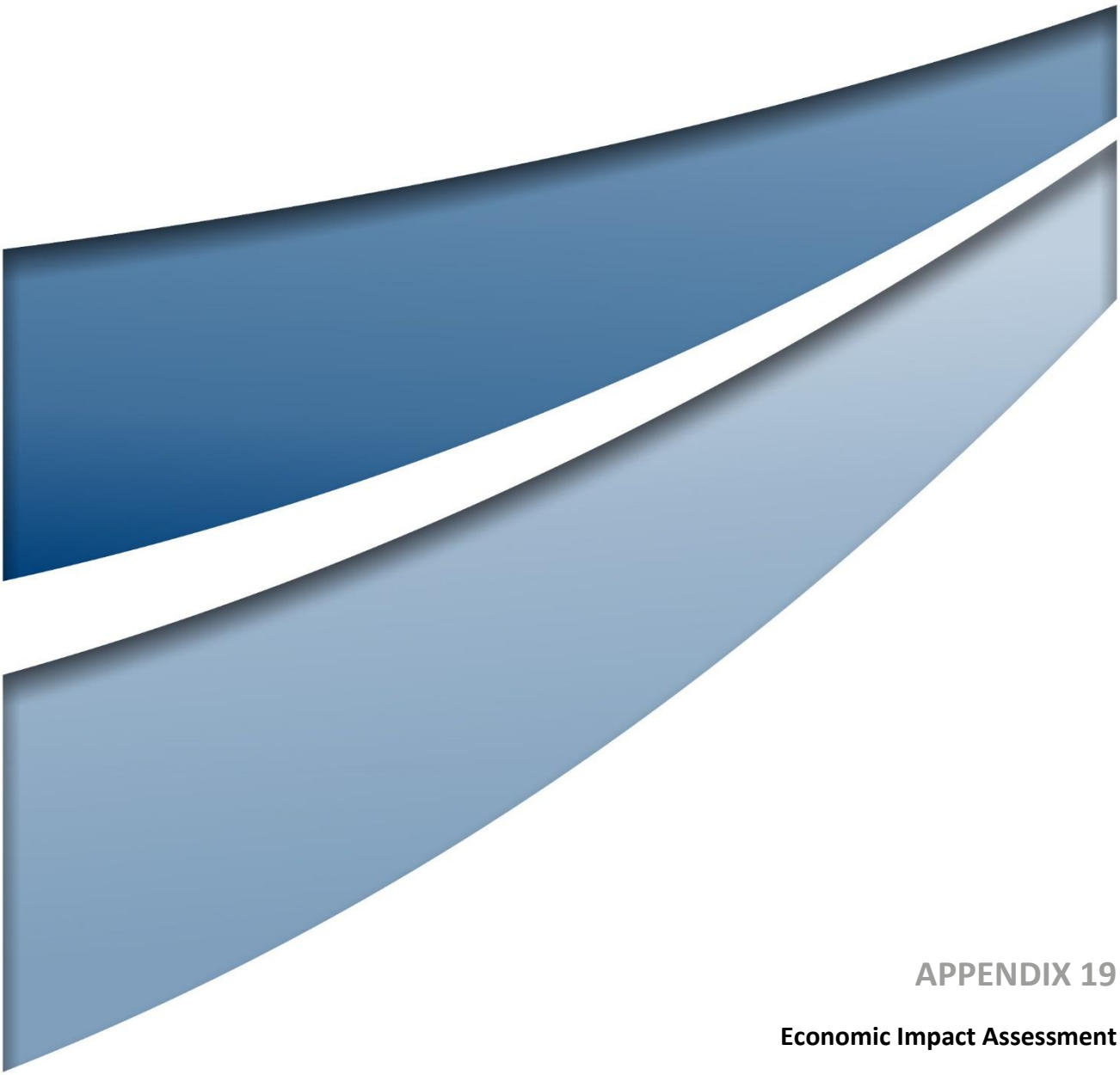


APPENDIX 19

Economic Impact Assessment

Economic Impact Assessment

Gundary Solar Farm

Submitted to NSW Department of Planning, Housing and Infrastructure
on behalf of Lightsource bp

Ethos Urban

Prepared by Ethos Urban

17 July 2024 | 3220398

'Gura Bulga'
Liz Belanjee Cameron

'Gura Bulga' – translates to Warm Green Country. Representing New South Wales.

'Dagura Buumarri'
Liz Belanjee Cameron

'Dagura Buumarri' – translates to Cold Brown Country. Representing Victoria.

'Gadalung Djarri'
Liz Belanjee Cameron

'Gadalung Djarri' – translates to Hot Red Country. Representing Queensland.

Ethos Urban acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We pay our respects to their Elders past, present and emerging.

In supporting the Uluru Statement from the Heart, we walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people for a better future.

Contact:	John Noronha Director, Economics	jnoronha@ethosurban.com 0411 514 664

This document has been prepared by:		**This document has been reviewed by:**	
Stephanie Stamatellis	17 July 2024	John Noronha	17 July 2024

Version No.	**Date of issue**	**Prepared by**	**Approved by**
1.0 (DRAFT)	26/06/2024	SS	JN
2.0 (FINAL)	26/06/2024	SS	JN
3.0 (FINAL V2)	17/07/2024	SS	JN

Ethos Urban | Ethos Urban Pty Ltd | ABN 13 615 087 931 | Sydney NSW | Melbourne VIC | Brisbane QLD | ethosurban.com

Contents

Figures

Tables

Executive Summary

Lightsource bp (the Proponent) has commissioned Ethos Urban to prepare an Economic Impact Assessment (EIA) for a proposed 400 Megawatt peak (MWp) solar farm and Battery Energy Storage System (BESS) with of up to 555 MWp and 1,570 Megawatt hour (MWh) capacity (the Project) to be located approximately 10 kilometres (km) south of Goulburn, within the Goulburn Mulwaree Local Government Area (LGA). The Project will be located across a 702ha site (Project Site) comprising a single landowner.

The main findings of this EIA are summarised as follows.

Regional Economic Context

1. The Study Area for the purposes of this EIA comprises multiple Local Government Area (LGA) boundaries, and includes Goulburn-Mulwaree, Wingecarribee, Queanbeyan-Palerang, Upper Lachlan Shire, and Yass Valley (see **Figure 3** in **Section 2.4**).
2. A resident population of approximately 179,870 reside in the Study Area as of 2024. The Study Area population is forecast to increase to an estimated 225,710 persons by 2041, reflecting an increase of +45,840 persons at an average annual rate of +1.3% over the period.
3. The Study Area's occupational and business structures indicates a good base exists to service the needs of the Project, including approximately 24,625 construction related workers (based on occupation) and approximately 4,367 construction businesses.
4. The major regional township of Goulburn is located close to the Project Site and includes a significant provision of services to support aspects of the Project. Other townships that will likely have capacity to support some of the Project's accommodation, labour and services requirements include Bowral, Mittagong, Moss Vale and Queanbeyan.

Economic Impact Assessment

5. The Project will support approximately $650 million in capital investment during the construction phase, of which approximately $98 million (or 15%) is anticipated to be retained in the Study Area.
6. Approximately 400 Full Time Equivalent (FTE) positions would be supported in the national economy over the 24-month construction period (155 Direct FTE jobs and 245 Indirect FTE jobs). Once operational, approximately 14 FTE jobs will be supported by the Project (4 Direct FTE jobs and 10 Indirect FTE jobs).
7. Of this total, the Study Area is expected to benefit from 60 FTE construction jobs and 6 FTE operational jobs (includes direct and indirect jobs) associated with the Project.
8. The Project will provide new participation opportunities for businesses and workers located in the Study Area, having regard for the good match of skills and resources available; and specific procurement activities proposed by the Proponent.
9. The Project will likely need to compete with other concurrent major projects within the region, particularly with regard to accommodation, labour and other resources. Of significance, there are four infrastructure projects recording a medium or high cumulative impact due to their location and potential for timing overlap with the Project (see **Section 4.3** of this report). These projects include the Merino Solar Farm, Wattle Creek Solar Farm, the Woodlawn Advanced Recovery Centre and the HumeLink project. It is possible other identified projects may overlap with the Project, but this is not certain.
10. The 'external' project labour requirement would be expected to generate an accommodation need for 237 FTE workers at the peak of the Project. The Project's Accommodation and Employment Strategy (Umwelt, 2024) finds that approximately 390 rooms are likely to be available in the Study Area to support the Project's peak when cumulative impacts are considered. These 390 rooms include commercial accommodation (hotels, motels, caravan parks) and private rentals (e.g., long-term houses/units, short-term Airbnb) and are spread over a number of locations.
11. Construction workers relocating to the region would be expected to inject approximately $11.0 million in new spending into the economy over the construction phase, supporting approximately 28 FTE jobs in the service sector in the Study Area over this time.

12. Approximately 702 ha of existing agricultural land will be required to host the Project, with a development footprint of approximately 512 ha. This land is currently mainly used for grazing and has an identified Land Soil Classification (LSC) Class of LSC 3 (High-capability land), LSC 4 (Moderate Capability Land), LSC 5 (Low-Moderate Capability Land) and LSC 6 (Low-capability land). No loss of employment associated with the Project Site is anticipated, either directly (on-site) or through associated supply chains. Further, through ongoing discussions with the landowner and Proponent, there will likely be an opportunity for the continuation of sheep grazing across the Project Site during the operation of the Project.
13. Ongoing economic stimulus associated with the operation of the Project is estimated at approximately $113.8 million (over 40 years, CPI adjusted) relating to, operational wage stimulus, landowner lease payments and neighbourhood payments. Excludes VPA payments and increases in Council rates revenue.
14. The Project has the capacity to supply sufficient clean energy to power the equivalent of approximately 133,000 homes per annum and will reduce carbon emissions by 670,000 tonnes per annum.
15. The Project will have a negligible impact on Goulburn's existing and future agricultural, industrial and business sector growth due to in part to the Project's location in a RU1 zone – with its associated limitations on large-scale commercial/industrial development. The Project Site is not located in a residential growth zone and is relatively disconnected from Goulburn's key commercial and industrial activities due to its location south of the Hume Highway, while small-scale agricultural activities (which do not represent primary production noting the LSC Class 4 and 5) surrounding the Project Site and in the nearby RU6 transition zone can continue/expand unimpeded.
16. Decommissioning of the Project is likely to support significant employment generation, new business contracts and provide a spending stimulus to the Study Area over the decommissioning period. However, given decommissioning will not occur for at least 40 years after the operation of the Project commences, it is not possible to estimate potential impacts and benefits at this stage noting economic, technological, environmental factors may change considerably over this period.

Net Economic Benefit Assessment (Study Area)

A Summary of net economic outcomes for the Study Area is included in **Table 1**.

Table 1 Summary of Net Economic Benefits

Factor	Value
Negative Economic Outcomes	
Temporary loss of agricultural land (40 years) (Development Footprint)	512 ha
Loss of employment (includes direct and indirect jobs)	0 jobs
Positive Economic Outcomes	
Construction Phase (24-Months)	
Capital investment	+$650 million
Study Area investment (including wage stimulus)	+$98 million (assumes 15% of total investment)
Average construction employment (direct plus indirect jobs)*	400 FTE
Average Study Area employment (direct and indirect jobs)**	*10 FTE direct on-site* *50 FTE indirect off-site* *Total: 60 FTE*
Operational Phase (40 Years)	
Operational employment (direct and indirect jobs)***	14 FTE total
Study Area operational employment (direct and indirect jobs)****	*4 FTE direct on-site* *2 FTE indirect off-site* *Total: 6 FTE*
Operational Economic Stimulus	
Total net local economic stimulus (operational wage stimulus landowner lease payments and neighbourhood payments. Excludes VPA payments and increased Council rates returns.	**$114 million**
Study Area Total Economic Benefits (Construction and Operational Phases)	**$211 million**
Decommissioning Phase	
Likely to generate employment, business contract and spending stimulus benefits for the Study Area	Not quantified

Note*: Total Direct Construction workers assumes 155 FTE direct jobs and 245 FTE indirect jobs based on an employment multiplier of 1.6
Note**: Assumes 5% of direct FTE construction jobs and 20% of indirect FTE construction jobs are supported locally.
Note***: Assumes 4 direct FTE ongoing jobs, and 10 indirect FTE ongoing jobs based on a multiplier of 2.9
Note****: Assumes 20% if indirect FTE ongoing jobs are supported locally.

1.0 Introduction

1.1 Overview of the Project

Lightsource Development Services Australia Pty Ltd (Lightsource bp) proposes to develop the Gundary Solar Farm (the Project) in the Southern Tablelands of New South Wales (NSW), approximately 10 kilometres (km) southeast of Goulburn within the Goulburn Mulwaree Local Government Area (LGA).

The Project will involve the construction, operation, maintenance and decommissioning of a 400 Megawatt peak (MWp) solar farm with a Battery Energy Storage System (BESS) of up to 555 MWp and 1,570 MWh capacity and associated infrastructure to connect the Project to the national electricity grid. The Project will be accessed via the existing driveway at 961 Windellama Road off the Hume Highway. Road works on Windellama Road near the property entry are proposed as part of the Project to provide Project access for heavy vehicles and over-size-over-mass (OSOM) vehicles.

The Project will supply electricity to the National Electricity Market (NEM), via a new onsite connection to the existing 330kV overhead transmission line traversing through the north-west corner of the Project Site. The Project will generate enough clean energy for about 133,000 homes per annum and reduce carbon emissions by 670,000 tonnes per annum. The BESS will have capacity to store approximately 1,570 MWh of on-demand energy for supply to the grid.

The Project Site will be located on land zoned RU1 – Primary Production. The area surrounding the Project Site is characterised predominantly by agricultural lands associated with rural residential properties, small settlements, conservation areas and rural tourism. Land within and adjacent to the Project Site has been subject to extensive cultivation associated with historic and more recent agricultural land uses.

The Project will be developed across five freehold lots, covering an area of approximately 702 ha (the Project Site). These properties are primarily used for grazing activities. The Project infrastructure will cover approximately 512 ha (the development footprint).

The Project is expected to generate up to 400 Full Time Equivalent (FTE) direct and indirect jobs over the 24 month construction period and 14 FTE jobs (direct and indirect) during operation.

The Project is a State Significant Development (SSD) under the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) as the capital value of the Project is over $30 million. A development application (DA) for the Project is required to be submitted under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

1.2 Purpose of Scope of this Report

This Economic Impact Assessment has been prepared by Ethos Urban in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the former Department of Planning and Environment (DPE) (now the Department of Planning, Housing and Infrastructure (DPHI)) on 10 November 2022.

The SEARs identify matters that must be addressed in the Environmental Impact Statement (EIS). **Table 2** below references the relevant requirements for economic matters and where the SEARs have been addressed in this report.

Table 2 SEARS Item and Responses

SEARS Requirement	Section where addressed in this report
Economic – including an assessment of the economic impacts of benefits of the project for the region and the State as a whole and provide details of any proposed voluntary benefit sharing programs in accordance with the Solar Guideline	**Section 4.0**
General Requirements - an estimate of the jobs that will be created during the construction and operational phases of the proposed development	**Section 4.2**

1.3 Methodology and Data Sources

1.3.1 Methodology

The following methodology has been applied to this EIA:

- Identification of a relevant Study Area for the assessment which reflects likely local labour force, accommodation, and supply chain linkages available to support the Project. The Study Area is defined in terms of local government areas (LGAs) as defined by the ABS; for this Project the following LGAs define the Study Area, Goulburn Mulwaree, Upper Lachlan Shire, Yass Valley, Queanbeyan-Palerang Regional Council, Wingecarribee Shire.
- Review of federal and state policies relevant to investment in the renewable energy sector, including the Paris Climate Accord and NSW Large Scale Solar Energy Guidelines 2022.
- Baseline analysis of population, labour markets, occupational structure and business structure for the Study Area and NSW, with reference to latest available data relating to ABS Estimated Resident Population, Department of Environment and Planning State and Local Government Population Projections, ABS Census, ABS Business Counts and Department of Education, Skills and Employment Small Area Labour Markets.
- Assessment of the capacity and opportunities of townships in the Study Area to participate and service the Project. This information has been compiled through Project Site visits, a desktop review of townships and accommodation data (accommodation provider websites, Airbnb and Vrbo databases, website searches) and discussions with the Proponent.
- Assessment of Project investment, with investment estimates provided by the Project's Capital Investment Value report and share of investment retained in the Study Area informed by benchmarking analysis of similar sized completed renewable energy facilities located in regional areas.
- Assessment of Project employment (direct and indirect) for construction and operational phases. Direct employment is assessed as jobs created to support the on-site construction and operation of the Project. Indirect employment is assessed as jobs supported through the industrial and consumption/induced impacts of each Project stage. Relevant ABS multipliers are applied to construction and operational phases. Employment estimates have been provided by the Proponent based on requirements associated with similar scale solar projects. Ratios of direct Study Area (local) and non-Study Area (imported) employment and share of indirect employment supported in the Study Area are based on advice from the Proponent, based on experiences from previous renewable energy construction projects in similar regional locations.
- Identification of business and industry participation opportunities, with reference to baseline analysis outcomes regarding workforce size and skills composition and procurement activities proposed by the Proponent.
- Assessment of agricultural impacts which includes employment and production impacts through land consumption and disruption to activities, and benefits to host landowners from new incomes and improved on-site infrastructure.
- Assessment of accommodation and housing impacts, with reference to the baseline analysis and the estimated number of construction workers that may require accommodation at the Project's peak, and with regard to other infrastructure projects expected to be developed concurrently.
- Assessment of cumulative impacts relating to the potential concurrent construction of major infrastructure projects in the Study Area/within 100km of the Project Site. This includes assessing potential impacts on accommodation, labour and services (construction and non-construction).
- Estimates of economic stimulus impacts (construction and operation phases) including supplier contracts, project wages and spending and community fund payments. Construction stimulus is expressed in 2024 dollars (and calculated over 24 months), while operational stimulus is calculated over 40 years using 2024 dollars but indexed to 3.0% CPI annually.
- Assessment of the Project's impact on Goulburn's capacity for future growth.
- Summary of economic benefits arising for NSW (beyond the Study Area) for construction and operational phases of the Project.
- Description of proposed mitigation measures relating to accommodation, workforce and procurement and community benefit sharing.
- High-level comments on potential impacts of the decommissioning phase of the Project.

Note, detailed assumptions and calculations are provided throughout the report.

1.3.2 Data Sources

The following specific data sources have been uses in compiling this EIA:

- ABS Average Weekly Earnings, November 2022
- ABS, Counts of Australian Businesses, including Entries and Exits, June 2018 to June 2023
- ABS Census of Population and Housing, 2021
- ABS Estimated Resident Population, 2021 (April 2024 release)
- ABS Household Expenditure Survey, 2015-16
- ABS Regional Population Growth, Australia
- Australian National Accounts: Input-Output Tables
- Department of Employment – Small Area Labour Markets, September Quarter 2023
- Department of Environment and Planning NSW, State and Local Government Population Projections 2022, 2022 NSW Common Planning Assumption Projections
- Umwelt Accommodation and Employment Strategy Report

2.0 Project Context

2.1 Project Site Location

The Project Site is located on an approximately 702 ha parcel of land across five cadastral lots. The Project Site is accessed from 961 Windellama Road and is located approximately 10km south of Goulburn. The Project Site is zoned RU1 Primary Production and is entirely located within the Goulburn Mulwaree Local Government Area (LGA), and has been subject to agricultural activities, including sheep and cattle grazing.

2.1.1 Regional Context

Goulburn is defined as a strategic centre under the NSW DPHI Regional Plans, and is a Regional City under the Transport and Infrastructure SEPP 2022. Accordingly, it is a major regional centre within NSW, providing key critical services and employment to people living within Goulburn Mulwaree LGA, and surrounding regions such as the Upper Lachlan Shire.

Goulburn is located approximately 90km north of Canberra. The Draft South East and Tablelands Regional Plan 2041 notes that Canberra is intrinsically linked to the region, through transport connections, educational institutions, health services, and importantly employment. Specifically, the plan notes that around 25,000 people travel to the ACT for work each day from the South East and Tablelands Region. The region also supports Canberra by providing more diverse and affordable housing options, and experiences within the cities reach, including in centres such as Goulburn.

As a regional city, Goulburn provides essential services to surrounding communities such as Crookwell, Gunning, Marulan and Braidwood. Accordingly, it is an important centre that provides access to necessary employment, services and infrastructure for residents throughout the region.

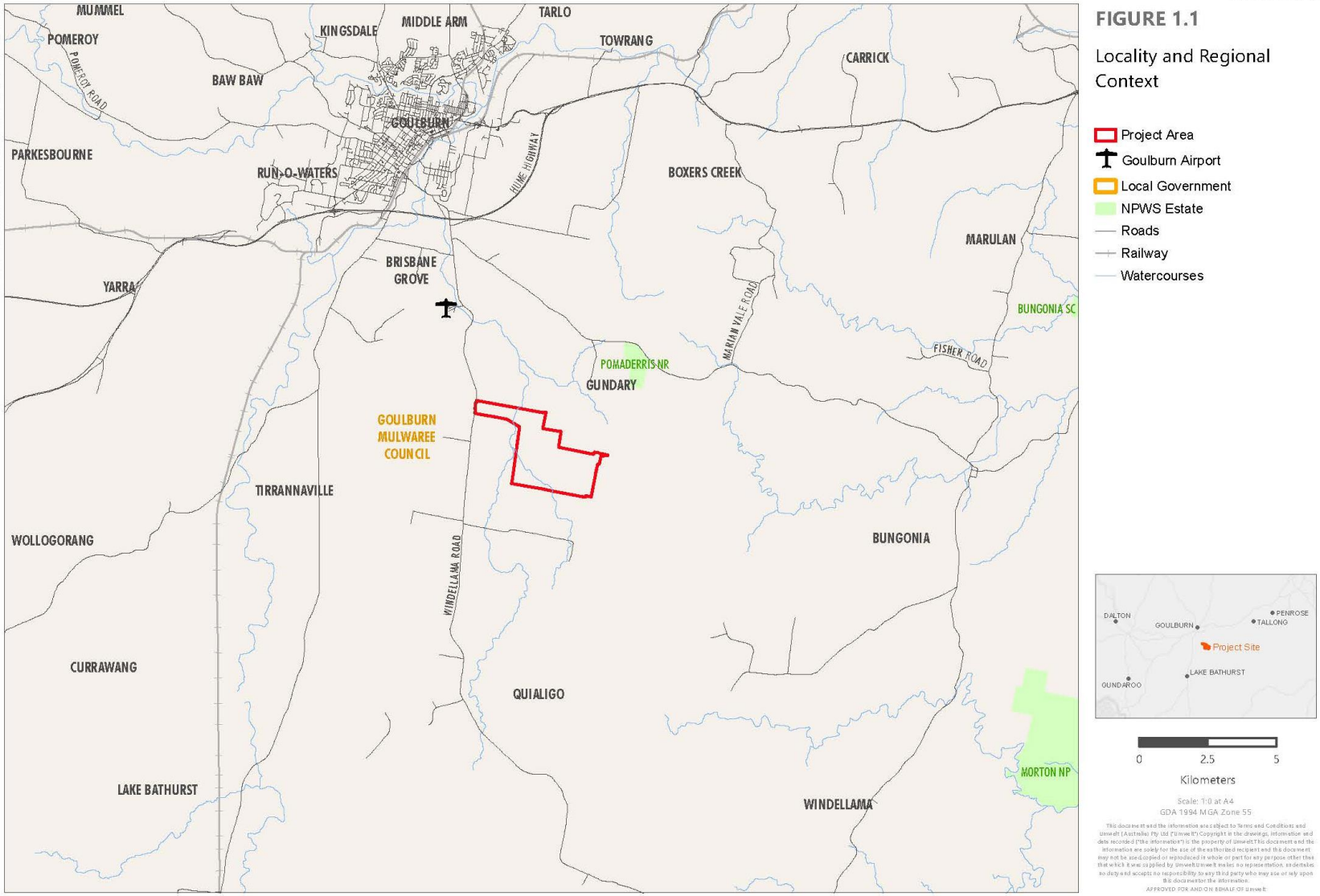


Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

Figure 1 Project Site Location and Regional Context

Source: Umwelt

2.2 Project Description

Subject to detailed design, the Project comprises the following key elements:

- Approximately 660,000 solar panels bifacial flat plate solar PV modules in single-axis tracking arrangement with a maximum height of 5 metres (m) above ground level.
- A centralised and/or de-centralised lithium-ion BESS with a total capacity of 555 MWp/1,570 MWh, to store energy generated by the Project.
- Onsite 33/330 kV switchyard and substation, with underground electrical conduits and cabling leading from the solar panels into the substation yard, and overhead lines reaching above to the existing 330 kV transmission line.
- Internal and perimeter gravel access tracks, including a number of watercourse crossings (via culverts and bed level crossings) within the Project Area, where required, to manage existing surface water flows and access points.
- Temporary ancillary facilities, including a construction compound (including office amenities, parking and storage) and laydown areas.
- Permanent Project Site office, operations and maintenance building with parking for the operations team.
- Primary access point from the existing driveway off Windellama Road, with proposed intersection works on Windellama Road to establish Project Site access.
- Emergency access point proposed on the east, via the existing entrance off Kooringaroo Road.
- Perimeter security fencing, crossing gates, water tanks or dams, and access points to facilitate sheep grazing and mitigate bushfire risks.

Details on the Project Site layout is shown in **Figure 2** below.

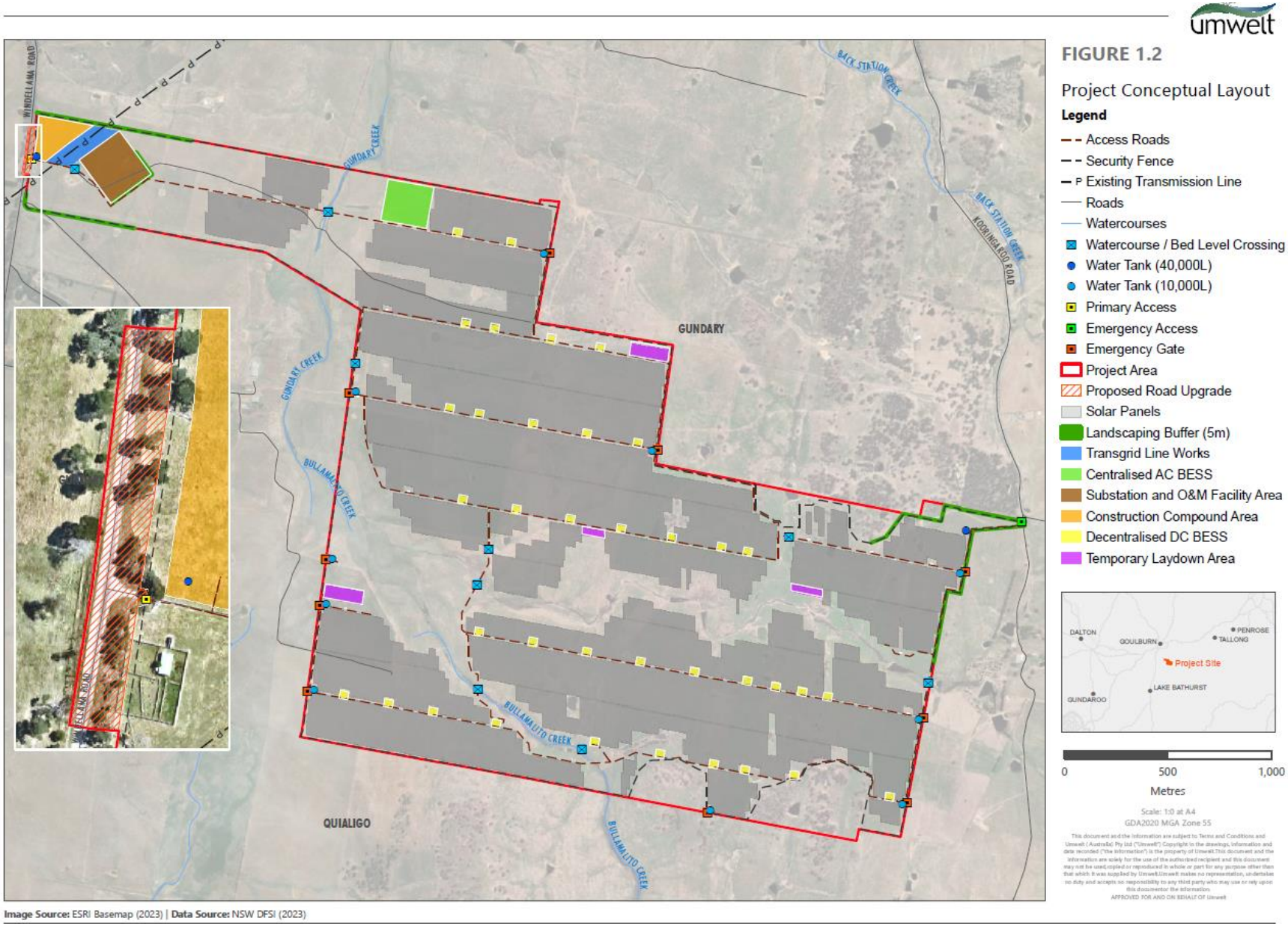


Figure 2 Gundary Solar Farm – Preliminary Project Site Layout

Source: Umwelt

2.3 Policy Context

International and domestic agreements and government policy settings play an important role in influencing demand and investment in the renewable energy sector, as noted below.

The Paris Agreement

The Paris Agreement is a comprehensive international and legally binding climate agreement to which Australia is a party. The Agreement sets out a global consensus to limit temperature increases to below two degrees Celsius when compared to pre-industrial levels. Participating nations were required to set themselves nationally determined contributions (NDCs) beginning in 2020, with review at five-year intervals. NDCs do not have any set lower limit but are required to progress over time (beginning with the intended NDC pledged during the Paris conference) and to be 'ambitious.' Australia's previous target was to achieve a reduction of emissions by 5% from 2000 levels by 2020 and the previous Liberal Federal Government committed to a reduction of 26-28% below 2005 levels by 2030 and net zero emissions by 2050.

In July 2022, an updated Nationally Determined Contribution (NDC) was submitted by the newly elected Federal (Labor) Government and reflected a pre-election promised by the Labor Party to fulfill Australia's obligations under the Paris Agreement. The updated NDC includes a commitment to a reduce greenhouse gas emissions by 43% by 2030 and reaffirms the previous commitment to net zero emissions by 2050.

NSW Large Scale Solar Energy Guidelines 2022

The NSW Large Scale Solar Energy Guideline identifies social and economic impacts as 'other' key matters for consideration in the development of a large scale solar farm. Specifically, the Guidelines note the following:

A social impact assessment is required for all state significant projects and must be undertaken in accordance with the department's Social Impact Assessment Guideline for State Significant Projects. The assessment will include both positive and negative impacts of the proposed development on potentially affected people and groups, including how the impacts are distributed. This includes workforce accommodation, job creation opportunities and flow-on economic impacts to local communities.

Of significance to the Project, the Guidelines note that where an applicant proposes a large scale solar development within a mapped area in proximity to a regional city, the provisions within the Transport and Infrastructure SEPP should be clearly and comprehensively addressed. Goulburn is listed as a regional city under the clause 2.42 of the Transport and Infrastructure SEPP, and as such the provisions of this SEPP need to be considered, particularly in relation to how the Project could impact Goulburn's capacity for growth. This is addressed in **Section 4.10** of this report.

The Guidelines also require an assessment of cumulative impacts from other projects, including socio-economic impacts. This must be addressed in accordance with the Departments Cumulative Impact Assessment Guidelines for State Significant Projects 2022. Cumulative impacts in this report will be addressed in **Section 4.3.**

Draft Energy Policy Framework, 2023

The NSW Department of Planning, Infrastructure and Environment have provided a section in the Draft Energy Policy Framework namely 'Updates to the Solar Energy Guideline', the proposed changes to the Large-scale Solar Energy Guideline are still preliminary with further changes expected before the guidelines are finalised.

NSW Electricity Strategy and Infrastructure Roadmap

Renewable electricity development is supported through the NSW Governments Electricity Strategy, and the NSW Electricity Infrastructure Roadmap which builds on the framework set out in the Electricity Strategy. The aim of the strategies are to consider an integrated electricity approach that addressed demand and supply management, electricity affordability, households and businesses, reliable generation and investment in large scale generation. This is outlined in Action 5, which encourages the development of reliable, affordable and clean technologies to take pressure off the grid.

Specifically, the strategy notes that renewables are the most economical form of reliable electricity and will be able to reduce energy costs through the development of more reliable renewable generation with the aid of battery energy storage systems.

The Project supports the aims and objectives of the Electricity Strategy and Infrastructure Roadmap, by providing a large-scale renewable electricity source that can power up to 133,000 homes per annum in the region and is supported by battery energy storage systems.

2.4 Study Area

The Study Area for this has been defined with consideration to townships, major regional centres, and LGA administrative boundaries of relevance to the Project Site. Major townships or regional centres include Goulburn, Bowral, Mittagong, Queanbeyan, Yass and Crookwell. Specifically, the Study Area has been defined using the following LGA boundaries:

- Goulburn Mulwaree
- Upper Lachlan Shire
- Wingecarribee Shire
- Queanbeyan-Palerang Regional
- Yass Valley

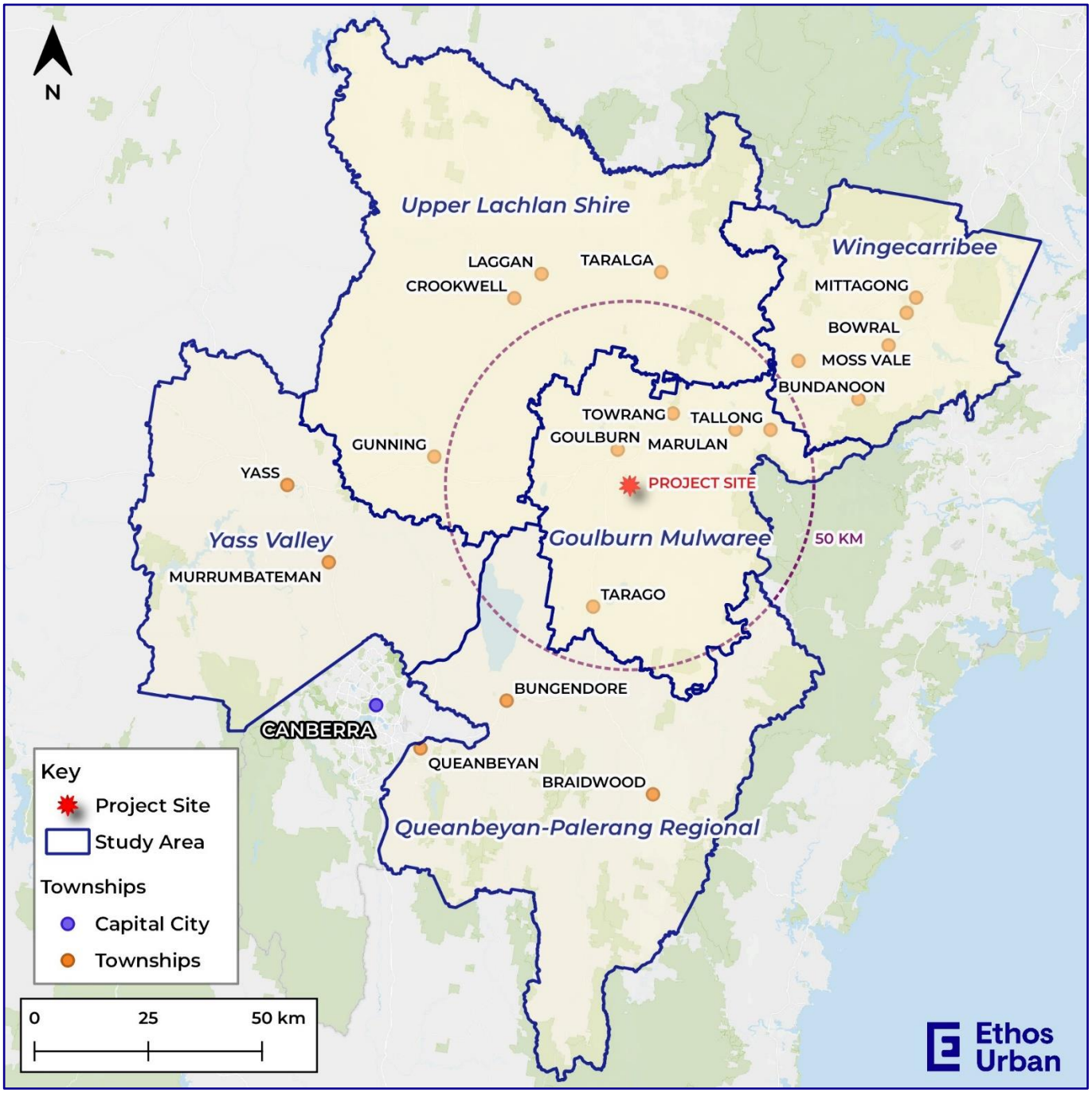


Figure 3 Study Area Map
Source: Ethos Urban using QGIS

3.0 Baseline Regional Economic Profile

3.1 Resident Population

The population of the Study Area is estimated at 179,870 persons in 2024, with the population of the Goulburn Mulwaree LGA estimated at 33,130 persons.

Population forecasts for the Study Area show an estimated increase of +45,840 residents between 2024 and 2041. This includes growth of +7,300 residents in Goulburn Mulwaree LGA.

Goulburn Mulwaree LGA's growth is forecast to increase at an annual rate of +1.2% across the 17 years from 2024-2041, representing an additional +430 persons per annum on average. This growth rate is slightly less than the Study Area, estimated at +1.3% per annum over the same period.

Official population projections have been prepared by NSW government and rebased to the most recent ABS estimated resident population figures for 2023. This is shown below in **Table 3.**

Table 3 Resident Population Forecasts – Study Area, 2024 to 20241

Locality	2024	2030	2036	2041	Change 2024 to 2041
Population					
Goulburn Mulwaree LGA	33,130	35,810	38,400	40,430	+7,300
Study Area	179,870	196,320	212,640	225,710	+45,840
New South Wales	**8,263,990**	**8,831,620**	**9,398,170**	**9,866,810**	**+1,602,820**

Source: ABS, 3218.0 Regional Population Growth, Australia; NSW State and Local Government Population Projections 2022
Notes: Figures rounded

3.2 Labour Force

As of September 2023, Goulburn Mulwaree LGA had a labour force of 16,720 persons and an unemployment rate of 3.2% (source: Australian Government – Small Area Labour Markets data). This rate is at par with the unemployment rate for NSW (3.2%). The LGA currently has approximately 530 persons who are unemployed.

More broadly, the Study Area has a labour force of 98,210 persons and an unemployment rate of 1.6%, which is around half the rate of unemployment for NSW. This reflects a tight regional labour market, with the total number of unemployed persons in the Study Area being 1,550 persons.

The Project is likely to require approximately 250 workers at peak construction, which may last several months. It is anticipated that approximately 5% of these workers will be sourced from within the Study Area, providing a small number of new opportunities for unemployed job seekers (subject to appropriate skills match) or 'back filling' employment opportunities associated with jobs vacated by workers taking up project employment. It is anticipated that the remaining 95% of non-local workers will require accommodation during the construction phase. Labour supply factors are further explored in **Section 4.**

Table 4 Resident Labour Force Statistics – Study Area, September 2023

Area	Labour Force	Unemployed	Employed	Unemployment Rate (%)
Goulburn Mulwaree	16,720	530	16,190	3.2%
Yass Valley	10,060	140	9,920	1.4%
Queanbeyan-Palerang	39,190	510	38,680	1.3%
Upper Lachlan	4,710	80	4,630	1.7%
Wingecarribee	27,530	290	27,240	1.1%
Study Area	**98,210**	**1,550**	**96,660**	**1.6%**
New South Wales	**4,487,200**	**144,200**	**4,343,000**	**3.2%**

Source: Australian Government National Skills Commission, *Small Area Labour Markets,* September Quarter 2023
Note: Figures Rounded

3.3 Occupational Structure

The skills base of the Study Area is reflected in its occupational structure. ABS Census data for 2021 highlights that 35.6% of employed residents in Goulburn Mulwaree LGA and 28.6% of employed residents in the Study Area were occupied in activities generally sought for construction of major utility-scale renewable energy projects (e.g., technicians and trades workers, machinery operators and drivers, and labourers).

Of importance, the representation of these occupations in Goulburn Mulwaree LGA is significantly above the State average (26%), indicating a generally suitable occupational base for the Project is present in the immediate region. In total numbers, 5,111 workers in the Goulburn Mulwaree LGA are occupied in construction-related activities. The Study Area overall has 24,625 workers employed in construction related activities.

Table 5 Occupational Structure – Study Area, 2021

Occupation	Study Area (No.)	Study Area (%)	New South Wales (%)
Managers	14,720	17.1%	14.6%
Professionals	17,430	20.2%	25.8%
Technicians and Trades Workers	12,350	14.3%	11.9%
Community and Personal Service Workers	9,650	11.2%	10.6%
Clerical and Administrative Workers	11,600	13.5%	13.0%
Sales Workers	6,340	7.4%	8.0%
Machinery Operators and Drivers	4,830	5.6%	6.0%
Labourers	7,440	8.6%	8.2%
Inadequately described/Not stated	1,740	2.0%	1.1%
Total	**86,097**	**100.0%**	**100.0%**

Source: ABS Census of Population and Housing, 2021, TableBuilder – Usual Place of Residence

Note: Figures Rounded

3.4 Business Structure

A tangible benefit of a major investment project is the extent to which local businesses can participate through project contracts and other service provision.

ABS Business Count data for June 2023 show the Study Area includes 4,367 construction related businesses, accounting for 23.8% of total businesses in the Study Area (refer Table 6) This data indicates a reasonable presence in the Study Area of the types of firms that have potential to directly service aspects of the Project. This opportunity is discussed in more detail in the following chapter (Section 4).

Although construction-related businesses will likely be the main beneficiaries of the Project, businesses in other sectors supporting the Project (directly and indirectly) are also likely to benefit, including:

- Retail trade
- Accommodation and food services
- Rental, hiring and real estate services.
- Health care and social assistance.

These sectors make up approximately 22.4% of all businesses located in the Study Area and their services will likely play a role in supporting the needs of project workers, especially those relocating to the Study Area to work on the Project.

Approximately 2,600 businesses are located within Goulburn Mulwaree LGA, including 624 construction and manufacturing businesses, who may provide support the Project. The LGA also supports a range of other businesses that may benefit from the Project, including businesses involved in retail trade, accommodation and food services.

Table 6 Business Structure – Study Area, 2023

Industry	Study Area (No.)	Study Area (%)
Agriculture, Forestry and Fishing	3,202	17.4%
Mining	49	0.3%
Manufacturing	675	3.7%
Electricity, Gas, Water and Waste Services	67	0.4%
Construction	3,692	20.1%
Wholesale Trade	421	2.3%
Retail Trade	980	5.3%
Accommodation and Food Services	709	3.9%
Transport, Postal and Warehousing	989	5.4%
Information Media and Telecommunications	145	0.8%
Financial and Insurance Services	503	2.7%
Rental, Hiring and Real Estate Services	1,565	8.5%
Professional, Scientific and Technical Services	2,305	12.6%
Administrative and Support Services	765	4.2%
Public Administration and Safety	44	0.2%
Education and Training	256	1.4%
Health Care and Social Assistance	856	4.7%
Arts and Recreation Services	283	1.5%
Other Services	846	4.6%
Currently Unknown	10	0.1%
Total Businesses in Study Area	**18,362**	**100.0%**

Source: ABS, Counts of Australian Businesses, including Entries and Exists, June 2023

3.5 Township Services Capacity

This section provides an overview of key townships located within the Study Area that may have the capacity to support the Project through accommodation, labour and supplier needs.

3.5.1 Accommodation

Commercial Accommodation

As noted in **Section 3.2**, the non-local construction workforce will require accommodation during the construction phase of the Project. Some of this requirement can be satisfied through the use of commercial accommodation. However, the capacity of existing accommodation providers across the Study Area, and specifically in Goulburn, needs to be taken into consideration. This is particularly relevant given the need for this accommodation to service many sectors (given Goulburn's regional city status and key stopping point between Sydney and Canberra) and visitor groups (especially during holiday seasons).

An audit of commercial and private accommodation located within the Study Area's major townships has been undertaken. These townships generally represent an approximate drive time of 60-minutes from the Project Site. The Study Area's commercial accommodation capacity is approximately 2,328 rooms/cabins, with 189 of these rooms estimated to be available to the Project. A large share of accommodation located in the Queanbeyan-Palerang, Goulburn Mulwaree and Wingecarribee LGAs. Information regarding accommodation supply has been sourced from the Project's Accommodation and Employment Strategy (AES)

The range of short-term accommodation options available in the Study Area is diverse, and includes motels, hotels, guest houses, and caravan/holiday parks. From a Project perspective, it will be important to ensure

commercial accommodation demands don't result in a shortage of rooms for other sectors in Goulburn and other townships, including tourism.

Table 7 Commercial Accommodation – Study Area, 2024

Townships	Rooms/Cabins	Total Providers	Rooms Available to the Project
Goulburn Mulwaree	529	24	43
Yass Valley	347	14	28
Queanbeyan-Palerang	813	14	40
Upper Lachlan	143	13	12
Wingecarribee	496	19	66
Total Study Area	**2,328**	**84**	**189**

Source: Umwelt Accommodation and Employment Strategy, ATDW 2024

Private Accommodation

Private accommodation (i.e. short or long term housing rentals) are often used to support construction worker needs for major renewable energy projects. This could be through leasing of holiday homes and investment properties, either privately (including Airbnb), or through real estate agents.

Within the Study Area, there are a total of 524 vacant dwellings, including 164 vacant dwellings in Goulburn Mulwaree LGA, and 264 in Wingecarribee LGA. The AES identifies the highest vacancy rate in the EIA Study Area is just 1.35% in Queanbeyan-Palerang LGA. Given this tightness, and to avoid putting upward pressure on prices and the potential for local renters to be priced out of the market, the AES estimates only 13 rental properties are likely to be available to the Project across the Study Area.

Short-term/temporary accommodation provides another option for construction workers, with 1,321 active short-term rentals currently advertised in the Study Area according to the AES. Of these available listings, the AES anticipates 124 of rooms might be available to the Project, when all competing demands are considered.

Table 8 Vacant Dwellings – Study Area, 2024

Local Government Areas	Major Township	Vacant Dwellings	Vacancy Rate (%)	Rental Properties Available to Project Workforce
Goulburn Mulwaree	Goulburn	164	1.03%	4
Yass Valley	Murrumbateman	36	0.46%	1
Queanbeyan-Palerang	Queanbeyan and Bungendore	46	1.35%	1
Upper Lachlan Shire	Taralga and Gunning	14	0.26%	0
Wingecarribee	Bowral, Moss Vale and Mittagong	264	1.05%	1
Total Study Area		**524**		**13**

Source: Umwelt Accommodation and Employment Strategy (real estate investor, 2024)

Further to the above, the Study Area has a provision of unoccupied private dwellings at 7,754 dwellings. This equates to a rate of 10.7% of unoccupied dwellings, compared to New South Wales at 9.4%. Notably Upper Lachlan LGA specifically has a high share of unoccupied private dwellings at 23.3% of dwelling stock. It is acknowledged that most of these unoccupied dwellings will not be available for project workers, with many being secondary homes that are not available on the rental markets. However, some new stock may enter to the market on a temporary basis to support the Project and other major infrastructure projects in the region.

Table 9 Unoccupied Private Dwellings – Study Area 2021

Area	Occupied Private Dwellings		Unoccupied Private Dwellings	
	(No.)	(%)	(No.)	(%)
Goulburn Mulwaree	12,045	87.0	1,799	13.0%

Area	Occupied Private Dwellings		Unoccupied Private Dwellings	
	(No.)	(%)	(No.)	(%)
Yass Valley	5,932	91.8	531	8.2%
Queanbeyan-Palerang	23,100	91.3	2,191	8.7%
Upper Lachlan	3,249	76.9	983	23.3%
Wingecarribee	20,184	90.0	2,250	10.0%
Total Study Area	**64,510**	**89.3**	**7,754**	**10.7%**
New South Wales	**2,900,468**	**90.6**	**299,524**	**9.4%**

Source: ABS Census of Population and Housing 2021

3.5.2 Township Services

Workers locating temporarily to the Study Area will require a wide range of convenience services, including retail, health and food and dining for example. In addition to this, the Project will also need to source, trade, equipment hire, fuel, vehicle mechanical services, and other services from business located in the immediate region.

The following sections provide an overview of the services located in the regional centres/main townships within the Study Area.

Goulburn

Goulburn is a major regional centre located strategically along the Hume Highway, acting as a key destination between Canberra and Sydney. The regional city supports a population of 25,017 (ABS 2023), and provides critical services to surrounding regional townships, such as Crookwell, Taralga, Marulan and Gunning.

- Goulburn supports a range of major civic, education, health, retail and commercial services, and is a key centre for employment within the Goulburn Mulwaree LGA. Key services include:
- Wide range of accommodation options within the town centre. Goulburn serves a regional function being a strategic stopping point before Sydney, and more broadly along the eastern seaboard between Victoria and Queensland. There is a diversity of accommodation options including hotels, motels and caravan parks.
- Higher order retailing including:
  - Goulburn Square: Anchored by Coles and Kmart
  - Goulburn Marketplace: Anchored by Woolworths
  - Retailing along Auburn Street, including provision of cafes, restaurants, clubs (i.e. RSL), pubs, takeaway shops and other retail suppliers and services (i.e. apparel and homewares).
- Banks and other financial institutions and services
- Engineering and mechanical services
- Goulburn Base Hospital – which operates as the major regional hospital with an emergency department for Goulburn Mulwaree LGA. The hospital has recently undergone a major upgrade.
- Other health services – including general practitioners, allied health, and pharmacies.
- Airport – Privately owned facility that offers general aviation services only, as well as recreational skydiving activities.
- Goulburn Correctional Centre – Australia's super maximum-security prison.
- Education – Goulburn has a strong presence of educational institutions, including primary and secondary schools, as well as tertiary education facilities. Of significance, this includes institutions such as TAFE, as well as the NSW Police Academy operated by Charles Sturt University. The NSW Police Force host major events a number of times throughout the year that attract visitation to Goulburn.
- Entertainment and community spaces – parks, hotels, clubs, recreational activities, aquatic centre, library, performing arts centre/theatre and cinema.
- Post Office, Police Station, Rural Fire Services
- Multiple real estate agents
- Multiple service stations

- Hardware stores (Bunnings, Mitre 10), wholesale trade supplies, plumbing (Reece), earthworks and demolition, builders, concreting services, electricians, transport and bulk haulage, quarries, plant hire companies (Kennards) and other industrial suppliers.
- Agricultural services including equipment hire, produce, irrigation and general rural supplies.

Figure 4 Goulburn – Auburn Street (left), Serviced Apartments (right)

Source: Ethos Urban

Marulan

Marulan is a village located 30km north of Goulburn, along the Hume Highway. Marulan supports a small population of 857 residents (ABS 2023). The village includes a limited provision of local retail services including an IGA, butcher, baker, pub, cafes, general store, and retail services (i.e. hairdressing). Marulan supports some visitor accommodation, primarily serving passing traffic and acts as a truck stop destination.

Marulan's other key services include:

- A Boral concreting facility
- Plant hire.
- Rural supplies
- Two quarries operated by Holcim and Gunlake. There is also a major quarry and limestone mine located in Marulan South, both operated by Boral.

Figure 5 Marulan – Accommodation (left) and main shops (right)

Source: Ethos Urban

Crookwell

Located 45km north of Goulburn, Crookwell supports a population of 2,095 (ABS 2023). The township functions as a smaller local service centre for residents in the Upper Lachlan Shire. Residents in Crookwell still typically rely on

Goulburn for services (i.e. major supermarkets, businesses and other retail), with the township supporting basic services for the local population, including:

- IGA Plus Liquor
- Cafes
- Bakery
- Veterinary Hospital
- Crookwell Public School
- Service stations.
- Agricultural services such as hardware, supplies and livestock produce.
- Commonwealth Bank Branch.
- There is also an established and operational wind farm development located to the south of Crookwell.

Figure 6 Crookwell- Goulburn Street

Source: Ethos Urban

Gunning

Located between Goulburn and Yass along the Hume Highway, Gunning is a small township with a population of 609 persons (ABS 2023). The township is located around 45km west of Goulburn and supports a limited provision of supporting services for the Project, and includes the following:

- A single hotel located along Yass Street
- Education – A small primary school
- Retail – including cafes, pubs, butcher, small homeware and apparel stores.
- Post office.
- Agricultural supplies and services.

Figure 7 Gunning – Yass Street

Source: Ethos Urban

Bungendore

A township of 4,035 persons (ABS 2023), Bungendore is located in the Queanbeyan Palerang LGA, approximately 50km south of Goulburn. The township is located between Braidwood and the ACT and contains limited retail and commercial offerings. The following services are available:

- Limited commercial accommodation options
- IGA
- Community centre
- Cafes and takeaway food
- Service Stations
- Health services, including medical centres and pharmacies.
- Community services such as a post office, police station, library, and Queanbeyan-Palerang Council
- Education – including public school.
- Real Estate Agent
- Agricultural and rural services/supplies
- Recreation facilities – e.g. Parks, tennis courts, ovals, basketball.
- Industrial services including plumbing, community recycling centre, plant and machinery, engineering, and auto repairs.
- Home and timber hardware.

Figure 8 Bungendore – Village shops (left), looking west down Malbon Street (right)

Source: Ethos Urban

Moss Vale

Moss Vale is a centre of 8,886 residents (ABS 2023), located within the Southern Highlands region, approximately 70km north of Goulburn. Moss Vale supports a range of critical services for local residents, including the following:

- Limited commercial visitor accommodation, with accommodation services predominantly including boutique homes/bed and breakfasts, caravan parks or pub/hotel accommodation.
- A strong provision of retail including:
  - A SUPA IGA
  - A supermarket centre (anchored by Coles)
  - Large format retailing, including major stores such as Harvey Norman.
  - Retailing along the Illawarra Highway including pubs, cafes, restaurants, takeaway food, bakeries, apparel, homewares, retail services (i.e. hairdressing and health/fitness)
- Health services – including allied health, pharmacies, dentists and medical centres (General Practitioners)
- Education – including University of Wollongong Southern Highlands Campus, TAFE NSW, primary and high schools.
- Hardware stores (Mitre 10), irrigation and machinery services.
- Resource recovery centre and other waste management services


Figure 9 Moss Vale – shopping centre (left), retail plaza (right)

Source: Ethos Urban

Bowral

Located approximately 88 km northeast of the Project Site, Bowral is one of the major townships within a 60 minute drive and is located in the Wingecarribee LGA. The estimated population for Bowral was 13,512 (ABS, 2023). Key services include:

- A number of accommodation options within the town centre. Bowral is a strategic stopping point before Sydney en-route to Canberra.
- Range of restaurant and cafes
- Grocery shops: Coles, Woolworths, ALDI and Harris Farm
- Recreation centre: Bowral Golf club, Bradman Cricket and International Hall of Fame, Bowral Bowling Club, Centennial Vineyards and Bowral Lookout
- Entertainment and community spaces – parks, hotels, clubs, recreational activities, aquatic centre, library, performing arts centre/theatre and cinema.
- A range of educational centres including childcare, primary and secondary schools.
- Post Office, Police Station, Rural Fire Services
- Bowral and District Hospital and a range of other smaller medical centres and nursing homes
- Hardware Stores: Mitre 10, Plumbing Co-op, Reece Plumbing and Bowral Toolbox and equipment hire and supplies.
- Entertainment and community spaces – parks, hotels, clubs, recreational activities, aquatic centre, library, performing arts centre/theatre and cinema.

Figure 10 Bowral (Bong Bong Street)

Source: Ethos Urban

Mittagong

Mittagong is located approximately 92 km or a 60 minute drive northeast of the Project Site, within the Wingecarribee LGA . The estimated population for Mittagong in 2023 was 11,078 (ABS, 2023). Key services include:

- A range of accommodation options

- Range of restaurant and cafes
- Essential retail including major supermarkets (ALDI and Woolworths)
- Post Office, Police Station, Rural Fire Services
- Hardware Stores: Mitre 10, Bunnings, Total Tools, Hudson Home Timber, Plumbers Co-op and Supercheap Auto as well as equipment hire and supplies.
- Education – Mittagong has a strong presence of educational institutions, including primary and secondary schools and early learning centres.

Figure 11 Mittagong (Bowral Road)

Source: Ethos Urban

Braidwood

Braidwood is a historic village located within the Queanbeyan-Palerang LGA, some 85km south of Goulburn and around 90km east of Canberra. Braidwood is located along the Kings Highway; a busy roadway servicing connectivity between the ACT and the South Coast. Accordingly, Braidwood receives high levels of visitation, largely through motorists passing through the township. In total, the Braidwood township supports a population of 1,405 residents (ABS 2023), with a provision of services to support the locals and visitors.

Key services include:

- A limited provision of visitor accommodation, including motels and pub accommodation.
- Retail including:
  - An IGA supermarket
  - Cafes, pubs, restaurants and takeaway food
  - Speciality food and groceries such as butchers and bakeries
  - Speciality retail such as apparel and homewares
- Health services – Medical centres, pharmacies and dentists
- Financial institutions – banking
- Multiple real estate agents
- Service Station
- Public services including Post Office, Queanbeyan Palerang Council, and Library
- Education – Primary school
- Hardware stores, mechanical services, rural and agricultural supplies and services.

Figure 12 Braidwood – Wallace Street

Source: Ethos Urban

Yass

A large township located 85km west of Goulburn, Yass supports a population of 6,522 persons (ABS 2023) and is a key strategic centre within Yass Valley LGA. Yass benefits from its proximity to Canberra (55km north) and supports a range of local services and facilities for the local and regional population. Key services include:

- Notable provision of visitor accommodation, including commercial hotels, caravan parks and motels.
- Health – regional health services including Yass District Hospital, medical centres, pharmacies, and allied health.
- Multiple cafes, restaurants, takeaway outlets and pubs.
- RSL
- Supermarkets including Woolworths and Aldi
- Other retailing including Kmart, apparel, homewares and retail services.
- Multiple service stations
- Post Office, Police Station and Rural Fire Service
- Financial institutions – including multiple banks and financial services.
- A small industrial area is located to the north of Yass along Yass Valley Way. Industrial related services include Haulage, plumbing, engineering, steel fabrication, solar energy company, warehousing, electrical services, and machinery services.
- Parks, and other public recreation facilities
- Agricultural and rural supplies

Figure 13 Yass – Comur Street (left), accommodation (right)

Source: Ethos Urban

Queanbeyan

Queanbeyan is a major regional centre located approximately 90km southwest of the Project Site. The regional city supports a population of 37,875 persons and is a key centre within Queanbeyan-Palerang LGA. Queanbeyan benefits from its proximity to Canberra (16km north-west), supports a range of major civic, education, health, retail and commercial services, and is a key service centre for surrounding townships in Queanbeyan-Palerang Regional Council.

Key services include:

- Wide range of accommodation options within the town centre. Queanbeyan serves a regional function being a strategic centre outside of the ACT. There is a diversity of accommodation options including hotels, motels and caravan parks.
- Higher order retailing including:
  - Riverside Plaza: Anchored by Coles and Best&Less
  - Standalone Woolworths, Kmart and Coles
  - Retailing along Crawford and Monaro Streets, including provision of cafes, restaurants, clubs (i.e. RSL), pubs, takeaway shops and other retail suppliers and services (i.e. apparel and homewares).
- Banks and other financial institutions and services
- Engineering and mechanical services
- Queanbeyan District Hospital & Health Service – which operates as an acute care public for the Queanbeyan-Palerang LGA. The hospital underwent a major $51 million upgrade, completed in 2009.
- Other health services – including general practitioners, allied health, and pharmacies.
- Entertainment and community spaces – parks, hotels, clubs, recreational activities, aquatic centre, library, performing arts centre/theatre and cinema.
- Post Office, Police Station, Rural Fire Services
- Multiple real estate agents
- Multiple service stations
- Hardware stores (Mitre 10), wholesale trade supplies, plumbing (Reece), earthworks and demolition, builders, concreting services, electricians, transport and bulk haulage, quarries, plant hire companies (Kennards) and other industrial suppliers.
- Agricultural services including equipment hire, produce, irrigation and general rural supplies.

Summary

The following key findings are highlighted:

1. The population of the Study Area totalled 179,870 persons in 2024. Over the period between 2024 and 2041, the Study Area population is forecast to increase by +45,840 residents, to a total of 225,710 in 2041. investment in major renewable energy projects (such as the Project) can generate new employment opportunities for residents and generate economic stimulus in the local region. Importantly, renewable energy projects can service increased electricity demands as the number of residents, and subsequently households in the Study Area increases in the coming years.
2. The Study Area had an unemployment rate of 1.6% in June 2023; however, Goulburn Mulwaree LGA's unemployment rate was much higher at 3.2%. New short term employment opportunities for labour force participants (including unemployed job seekers, subject to a suitable skills match) are likely to be generated by the Project.
3. The Study Area's occupational and business structures indicate a good base exists to service the needs of the Project, with approximately 24,625 workers and 4,367 businesses involved in construction related activities, including approximately 5,110 workers and 520 businesses located in Goulburn Mulwaree LGA.
4. The major regional township of Goulburn will be a key service provider for the Project, by means of labour, accommodation, trade supplies and other general services. Other major townships including Bowral, Mittagong and Queanbeyan also provide a wide range of services that could support the Project, albeit are located further in distance to the Project Site. Smaller townships such as Marulan, Braidwood, Moss Vale and Gunning offer a more limited provision of services to support the Project.

4.0 Economic Impact Assessment

4.1 Project Investment

The total construction cost for the Project is estimated to be approximately $650 million, based on information provided by WT Partnership Australia. Investment costs are associated with the purchase of PV panels and associated equipment, battery storage components etc. Significant investment is also required for civil, electrical and grid connection works.

A review of confidential information from constructed renewable energy projects in Australia (based on unpublished Engineering, Procurement and Construction (EPC) data) shows approximately 15% of construction investment is generally retained within the host Study Area for these types of projects. Applying this ratio to total investment indicates approximately $98 million in wages (rounded), contracts and other service provision may be generated for the Study Area's economy up to 24 months.

Table 10 Project Investment and Study Area Retention

	Value
Total Project Capital Investment Value	$650 million
Retained Investment in Study Area (%)	15%
Retained Investment in Study Area (No.)	$98 million

Source: WT, EPC Data, Ethos Urban

Note: Figures Rounded

4.2 Project Employment

Project employment is assessed in terms of direct jobs (i.e., site-related) and indirect (or flow-on) jobs in the local and wider economies (i.e., jobs that are generated through the industrial and consumption impacts of the initial investment).

4.2.1 Construction Phase

Direct Construction Phase

Data provided by the Proponent indicates 155 Full Time Equivalent (FTE) jobs will be generated over the construction phase, which is expected to be 24 months (assumed for this EIA). That is, on average 155 FTE jobs will be sustained for each of the 24 months of construction activities. However, actual workforce numbers will vary from month to month depending on the intensity of construction at the time. At the Project's peak, which may last for several months, the Proponent estimates 250 FTE positions will be supported by on-site construction activities.

Based on the Proponent's experience of solar farm construction projects in similar rural locations, the following employment split is considered realistic:

- 5% or 10 FTE jobs sourced from within the Study Area (local employment) – rising to 13 FTE at peak.
- 95% of 145 FTE jobs sourced from outside the Study Area (non-local employment) – rising to 237 FTE at peak.

Note, sourcing 5% of the construction workforce locally should be considered a target rather than a commitment by the Proponent.

Construction-related jobs are expected to be associated with a wide-range of on and off-site activities, including:

- Labour recruitment
- Training
- Installation of PV support structures
- Vehicle and equipment hire.
- Earthworks
- Foundations
- Engineering services
- Roads and access tracks
- Transport and logistics.
- Assembly and installation of PV panels
- Assembly and installation of BESS facilities
- Electrical works (cabling and connections)
- Installation of monitoring equipment
- Fencing
- Landscaping
- Security
- Waste disposal.
- Business and financial services
- Administrative services.

As highlighted in **Section 3**, the business structure of the Study Area indicates a good mix of these types of services are available in the Study Area, especially within Goulburn. It is reasonable to expect, therefore, that businesses located in the Study Area will be well-positioned to provide services and secure contracts during the construction phase of the Project either directly or indirectly (see below).

Indirect Construction Employment

In addition to direct employment, significant employment will be generated indirectly through the employment multiplier effect. By applying an industry-standard multiplier for the construction industry of 1.6 (based on ABS Type B multipliers), the Project is estimated to generate an additional 245 FTE jobs over the construction period.

Indirect or flow-on jobs (which captures industry and consumption effects) include those supported locally and in the wider economy (including within other parts of NSW, and nationally), as the economic effects of the capital investment flow through the economy. Indirect employment creation in local and regional economies includes jobs supported through catering, accommodation, trade supplies, fuel supplies, transportation, food and drink etc.

For the purposes of this assessment, it is assumed 20% of the 245 indirect jobs (equating to 50 indirect FTE jobs) are supported locally in the Study Area. This assumption is made with reference to findings from completed renewable energy projects in regional areas, where generally a 20% share of indirect jobs is applied and noting the significant influx of non-local workers (and their spending) likely to be associated with the Project.

Total Construction Employment

A summary of total average construction employment to be supported by the Project is provided below.

Table 11 Construction Employment Summary

	Average Local FTE Jobs per Month	Average Non- Local FTE Jobs per Month	Average FTE Jobs per Month
Direct Average Jobs	10	145	**155**
Indirect Average FTE Jobs	50	195	**245**
Total Average FTE Jobs	60	340	**400**

Source: Lightsource bp, Ethos Urban

Note*: Assumes 5% of direct FTE construction jobs and 20% of indirect FTE construction jobs are supported locally.

Note**: Assumes 95% of direct FTE construction jobs and 80% of indirect FTE construction jobs are support by non-local workers.

4.2.2 Operational Phase

Direct Operational Employment

The Proponent indicates that 4 FTE direct jobs will be supported locally (on-site) on an ongoing basis through the operation and maintenance of the Project.

Indirect Operational Employment

A number of additional jobs will also be supported indirectly through the employment multiplier effect. By applying an industry-standard multiplier for the electricity industry of 2.9 (based on ABS Type B multipliers) to the direct operational and maintenance jobs, a further 12 FTE permanent jobs (rounded) would be generated in the wider State and national economies, with some of these jobs supported locally through operational supply chains and consumption impacts.

As noted previously, it is assumed that 20% of indirect operational jobs are created in the Study Area. This equates to approximately 2 ongoing FTE indirect Study Area positions.

Operational-related employment is for the lifetime of the Project (40 years throughout); therefore, while ongoing job creation is relatively small, it represents new long-term employment opportunities at a local, regional and national level.

Total Operational Employment

In summary, approximately 14 FTE jobs (4 FTE direct and 10 FTE indirect) are expected to be generated by the Project, with 6 FTE positions supported in the Study Area. A summary of total operational employment is provided in **Table 12** below.

Table 12 Total Operational Employment

	Total Employment	Total Employment – Study Area
Direct FTE Jobs	4	4
Indirect FTE Jobs	10	2
Total FTE Jobs	**14**	**6**

Source: Lightsource bp, Ethos Urban, ABS Type B Multipliers

Note: Figures Rounded

4.3 Cumulative Effects Assessment

Construction of the Project will potentially need to compete for labour, accommodation, and other resources with major infrastructure projects under construction concurrently in the Study Area. For the purposes of this assessment, major projects include other renewable energy projects, as well as significant civil or other infrastructure projects.

Construction of the Project is planned to commence in early 2026 and will be operational in early 2028.

The Assessment Risk ratings are based on the following:

- **Low:** No further consideration of cumulative impacts undertaken.
- **Medium**: Potential for overlap however unlikely to result in substantial cumulative impacts – qualitative assessment of cumulative impacts undertaken.
- **High:** Overlap is certain and there is potential for substantial cumulative impacts – qualitative assessment of the cumulative impacts undertaken.

A list of potentially competing projects in the Study Area and associated level of anticipated impact is shown in **Table 13**. These projects are considered likely to have varying degrees of interaction with the Project from an economics perspective (i.e. timing of the construction phase overlaps, proximity to other major centres, and distance from the Project Site).

To assess impacts, the construction timing for the Project is assumed to commence in early 2026, and construction phase run for 24 months (i.e. until early 2028).

In relation to proposed renewable energy projects, the following is noted:

- The projects outlined in the cumulative impact table are within various stages of the development cycles, including some planned or approved. With this in mind, many of the projects outlined do not have clear or definitive construction programs available, as such timing and construction overlap with the Project is not certain. Further, not all identified projects may end up proceeding. It should be noted that where limited information is available on timing and phasing of a project, it has been assumed that there is potential for overlap with the Gundary Solar Farm Project.

New developments (not yet proposed or planned) may emerge in the period prior to construction of the Project.

The assessment highlights that the construction phase of four major infrastructure projects may overlap with the construction of the Project. These projects are:

- HumeLink – a significant transmission infrastructure project which is highly likely overlap with the Project's construction timeframe (High Risk).
- Three utility-scale renewable energy projects that 'may' overlap with the Project, but uncertainty exists regarding construction timing. The distance of these projects from the Project Site varies (Medium Risk).

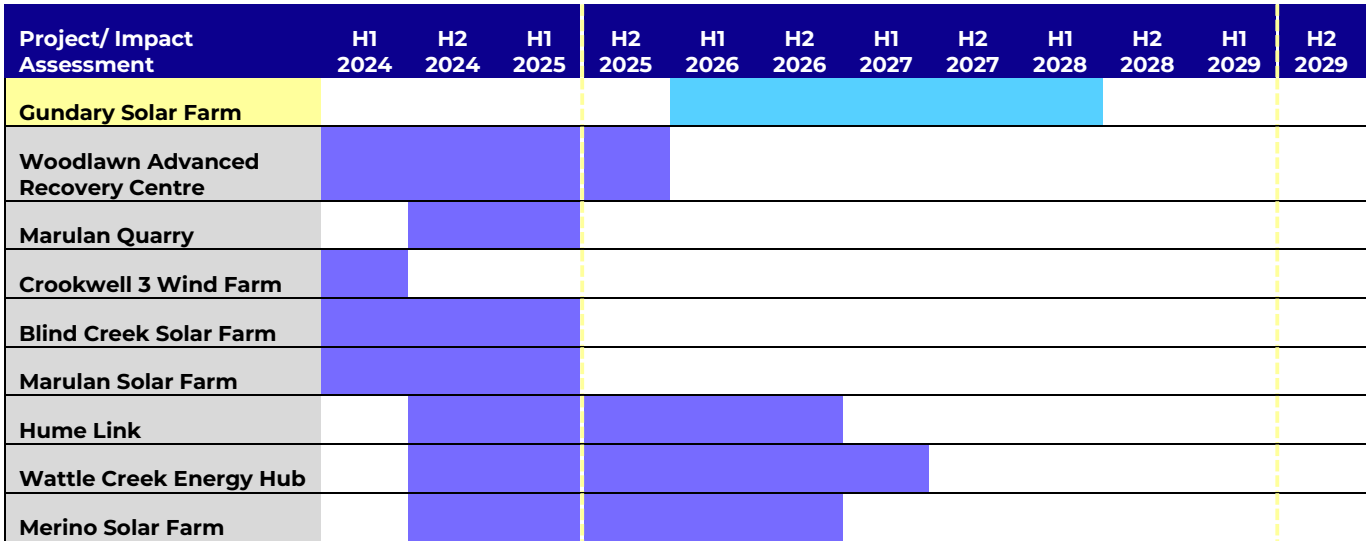
Key cumulative impacts relating to High Risk projects include:

- Competition for construction aligned services and labour resulting in a shortage of workers in the regional area.
- A shortage of available commercial and private accommodation due to the demand from multiple infrastructure projects, resulting in a lack of available rooms to service other sectors (i.e. tourism, visitation, business etc) and lack of available rental housing for local communities in a very tight rental market (especially in Goulburn).

It should be recognised that the multiple major infrastructure projects constructed concurrently in the Study Area (including the Project) will generate cumulative benefits for the regional economy, including:

- Spending stimulus from non-local workers on accommodation, goods and services
- Generate new short-term employment for local communities.
- Increase revenues for local businesses through construction contracts and services provision.
- Develop a renewable energy skills base that may result in efficiencies and further economic opportunities for the region.

Figure 14 Indicative Timing of Surrounding Projects



Source: Umwelt; NSW Major Projects Portal; Ethos Urban

Table 13 Cumulative Impacts Assessment

Project	Proximity/Location	Economic Impact
Renewables Project – Proposed/under assessment or in planning and design phases		
Merino Solar Farm ITP	1km West Tirrannaville, Goulburn Mulwaree LGA	**Medium** Potential may overlap with the Gundary SF Project if the project extends beyond its planned timeframe. Therefore, the project may compete for construction services, labour and accommodation.
Western Range Solar Farm Base International	46km west Gunning, Upper Lachlan Shire	**Low** Project likely to be completed by the time the Gundary SF project commences
Wattle Creek Energy Hub Spark Renewables	50km northeast Marulan, Upper Lachlan Shire	**Medium** Potential may overlap with the Gundary SF Project if the project extends beyond its planned timeframe. Therefore, the project may compete for construction services, labour and accommodation.
HumeLink Transgrid	55km north, at the nearest point to Gundary Solar Farm Located across 5 LGAs, including Study Area LGAs (Yass Valley, Upper Lachlan Shire)	**High** Project likely to overlap with the construction timeframe of Gundary SF. However, impacts will be dependent on the location of where works are occurring at any particular time. Impacts will be high on construction services, labour and accommodation in Study Area LGAs of Yass Valley and Upper Lachlan Shire.
Renewables Project – Approved/Construction not yet commenced		
Marulan Solar Farm Terrain Solar	35km northeast Marulan, Goulburn Mulwaree LGA	**Low** Project likely to be completed by the time the Gundary SF project commences.
Blind Creek Solar Farm Blind Creek Solar Farm Pty Ltd	80km southwest Bungendore, Queanbeyan-Palerang LGA	**Low** Project likely to be completed by the time the Gundary SF project commences. Project is located within close proximity to Canberra, and as such will likely rely on the city for much of the project's needs (including services, labour and accommodation).
Crookwell 3 Wind Farm Global Power Generation Australia Pty Ltd	50km north Roslyn, Upper Lachlan Shire	**Low** Project likely to be completed by the time the Gundary SF project commences.
Other Projects – Proposed/Approved, not yet commenced		
Marulan Quarry Global Quarries Australia Pty Ltd	30km northeast Marulan, Goulburn Mulwaree LGA	**Low** Project likely to be completed by the time the Gundary SF project commences.
Woodlawn Advanced Energy Recovery Centre Veolia	45km south Tarago, Goulburn Mulwaree LGA	**Medium** Potential may overlap with the Gundary SF Project if they project timeframe extends, and therefore the project may compete for construction services, labour and accommodation

Source: Umwelt, Ethos Urban

4.4 Labour Force and Business Participation Assessment

In terms of cost efficiencies (lower transport, labour costs etc), many large construction projects located in regional areas are, where possible, serviced locally or from within the immediate region.

The Study Area has substantiated capacity in terms of construction-related workers (24,625 workers) and construction-related businesses (4,367 businesses). Goulburn Mulwaree LGA has 5,110 workers and 520 businesses associated with construction-related activities.

Further, the Study Area currently contains 1,550 unemployed labour force participants. Goulburn Mulwaree LGA currently has an unemployment rate of 3.2% and contains 530 unemployed labour force participants. Some unemployed labour force participants could potentially work on the Project and/or other major infrastructure projects (subject to suitable skills mix). Alternatively, unemployed jobseekers may play a 'backfill' role in the labour market, engaging in jobs vacated by other workers transferring to employment on the Project or other major infrastructure projects.

The above factors indicate the Study Area may have the capacity to service the identified local elements of the Project (5% of all direct labour) and concurrent infrastructure projects subject to careful management

4.5 Housing and Commercial Accommodation Sector Impacts

As outlined above, the Proponent indicates 237 non-local FTE workers may need to be accommodated in the Study Area at the Project's peak (which is likely to last for several months).

This calculation is based on 95% of the 250 peak on-site FTE workers and represents workers coming from outside the Study Area and requiring accommodation. This level of accommodation relates to the Project's peak only. The average number of non-local staff requiring accommodation across the 24-month construction phase is estimated at 145 FTE workers (noting this number will be much lower during periods of low site activity).

The AES shows that 313 rooms and 13 established rental properties are likely to be available to the Project in the Study Area. This estimate factors in ongoing demand and demand generated from the concurrent construction of major infrastructure projects in the region. Specifically, the AES recommends the following mix and uptake of available of accommodation for Project workers:

- 30% of available temporary accommodation (hotels, motels, caravan park cabins) – equating to 189 rooms.
- 30% of available Airbnb properties – equating to 124 Airbnb rooms.
- 2.5% of available rental stock – equating to 13 rental properties.

The allocation of accommodation across the Study Area shows that Wingecarribee, Queanbeyan-Palerang, and Goulburn Mulwaree LGAs can support the largest provision of accommodation and housing requirements.

4.6 Local Wage Spending Stimulus (Construction Phase)

Construction employment estimates outlined in this report indicate that 95% of the 155 direct FTE construction jobs (145 FTE workers) may need to be sourced from outside the Study Area, particularly specialist and management positions.

This level of employment would equate to $29.4 million in wages (2024 dollars) on the basis that each non-local worker is employed for 24 months and earns the average construction wage of around $100,000 pa (source: ABS, *Average Weekly Earnings 6302.0 - Full Time Adult Ordinary Time Earnings*, November 2023).

A considerable portion of these wages would be spent in the Study Area, where these workers will be based. An estimated $11.0 million in wages (2024 dollars) would likely be directed to local and regional businesses and service providers during the construction period. This estimate is based on reference to the ABS *Household Expenditure Survey* which indicates that approximately 50% of post-tax wages are likely to be spent by workers in the regional economy in view of the wide range of goods and services available in the Study Area, especially in Goulburn. This spending would include the following:

- Housing expenditure, including spending on accommodation at hotels, motels, caravan/holiday parks, B&Bs, and private rental dwellings
- Retail expenditure, including spending on supermarket items, clothing, books, homewares etc.
- Recreation spending associated with day trips and excursions, gaming (lottery, sports betting, etc), purchases in pubs and clubs (although noting that expenditures at restaurants is included in the retail category)

- Personal, medical and other services, such as GP fees and local prescriptions, fuel, vehicle maintenance and so on.

This level of personal spending would generate the equivalent of approximately 28 FTE jobs in the services sector and associated supply chains for each of the 24 months of the construction phase (based on 1 FTE job allocated for every $200,000 of induced spending pa), supporting jobs in the Study Area and beyond such as in retail, accommodation, trade supplies, health services, fuel supplies, cafes and restaurants etc. These jobs are included in the 'indirect employment' estimates outlined in **Section 4.2** above.

4.7 Agricultural Impacts

Approximately 702 ha of existing agricultural land will be required to host the Project, which includes a development footprint of 512 ha. The Soils, Land, and Agricultural Impact Assessment prepared by Minesoils Pty Ltd identified that the Project Site consists of the following Land Soil Classification (LSC) class:

- **LSC Class 3**: High capability land – has moderate limitations and is capable of sustaining high-impact land uses, such as cropping with cultivation, using more intensive, readily available and widely accepted management practices. The Soils, Land and Agricultural Impact Assessment estimates that 21 ha of LSC class 3 land will be subject to disturbance as part of the Project. This represents less than 5% of the Project Site land area.
- **LSC Class 4:** Moderate capability land – has high limitations for high impact land uses. Land is mostly restricted to uses such as cropping, high intensity grazing and horticulture. These uses can only be managed with high levels of knowledge, expertise, inputs, investment and technology.
- **LSC Class 5:** Moderate-low capability land – has high limitation for high-impact land uses. Land is mostly restricted to uses including grazing, some horticulture (orchards), forestry and nature conservation. These uses need to be carefully managed to prevent severe land and environmental degradation.
- **LSC Class 6**: Low capability land – has high limitations for high-impact land uses. Land use restricted to low-impact land uses such as grazing, forestry and nature conservation.

With consideration to the above, the land is currently not used for high impact land uses, rather is mostly used for agricultural grazing Subject to ongoing discussions with the landholder and regulations, the Proponent is considering a mixed-use agri-solar arrangement for the Project Site, which may include sheep grazing in and around the solar farm infrastructure. The Proponent has a track record of minimising impacts on agricultural land by continuing to graze sheep on many of its project sites globally, creating a dual land use with the co-existence of agriculture and solar power generation. The Proponent and landowner are in consultation regarding such an arrangement.

No net loss of employment associated with the Project Site is anticipated, either directly (on-site) or through agricultural supply chains, noting the Project will support 6 local FTE jobs (direct and indirect) in the regional economy through renewable energy generation, which is higher than the existing number of jobs supported from the land through agricultural activities.

The Soils, Land and Agricultural Impact Assessment estimates that cessation of the 702 agricultural land at the Project Site will result in a loss to primary productivity of up to $280,624, and represents just 0.5% of total agricultural productivity value in Goulburn Mulwaree LGA. This level of economic impact is negligible and is outweighed by the considerable benefits including ongoing jobs and economic stimulus that will be generated by the Project over its operational lifespan (see **Section 4.8** below).

4.8 Ongoing Economic Stimulus

Financial Returns to Landowners

The host landowner will be paid an annual lease fee by the Project operator for the operating life of the Project. Details of lease arrangements are confidential; however, financial payments of this kind to the landowner may provide a local stimulus through investment in farming (or other) activities and through business and individual consumption impacts.

Neighbourhood Benefits Sharing Program

A neighbourhood benefits sharing program will provide financial support to neighbouring property owners over the Project's operational lifespan. Details of the program and proposed payments are provided by Lightsource

bp at https://assets.lightsourcebp.com/app/uploads/2024/02/20232618/Gundary_Neighbourhood-Level-Benefit-Sharing-Program-Flyer_GetStudio_digital_FINAL.pdf

Financial Returns to the Community

The Proponent has indicated it will provide community payments and employment purpose contributions for the operating life of the Project (40 years). These payments may take the form of a community fund, which will provide grants to local organisations/programs under a formal management arrangement.

To date, an allocation of $250,000 for community programs has been agreed as a one-off payment.

It is understood that a Voluntary Planning Agreement (VPA) between the Proponent and Goulburn Mulwaree Council is still to be negotiated but will provide additional stimulus and financial returns to Council and the community once agreed upon.

Local Operational Wage Stimulus

The operation of the Project will locally support 6 FTE jobs in the Study Area (direct and indirect). These 6 FTE jobs will provide an estimated stimulus within the Study Area of approximately $407,700 (2024 dollars) in Year 1 of operations. This figure assumes there will be no loss in direct or indirect agricultural jobs associated with the use of part of the land to host the Project (i.e., agricultural activities will continue on the remainder of the land and around Project infrastructure). Refer to **Section 4.6** for wage stimulus methodology.

Total Operational Stimulus

The total economic stimulus associated with the operation of the Project is estimated at approximately $113.8 million over 40 years, (2024 dollars, CPI adjusted) relating to host landowner payments, payments to neighbouring properties and operational wage stimulus.

National Grid Supply Benefits

With an installed capacity of 400 MW, the Project has the potential to provide sufficient renewable energy to support the annual electricity needs of the equivalent of approximately 133,000 NSW households per annum, according to information provided by the Proponent.

The Project will provide renewable energy contributing to the reduction of greenhouse gases across NSW, avoiding up to 670,000 tonnes per annum (compared to the equivalent amount of fossil fuel generated energy).

4.9 Implications for Future Growth

Goulburn is a major regional centre (Regional City) within the Study Area and is a key growth area within the Goulburn Mulwaree LGA. As noted in **Section 3.5.2**, Goulburn supports a range of non-residential uses, including retail, industrial facilities, commercial premises, education and health services, tourist support facilities and other services. The Project Site is located on the periphery of Goulburn, approximately 10km from the town centre. Surrounding uses predominately include rural residential land, and associated agriculture. The airport is located approximately 3.5km north of the Project Site and is physically separated by Windellema Road.

The Project Area is wholly located within land zoned as RU1 Primary Production (RU1) zone, which aims to promote the zone as primary agricultural land, and to allow the development of non-agricultural land uses which are compatible with the character of the zone. The following uses are permissible within the zone:

Aquaculture; Cellar door premises; Dwelling houses; Extractive industries; Hardware and building supplies; Intensive livestock agriculture; Intensive plant agriculture; Kiosks; Landscaping material supplies; Light industries; Markets; Open cut mining; Plant nurseries; Roadside stalls; Rural supplies; Timber yards; Any other development not specified in item 2 or 4.

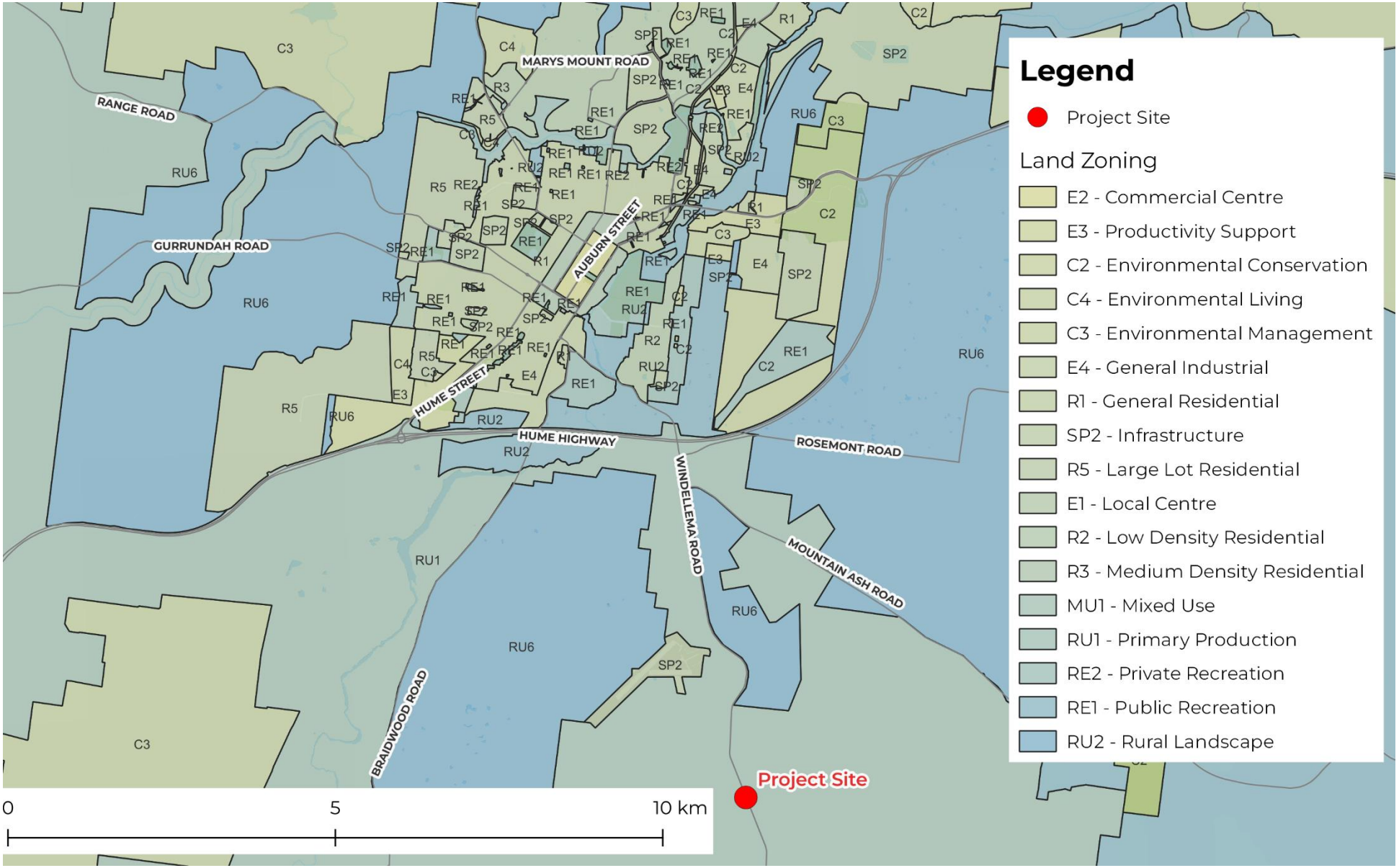
Under the LEP, *'electricity generating works'* are not listed as prohibited within the RU1 zone, and therefore, under the provisions of the LEP, the Project is permissible with consent.

Taking into account the above guidelines, the RU1 zone does not permit major industrial and commercial uses, and as such the Project is unlikely to impact the viability of existing or future commercial and industrial activities /employment uses in Goulburn and surrounding region. This is highlighted by the following considerations:

- Goulburn's business/commercial zones are located predominately within the town centre around Auburn Street (see **Figure 12**) and are not likely to expand to the south of the Hume Highway or around the Project Site.
- Similarly, industrial zones are located on the town's periphery (around Eastgrove and Bradfordville) and are not located south of the Hume Highway along Windellama, Mountain Ash or Braidwood Roads. Again, the Project is unlikely to provide constraints to future industrial activities.
- A zoning map of Goulburn and areas surrounding the Project Site is shown in **Figure 12** over the page, confirming the Project Site's location within the RU1 zone. While in close proximity to transition zones (RU6), from an economics perspective the Project will not impact on the viability of these surrounding land use zones which will be to enable growth and develop as permitted. Importantly, the Project Site has a disconnect to Goulburn due to being situated south of the Hume Highway and as such the area is not planned for business growth and development.

The Project will also have a negligible impact on the role and function of Goulburn's agricultural industries, due the following factors:

- The Project Site is currently used for agricultural grazing, rather than intensive primary production, and has a mix of land soil types with, with LSC Class 3, 4, 5 and 6 identified. The LSC Class 3 soil (high capability land) comprises just 21 ha (less than 5%) of the Project Site area.
- The loss in agricultural productivity at the Project Site (estimated at up to $280,624) represents just 0.5% of the total agricultural productivity value in Goulburn Mulwaree LGA.
- There will be no net loss of employment associated with the Project.
- The Proponent and landowner are in consultation regarding an arrangement to create a dual land use in which the Project Site, once operational, will continue to support grazing in co-existence with clean power generation.
- The construction and operation of the Project will not impede ongoing/future small-scale agricultural activities on surrounding land from an economic growth perspective.


Legend
Project Site
Land Zoning
E2 - Commercial Centre
E3 - Productivity Support
C2 - Environmental Conservation
C4 - Environmental Living
C3 - Environmental Management
E4 - General Industrial
R1 - General Residential
SP2 - Infrastructure
R5 - Large Lot Residential
E1 - Local Centre
R2 - Low Density Residential
R3 - Medium Density Residential
MU1 - Mixed Use
RU1 - Primary Production
RE2 - Private Recreation
RE1 - Public Recreation
RU2 - Rural Landscape
MARYS MOUNT ROAD
RANGE ROAD
GURRUNDAH ROAD
AUBURN STREET
HUME STREET
HUME HIGHWAY
ROSEMONT ROAD
WINDELLEMA ROAD
MOUNTAIN ASH ROAD
BRAIDWOOD ROAD
Project Site
0
5
10 km

4.10 Estimated State Benefits

In addition to supporting the NSW State policy directions and national grid supply benefits outlined above, the Project will deliver the following key State-wide economic benefits:

- **Capital investment**: $162.5 million or 25% of the total project CIV. The remaining 60% is attributed to imports, and 15% to other states and territories.
- **Construction employment**: 300 FTE direct and indirect construction jobs, or 75% of total construction employment. The remaining 25% is attributed to other states or territories.
- **Ongoing employment:** 13 FTE direct and indirect jobs, or 90% of the total operating employment. The remaining 10% is attributed to other states and territories.
- **Supporting diversification of the economy** through investment in the renewable energy sector.

A summary of state benefits is provided in **Table 14** below.

Table 14 Summary of State Benefits

Benefit Type	NSW State Benefit	Remaining Benefit to Other States and Territories, and internationally
Capital Investment	$162.5	$487.5
Construction Employment (direct and indirect)	300 FTE Jobs	100 FTE Jobs
Ongoing Employment (direct and indirect)	13 FTE Jobs	1 FTE Job

4.11 Decommissioning Impacts

The Project has an operating life of approximately 40 years, at which stage there are likely to be three main options for consideration:

- Continue to use the Project Site as a solar farm using the existing infrastructure, potentially with some refurbishments.
- Replace/modernise Project infrastructure and continue to operate as a new/significantly upgraded solar farm.
- Decommission the Project and rehabilitate the Project Site so the land can be returned to agricultural use.

The decision on whether to refurbish, replace or decommission the solar farm would be subject to an assessment of the economic viability closer to the time, and in consultation with host landowner, key stakeholders and approval authorities.

If decommissioning were to occur, these activities pose similar potential impacts and benefits as construction activities, albeit over a shorter timescale. Decommissioning activities would involve a significant on-site workforce to dismantle the infrastructure and other workers to transport project components from the site for disposal or recycling. The Project Site would then require a range of resources to undertake rehabilitation activities.

Decommissioning would therefore support significant employment, business contracts and provide a spending stimulus to the Study Area over the decommissioning period.

Given decommissioning will not occur for at least 40 years after the operation of the Project commences, it is not possible to estimate potential impacts and benefits at this stage noting economic, technological and environmental factors may change considerably over this period. Note however, the Proponent is committed to ensure as much infrastructure as possible is recycled on decommissioning.

4.12 EIA Summary

1. The Project will require approximately $650 million in investment during the construction phase, of which approximately $98 million will be retained in the Study Area.
2. Approximately 155 direct and 245 indirect FTE positions will be supported in the national economy on average over the 24-month construction period. Once operational, 4 direct and 12 indirect FTE jobs will be supported nationally by the Project.
3. Of this national total, the Study Area is expected to benefit from 60 FTE construction jobs and 6 FTE ongoing jobs (direct and indirect) associated with the Project.
4. The Project will provide new participation opportunities for businesses and workers located in the Study Area, having regard for the good match of skills and resources available; and specific procurement activities proposed by the Proponent.
5. The 'external' project labour requirement would be expected to generate an accommodation need for 237 FTE workers at the peak of the Project. The Project's AES estimates approximately 330 rooms may be available to the Project to cater for the peak. This estimate takes into consideration competing accommodation demands from existing visitor markets and those associated with concurrent major infrastructure projects. The AES also assumes a range of accommodation types and locations will be required to ensure sufficient supply to support the Project.
6. It is estimated that construction workers relocating to the region will inject approximately $11.0 million in new spending into the economy over the construction phase, supporting approximately 28 FTE jobs in the service sector in the Study Area over this time.
7. Approximately 702 ha of existing agricultural land will be required to host the Project, with a development footprint of approximately 512 ha. This land is mainly used for grazing. No loss of employment associated with the Project Site is anticipated, either directly (on-site) or through supply chains. Further, through ongoing discussions with the landowner and Proponent, there will likely be an opportunity for the continuation of sheep grazing across the Project Site.
8. Ongoing economic stimulus associated with the operation of the Project is estimated at approximately $113.8 million (rounded) (over 40 years, CPI adjusted) relating to operational wage stimulus, neighbourhood payments and community fund payments.
9. The Project has the capacity to supply sufficient clean energy to power the equivalent of approximately 133,000 homes per annum and will reduce carbon emissions by 670,000 tonnes per annum.
10. The Project will have a negligible impact on Goulburn's existing and future agricultural, industrial and business sector growth due to in part to the Project's Site location in a RU1 zone – with its associated limitations on large-scale commercial/industrial development. Additionally, the Project is relatively disconnected from Goulburn's key commercial and industrial activities due to its location south of the Hume Highway, while small-scale agricultural activities (which do not represent primary production) surrounding the Project Site and in the nearby RU6 transition zone can continue/expand unimpeded. The Project Site is not located in any residential growth zones.
11. Estimated economic benefits to NSW include investment of $150 million, and employment generation of 300 FTE construction jobs and 13 FTE operational jobs.
12. Decommissioning of the Project is likely to support significant employment generation, new business contracts and provide a spending stimulus to the Study Area over the decommissioning period. However, given decommissioning will not occur for at least 40 years after the operation of the Project commences, it is not possible to estimate potential impacts and benefits at this stage noting economic, technological, environmental factors may change considerably over this period.