR) prepared in

Category	Statutory requirements	Relevance to Project
matters for consideration (specific instruments)	2016 (BC Act) State Environmental Planning Policy (Biodiversity and Conservation) 2021, State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP), <i>Native Title Act 1993</i> Narrandera LEP TISEPP	accordance with Section 7.9 of the <i>Biodiversity Conservation Act 2016</i>. The BDAR will be undertaken in consultation with the DPHI's Regional Delivery Conservation Programs, Heritage and Regulation Group (RD CPHR) • A Preliminary Hazard Analysis (PHA) will be completed that addresses Section 3.7 of the State Environmental Planning Policy (Resilience and Hazards) 2021 for energy storage systems ◦ A risk screening will be included in the PHA that addressing the SEPP 33 (Hazardous and Offensive Development Application) Guidelines. • A Preliminary Site Investigation would be undertaken in accordance with the National Environment Protection Measures due to previous agricultural cropping activities. • A native title search was undertaken on 26 May 2025 and returned no native title or active native title cases over the Subject Land. • Pursuant to s 5.15(2) of the Narrandera LEP, 'before determining a development application for development on defence communications facility buffer land, the consent authority must consider Australian and New Zealand Standard AS/NZS 5070.1:2008, Siting and operation of radiocommunications facilities – General guidelines for fixed, mobile and broadcasting facilities including fixed location satellite earth stations independent of the operating frequency'. • Further, s 5.15(3) of the Narrandera LEP states that development consent must not be granted for certain developments on defence communications facility buffer land unless the consent authority is satisfied that the Secretary of the Commonwealth Department of Defence has been consulted about the proposed development and has indicated that he or she is of the opinion that the development will not adversely affect the optimum operational capability of the defence receiver station. • Consultation with the Department of Defence is also a requirements of Part 2.2 Division 1 Section 2.15(e) of the TISEPP. • Pursuant to s. 5.21 of the Narrandera LEP, development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the Project will not adversely affect flood behaviour or safe occupation of land, or not adversely impact the environment.

Category	Statutory requirements	Relevance to Project
		○ The Project Area is not located within flood prone land mapped in the LEP. Furthermore, the Project Area is not modelled as a flood risk area as per the Narrandera Flood Study (NSW SES, 2009) ● The EIS will also consider the following from the Narrandera LEP: ○ Clause 5.10 Heritage conservation ○ Clause 5.11 Bush fire hazard reduction ○ Clause 6.1 Earthworks ○ Clause 6.4 Terrestrial biodiversity ○ Clause 6.5 Groundwater vulnerability.

5. Engagement

Early engagement has commenced for the Project, with proactive engagement undertaken by the Applicant and NGH summarised below. A more detailed summary with supporting information can be found attached as Appendix C.

Engagement to inform the Scoping Report preparation has been undertaken in accordance with the following guidelines:

- *Department of Planning and Environment – Revised Large-Scale Solar Energy Guideline* (DPE, 2022)
- *State Significant Development Guidelines – preparing a Scoping Report* (DPE, 2022)
- *Undertaking Engagement Guidelines for State Significant Projects* (DPHI, 2024)

5.1. Community and stakeholder engagement

As outlined in the Engagement Summary Report (Appendix C), a Stakeholder Engagement Plan (SEP) aimed to achieve the following objectives:

- Introduce the Project to the local community and nearby neighbours early on in the planning process
- Identify key issues early and understand the local concerns and sensitivities to be considered in the Project design
- Listen to feedback to help understand the scope of the technical assessments required to consider and address concerns
- Build awareness and ensure that the community and stakeholders have the opportunity to ask questions at the earliest stage.

The methodology to announce the Project consisted of:

- Posted letters to non-associated receives within 4km and access road
- Targeted stakeholder emails
- An online community feedback survey
- Newspaper advertisements
- Two Community information and feedback drop-in sessions
- Face to face meetings
- Online meetings
- Supporting materials, including a fact sheet, Frequently Asked Questions (FAQs), and a Project website page.

Based on the stakeholder analysis and approach, a stakeholder register was developed by NGH, which enabled the distribution of materials and consultation with both the wider community as well as identified stakeholders. Engagement activities during the scoping phase focused on understanding community sentiment, identifying potential impacts and possible mitigation measures, and preparing engagement recommendations for the EIS.

5.1.1. Results from community and stakeholder engagement

All consultation activities and feedback have been recorded to track interactions, record and measure data to understand the recurring topics; ensuring that feedback is used to inform Project planning and engagement

efforts going forward. It also enables the Project team to continue to monitor emerging themes over time and going forward, demonstrate how community input has been considered.

Community and stakeholder feedback was gathered and analysed over a period of three weeks. The overall sentiment in the community was neutral, measured, informed, and generally constructive, with no reported negative interactions about the Project. Throughout the engagement period, community members and neighbours approached the Project with interest and sought clarification on key details, which the team was able to provide, acting to alleviate any early concerns about the Project's potential development.

Across the engagement activities, stakeholders demonstrated a genuine interest in understanding Project details, particularly regarding its local economic contribution, environmental management, and potential benefits for the Narrandera community. While early interactions were primarily neutral or information-seeking, sentiment progressively shifted toward supportive, especially after stakeholders received clarifications about land use compatibility, visual impacts, and employment opportunities. Local representatives and key community members expressed openness to renewable energy development, provided that consultation remains transparent and that potential impacts are effectively managed.

Community sentiment was primarily expressed through the community information session interactions, which was the Project's main source of two-way engagement discussions. All interactions were noted as either neutral or positive in sentiment, with one in every three discussions having a clear positive and supportive sentiment, primarily when related to topics of regional employment and benefits.

Opportunities and challenges were identified in relation to the Project and are outlined below.

Opportunities

- Local employment and training
- Community benefit sharing (e.g. discounted electricity)
- Early visual screen planting and environmental enhancement
- Local advocacy networks for renewable transition
- Council planning, infrastructure and communications collaboration.

Challenges

- Near neighbour engagement
- Construction impacts (potentially cumulative)
- Visual impacts
- Environmental and biodiversity concerns
- Fire safety concerns
- Maintaining community trust.

5.2. Agency engagement

5.2.1. Narrandera Shire Council

The Applicant, along with NGH, met with Narrandera Shire Council (NSC) via a face-to-face meeting at the Council Chambers on 29 October 2025, to discuss the proposed Project. The following matters were discussed:

- Planning and approvals

- Infrastructure and road access
- Economic and employment opportunities
- Community engagement and benefit
- Environmental and amenity considerations.

Council consistently reiterated that cumulative impact considerations are to be made with similar developments in the region, and that the priority should be maintaining community benefit without cumulative impacts. Council reaffirmed its supportive stance toward renewable energy development within the LGA, noting alignment with regional objectives. The Applicant and Council agreed to maintain open lines of communication as the Project advances through the planning and consultation stages.

All matters raised by Council will be addressed in the EIS.

5.2.2. Narrandera Shire Council – Ordinary Council Meeting

The Applicant, along with NGH, presented to the NSC and Councillors at their Ordinary Council Meeting on 18 November 2025. The following matters were discussed:

- Bushfire and battery safety
- Preservation of wildlife corridors and biodiversity
- Long-term vs short-term community benefits (including reduced power prices), and key messaging to the Community
- Recycling demand, capacity and existing/future facilities
- Capacity and size of land required for a viable Project
- Landholders' response to date.

The Councillors were supportive of Agri-Solar and made a point to ensure infrastructure is designed appropriately to allow for continued safe grazing of sheep during operation of the Project.

5.2.3. Member for Cootamundra – Online meeting

A letter introducing the Project was sent on 21 October 2025. This was followed by an online meeting was held with the Office of the Member for Cootamundra on the 9 December 2025, to introduce the Project, understand concerns, request feedback, and help to inform mitigations and build on potential CBS.

The following items were discussed during the meeting:

- Overview of engagement to date provided, along with sentiment from community
- Engagement with Council, VPAs and CBS options
- Engagement with near neighbours and outreach
- Ongoing engagement throughout the SSD process.

5.2.4. DPHI consultation

The Applicant and NGH met with DPHI representatives via videoconference on 13 November 2025 in the form of a pre-lodgement meeting. The Applicant and NGH gave DPHI an overview of the Project and a summary of engagement undertaken to date, generally as explained in the sections above.

DPHI raised the following key concerns:

- Early consideration of heavy vehicle and Over Size Over Mass transport routes and early consultation with Transport for NSW.
- Early and ongoing consultation with the local council with evidence of community benefit sharing to be included in the EIS
- Worker's accommodation
- Consideration of potential contamination
- Importance of early identification of key constraints and appropriate specialist assessments undertaken as part of EIS to not hold up/prolong Department assessment.

5.2.5. Department of Defence consultation

NGH initially reached out to the Department of Defence in May 2025 via email. Both NGH and the Applicant have continued correspondence with the Department of Defence throughout the scoping phase.

A meeting with the Department of Defence occurred in December 2025. The Department of Defence raised key concerns about the siting of Project infrastructure, as well as construction activities within the buffer zone, noting experiences where similar electrical infrastructure projects (solar farms) have interfered with the operation of communications facilities. The Department of Defence requested a high level of detail to demonstrate that the Project will not impact the operation of their communications facility.

Consultation with the Department of Defence will continue throughout the EIS phase.

5.3. Key issues

While overall community sentiment was neutral during the Scoping phase, engagement to date indicates that the Narrandera community and key stakeholders hold a genuine interest and a supportive outlook towards the Project. Across all engagement channels, stakeholders demonstrated a constructive and informed approach, seeking clarity around the Project's development details, local benefit opportunities, environmental management procedures, and land use compatibility. Many stakeholders also recognised the positive potential for economic benefits from renewable energy in the region

Concerns when raised were focused on ensuring that infrastructure, amenity, and environmental factors are appropriately managed throughout the process. When concerns were expressed, the community consistently demonstrated an understanding of the SSD assessment and renewable energy development processes. This knowledge allowed for constructive conversations about Project details, with community members requesting continued transparent communication and regular planning updates. Overall, the engagement process has provided valuable insights into community priorities and expectations, with the Project team committed to maintaining open, ongoing dialogue as planning progresses.

5.4. Future engagement activities

Future engagement activities for the EIS will continue to align with the Engagement Guidelines. Specifically, this continuation of engagement would include:

- Engage with DPHI to further discuss the likely expectations for engagement, impact analysis/mitigation and community benefit planning required in the EIS stage.
- Share decisions on mitigations with the non-associated sensitive receivers, NSC, First Nations Groups, and the wider community

- Continue attempts to engage and foster relationships with the Narrandera First Nations community.
- Be open and transparent with stakeholders and be committed to share information about the Project throughout the entire planning process.
- Work proactively to develop strong relationships with neighbours, residents, and community members.
- Mitigate impacts, continue discussions regarding VPA with NSC and deliver a sophisticated communications and engagement program that engages with the wider community.

5.4.1. EIS exhibition and submissions report

Once the EIS is completed and submitted to DPHI, the report will be placed on public exhibition for a minimum of 30 days, mandated by the EP&A Act. During the exhibition period, government agencies and the community (both individuals and organisations) will have the option to make a written submission to the DPHI for consideration in its assessment of the project. Each submission can either be in support, objection or a general comment about the EIS.

Once all the submissions are received, the Applicant prepares a Submissions Report that addresses the submissions. If any significant changes to the Project occur following the consideration of submissions, then an Amendment Report would also be submitted. The Amendment Report outlines all the changes from the EIS to the revised Project and updates environmental impact assessments where appropriate.

6. Environmental assessment

The environmental matters below are considered the key issues requiring investigation in the detailed EIS stage. Matters that require no further assessment are also stated in Section 6.13.

6.1. Land use

6.1.1. Existing environment

Geology and soils

The Subject Land is located within the Riverina Interim Biogeographical Regionalisation for Australia (IBRA) region and the Narrandera IBRA subregion. The bioregion has a persistent dry semi-arid climate, characterised by hot summers and cool winters. Annual rainfall more consistently occurs in the winter months, though rainfall is unpredictable with drought periods not unusual. (OEH, 2025).

The Riverina bioregion covers the alluvial fans of the Lachlan, Murrumbidgee and Murray Rivers, with overlapping, low gradient alluvial fans. The bioregion is dominated by river channels, floodplains, backplains, swamps, lakes and lunettes that are all of Quaternary age. Discharge from past and current streams control sediment deposition, soils, and vegetation. Red-brown and grey clays and calcareous, sandy soils feature throughout the bioregion (OEH, 2025). Lake beds are predominantly grey clays. Most lakes have well-formed sandy beaches composed of fine cemented quartz sand with some layers of pelleted clay.

There is a data gap for the existing soil landscapes across the Subject Land, with a search of the NSW state eSPADE site having no information for the soil landscape. Soils within the Subject Land are mapped as comprising of Vertosols, Chromosols and Kurosols, as per the Australian Soil Classification (ASC) (NSW DPHI, 2025), which are commonly found in agricultural landscapes, and are important for cropping and grazing activities. However, this would be investigated in greater detail and verified during the EIS.

A portion of the southern section of the Subject Land is mapped as containing potential saline soils, with a previous soil profile report noting salting was evident (eSPADE, 1992). The Subject Land is not mapped as containing Acid Sulfate Soils.

Land use

Land use in the Subject Land is predominantly mapped as cropping as per the NSW statewide land use map (refer to Figure 6-1), with other land uses including grazing native vegetation, grazing modified pastures, managed resource protection and residential and farm infrastructure. The Subject Land is currently used for sheep grazing and fodder / grazing cropping. The land use surrounding the Subject Land is predominantly cropping, with areas of grazing native vegetation, grazing modified pastures, irrigated cropping and environmental forest plantation.

The Subject Land falls within the Land and Soil Capability (LSC) Assessment coarse statewide mapping as predominantly Class 4 (approximately 920ha) with a small area of Class 3 (approximately 155ha) (refer to Figure 6-2). The surrounding area is predominantly coarsely mapped as LSC Class 3, 4 and 5, with the more

productive Class 3 land (approximately 206,555ha) and Class 4 land (approximately 32,824ha) being mapped within the Narrandera LGA.

Given the finite and largely reversible nature of the Project and the availability of Class 3 and 4 land within the area, it is unlikely to lead to fragmentation of the mapped LSC with the surrounding landscape.

LSC Class 4 is moderately capable land that is capable of a variety of low-impact land uses, with moderate to high limitation for high-impact land uses. This restricts land management options for land uses such as cropping, high intensity grazing and horticulture. These limitations can only be managed by specialised management practices.

LSC Class 3 is highly capable land that is capable of sustaining high-impact land uses, such as cropping, utilising more intensive, readily available and widely accepted management practices (NSW OEH, 2012). careful management of limitations is required for cropping and intensive grazing to avoid land and environmental degradation.

The Subject Land is not mapped as containing Biophysical Strategic Agricultural Land (BSAL). BSAL refers to land with higher quality soil and water resources that have the potential to sustain high levels of agricultural productivity. (NSW Government, 2025). BSAL is identified and mapped to ensure its protection from potential harmful activities.

The Subject Land is also not mapped State Significant Agricultural Land (SSAL) as per the draft SSAL mapping (NSW DPI, 2025). The closest mapped SSAL is directly south of Subject Land, adjacent to Kangaroo Plains Road. The intention of mapping SSAL is to provide information to planning authorities, land holders and development applicants about the location of the best agricultural land in the state.

There is no active exploration licences mapped across the Subject Land (MinView, 2025), and the Project is not located on mine subsidence prone land.

Contamination

A search of the Section 58 and 60 of the *Contaminated Land Act 1997* (CLM Act) (NSW EPA, 2025) in July 2025 found two current sites listed for the Narrandera LGA. Neither site is within 4km of the Subject Land.

There are no listed sites on the National Pollution Inventory within or in close proximity of the Subject Land. The closest listed site is the Milbrae Strontian Quarry located at Strontian Road, Gillenbah approximately 7.02km northeast of the Subject Land.

There is no Naturally Occurring Asbestos mapped across the Subject Land

The Subject Land and surrounding land have been historically utilised for agricultural activities, specifically grazing and in areas cropping. In addition to this, a 330kV transmission line transects the southern portion of the Subject Land. Agricultural activities are listed as potentially contaminating land use activities within Table 1 of the Managing Land Contamination Planning Guidelines (EPA, 1998). Therefore, a Preliminary Site Investigation (PSI) including preliminary soil sampling is required to determine if there is potential for soil contamination within the site.

The Subject Land is located within the Morundah Defence Communications Facility buffer. A search of the national Defence Unexploded Ordnance map identified no potential areas of unexploded ordnance within proximity to the Subject Land (Australian Defence, 2025). The closest mapped site is approximately 27km southwest of the Subject Land.

As such, there is low potential for contamination through activities, including unexploded ordnance.

Defence

As detailed above, the Subject Land is located within the Morundah Defence Communications buffer.

6.1.2. Issues for consideration

Geology and soils

Soil impacts generally are considered low and easily managed with erosion and sediment controls, and solar array layout designs. Batteries and substations, and other structures requiring concrete footings generally require only a small proportion of the total Subject land.

A soil survey will be undertaken to verify the actual geology and LSC classes onsite. This will inform the requirements for the Agricultural Impact Assessment and will assist to develop measures to mitigate and minimise impacts.

Land use

The Project would involve some earthworks and ground disturbance for access tracks and infrastructure, as well as piling for the PV arrays. This would be limited to the Subject Land and access point. As much as possible, the intention will be to retain stable pasture beneath the arrays.

The impact of the Project on all adjacent land uses, such as residences, cropping areas, grazing areas, would be assessed in detail in the EIS as a Land Use Conflict Risk Assessment (LUCRA).

As detailed above, the Subject Land is predominately mapped as Class 4 LSC.

Appendix A of the Large-Scale Solar Energy Guidelines (Department of Planning and Environment, 2022) state LSC verification is required for Projects located on or adjacent to important agricultural land, or located on moderate capability land (LSC class 4). A 'level 3 – detailed' Agricultural Impact Assessment is required where solar energy projects are proposed on land verified as LSC Class 3.

The LSC class currently has not been verified for the site, however avoidance of high capability land is possible. An Agricultural Impact Assessment will be completed in the EIS appropriate to the verified LSC class.

The objectives of the Agricultural Impact Assessment are to:

- Describe project impacts on identified agricultural lands including, but not limited to, potential weeds, pests, dust, bushfire, livestock, crop production
- Consider impacts to the agricultural productivity of the site
- Consider project potential to permanently remove agricultural land and/or fragment or displace existing agricultural industries
- Consider cumulative impacts of multiple solar energy projects on agriculture in the region

The Agricultural Impact Assessment will follow the requirements included in Appendix A of the *Large-Scale Solar Energy Guideline* (Department of Planning and Environment, 2022). The Agricultural Impact

Assessment will identify mitigation measures appropriate to the sensitivity of the site's soils and solar development impact.

The baseline soil surveys undertaken for the Agricultural Impact Assessment will be referenced when considering the final mitigation measures for soils, contamination, and erosion. Land and soil classification verification would be undertaken due to the potential presence of Class 3 and 4 land on the Subject Land.

As mentioned above, continuation of sheep grazing would help limit the fragmentation of agricultural land across the Subject Land and the broader region during operation and after decommissioning of the Project, as the land remains as active agricultural land.

Project specific commitment to soil and land use may include soil amelioration, nutrient analysis and rehabilitation across the lifespan of the Project, to be advised by the Agricultural Impact Assessment and baseline soil surveys. Continuation of existing sheep grazing over the Subject Land during operation of the Project would be investigated further as an appropriate solution for ground cover management.

Contamination

As required under Chapter 4 of the State Environmental Planning Policy (Resilience and Hazards) 2021, an assessment to determine the potential for land contamination is required.

A Preliminary Site Investigation with supplementary sampling would be undertaken to determine whether previous land uses have led to land contamination within the Subject Land.

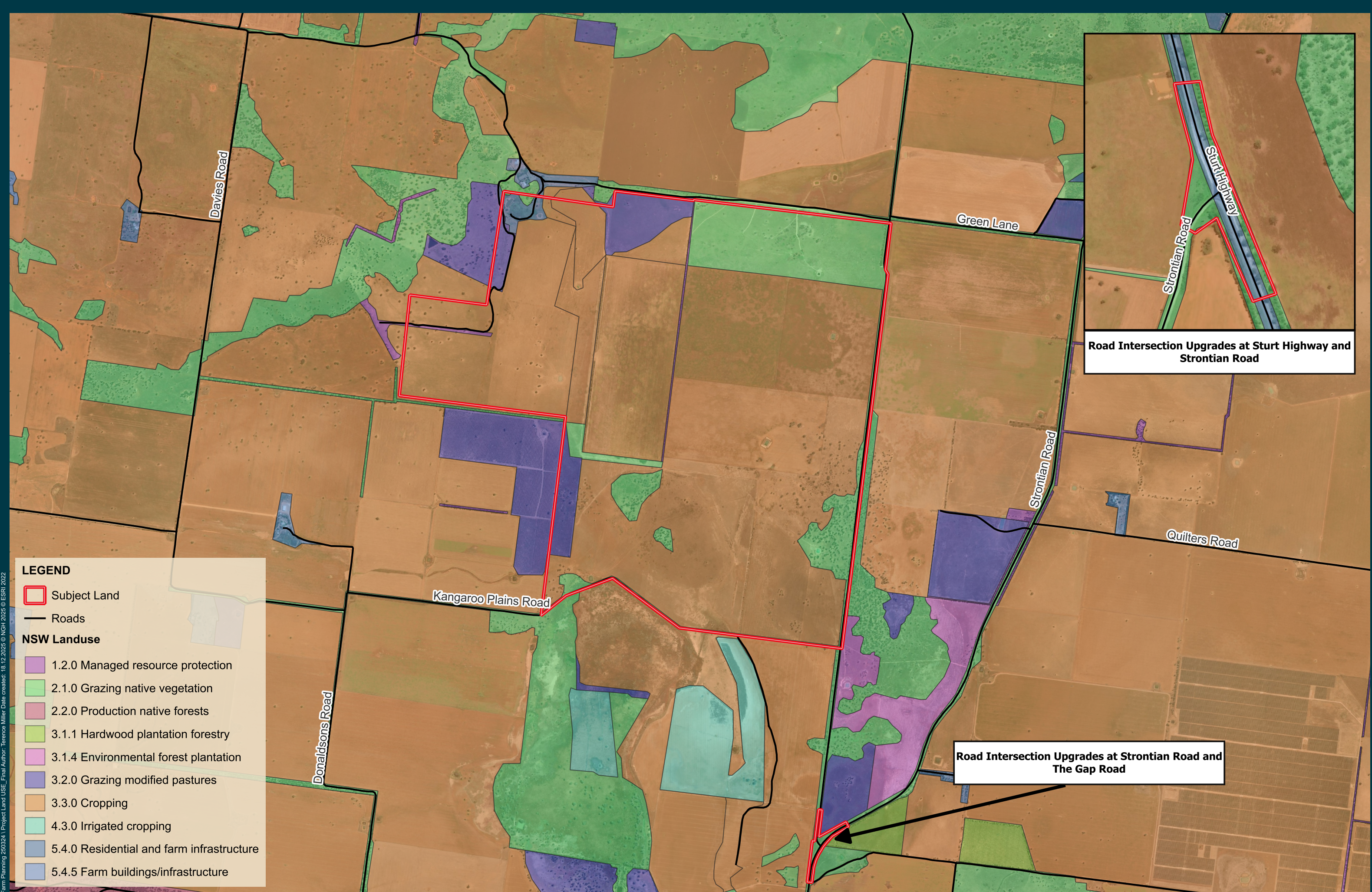
Depending on the findings of the assessment, further intrusive sampling may be required to identify any potential contaminants of concern present within the Subject Land and measures for decontamination.

Defence

As detailed within Section 4, consultation and confirmation that the Project will not adversely affect the optimum operation capacity of the Defence facility is required with the Department of Defence.

Consultation with the Commonwealth Department of Defence commenced early in the Scoping Phase and will continue during the EIS (refer Section 5 for further details).

Ref: 260061_Currajong Solar Farm Planning 260324_1 Project Land Use_Final Author: Terence Miller Date created: 18.12.2025 © NGH 2025



LEGEND

Subject Land

Roads

NSW Landuse

1.2.0 Managed resource protection

2.1.0 Grazing native vegetation

2.2.0 Production native forests

3.1.1 Hardwood plantation forestry

3.1.4 Environmental forest plantation

3.2.0 Grazing modified pastures

3.3.0 Cropping

4.3.0 Irrigated cropping

5.4.0 Residential and farm infrastructure

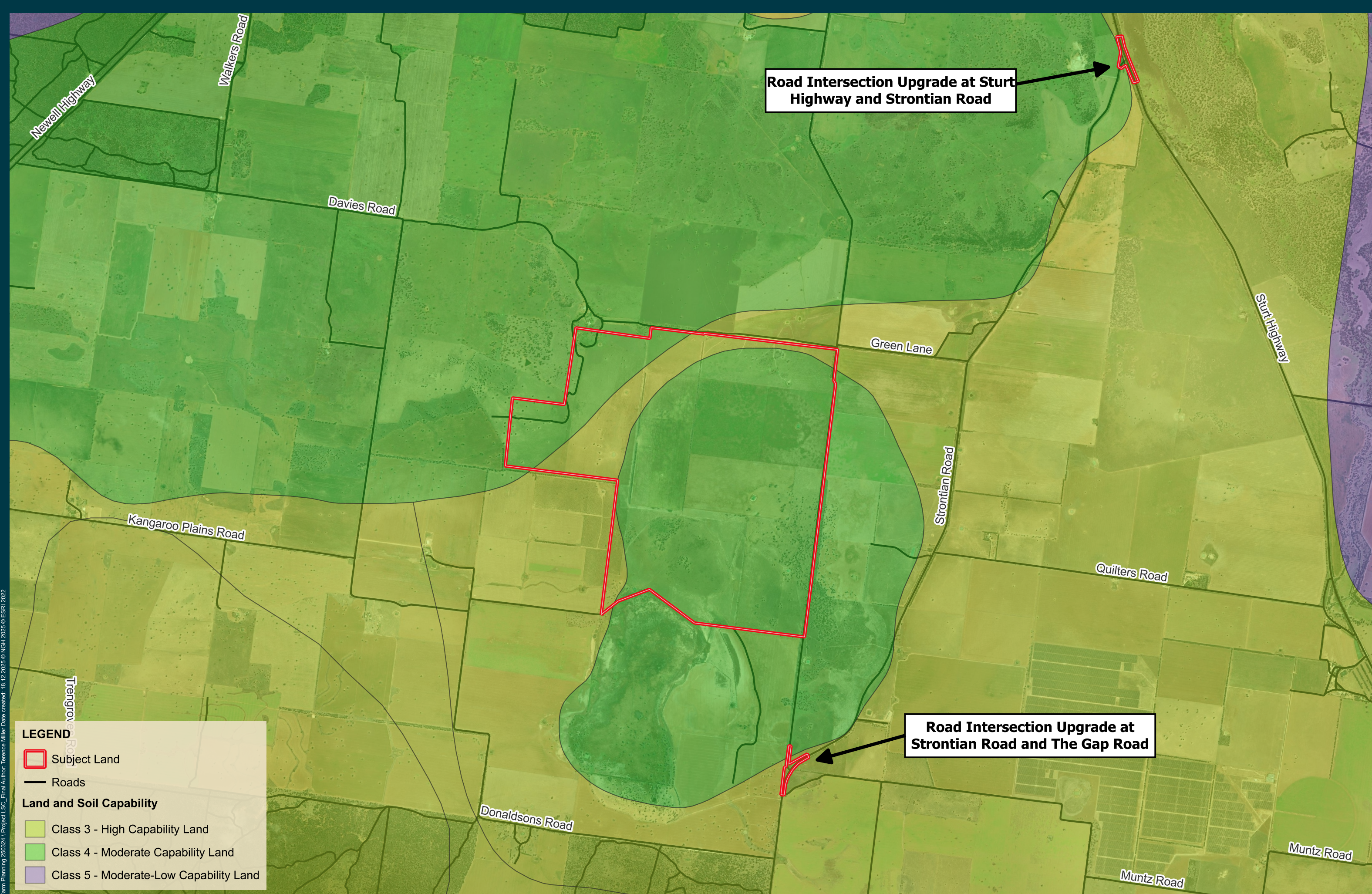
5.4.5 Farm buildings/infrastructure

Datum: GDA2020 / MGA Zone 55

0

1

2 km



Datum: GDA2020 / MGA Zone 55



Narrandera Solar Farm
Figure 6-2 Land & Soil Capabilty Mapping

6.2. Landscape and visual amenity

A Preliminary Visual Impact Assessment (PVIA) was prepared by Moir Landscape Architecture Pty Ltd (Moir). in accordance with *Technical Supplement – Landscape and Visual Impact Assessment, Large-Scale Solar Energy Guideline August 2022* (DPE, 2022). The PVIA is attached as Appendix E of this Scoping Report.

6.2.1. Existing environment

Under the Technical Supplement, key public viewpoints within 2.5km of the project need to be identified and private viewpoints (residences) within 4km. A viewshed analysis was undertaken to identify receivers with visibility of the Project using a 5m digital elevation model, receiver height of 1.5m and an indicative infrastructure layout height of 6.5m (refer to Figure 6-3).

The viewshed analysis is a preliminary assessment tool based on a 'bare earth scenario' and does not consider existing vegetation or other mitigating factors that may filter or screen views. It therefore represents a worst-case visual scenario at this early stage.

Community consultation in regard to landscape and visual amenity

The Applicant conducted an online community survey to gather feedback on the Project. The survey was open from 10 October 2025 to 31 October 2025 (three working weeks) and received three responses. The top concerns identified were: (1) traffic, (2) noise/fire/property insurance, and (3) impacts on natural areas or habitats.

While some nearby residents made general enquiries about visual impacts during these activities, no stakeholders expressed significant concern.

Public viewpoints on roads or railways within 2.5km

A total of 12 public viewpoints were selected to represent roads and rail receivers at this preliminary stage within 2.5km. These include:

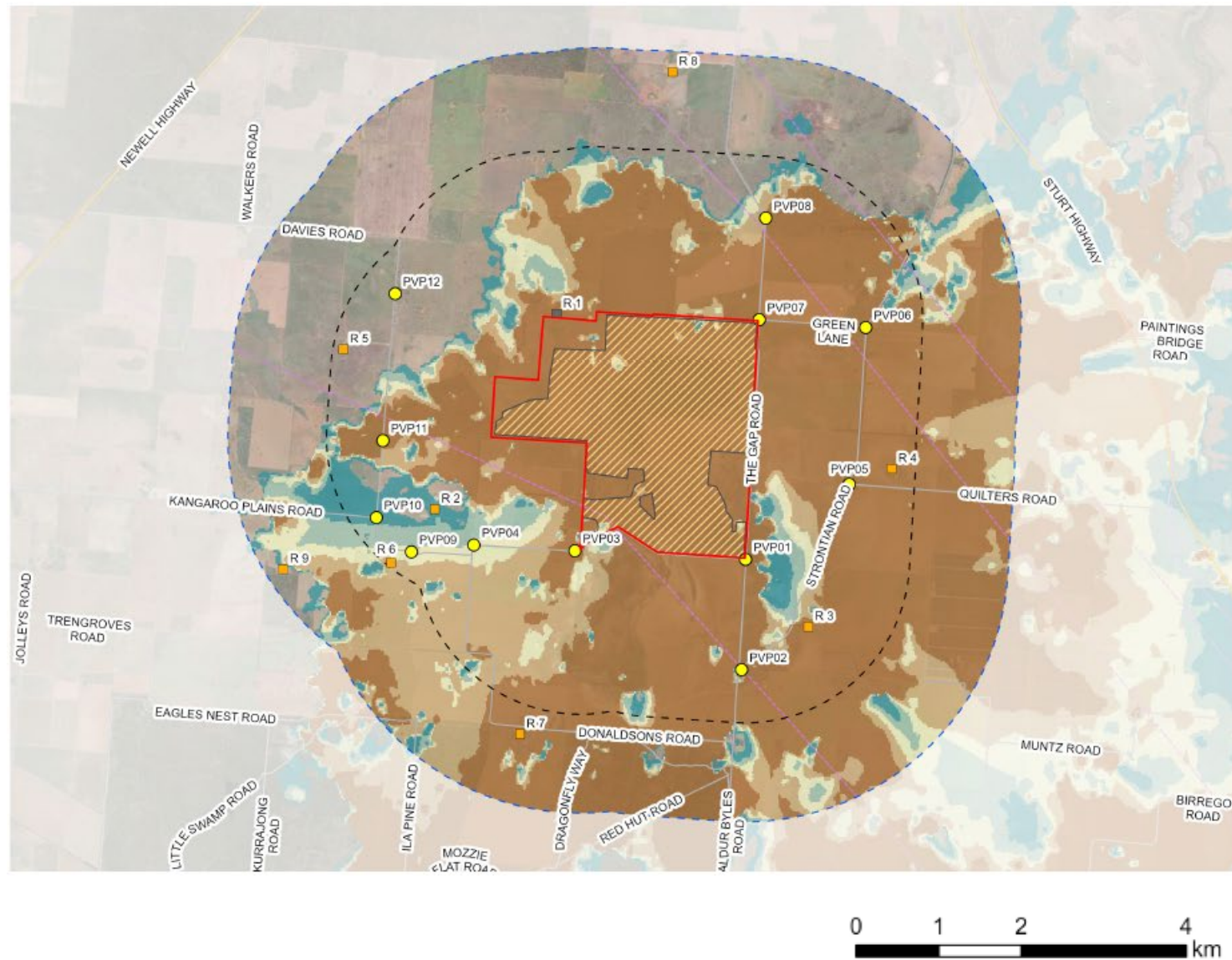
- Strontian Road x3
- The Gap Road x3
- Kangaroo Plains Road x4
- Davies Road x2

Representative viewpoint locations were selected for roads identified within the 2.5km visual line from the Project, with regards to the viewshed mapping to represent the worst-case scenario views. These viewpoints will be confirmed during the fieldwork component during the EIS phase.

Private viewpoints within 4km

The preliminary stage of identifying non-associated dwellings involves a desktop analysis of potential receiver locations, involving a conservative estimate of dwelling locations. Subsequent ground truthing exercises will be undertaken during the EIS phase to accurately confirm the nature and occupancy of these identified locations, refining the quantity of non-associated dwellings requiring further assessment.

A preliminary assessment has identified 8 non-associated dwellings within a 4km visual line of the Subject Land.



Viewshed Map

LEGEND

- Project Area
- Indicative Infrastructure Layout
- Public Viewpoint Locations
- Non-Associated Dwellings
- Associated Dwellings
- 2.5km from Project Site
- 4km from Project Site
- Local Government Area
- Existing Transmission Line
- Highways
- Major Roads
- Roads

VIEWSHED LEGEND

- 1 - 20% of the Project visible
- 21 - 40% of the Project visible
- 41 - 60% of the Project visible
- 61 - 80% of the Project visible
- 81 - 100% of the Project visible

Figure 6-3 PVIA Viewshed Analysis (Source: Moir, 2025)

6.2.2. Issues for consideration

Based on the preliminary assessment, the following viewpoints require intermediate assessment in the EIS phase (refer to Figure 6-3):

- 8 non-associated dwellings within a 4km
 - Five are likely to have a theoretical line of sight to the Project.
 - All non-associated dwellings resulted in a low visual impact rating and therefore requiring no further assessment
- 12 public viewpoints within 2.5km
 - One public viewpoint resulted in a moderate visual impact rating due to a high visual magnitude and very high cumulative visual magnitude rating determined, but low visual sensitivity, therefore requiring a further intermediate assessment.
 - All remaining public viewpoints resulted in a low or very low visual impact rating and therefore do not require further assessment.

Due to the topographic character of the surrounding landscape, the Project is expected to be visible to the northeast and southwest. In contrast, natural undulations are likely to limit visibility to the northwest of the Project. Existing vegetation on site would likely further fragment views of the Project from nearby dwellings and road corridors.

A Landscape Character and Visual Impact Assessment (LCVIA) will be prepared in accordance with the Guideline and the Technical Supplement during the EIS phase. During the preparation of the LCVIA, detailed site investigations will be undertaken from areas identified in the preliminary assessment as having potential visibility towards the Project.

The LCVIA will include an assessment of the landscape and visual impact resulting from all associated infrastructure and ancillary structures, and consideration of cumulative impacts of nearby infrastructure. Further assessment will be undertaken to assess potential impacts of glint and glare using industry standard methodology, and night lighting. The cumulative impacts of surrounding renewable energy projects will be assessed as part of the LCVIA to evaluate potential effects on the broader regional landscape character.

On-site and off-site visual landscape mitigation strategies will be developed in response to further assessment and community consultation. The purpose of the mitigation strategies will be to ensure the Project is integrated into the existing landscape and to mitigate identified visual impacts to an acceptable level. There are opportunities within the Subject Land for landscape planting to further ameliorate visual impacts of the Project and will be explored in detail in the EIS phase.

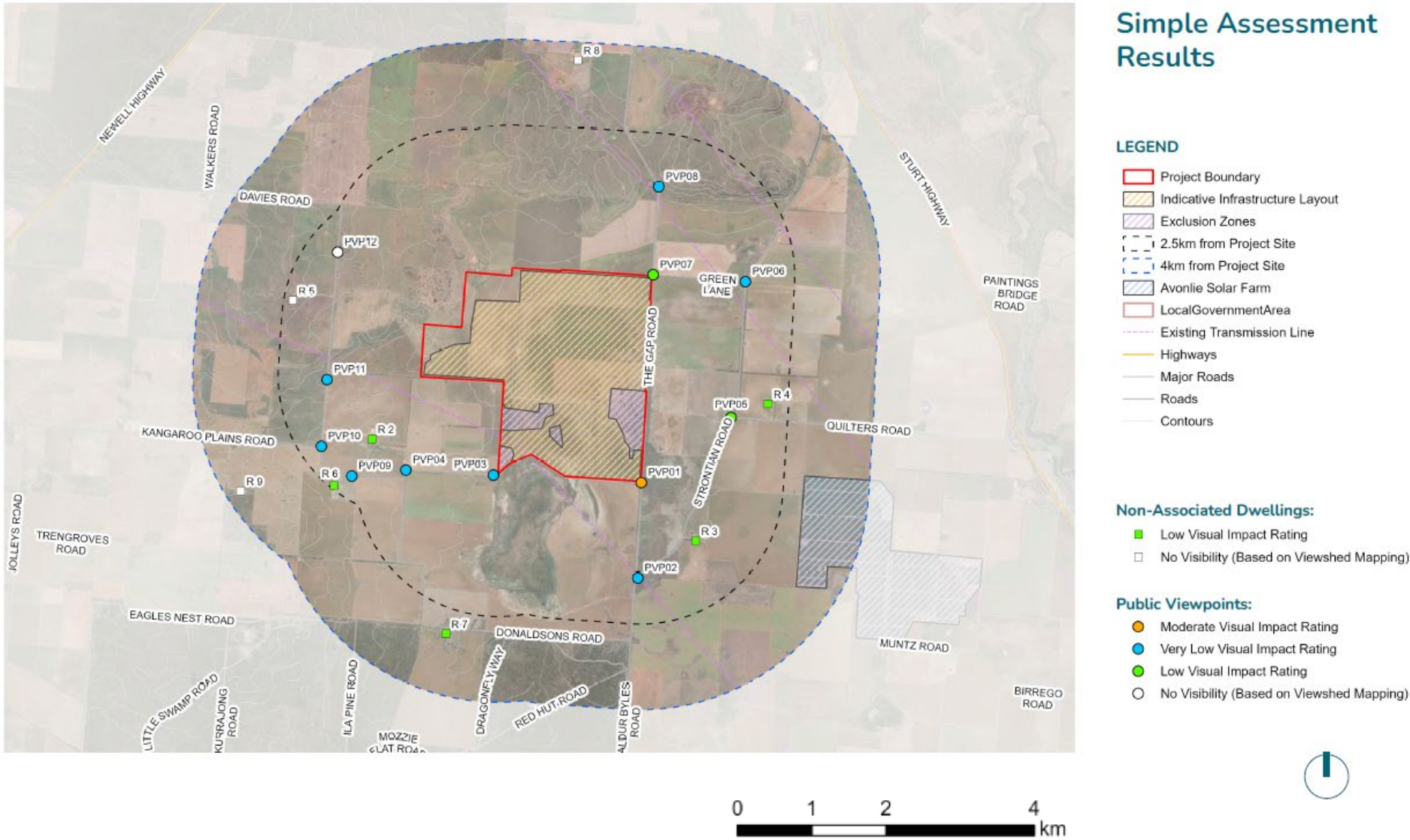


Figure 6-4 Preliminary (simple assessment) findings (Source: Moir, 2025)

6.3. Noise and vibration

6.3.1. Existing environment

The Subject Land is located within a rural setting, subject to regular background noise impacts including farming equipment, and road traffic on surrounding roads. There are 8 existing non-associated receivers within 4km of the Subject Land, and 9 non-associated receivers along one of the proposed haulage routes (Kangaroo Plains Road) as shown in Figure 2-6 in Section 2.2.2 of this Scoping Report. As stated previously, no receivers are identified along the proposed Strontian Road haulage route.

The Subject Land and surrounding locality are generally gently undulating with low relief, however there is a notable ridgeline to the west of the Subject Land which may provide topographical and noise screening to receivers such as R3, R6, R7 and R11.

6.3.2. Issues for consideration

Construction vehicles and machinery use during the construction phase would be most relevant in contributing to noise and vibration impacts.

During the operation of the solar farm, noise levels have the potential to be greater than the existing levels on the Subject Land. Noise would be generated from the solar tracking system, BESS, substation, switchgear and any maintenance works undertaken at the Subject Land.

A construction and operational noise and vibration assessment would be undertaken as part of the EIS to assess the potential noise impacts for nearby receivers. The report would include an assessment of road traffic noise as a qualitative assessment for offsite traffic movements inclusive of a review of existing and future traffic movements for the Project.

The assessment would be undertaken in accordance with the Interim Construction Noise Guideline (Department of Environment & Climate Change, 2009), NSW Noise Policy for Industry (NSW Environment Protection Authority, 2017), Assessing Vibration: A Technical Guideline (Department of Environment and Conservation NSW, 2006) and NSW 'Road Noise Policy' (Department of Environment, Climate Change and Water, 2011).

Noise levels experienced by noise-sensitive receivers would be modelled and any identified exceedances would be considered iteratively, developing mitigation strategies to achieve compliance with the relevant criteria. While some increase is allowable, the Project will aim to avoid significant increases in noise for nearby dwellings.

6.4. Access and traffic

6.4.1. Existing environment

Key project components must be imported for this Project. There are four indicative haulage routes currently under consideration for the Project, although alternative routes may also be explored. The proposed routes will be investigated during the EIS phase to assess their feasibility, including road capacities, clearances, and other logistical details.

Potential haulage routes under consideration are detailed below:

- Port of Newcastle (NSW) – 706.25km
- Port Botany (Sydney) (NSW) – 569.93km
- Port of Melbourne (VIC) – 443.89km
- Glen Waverly (Wilson Transformers) (VIC) – 438.39km

The final haulage route/s would be investigated further in the EIS phase. At this stage, the likely primary haulage route would be from New South Wales. However, all options above would be investigated in more detail.

High-risk heavy vehicles requiring escort would be required for transportation of select substation infrastructure during construction, in addition to heavy and light vehicles.

The Newell Highway is a major inland national highway that serves as a crucial link for both passenger and freight transportation between Queensland and the northern and central regions of NSW.

The Sturt Highway is an essential arterial highway utilised by both passengers and freight transportation which spans approximately 605km connecting New South Wales, Victoria, and South Australia. The route plays a major role in linking major regional centres across state borders.

According to the Transport for NSW 'Combined Higher Mass Limits and Restricted Access Vehicle (TfNSW, 2024), these highways are approved for 19m, 23m and 25m/26m B-double routes. They are also either in 4.6m High Vehicle approved areas or the route is approved for 4.6m High Vehicles. Given the relative equidistant location of the Project between the two major highways (Sturt and Newell), both are being considered for the heavy vehicle routes.

TfNSW's Traffic Volume Viewer (TfNSW, 2024) located on the Newell Highway, north of Morundah, approximately 18.7km southwest of the Subject Land (station ID: 95079) shows a daily average traffic count of 1219, 60% light vehicles and 40% heavy vehicles. Traffic volumes during certain times of the year, such as harvest and sowing would likely experience an increase in traffic volumes.

Two options are being explored for site access points off Kangaroo Plains Road directly onto the Subject Land. Kangaroo Plains Road is accessible via the Sturt Highway and Strontian Road to the east of the Subject Land, and the Newell Highway to the west. Consultation with NSC however indicate an early preference for access off Strontian Road based on previous experience with dust and the already constructed Avonlie Solar Farm, given that it is already sealed.

6.4.2. Issues for consideration

The Project would result in increased traffic on the road network during the construction phase. Activities that would increase the number of vehicles on the road include:

- Construction of the PV array and BESS hardstands for the BESS container units
- Delivery of the key infrastructure components, including PV array components, BESS containers, high voltage AC units, switch gear rooms, control room, cabling, fencing, sand and fill
- Delivery of site personnel.

During operation, low numbers of light vehicle movements are anticipated to deliver operational staff and maintenance crews to site. The occasional heavy vehicle may be utilised to deliver replacement infrastructure components for the Project.

At this stage, it is anticipated that key project infrastructure, such as multiple transformers for both substations, would require high-risk heavy vehicles requiring escort for transportation. This would likely result in multiple ports and facilities being utilised. The most likely haulage routes would be assessed in detail during the EIS phase.

Intersection upgrades, surface upgrades/sealing and other improvements to existing roads may be required to safely access the site. Investigation of impacts to road assets and road safety would require detailed assessment.

A Traffic Impact Assessment (including a haulage assessment) will be undertaken by a specialist in consultation with the road's authorities as part of the EIS to:

- Assess the peak and average traffic generation, including over-dimensional vehicles and construction worker transportation
- Assess the likely transport impacts to the site access route(s), particularly in relation to the capacity and condition of the roads, road safety, bridge assessment and intersection performance
- A cumulative impact assessment of traffic from nearby developments
- Provide details of measures to mitigate and/or manage potential impacts including a schedule of all required road upgrades, road maintenance contributions, and any other traffic control measures, developed in consultation with the relevant road authority.

The Traffic Impact Assessment will consider the following:

- *Austroads Guide to Traffic Management Part 12 and TfNSW supplement*
- *Austroads Guide to Road Design and TfNSW supplements*
- *TfNSW Guide to Traffic Generating Developments*
- *Unsealed Roads Manual: Guidelines to Good Practice (2009).*

Post-approval, a Dilapidation Report would also be required to ensure roads are restored to their pre-construction condition, and management plans, such as traffic and dust suppression plans, would be implemented to minimise disruption during construction.

6.5. Socio and economic impacts

As part of the Scoping phase, a Preliminary Social Impact Assessment (PSIA) is required to be prepared in accordance with the *Social Impact Assessment Guideline* (DPHI, 2025) and the *Technical Supplement – Social Impact Assessment Guideline for State Significant Projects* (DPHI, 2025).

A PSIA has been undertaken by social impact specialists at NGH to gain initial insights into the potential social impacts and benefits of this Project. The findings have been informed by semi-structured interviews, supported by broader engagement with community members and stakeholders through engagement and consultation activities and community surveys to capture local perspectives and context. The full report is included as Appendix D.

6.5.1. Existing environment

The Narrandera Shire LGA spans 4,116 km² and had a population of 5,687 people in 2021. Aboriginal and Torres Strait Islander peoples comprise 12.7% of the local population, and the area forms part of the traditional lands of the Wiradjuri, peoples (Narrandera Shire Council, 2025).

The population of Western Riverina region have decreased since 2018 and is expecting slow population growth slightly lower than the NSW annual increase of 0.95% until 2041 (Department of Regional NSW, 2023b). Narrandera Shire has experienced population decline since 2001 and is projected to decrease over the next 10-15 years (Narrandera Shire Council, 2024). In 2001, the population was 6,478 and decreased to 5,687 in 2021 (-791 people). This negative growth trend is projected to continue. By 2036, the number of residents is predicted to decline with 441 people, which represents a 0.5% decrease over the period (Narrandera Shire Council, 2024).

Demographically, the largest age group in Narrandera was 55 to 64 years old and the median age (44) was higher compared with the NSW average of 39 years in 2021 (Narrandera Shire Council, 2024).

Economically, the Shires total output was \$741million, as of 2022. Rural industry, particularly agriculture, is a key competitive advantage and central to the Shire's economy and employment, contributing with 23% of the total output. In addition to the prominence of the agriculture, Narrandera Shire has significant productive capacity in construction and manufacturing sectors, contributing with 15% and 12% of total output respectively.

Emerging sectors and economic opportunities are in renewable energy, visitor economy, education and training, agricultural value-add industries (e.g. agritourism, processing). The Western Riverina region has seen \$2 billion worth of private investment in renewable energy. In addition, the Shire experienced job growth in education and training (+42) and accommodation and food services (+17) between 2016 – 2021.

The local workforce numbered approximately 2,463 individuals in 2021, a notable increase from the 2016 census number (1,488). Narrandera LGA's unemployment rate has been declining, falling to 5.1% in 2022, however higher than Riverina-Murray regional average of 2.8% (Narrandera Shire Council, 2024). According to the latest Community Strategic Plan, the largest employing industry in 2025 was agriculture, forestry and fishing (20%), health care and social assistance (12%), education and training (11%) (ABS, 2021a; Narrandera Shire Council, 2024, 2025).

The Western Riverina experienced a low housing vacancy trend, below 1%², and rising housing prices between 2018 and 2023 (Department of Regional NSW, 2023b). The Narrandera Shire's Community Strategic Plan (2025) has identified housing affordability and availability a key concern and identified increasing housing stock that is affordable and diverse as a priority to support ageing in place and workforce growth. The LGA's median house prices slowly increased from \$200,000 to \$250,000 between December 2018 - June 2021 (Narrandera Shire Council, 2022). Rental vacancy rate of Gillenbah and Narrandera (postcode 2700) and second largest town centre in Narrandera Shire Leeton (postcode 2705) is relatively low but stable.

6.5.2. Issues for consideration

The PSIA has identified potential social impacts and benefits arising from the Project. The key potential benefits and impacts of this Project and their associated level of assessment to be undertaken as part of the full Social Impact Assessment within the EIS phase of the Project are summarised in Table 6-1 below. Draft recommended enhancement and mitigation measures, directly responding to the identified potential social impacts and benefits are suggested. Further work is required to refine, develop, add to, and test the suggested mitigation measures that are detailed within these overarching management strategies, as part of the Social Impact Assessment to be undertaken within the Project's EIS phase.

Table 6-1 Social impact level of assessment required in the Social Impact Assessment

Potential impact	Stakeholders impacted	Assessment level in full SIA
Livelihoods		
Increased local employment opportunities	- First Nations - Broader community and region	Detailed
Increase in local economic activity	- First Nations - Business groups/small businesses - Broader community and region	Detailed
Potential impacts to property values and insurances	- Broader community - Near neighbours	Standard
Potential increase in training opportunities	- Broader community - TAFE	Detailed
Community		
Potential changes to community cohesion	- Near neighbours - Broader community	Standard

² According to Suburbs Finder (2023), a vacancy rate of 3% is considered healthy, with rates of less than 2% indicating high rental demand and rates above 4%, meaning that there is a stable housing availability.

Potential impact	Stakeholders impacted	Assessment level in full SIA
Increased community investment	▪ Broader community	Detailed
Accessibility		
Increased pressure on housing and accommodation	Broader community and region	Detailed
Increased pressure on social infrastructure and services	▪ Business groups/small businesses ▪ Broader community and region	Standard
Increased traffic on local roads	▪ Near neighbours ▪ Broader community	Detailed
Way of life and health and wellbeing		
Impacts on privacy, peace and enjoyment	▪ Near neighbours	Detailed
Health impacts (air quality, noise)	▪ Near neighbours ▪ Broader community and region	Detailed
Stress and anxiety to those opposing the Project	▪ Near neighbours ▪ Road receivers	Standard
Culture		
Potential damage to Aboriginal cultural assets	▪ First Nations ▪ Broader community and region	Standard
Surroundings		
Perceived increase in fire risk	▪ Near neighbours ▪ Broader community	Detailed
Potential change to landscape character and visual amenity	▪ Near neighbours ▪ Broader community and region	Detailed
Perceived loss of agricultural land	▪ Broader community and region	Minor
Potential environmental impacts	▪ Broader community	Standard

Potential impact	Stakeholders impacted	Assessment level in full SIA
Decision-making systems		
Perceived lack of procedural fairness and exclusion from decision-making	▪ Broader community ▪ Near neighbours	Standard
Increased participation in decision making	▪ Broader community ▪ Near neighbours	Minor

6.6. Hazards – including bushfire

An 'environmental hazard' has the potential to threaten the environment or human health. Hazards may be natural or artificial or result from the interaction between human activity and the natural environment. Hazards relevant to the Project include risks associated with hazardous materials, electromagnetic fields, and fire.

6.6.1. Hazardous Material – issues for consideration

Designated development is a category of development under Part 4 of the *Environmental Planning and Assessment Act 1979* (the Act) that involves a higher level of assessment and scrutiny due to the potential risk it poses to the environment.

The proposed 400MW battery storage system exceeds the 30MW threshold for Designated Development (Schedule 3, Part 2 Section 7 of the Environmental Planning and Assessment Regulation 2021), and as such a Preliminary Hazards Analysis is required.

A Preliminary Hazard Analysis would be prepared by a specialist as part of the EIS in accordance with *Hazardous Industry Planning Advisory Paper No. 6 'Hazard Analysis'* (DoP, 2011a) and *Multi-level Risk Assessment* (DoP, 2011b).

The Preliminary Hazard Analysis would detail the potential hazards and controls to mitigate hazards to ensure the fire prevention and protection systems are adequate to protect the battery storage system. The Engineering, Procurement and Construction contractor and Applicant's approach to managing risks would be guided by the Preliminary Hazard Analysis. The objective of the Preliminary Hazard Analysis and identified mitigation measures would be to minimise the likelihood of occurrence and respond to an event if it occurs to minimise its impact.

A preliminary risk screening will also be completed in accordance with the Resilience and Hazards SEPP (former SEPP 33) to assess the development's potential for significant off-site effects from the storage, handling, or transport of dangerous goods, including identifying hazard classes and quantities, to determine if it's a potentially hazardous or offensive development.

6.6.2. Electromagnetic fields - issues for consideration

Electric and magnetic fields are produced within the vicinity of existing powerlines, such as the existing 330kV transmission line that intersects the lower southeastern portion of the Subject Land. Additional infrastructure proposed within the Project such as inverters, batteries, transformer, connecting powerlines and the substation would produce additional electric and magnetic fields within their vicinity.

The electric and magnetic fields levels associated with the proposed infrastructure would be below the guideline for public exposure and are not expected to have any adverse impact on human health. Standard design provisions are expected to ensure impacts comply with relevant guidelines.

As part of the EIS, an assessment of electromagnetic fields will be undertaken against the *International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields*.

6.6.3. Bushfire – issues for consideration

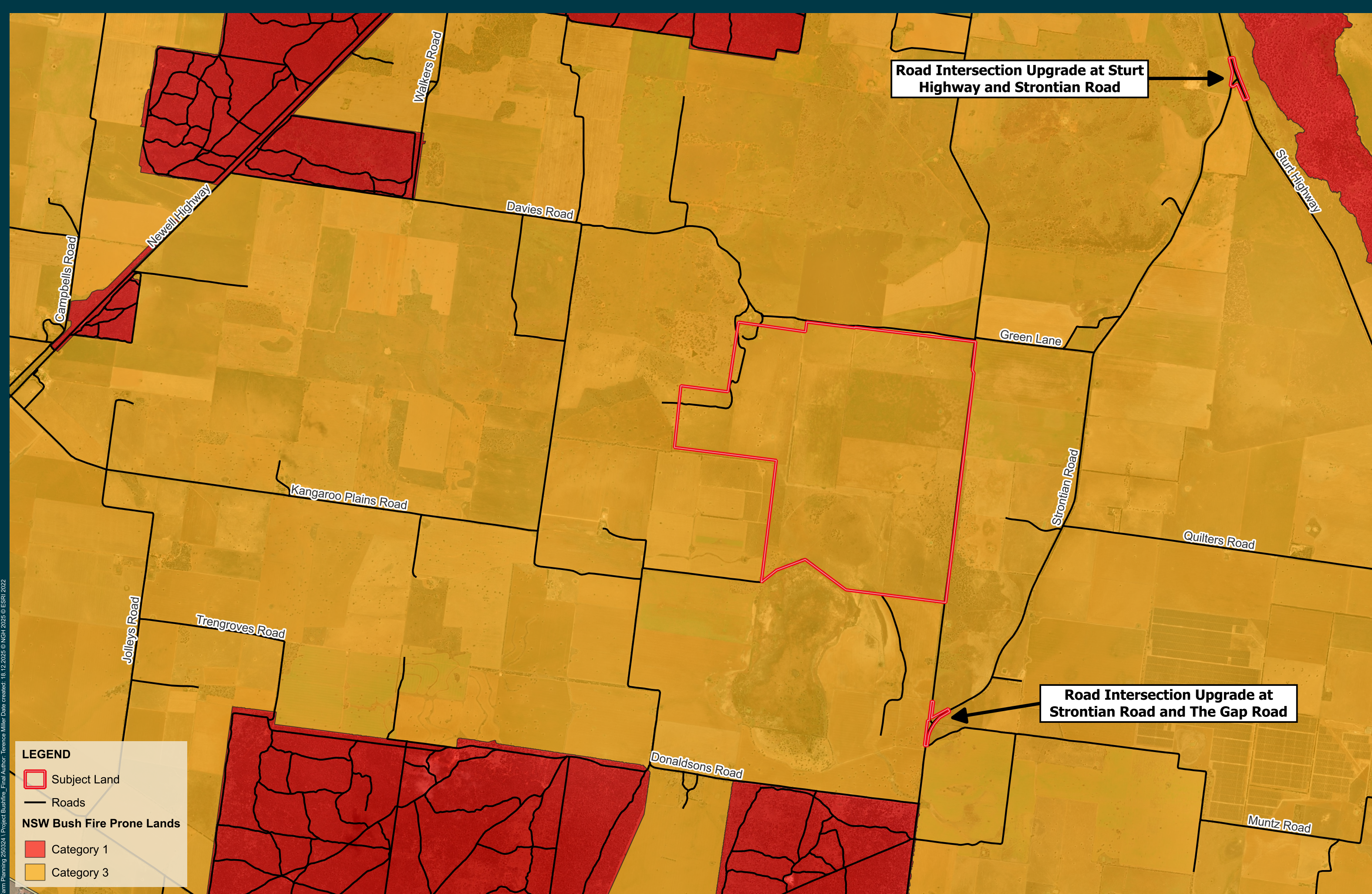
The entirety of the Project Area is mapped as bushfire prone land Category 3 – medium bushfire risk (refer to Figure 6-5). Buckingbong State Forest (2.8km south) and Gillenbah State Forest (3.6km north) are mapped as bushfire prone land Category 1 – high bushfire risk.

As the Subject Land is mapped as bushfire prone land, the EIS would include a standalone Bushfire Assessment Report (BFAR) in accordance with the Rural Fire Services (RFS) Planning for Bushfire Protection 2019 (NSW RFS, 2019) as the key guidance document. The Applicant recognises that RFS are bushfire managers, and these agencies would be engaged in the process of developing bushfire management strategies and management plans.

Details regarding water supply for firefighting and appropriate asset protection management would all be outlined in the BFAR as part of the EIS. The BFAR may include appropriate bushfire protection measures such as:

- Asset protection zone buffers across the site
- Affording buildings and their occupants protection from exposure to a bushfire
- Providing a defensible space to be located around buildings
- Providing appropriate separation between a hazard and buildings
- Ensuring appropriate operational access and egress for emergency service personnel and occupants is available
- Providing ongoing management and maintenance of bushfire management plans
- Ensuring that utility services are adequate to meet the needs of firefighters
- Emergency protocols

Ref: 260061_Curralong Solar Farm Planning 260324_Final Author: Terence Miller Date created: 18.12.2025 © NGH 2022



Datum: GDA2020 / MGA Zone 55



Narrandera Solar Farm
Figure 6-5 Bushfire Prone Land Mapping

6.7. Biodiversity

6.7.1. Approach

The Subject Land and proposed access off Kangaroo Plains Road was investigated utilising the following information sources and data obtained during the initial site assessment on the 12, 13 and 14 August 2025 (two-day equivalent):

The State Vegetation Type Map (SVTM) was used in the desktop assessment to identify potential Plant Community Types (PCTs) inside the Subject Land and Kangaroo Plains Road corridor. The SVTM extent map shows the distribution of the vegetation classification types within the limits of present-day native vegetation cover, across all of NSW.

A Biodiversity Memo was prepared using the above databases and site survey data collected. The Biodiversity Memo is summarised below and attached as Appendix F of this report.

6.7.2. Existing environment

Vegetation

The Project Area is currently and historically used for cropping and grazing. The majority of the Project Area is an exotic dominated grassland. Paddocks were dominated by exotic pasture grasses such as rye grass with some paddocks containing patches of remnant perennial tussock grasses.

Native vegetation consists of small, isolated patches of PCTs, scattered remnant paddock trees and eight narrow strips of planted vegetation. The remnant woodland patches occurred mainly towards the edges of the Subject Land, except in the southern section where River Red Gum woodland patches occur away from the fence line. There was limited mid-storey vegetation in the Subject Land.

Kangaroo Plains Road corridor contained River Red Gum trees, and two patches of planted natives. River Red Gum trees were the most abundant tree species in the south and southeastern section of the Subject Land. Grey Box and Kurrajong were dominant species in the northwestern section, and Weeping Myall occurred in the northeastern and southwestern section of the Subject Land. White Cypress Pines and Buloke were common and usually associated with Grey Box.

Plant Community Types

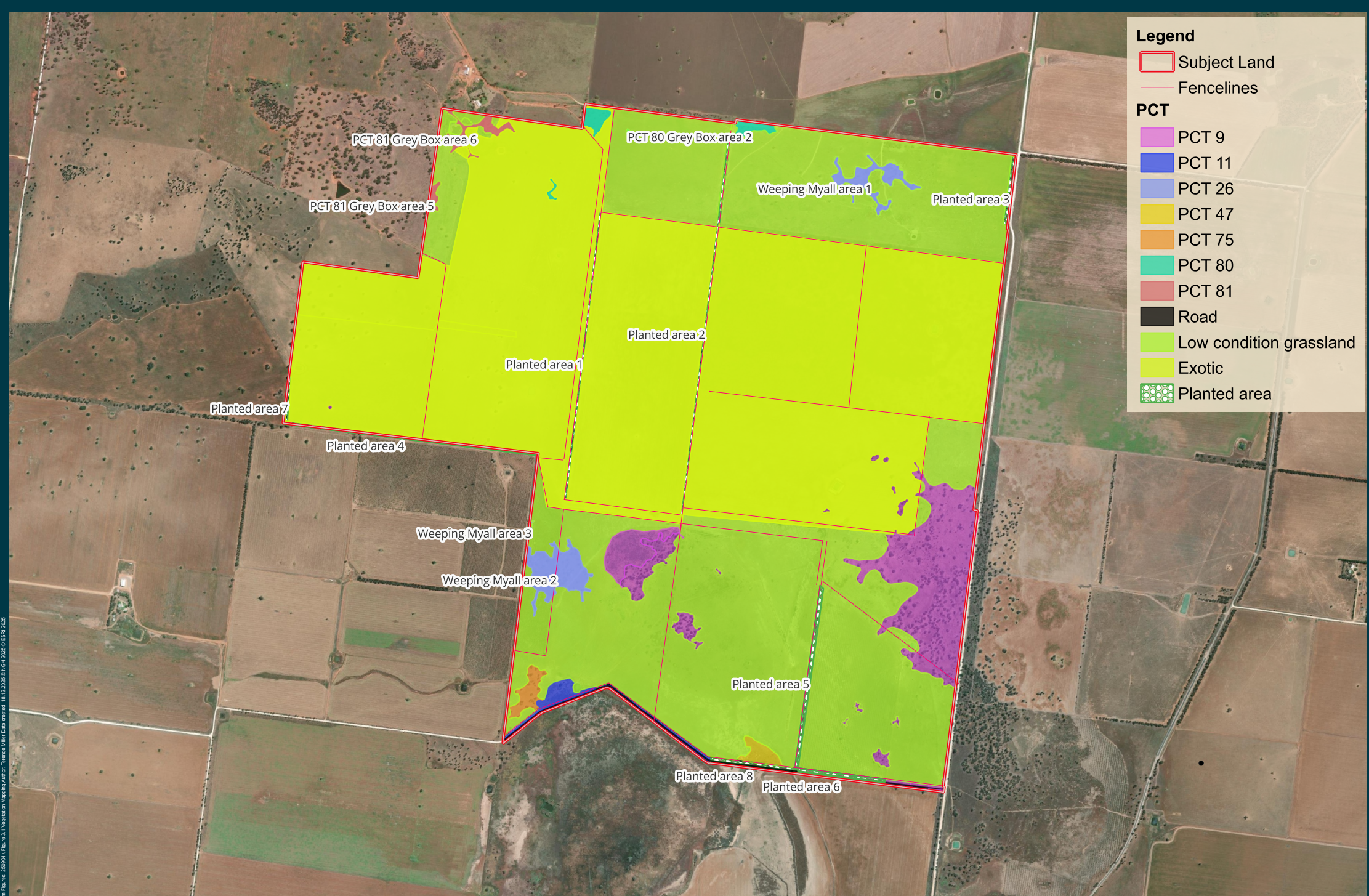
Several PCTs were identified onsite during the site assessment through conducting rapid assessment points across the Subject Land. Species dominance within each stratum, alongside soil types and landscape position were observed to classify the PCT and map vegetation community boundaries. Full floristic vegetation integrity plot surveys may provide additional data that could support or refine the current PCT assignment.

Identified PCTs at this preliminary stage are listed in Table 6-2 and illustrated in Figure 6-6 below.

Table 6-2 PCT preliminary identification and threatened ecological community status

PCT ID	PCT name	Condition zones	Associated TEC status
9	River Red Gum – wallaby grass tall woodland wetland on the outer River Red Gum zone mainly in the Riverina Bioregion	- Moderate - Low	None
11	River Red Gum - Lignum very tall open forest or woodland wetland on floodplains of semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	Moderate	None
26	Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion	Moderate	Listed BC Act, E: <i>Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Penneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions</i> Listed EPBC Act, E: <i>Weeping Myall Woodlands</i>
47	Swamp grassland wetland of the Riverine Plain	Low condition	Listed EPBC Act, CE: <i>The Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains</i>
75	Yellow Box - White Cypress Pine grassy woodland on deep sandy-loam alluvial soils of the eastern Riverina Bioregion and western NSW South Western Slopes Bioregion	Moderate	Listed BC Act, CE: <i>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions</i> Listed EPBC Act, CE: <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived</i>

PCT ID	PCT name	Condition zones	Associated TEC status
			<i>Native Grassland</i>
80	Western Grey Box – White Cypress Pine tall woodland on loam soil on alluvial plains of NSW South Western Slopes Bioregion and Riverina Bioregion	Moderate	Listed BC Act, E: <i>Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions</i> Listed EPBC Act, E: <i>Grey Box (Eucalyptus macrocarpa) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia</i>
81	Western Grey Box – cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion	Moderate	Listed BC Act, E: <i>Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions</i> Listed EPBC Act, E: <i>Grey Box (Eucalyptus macrocarpa) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia</i>



Datum: GDA2020 / MGA Zone 55

Threatened Ecological Communities

Three NSW *Biodiversity Conservation Act 2016* (BC Act) listed Threatened Ecological Communities (TECs) have been determined to be present within the Subject Land and road corridor. The following PCTs listed in Table 6-2 above have been determined to meet the condition threshold for the NSW listed TECs under the NSW BC Act:

- PCT 26
- PCT 75
- PCT 80 and 81.

Four PCTs also have the potential to conform to the Commonwealth EPBC Act TECs. Full floristic vegetation integrity plot surveys would provide additional data to confirm the presence of the EPBC Act listed TECs.

- PCT 26
- PCT 75
- PCT 47
- PCT 80 & 81.

Refer to Figure 6-7 and Figure 6-8 for a map of the TECs within the Subject Land.

Threatened species and terrestrial habitat

Habitat values confirmed to be within the Subject Land include:

- Hollows in living trees and stags (Figure 6-9a).
- Stick nests (Figure 6-9b).
- Woody debris, deadwood, fallen trees (Figure 6-10).
- Scattered trees and wooded vegetation patches providing vegetation connectivity for state and federally listed threatened flora and fauna.
- Rocky outcrops.

No threatened flora or fauna were incidentally observed by NGH ecologists during the site assessment. The Subject Land contains grassy woodland and mature trees, and as such, the presence of hollow bearing trees with suitably sized hollows for a range of threatened species is high. Further surveys would be undertaken to complete a comprehensive hollow bearing tree inventory.

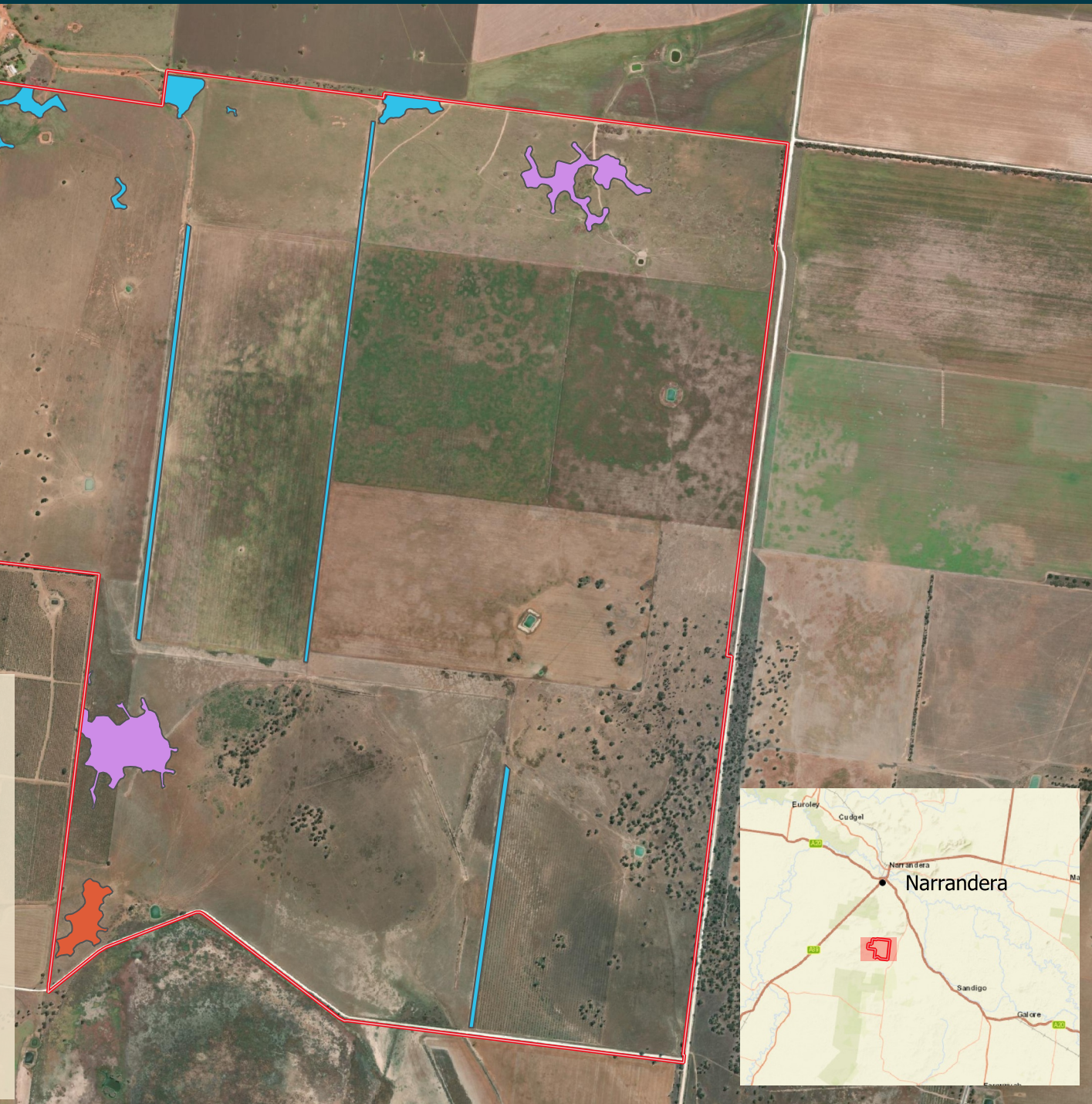
Stick nests were identified during the site visit, some of which are suitable size for threatened raptors such as the Little Eagle. Further surveys are required to complete a comprehensive stick nest survey.

There are fallen timber piles throughout the Subject Land. Fallen timber could be suitable habitat for the threatened Bush-stone Curlew.

The Subject Land occurs within the Western Slopes and Plains Koala Management Area. Foraging trees for the Koala and Glossy Black Cockatoo occur in patches and isolated trees throughout the Subject Land, however neither have been confirmed as present on the Subject Land. Further surveys are required to determine presence.

Ref: 250001_Cumulative Solar Farm Figures 2500041 Figures 3.8 Potential BC Act Threatened Ecological Communities Author: Trenchard Miller Date created: 18.12.2025 © NGH 2025 © ESRU 2025

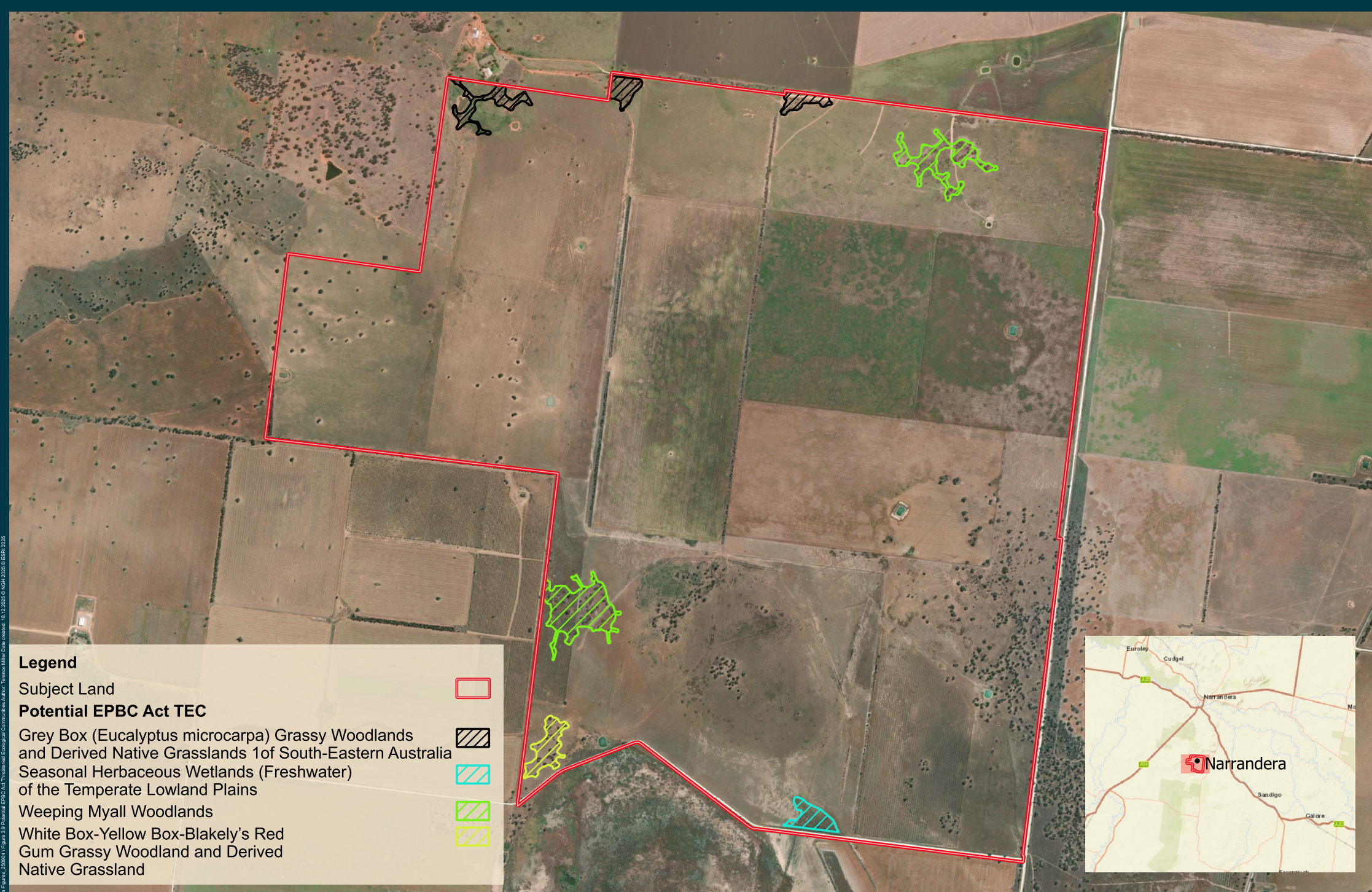
Legend
Subject Land
Potential BC Act TEC
Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Penepplain, Nandewar and Brigalow Belt South Bioregions
Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Penepplain, Murray-Darling Depression, Riverina and NSW South western Slope Bioregions
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions



Narrandera Solar Farm

Figure 6-7 Potential BC Act Threatened Ecological Communities

Ref: 2500901_Cumulative Solar Farm Figures_2509041 | Figure 3.8 Potential EPBC Act Threatened Ecological Communities Author: Terence Miller Date created: 18.12.2025 © NGH 2025 © ESRU 2025



Legend

Subject Land

Potential EPBC Act TEC

Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands 1 of South-Eastern Australia

Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains

Weeping Myall Woodlands

White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

Datum: GDA2020 / MGA Zone 55



Figure 6-9 a) River Red Gum (*Eucalyptus camaldulensis*) with large hollow in the far southeast of the Project Area, b) Stick nest in River Red Gum



Figure 6-10 Fallen timber stacked

Aquatic habitat

Aquatic habitat in the Subject Land consists of one 1st order and one 2nd order Strahler watercourse which occurs in the southern section of the Subject Land. The mapped Strahler streams had no flow at the time of the site investigation. From aerial imagery there are 11 dams placed throughout the Subject Land. The dams observed during the site visit contained no aquatic vegetation and low or no water present. Exotic vegetation occurred on the edge of the dam pictured below (Figure 6-11).

Terrestrial Groundwater Dependent Ecosystem (GDE) mapping (Bureau of Meteorology, 2025) shows low potential GDE occurs near the northern border of the Subject Land where PCT 26, 80 and 81 are currently mapped. In the southern and southeast section of the Subject Land, where River Red Gum occurs, GDE mapping shows these areas as a high potential Terrestrial GDE. There is no Aquatic GDE mapping in the Project Area.

Dams and riparian corridors can provide habitat for threatened amphibians, fish, and bird species.

No other defined waterbodies occur, however there was a patch in the southern section with vegetation indicative of a depression. This area would require further investigation to rule out the presence of a freshwater wetland PCT and any triggers for associated TECs.



Figure 6-11 Dam the far southeast of site with River Red Gums

Serious And Irreversible Impacts (SAIL)

Threatened entities that are most at risk of extinction from development related impacts are listed as a Serious and Irreversible Impact (SAIL) entities (OEH, 2025). An impact can be regarded as serious and

irreversible if it is likely to contribute significantly to the risk of a threatened species (including endangered populations) or ecological community becoming extinct.

The SAI species with potential to occur within the Subject Land and Kangaroo Plains Road corridor are detailed in Table 6-3. Targeted surveys are required for threatened species to determine if they are present within the Subject Land. A review of the BAM Calculator after detailed floristic surveys may produce additional species at risk of SAI to those listed below.

Table 6-3 SAI entities predicted by the preliminary BAM-C to occur within the Subject Land.

Name	Type	Credit type
<i>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions</i>	TEC	Ecosystem
Sloane's Froglet	Fauna	Species
Claypan Daisy	Flora	Species
Oaklands Diuris (Oaklands, D.L. Jones 5380)	Flora	species
Sand-hill Spider Orchid	Flora	species

Category 1 – Exempt Land

In NSW, development on Native Vegetation Regulatory map (NVR map) Category 1 – Exempt Land may not require biodiversity assessment within the NSW Biodiversity Offsets Scheme (BOS) or may have reduced biodiversity assessment requirements (DPE, 2023). Scattered paddock trees within the Category 1 - Exempt Land can also be assessed by the streamlined scattered tree assessment module.

The areas mapped as low-condition grassland and exotic in the Subject Land (Figure 6-6) showed signs of extensive agricultural use, including cropping and/or grazing. On the Draft NVR Map, most of these areas are mapped as Category 1 (NSW Department of Climate Change Energy and Water, 2025). Despite being dominated by agricultural species and weeds, the paddocks classify as low-condition grassland due to the presence of unidentified tussock grass and a dominance of exotic grasses.

6.7.3. Issues for consideration

Biodiversity Development Assessment Report

As the Project is classified as SSD, the BOS will be triggered, and a Biodiversity Development Assessment Report (BDAR) will be required as part of the EIS phase.

An assessment of the biodiversity values and the likely biodiversity impacts of the Project, in accordance with Section 7.9 of the BC Act, having regard to the BAM will be documented in the BDAR.

Further detailed ecological surveys, investigation and assessment would be undertaken in accordance with the BAM and reported in the BDAR. Consultation with the Regional Delivery for Conservation Programs and Heritage and Regulation Group (CPHR) will be reported in the BDAR. Further consideration of avoidance, minimisation of impact and mitigation measures would be developed where appropriate and reported in the BDAR.

A credit obligation is anticipated to be generated, which may be retired through various options including payment into the Biodiversity Conservation Fund, establishment of a stewardship site to generate credits or the purchase of credits from the Biodiversity Credits Market.

Category 1 – Exempt Land (Land Category Assessment)

Until the Draft NVR map is finalised, a Land Category Assessment (LCA) is required to be prepared to categorise the paddocks within the Subject Land. The LCA will demonstrate a history of cleared land and agricultural use and satisfy the criteria for Category 1 - Exempt Land under section 60H of the *Local Land Services Act 2013* (LLS Act).

The LCA is likely to reduce the biodiversity assessment effort, including targeted survey requirements. The LCA will be undertaken with the validation of vegetation community mapping, completed as first stage of the preparation of the BDAR.

Serious and Irreversible Impacts

Entities at risk of SAIL are assessed under the NSW BC Act using the BAM within the BDAR. SAIL impacts must be taken into consideration, and the Project must minimise or endeavour to eliminate impacts to SAIL entities. One TEC, one fauna species and three flora species, which may occur within the Project Area, are listed as SAIL entities. Further SAIL entities may be determined following further habitat evaluation or BAM-C assessment.

Referral under the EPBC Act

At this stage, the potential impacts to EPBC-listed entities remain unclear. Additional targeted species surveys, along with validation of EPBC-listed TECs will be required as part of the EIS, to confirm their presence and extent. The outcomes of these surveys will determine whether an EPBC referral is warranted

6.8. Aboriginal heritage

6.8.1. Approach

This section is intended to provide initial insight into the Project's possible impacts on Aboriginal objects and identify appropriate assessment pathways based on industry codes of practice which set guidelines for assessing Aboriginal Heritage in NSW and the relevant legislation requirements. As part of this approach appropriate database searches were undertaken for this desktop preliminary assessment.

In NSW, Aboriginal heritage is principally protected by two legislative acts:

- *National Parks and Wildlife Act 1974 (NSW) (NPW Act)* and its subordinate legislation, the *National Parks and Wildlife Regulation 2019*; and
- *Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act)*.

All Aboriginal objects have blanket protection under the NPW Act. An Aboriginal object may not be harmed (including movement) without approval from Heritage NSW.

6.8.2. Existing Environment

A search of the Register of Native Title Claims on the 20 August 2025 identified that no determined Native Title exists over the Subject Land and that there are no active Native Title claims across the Subject Land.

A search of relevant heritage registers for Aboriginal sites and places provides an indication of the presence of previously recorded sites. A search of the NSW State Heritage Inventory database was conducted in June 2025 which indicated that there are no previously recorded Aboriginal Places listed under the NPW Act within the Narrandera LGA.

An extensive search of the Aboriginal Heritage Information Management System (AHIMS) was also undertaken on the 26 June 2025 which identified 91 previously recorded Aboriginal sites and no recorded Aboriginal Places within an approximately 900km² area focused on the Subject Land (AHIMS Client Service ID (1017772)). NGH have previously undertaken an Aboriginal Cultural Heritage Assessment approximately 2.8km east at Avonlie Solar Farm. During the assessment phase of this project, four artefact scatters, one culturally modified tree and 64 isolated artefacts were recorded.

The results of the AHIMS search are summarised in Table 6-4 below and shown in Figure 6-12. No previously recorded AHIMS sites are located within the Subject Land. The closest previously recorded site is located 2.4km from the Subject Land. The main site types recorded to date within the AHIMS search area are modified trees (n=44; 48.3%) and artefacts (n=29; 31.8%). The absence of sites within the Subject Land does not reflect the absence of Aboriginal sites, objects or the potential for sites to occur within that area. A register search only reflects past survey efforts however, as a starting point, the search will indicate whether any previously recorded sites are known within or adjacent to the Subject Land.

Table 6-4 Breakdown of previously recorded Aboriginal sites in the search area.

Site type	Number	%
Modified Tree	44	48.3
Artefact	29	31.8
Hearth	4	4.4
Earth Mound	3	3.3
Earth Mound and Hearth	3	3.3
Shell Midden	2	2.2
Earth Mound, non-human bone and organic material and burial	1	1.1
Earth Mound and Artefact	1	1.1
Conflict	1	1.1
Ceremonial Ring (Stone or Earth)	1	1.1
Artefact and stone quarry	1	1.1
Artefact and burial	1	1.1
Total	91	100%

In addition to the above searches there is a range of landscape features within NSW which are generally accepted to have higher potential to contain Aboriginal objects. It is therefore necessary to consider whether there are landscape features of undisturbed land that may contain Aboriginal objects within the Subject Land. Landforms with increased Aboriginal heritage potential include:

- Areas within 200m of water
- Areas located within a sand dune system
- Areas located on a ridge top, ridge line or headland
- Areas located within 200m below or above a cliff face or
- Areas within 20m of a cave, rock shelter or cave mouth.

Areas within 200m of water is of relevance to the Subject Land. Although not a mapped waterway, there is an ephemeral swamp that has been named “Gum Swamp” on the historical parish maps.

None of the other landforms are particularly relevant to the Subject Land. The landform is generally flat with no variation in the 5m contour data except towards the western boundary and does not meet any of the other landforms that are likely to contain high potential for Aboriginal heritage. There are some slight elevation changes along the western boundary of the Subject Land that have higher potential to contain sites and potential for subsurface archaeological deposits.

There are several native trees located within the Subject Land. Given the prominence of modified trees within the area, there is a high probability that modified trees will be located within the Subject Land.

In addition to this, there is low to moderate potential of finding artefacts within the Subject Land although potential for stone artefacts to occur increases on higher elevations in association with the ephemeral swamp. Based on this assessment there are landscape features within the Subject Land that have potential for Aboriginal objects to occur.

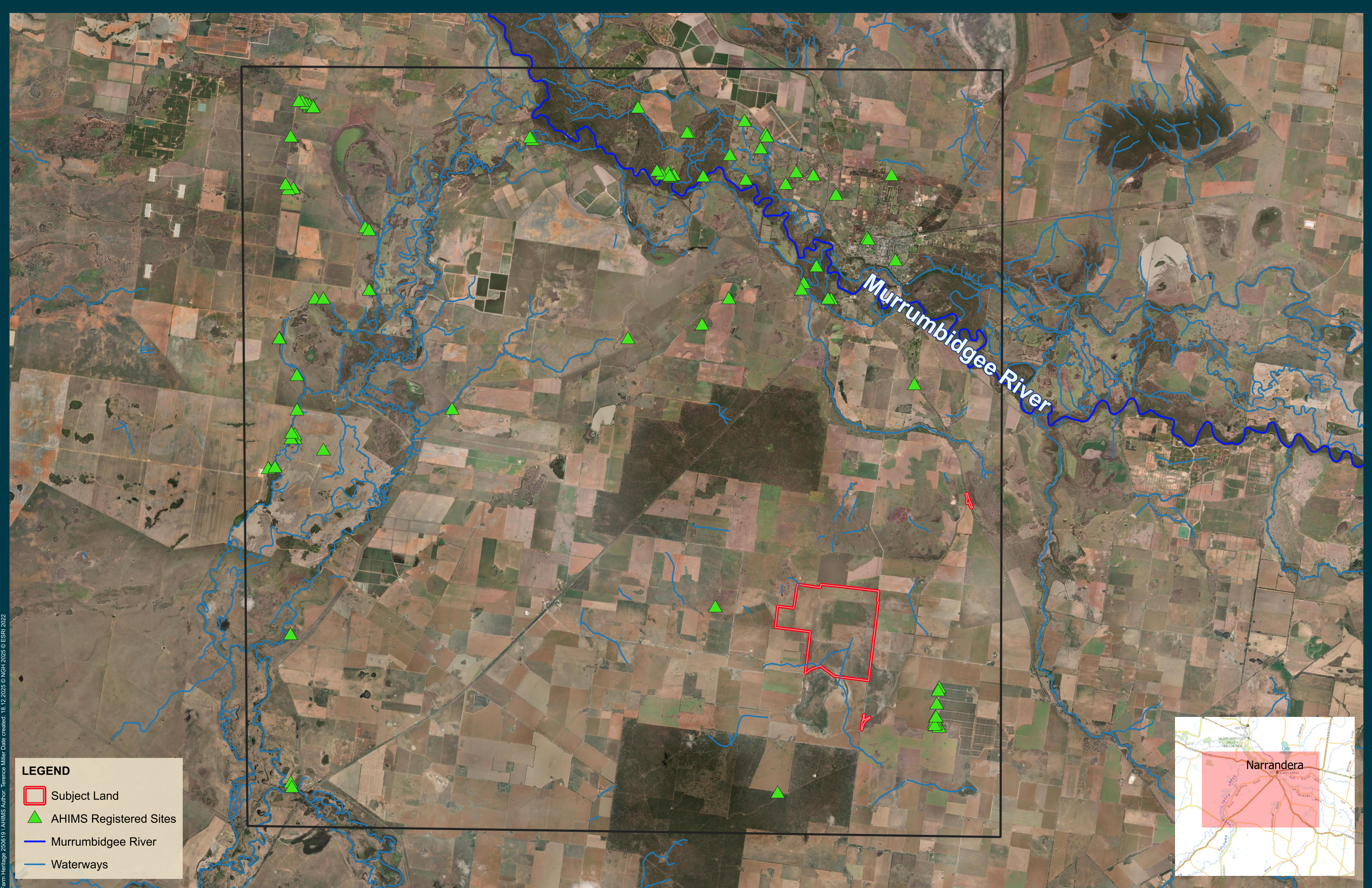
6.8.3. Issues for consideration

Given the presence of known Aboriginal objects within the region it is possible that other sites may also be present within the Subject Land, especially in areas which have previously not been subject to any field inspection. A number of site types were identified through the AHIMS search that are of a culturally sensitive nature, so there is a strong likelihood of encountering similar sites within the Subject Land. Risks in relation to Aboriginal heritage will be confirmed based on the results of a field inspection and the assessment of the area proposed to be impacted within the Subject Land.

An Aboriginal Cultural Heritage Assessment (ACHA), which includes Aboriginal community consultation with registered stakeholders must be undertaken in conjunction with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010) and the *Guide to Investigating Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) to appropriately assess any proposed impacts on Aboriginal objects or places within the Subject Land.

An ACHA and its associated Aboriginal community consultation will be required to be completed as part of the EIS.

Ref: 260061_Curralong Solar Farm Heritage 260619 | AHIMS Author: Terence Miller Date created: 18.12.2025 © NGH 2025



LEGEND

- Subject Land
- AHIMS Registered Sites
- Murrumbidgee River
- Waterways



Datum: GDA94 / MGA zone 55

NGH 0 7.5 15 km

A FYFE Company

6.9. Hydrology, groundwater and water use

6.9.1. Existing environment

The Subject Land sits within the Murrumbidgee River catchment area. This catchment is part of the broader Murray-Darling Basin and plays a significant role in the region's water management and flood planning. The Murrumbidgee River is a key waterway in this system, supporting both urban water supply and agricultural activities (NSW Government, 2025).

There are two mapped waterways within the Project Area: An unnamed ephemeral (only flows temporary) 1st order stream (under the Strahler Stream Order) and a 2nd order stream mapped across the Subject Land (Figure 6-15). There are additionally 10 farm dams mapped within the Project Area.

Desktop searches indicate the Subject Land is not mapped as flood prone land based off the available statewide mapping data and the local Council flood studies. However, the southern portion of the Subject Land has historically been subject to shallow water inundation. This would be subject to further assessment in the EIS via a detailed hydrology study. Early consideration is being given to flood impacts.

There are no mapped aquatic groundwater dependant ecosystems. Small sections of the Subject Land are mapped as terrestrial groundwater dependant ecosystems.

There are no groundwater bores within the Subject Land. The average groundwater depth and standing water level within the surrounding area is shown in Figure 6-13 below. It should be noted that this data is an average for the surrounding area and not a 100% representation of what the groundwater level may be on-site. Further investigations during the EIS would be undertaken.

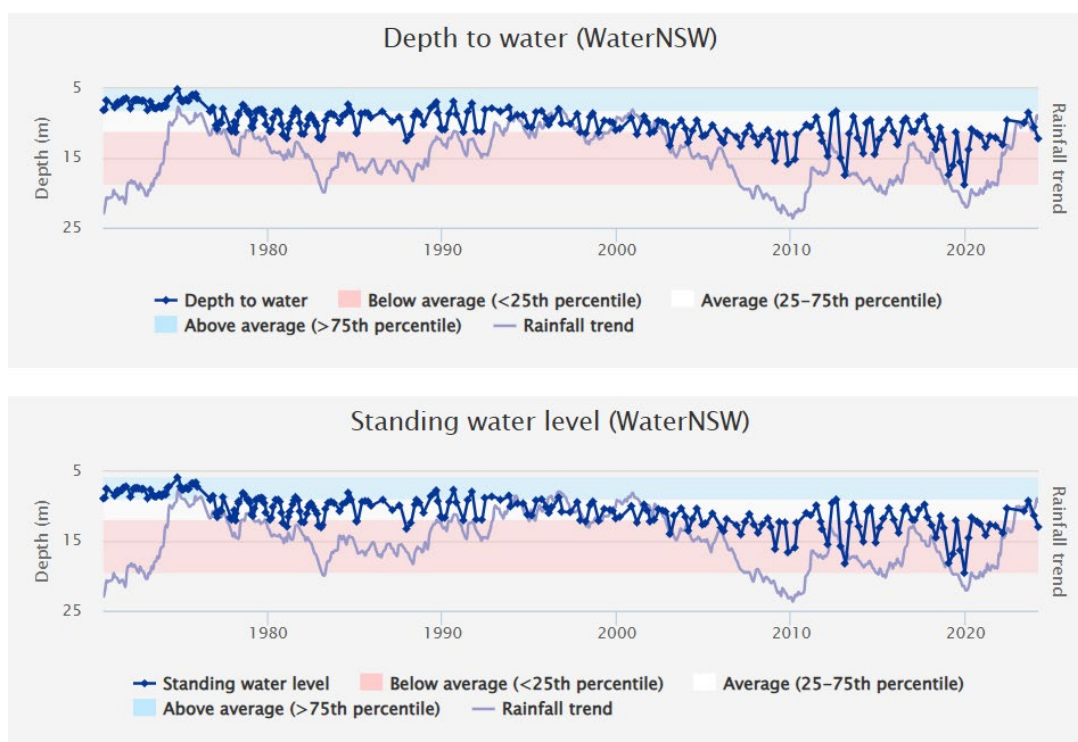


Figure 6-13 Bore log groundwater depth within the surrounding area (Source: (BOM, 2025))

6.9.2. Issues for consideration

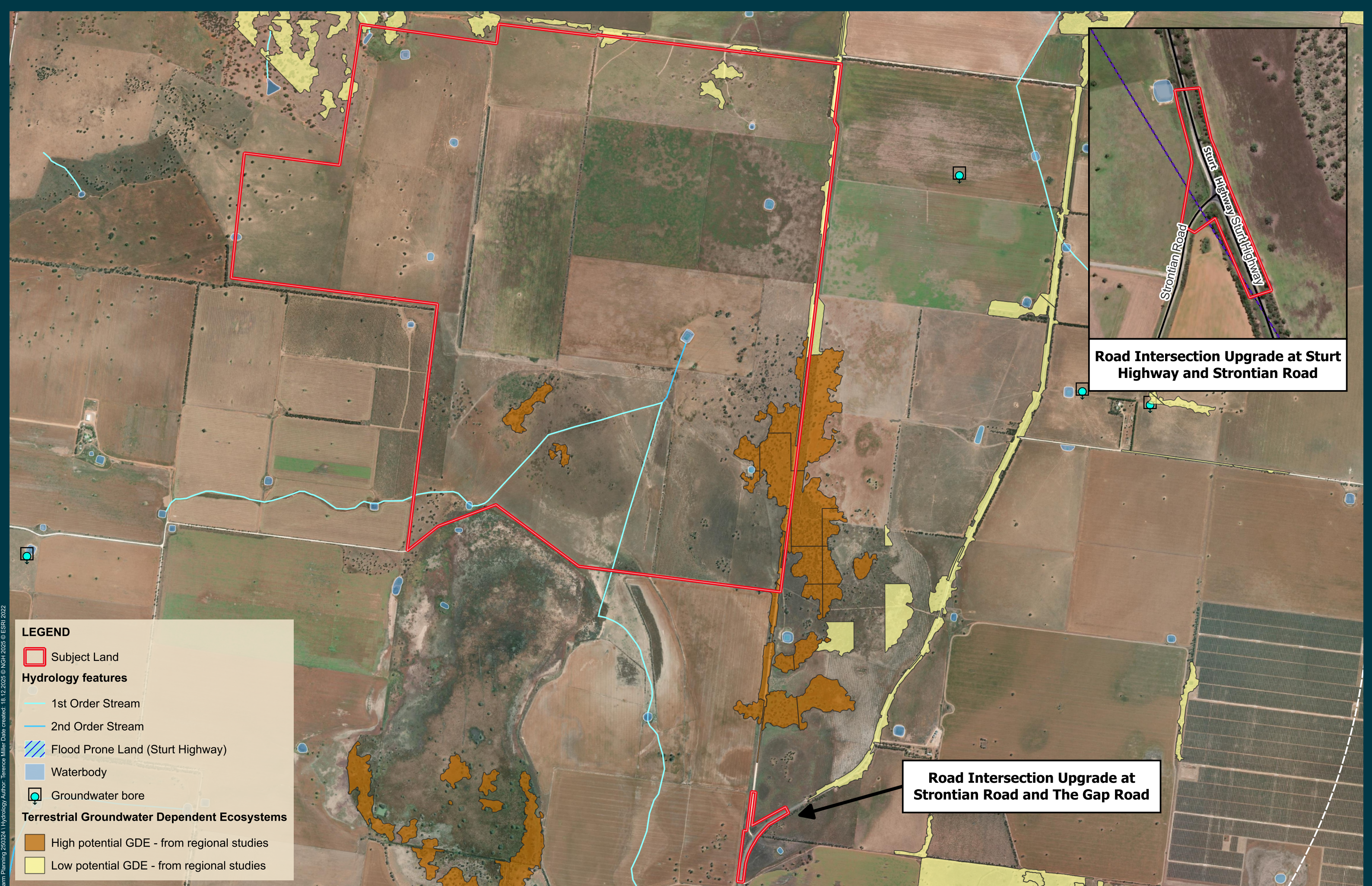
The WM Act defines waterfront land as the bed of any river, lake or estuary and any land within 10, 20, 30 and 40 metres of the riverbanks, lake shore or estuary mean high water mark, in accordance with best practice guidelines (refer to Figure 6-14 below). In these waterfront areas, permanent infrastructure would be avoided or minimised, as informed by further hydrological studies. In overland flow areas, which do not meet the definition of waterfront land under the WM Act, permanent infrastructure will be considered.

Water quantities and sources required for construction and operation are being considered in consultation with NSC and will be detailed in the EIS as part of the Project Description section.

Detailed assessment including hydrological hazard modelling will guide infrastructure placement, to protect the hydraulic function of waterways and prevent erosion. Early consideration for potential flooding risk and impacts on hydrology is being undertaken. The EIS would assess the impacts to waterways and include appropriate mitigation measures, such as buffering these areas for avoidance, in accordance with the best practice guidelines where possible (i.e. the Guidelines for Controlled Activities on Waterfront Land; (DPI, 2012)). Any potential impacts on waterways, either adjacent to the Subject Land or downstream, would be investigated during the EIS phase.

Watercourse type	VRZ width (each side of watercourse)	Total RC width
1 st order	10 metres	20 m + channel width
2 nd order	20 metres	40 m + channel width
3 rd order	30 metres	60 m + channel width
4 th order and greater (includes estuaries, wetlands and any parts of rivers influenced by tidal waters)	40 metres	80 m + channel width

Figure 6-14 Recommended riparian corridor widths (DPE, 2022)



LEGEND

Subject Land

Hydrology features

1st Order Stream

2nd Order Stream

Flood Prone Land (Sturt Highway)

Waterbody

Groundwater bore

Terrestrial Groundwater Dependent Ecosystems

High potential GDE - from regional studies

Low potential GDE - from regional studies

6.10. Historical heritage

In NSW, Historical heritage is principally protected by three legislative acts:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC).
- *Heritage Act 1977* (NSW); and
- *Environmental Planning and Assessment Act 1979* (NSW)

6.10.1. Existing environment

Desktop searches undertaken on the 20 August 2025 of the relevant historical heritage registers including the Australian Heritage Database, State Heritage Inventory and Section 170 registers, as well as LEP maps to identify any items that are currently listed within or adjacent to the Subject Land. The Australian Heritage Database includes items on the National and Commonwealth Heritage Lists while the State Heritage Inventory includes items on the State Heritage Register and items listed by state agencies and local government. The results of the Australian Heritage Database search indicated that:

- There are 11 heritage sites listed on the Register of National Estate (a non-statutory archive) within the Narrandera LGA. No items of National, Commonwealth or World Heritage significance are located within or adjacent to the Subject Land.

The search results of the NSW SHI database indicate that:

- There are 78 locally listed heritage items within the Narrandera LGA. The closest of these is Union Church (#1012) located approximately 7.8km west of the Subject Land.
- There are 7 previously recorded items on the State Heritage Register within the Narrandera LGA. None are located within the Subject Land. The closest listed state heritage items are within the town of Narrandera approximately 13.5km north of the Subject Land.

6.10.2. Issues for consideration

No known heritage places or items were located from a desktop search of the Australian Heritage Database and State Heritage Inventory as being within or in proximity to the Subject Land. Therefore, from a desktop search NGH has not identified any known or previously recorded historic heritage places or items within the Subject Land.

The probability of finding unrecorded but significant historical heritage in the activity area is low but still possible. It has been identified through the historical aerial imagery that some buildings existed in the northwest corner of the Subject Land (close to the current homestead) between at least 1967 to 2015 (however fall outside of the Indicative Infrastructure Layout). These areas would require investigation to determine their heritage significance. Further investigation as part of the EIS may be required to confirm that there is no impact to significant historical heritage, and this can be completed during future fieldwork efforts. This fieldwork would occur in tandem with the required ACHA field survey efforts.



Figure 6-16 Aerial snapshot from 2012 (left) showing historic buildings to the south of the existing homestead vs 2018 (right) with buildings removed (source: Google Earth)

6.11. Waste management and resource use

6.11.1. Existing environment

Policy context

Waste

The legal requirements for the management of waste are established under the NSW *Protection of the Environment Operations (Waste) Regulation 2005* (POEO Act). Unlawful transportation and deposition of waste is an offence under section 143 of this act.

The NSW *Waste Avoidance and Resource Recovery Act 2001* sets out the resource management hierarchy principles to encourage the most efficient use of resources and to reduce environmental harm. Adopting these principles is also consistent with the principles of Ecologically Sustainable Development.

The Project's resource management options would be considered against a hierarchy of the following order:

- Avoidance of unnecessary resource consumption
- Resource recovery (including reuse, reprocessing, recycling and energy recovery)

Disposal

The NSW Waste Avoidance and Resource Recovery Strategy (EPA 2014), the 'WARR Strategy', provides a framework for achieving these statutory objectives. Adopting the above principles would encourage the most efficient use of resources and reduce costs and environmental harm in accordance with the principles of ecologically sustainable development.

Regional waste capabilities

The Subject Land is currently used for agricultural activities, and therefore current waste streams pertain to agricultural products such as chemical disposal, machinery waste (e.g., batteries, tyres), and general waste such as packaging and minor building materials.

Sourcing local resources and disposal options and building local capabilities for separation, reuse and recycling are important to reducing the wastage related with transporting wastes large distances for disposal.

Early consultation with NSC note that the Narrandera Waste Depot/Community Recycling Centre will not accept construction waste for any large development project within their LGA, citing capacity issues. As such, it is likely that waste will be required to be transferred to adjacent LGAs.

NSC did however strongly recommend and noted endorsement of any recycling ventures possible, which may include:

- Solar Renew in Wagga Wagga is a partnership between Solar Professionals and Kurrajong Recycling. Using technology developed during an NSW EPA funded project in collaboration with Deakin University, APEX Greenhouses and Anderson Services (now collectively known as Circular Solar Solutions Pty Ltd), Solar Renew are piloting a semi-automated Solar PV panel recycling plant.

- The Wagga Wagga Lithium-Ion Recycling Facility, currently in the late planning stage, would most likely be operational by the time of decommissioning of the Project. This facility would be well suited to manage battery waste stream generated from the Project.

6.11.2. Issues for consideration

The Project would generate several waste streams and utilise a variety of materials during the construction phase, including:

- Excavated materials (soil)
- Packaging from solar panels and other infrastructure
- Vegetation
- Waste during decommissioning phase
- Putrescible waste.

Further consultation with surrounding LGAs and waste management providers will be required during the EIS, to ensure proposed waste streams and quantities will be accepted.

All waste produced by the Project will be classified, handled and managed in accordance with the Waste Classification Guidelines – Part 1 Classifying Waste (NSW EPA, 2014) and Resource Recovery Orders and Exemptions issued by EPA guided by the Waste Classification Guidelines Part 1: Classifying waste and Resource Recovery Orders and Exemptions issued by NSW EPA.

The waste and resource management hierarchy, as described in *the NSW Waste Avoidance and Resource Recovery Strategy 2014 – 21*, is a tool used to quantify and prioritise methods of waste management, ensuring that resource management options are considered against a hierarchy of:

- Avoidance of unnecessary resource consumption
- Resource recovery (including reuse, recycling, reprocessing and energy recovery)
- Disposal.

A summary of the waste hierarchy is presented in Figure 6-17 below.

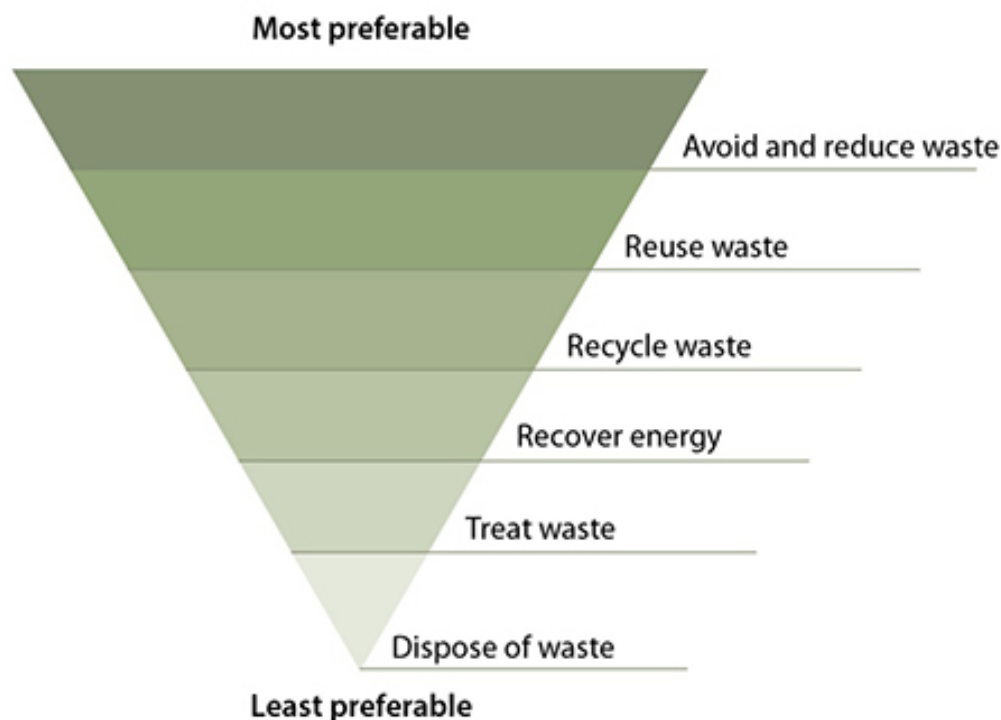


Figure 6-17 Waste management hierarchy - extract from *NSW Waste Avoidance and Resource Recovery Strategy 2014 - 21*, (NSW EPA, 2014)

Adopting these principles is also consistent with the principles of Ecologically Sustainable Development. The EP&A Act references five principles relevant to Ecologically Sustainable Development:

1. Intergenerational equity
2. Protection of biodiversity and maintenance of essential ecological processes
3. Integration of economic, social and environmental factors
4. The precautionary principle
5. Adoption of policy instruments such as improved valuation, pricing and incentive mechanisms.

The Project is committed to adopting these principles throughout the entirety of the Project's lifespan.

During the Project's operational stage, there would be minimal waste produced, with all waste mainly associated with maintenance activities and use of machinery and vehicles, and water requirements. Any waste generated during operation would be dealt according to relevant guidelines stated above.

Decommissioning of the site would generate a large volume of waste. The waste would involve solar panels, batteries, inverters, cabling and any other items that were similarly used during the construction of the Project. A suitable reuse/ recycling plan will be investigated in the EIS phase. The EIS will also study waste management in detail and advise on mitigating impacts resulting from this waste.

The Project would investigate all feasible options for reuse and recycling of infrastructure during the EIS phase.

Resource use and availability

While increasing scarcity of resources and environmental impacts are emerging from the use of non-renewable resources, the supply of the materials required for the Project's construction are still being

investigated. The Project's potential impact on the availability of local or regional resources would be assessed as part of the EIS.

In operation, electricity production using photovoltaics emits no pollution, produces no greenhouse gases, and uses no finite fossil-fuel resources. It is anticipated that only limited amounts of fuels would be required for maintaining and operating vehicles during operation of the Project.

It is likely that some electrical components, such as inverters, transformers, and electrical cabling, would need replacement over the proposed life of the Project. This would require further use of metal and plastic based products. An analysis of the lifecycle of key Project components would be detailed within the EIS.

6.12. Cumulative impacts

6.12.1. Existing environment

Cumulative impacts relate to the combined potential effects of different impact areas of the Project as well as the potential interaction with other Projects in the local area. They may occur concurrently or sequentially.

The relevant cumulative impacts are those associated with other known or foreseeable developments occurring in proximity to the Project. Cumulative impacts have been considered possible for projects within 50km of the Project (regional scale). However, the scale of cumulative impacts occurs at different scales as detailed in Table 6-5.

Table 6-5 Scale of cumulative impacts

Impact	Scale	Justification
Social and economic	Regional	Regional impacts on accommodation, employment and service providers, being one of three major renewable energy projects within the region.
Landscape and visual	Local	The Project may have low cumulative impacts on landscape and visual amenity, being one of three (one existing, two proposed) developments in the area
Noise and vibration	Local	The Project may have cumulative impacts on both construction and traffic noise and vibration, being one of two developments proposed in the area
Biodiversity	Local	The Project may have low cumulative impacts on biodiversity, being one of two developments proposed in the area
Land use	Local	The Project will have low cumulative impacts on land use. Current land use would be continued during operation so fragmentation with surrounding land use would be minimal.
Hazards	Local	The Project will have low cumulative impacts on hazards, including bushfire.
Aboriginal Heritage	Local	Localised cumulative impacts with proposed and existing projects are possible
Non-aboriginal heritage	Nil	The Project will have no impacts on non-aboriginal heritage
Access and traffic	Regional	Regional cumulative impacts on traffic and

Impact	Scale	Justification
		access are possible
Air quality	Local	The Project is unlikely to have ongoing cumulative impacts on air quality
Waste management	Local	Localised cumulative impacts on waste management with nearby renewable developments
Water	Local	Localised cumulative impacts on water supply and demand due to nearby renewable developments

As detailed in Section 3.1.1, The Project has been in development since early-2024. The undertaking of environmental studies and the ongoing consultation program will shape the Project and inform the Project approval process.

Pending Project approval, the Project delivery post approval can be separated into four key phases: Site establishment, construction, operation and decommissioning. The details of these phases are outlined below in Table 3-1 and would be described in more detail during the EIS phase.

Staging of the Project is currently considered unlikely.

Table 3-1 construction expected to commence in 2028. The Project will commence operations in 2029 and is expected to be operational for approximately 40 years. Potential cumulative impacts associated with the construction and operation of the Project are detail below in Table 6-6.

Table 6-6 Cumulative impacts associated with timeline

Stage	Project timeframe	Likely impact	Duration	Potential cumulative impact
Assessment	2025	Minor	Temporary	Social and economic
Approved	2026	Nil	Nil	Nil
Pre/construction	2027	Moderate to major	Temporary	Social and economic Access and traffic Waste management
Operation	2029	Minor	Operations	Social and economic Landscape and visual Noise and vibration
Decommissioning	2069	Moderate	Temporary	Social and economic Access and traffic Air quality

Major Projects undergoing assessment or determined listed on the Major Projects Register within 50km of the Project (current status as of 30 October 2025) are shown in Table 6-7 below.

Table 6-7 Nearby Major Projects

Project	Stage	Status	Distance from Project (km)	Indicative timeframe	Specific cumulative impacts to consider	Project overlap
Strontian Solar Farm	Planning	SEARs	1.5km east	Construction late 2026 Operational period 30years	Social and economic Landscape and visual Noise and vibration Biodiversity Land use Access and traffic	Potential construction and operational overlap
Avonlie Solar Farm	Determination	Operational	2.8km east	Project is constructed and operational	Social and economic Landscape and visual Noise and vibration Land use	Operational overlap
Sandigo Solar Farm	Determination	Approved 2018	16.8km southeast	Construction not started Operational period 40 years	Social and economic	Potential construction and operation overlap – However undetermined if will be constructed
Yarrabee Solar Farm	Determination	Approved 2018	20.4km west	Construction 2025. Operational period 35 years	Social and economic Land use Access and traffic	Potential construction and operation overlap – However undetermined if will be constructed
Devilins Bridge Wind Farm	Planning	Prepare EIS	21.1km northwest	Construction 2024 Operational period not limited	Social and economic Landscape and visual Land use Access and traffic	Construction and operation overlap

Project	Stage	Status	Distance from Project (km)	Indicative timeframe	Specific cumulative impacts to consider	Project overlap
Yanco Solar Farm	Determination	Approved	32km northwest	Construction 2025. Operational period 30 years	Social and economic Access and traffic	Potential construction and operation overlap – However undetermined if will be constructed
Yanco BESS	Determination	Approved	32km northwest	Construction 2025. Operational period 23 years	Social and economic Access and traffic	Potential construction and operation overlap
Darlington Point Solar Farm and BESS	Determination	Operational	45km west northwest	Project is constructed and operational	Social and economic	Operation overlap

6.12.2. Issues for consideration

The Projects detailed within Table 6-5 and shown in Figure 2-2 are considered to potentially have cumulative impacts in relation to social and economic, and access and traffic impacts.

Table 6-8 below within the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPHI, 2022) detailed the level of cumulative assessment required, while Table 6-9 provides a summary of the cumulative impacts to be assessed.

Table 6-8 Level of cumulative assessment required

Assessment	Description
Detailed	The project may result in significant impacts on the matter, including cumulative impacts.
Standard	The project is unlikely to result in significant impacts on the matter, including cumulative impacts.
N/A	No potential overlap in impacts between a future project (e.g. Project A) and the proposed project that would warrant any consideration in the cumulative impact assessment

Table 6-9 Cumulative Impact Assessment Scoping Summary Table

Project	Potential overlap					
	Social and economic	Landscape and visual	Noise and vibration	Biodiversity	Land use	Access and traffic
Strontian Solar Farm						
Avonlie Solar Farm						
Sandigo Solar Farm						
Yarrabee Solar Farm						
Devilins Bridge Wind Farm						
Yanco Solar Farm						
Yanco BESS						
Darlington Point Solar Farm						

Potential cumulative impacts would be assessed within the EIS in line with the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPHI, 2022).

The timing of works associated with the proposed developments nearby would be monitored throughout the EIS stage to ensure appropriate mitigation measures are implemented, particularly in relation to construction traffic and pressure on local services and facilities within the Narrandera LGA and the broader region.

6.13. Matter not requiring further assessment

The environmental matters below require no further assessment in this Project. These additional matters have been considered in reference to the matters included in Appendix B of the State significant development guidelines – preparing a scoping report (DPE, 2022). Refer to Table 6-10.

Table 6-10 Impact matters requiring no further assessment

Impact	Description
Marine Port facilities	The Project does not propose a modification to port or airport facilities. It is noted that materials deliveries via ports will be assessed under the following impact headings: • Traffic and access (refer to Section 6.4) • Hazards (refer to Section 6.6)
Rail facilities	The Project does not propose a development that directly impacts rail facilities.
Odour	The Project does not propose a development that would be likely to produce odours.
Coastal hazards	The Project is not located nearby any coastal areas and as such does not address coastal hazards.
Dams safety	The project does not propose to construct, maintain or decommission a dam.

7. Conclusion

This Scoping Report has outlined the Project and established the strategic and legislative context of the Project. The Project would be assessed under Part 4 of the EP&A Act and classed as SSD under the Planning Systems SEPP. At this stage, referral under the EPBC Act is not considered likely but this will be investigated further as a priority.

As the Project proceeds into the EIS Phase, the Applicant is committed to a strong engagement and communications campaign focused on what's changed to address concerns, sharing of benefits, community and stakeholder partnerships and ongoing proactive management of issues.

The Project-specific SEARs are now sought to guide the preparation of the EIS. As well as detailed investigations, the EIS will set out the mitigation measures required to manage the impacts of the project to an acceptable level and will include further input from the community and other stakeholders through a robust continued engagement process.

An overview of the potential impacts identified throughout this report and how it will be addressed in the EIS have been provided in Table 7-1 below.

Table 7-1 Overview of impacts identified at scoping phase

Matter	Potential impacts identified	Assessment proposed during EIS
Geology and soils (Section 6.1)	LSC Class 3 and 4 land within Subject Land	Agricultural Impact Assessment (AIA) level pending LSC verification
Land use (Section 6.1)	Land use conflicts with existing Subject Land and surrounding land uses	Land Use Conflict Risk Assessment (LUCRA)
Contamination (Section 6.1)	Disturbance of potentially contaminated land from previous land uses	Preliminary Site Inspection (PSI) with supplementary sampling
Landscape and visual amenity (Section 6.2)	Landscape and visual amenity impact on surrounding public and private receivers	Landscape Character and Visual Impact Assessment (LCVIA)
Noise and vibration (Section 6.3)	Construction and operation noise and vibration impacts on nearby sensitive receivers	Noise and Vibration Impact Assessment (NVIA)

Matter	Potential impacts identified	Assessment proposed during EIS
Access and traffic (Section 6.4)	Impacts on local and state road network from construction and operation	Traffic Impact Assessment (TIA)
Socio and economic (Section 6.5)	Both potential impacts and benefits on local/regional economics, housing and community cohesion	Social Impact Assessment (SIA)
Hazards – PHA (Section 6.6)	Potential risks and consequences arising from Project infrastructure (namely the battery energy storage system)	Preliminary Hazards Analysis (PHA) Preliminary risk screening
Hazards – Bushfire (Section 6.6)	Risk of a bushfire moving through the Subject Land.	Bushfire Assessment Report (BFAR)
Biodiversity (Section 6.7)	Impacts on threatened species and communities. Impacts on potential SAI species.	Biodiversity Development Assessment Report (BDAR)
Aboriginal heritage (Section 6.8)	Disturbance of potential Aboriginal heritage items/sites not already identified	Aboriginal Cultural Heritage Assessment (ACHA)
Hydrology, groundwater and water use (Section 6.9)	Distance on existing waterways and changes to surface water and groundwater flows	Flood Impact Assessment (FIA)
Historic heritage (Section 6.10)	Disturbance of potential historic heritage items/sites not already identified	Addressed within the heritage chapter of the EIS
Waste management and resource use (Section 6.11)	Impacts on local and regional resource availability and waste streams on regional waste and recycling facilities	Addressed within waste management and resource use chapter in EIS.

Matter	Potential impacts identified	Assessment proposed during EIS
Cumulative impacts (Section 6.12)	Impacts on local and regional areas in relation to other state significant projects	Addressed within cumulative impact chapter in EIS.

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