



APPENDIX

F

Technical Assessments

Appendix F.5

Addendum social impact assessment

Birriwa Solar and Battery Project

Amendment Report - Social Impact Assessment

Prepared for ACEN Australia

August 2023

Birriwa Solar and Battery Project

Amendment Report - Social Impact Assessment

ACEN Australia

J210553 Birriwa Solar and Battery Project - Amendment Report - SIA Addendum

August 2023

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Executive Summary

ES1 Introduction

ACEN Australia Pty Ltd (ACEN) proposes to develop the Birriwa Solar and Battery Project, a large-scale solar photovoltaic (PV) electricity generation facility along with battery storage and associated infrastructure (the solar and battery energy storage system (BESS) project). The solar component of the project will have an indicative capacity of around 600 megawatts (MW) and will include a centralised BESS of up to 600 MW for a 2 hour duration (1,200 MWh). The BESS will enable energy from solar to be stored and then released during times of demand, as well as providing grid stability services and back-up capacity to ensure security of supply.

The project is in the localities of Birriwa and Merotherie, approximately 15 kilometres (km) southwest of the township of Dunedoo, New South Wales (NSW) (refer to Figure 1.1). The project is within the Central-West Orana (CWO) Renewable Energy Zone (REZ) and is within Mid-Western Regional and Warrumbungle Shire local government areas (LGA).

The Project is State significant development (SSD) pursuant to Schedule 1, section 20 (electricity generating works) of State Environmental Planning Policy (Planning Systems) 2021. Project approval is sought under Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The development application and environmental impact statement (EIS) (application number SSD-29508870) were submitted to the NSW Department of Planning and Environment (DPE) and publicly exhibited from 14 October 2022 to 10 November 2022.

Following the public exhibition of the EIS, 92 submissions were received from the public, councils, and special interest groups. In addition, 14 government agencies provided advice on the project. A submissions report (EMM, 2023) has been prepared to respond to matters raised in these submissions and agency advice, as well as an amendment report (EMM, 2023b). This social impact assessment addendum is appended to the amendment report (Appendix F.5 of the amendment report) and should be read in conjunction with the amendment report.

Proposed amendments

In response to matters raised in submissions and outcomes of ongoing engagement with the local community, government agencies, project landholders, and other stakeholders, ACEN has made amendments to the project, as follows:

1. The addition of a temporary accommodation facility, on an adjacent property south-east of the original project study area presented in the EIS (refer to Figure 1.2), to provide temporary accommodation for up to 500 construction staff during the construction phase of the project.
2. A refinement to the development footprint associated with the solar component of the project, to include the south-eastern corner (approximately 5 ha). This area was conservatively mapped as derived native grassland (DNG) of plant community type (PCT) 80 (and therefore a threatened ecological community) and previously excluded from the EIS and BDAR. Subsequently, this area has been surveyed by EMM ecologists since submission of the Environmental Impact Statement (EIS) and Biodiversity Development Assessment Report (BDAR), and is confirmed as low condition DNG of PCT 479 (rather than DNG of PCT 80), and therefore does not need to be avoided on the basis of ecological constraints.

The temporary accommodation facility will be suitable to accommodate up to 500 people (construction workforce). The accommodation facility will have the potential to expand, enabling capacity for up to 1,000 people subject to future approvals, to accommodate a workforce from future ACEN developments within the CWO REZ, if deemed required and subject to future accommodation needs.

ES2 Purpose of social impact assessment

EMM has prepared this addendum to the Social Impact Assessment (ASIA) (EMM, 2022a) prepared as part of the EIS for the project, to address the effects of the proposed changes to the project description on the assessment outcomes of the project. Preparation of the ASIA also seeks to satisfy the Secretary's Environmental Assessment Requirements (SEARs) for the project and the *Social Impact Assessment Guideline for State Significant Projects* (SIA Guideline 2023) (DPE, 2023a) and the *Technical Supplement: Social Impact Assessment Guideline for State Significant Projects* (SIA Technical Supplement 2023) (DPE, 2023b).

ES3 SIA study area and existing conditions

The SIA study area reflects the nature of social impacts and benefits which may be experienced by different stakeholder groups. Study areas adopted for the SIA include a local study area (localities of Birriwa, Merotherie and Dunedoo), the key townships of Gulgong and Mudgee, and a regional study area (Mid-Western Regional, Warrumbungle Shire, and Dubbo Regional Local Government Areas).

There are approximately 1,166 residents in the local study area. Key identified community values include the rural character of the area which provides a relatively peaceful environment in which to live, as well as having access to services in nearby towns. The local area has a limited range of services, with higher order services accessed in bigger regional centres such as Mudgee, Gulgong, and Dubbo.

The development footprint is primarily used for agricultural purposes. The primary industries of employment in the local area are agriculture, forestry, and fishing (ABS, 2021a). The community is currently experiencing a period of change due to the influx of renewable energy generation and transmission projects in the area from the CWO REZ.

ES4 Engagement informing the ASIA

Community and stakeholder engagement are core elements of SIA. This ASIA draws on feedback generated through community and stakeholder engagement undertaken as part of ongoing engagement on the project by ACEN, and engagement activities tailored specifically to inform the SIA including:

- 15 in-depth interviews with key stakeholders which directly informed identification and assessment of potential impacts and benefits. Interviews were held with neighbours and landholders, local businesses, local councils, and service providers.
- A review of engagement conducted for other recent social impact assessments of projects within the SIA study area, and engagement conducted for other technical studies accompanying the amendment report, to better understand cumulative impacts and feedback trends.

Community and stakeholder feedback derived through engagement activities revealed a range of opinions on the amendment. Most stakeholders engaged were supportive of the addition of a temporary accommodation facility to the project, as they believed it would resolve key concerns relating to increased traffic and demand for local housing and short-term accommodation. Four of the stakeholders interviewed reported that the remote location of the proposed accommodation facility would need to be adequately serviced, and they would be more supportive if it were located closer to Dunedoo to be closer to services.

Through the analysis of project details, social baseline characteristics and engagement feedback, the following key SIA themes were defined as a result of community observations and perceptions:

- **Accessibility** – the nature of the local housing market and service provision in the local and regional area and how this intersects with the project.

- **Livelihoods** – the positive contributions that the project would make to the local and regional economy and how these can be maximised.
- **Surroundings** – potential amenity, traffic and public safety impacts experienced by the local community, potential impacts upon the natural environment including water quality and water security impacts, and fire safety risk.
- **Culture** – potential impacts upon Aboriginal connections to Country, land and waterways.
- **Health and wellbeing** – concerns relating to health and policing services in the area which are at capacity servicing the existing population.
- **Decision-making systems** – the local community suggested they feel a general lack of trust in approval processes for renewable projects.

ES5 Assessment of social impacts and benefits

ES5.1 Approach

Key to the approach was a detailed review of the previously identified social impacts and benefits of the project, to determine how the previous assessment is affected by the inclusion of the accommodation facility and updated community feedback.

Table ES1 indicates impacts from the original SIA (EMM 2022a) which have and have not required reassessment to address the potential effects of the amendment.

Table ES1 Summary of impacts requiring reassessment

Reassessment required	Impacts and benefits (number)
Yes – materially affected by the amendment	25
No – not likely to be affected by the proposed amendment	4
No – resolved by the proposed amendment	1

The approach to determining further assessment requirements for each impact or benefit is outlined in Chapter 4 of this report.

ES5.2 Assessment

As outlined in Table ES2, the proposed amendments result in fewer impacts of the project, and the significance rating of most impacts identified in the SIA (EMM, 2022a) is reduced through addition of an accommodation facility.

The assessment of impacts and benefits associated with the amended project concludes that the addition of the accommodation facility substantially reduces the significance of key social impacts which would otherwise be experienced by the community due to the project. It will also further enhance a number of social benefits associated with the project and generate new benefits. Specifically, the accommodation facility:

- limits the impact on regional housing availability and affordability during the construction phase of the project – refer to impact AO1 in Table ES2
- avoids temporary construction workers utilising the limited tourist accommodation available, which is important to the regional economy – refer to impact AO2 in Table ES2

- provides contracting and employment opportunities for local providers for the construction and servicing of the accommodation facility – refer to benefit LO1 in Table ES3
- reduces safety risks associated with traffic movements through accommodating the majority of the workforce in one location and by internalising traffic within the site to avoid use of public roads between the accommodation facility and the solar and BESS project – refer to impact HWO1 in Table ES2
- enhances health and well – being for workers through appropriate accommodation design and reduced fatigue - refer to benefit HWO2 in Table ES3.

Whilst not specifically addressed in this assessment, the accommodation facility may also potentially provide local government or other entities with relocatable accommodation facilities that can be re-purposed to meet future community needs.

Table ES2 Social impacts of the amended project

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
A01	Accessibility	Impact on affordability and availability of rental housing	Way of life impacts (personal disadvantage) related to access to affordable housing. Significance (mitigated): Medium	Low
A02		Project contribution to restricted access to short-term accommodation	Accessibility impacts due to capacity of short-term accommodation. Significance (mitigated): Medium	Low
A03		Reduced capacity and availability of community services	Accessibility related to community infrastructure and services. Significance (mitigated): Medium	Low
L03	Livelihoods	Limited workforce supply and job competition	Livelihood impact due to limited workforce supply and job competition (construction) Significance (Mitigated and enhanced): High (positive) Livelihood impact due to limited workforce supply and job competition (operations) Significance (Mitigated and enhanced): Medium (positive)	Medium
L04		Impacts to nearby agricultural producers	Livelihood impacts to the agricultural sector. Significance (Mitigated and enhanced): Medium (positive)	Low

Table ES2 Social impacts of the amended project

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
S01	Surroundings	Changes in amenity due to generation of dust, noise, vibration and lighting.	Way of life impacts (changes in social amenity) resulting from construction activities. Significance (mitigated): Medium. Way of life impacts (changes in social amenity) resulting from project operation. Significance (mitigated): Medium	Medium – no change
S02		Changes to the visual landscape affecting how neighbours and other stakeholders experience their surroundings	Surroundings impacts experienced by near neighbours due to changes in the visual landscape. Significance (mitigated): Medium	Medium – no change
S03		Impact to surroundings from changes in ecological values and natural assets	Surroundings impacts due to changes in ecological values and the quality of natural assets. Significance (mitigated): Low	Low – no change
S04		Perceived reduction in local property values.	Livelihood impacts due to changes in rural property values. Significance (mitigated): Low	Medium
C01	Culture	Change to land use results in a sense of loss of cultural heritage for Aboriginal and Torres Strait Islander people	Cultural impacts related to Aboriginal and Torres Strait Islander Values: Significance (mitigated): Medium	Medium – no change
HW01	Health and wellbeing	Safety risks for transport network users	Public safety related to increased traffic movements on the local road network. Significance (mitigated): Medium Health and wellbeing impacts related to safe use of the Central West Cycle Trail Significance (mitigated): High	Medium
HW03		Risks associated with an increase in population in an isolated location close to rural properties	New impact	Low
HW04		Health and wellbeing impacts related to bushfire risk	Health and wellbeing due to fire risk to public safety. Significance (mitigated): Medium	Medium – no change
HW05		Project related stress and anxiety	Health and wellbeing impacts due to project related stress and anxiety (associated and non-associated landholders). Significance (mitigated): Medium Health and wellbeing impacts due to project related stress and anxiety (Broader local communities). Significance (mitigated): Low	Medium

Table ES2 Social impacts of the amended project

ID	Category	Impact	Original project – Relevant impacts and significance (mitigated)	Amended project – Significance (mitigated)
D01	Decision-making systems	Lack of trust in decision-making systems	New impact	Medium

The assessment merged previous livelihood and community benefits and introduced one new benefit, being improved worker health and wellbeing through the inclusion of a temporary workers accommodation facility into the project, and found that social benefits had a high enhanced level of significance. The social benefits of the amended project are presented in Table ES3.

Table ES3 Social benefits of the amended project

ID	Category	Benefit	EIS SIA Benefit and Significance (enhanced)	Significance (enhanced)
L01	Livelihoods	Use of local goods and services	Livelihood benefit related to use of local goods and services Significance (Enhanced): High Community benefit related to growth and economic development Significance (Enhanced): Medium	High (benefit)
L02		Enhanced employment and training opportunities	Livelihood benefit related to access to employment and training opportunities (Youth). Significance (Enhanced): High Livelihood benefit related to access to employment and training opportunities (Aboriginal and Torres Strait Islander People). Significance (Enhanced): Medium	High (benefit)
HWO 2	Health and wellbeing	Improved worker health and wellbeing	New benefit	High (benefit)

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1 Introduction

EMM Consulting Pty Ltd (EMM) has prepared this Social Impact Assessment (SIA) for the Birriwa Solar and Battery Project (the project) on behalf of ACEN Australia Pty Ltd (ACEN). This ASIA re-assesses impacts and benefits identified in the *Social Impact Assessment: Birriwa Solar and Battery Project* (EIS SIA) (EMM, 2022a) to address changes to social conditions under the amended project description (the amendment). The context for this ASIA is outlined below.

1.1 Background and previous steps

ACEN Australia Pty Ltd (ACEN) proposes to develop the Birriwa Solar and Battery Project, a large-scale solar photovoltaic (PV) electricity generation facility along with battery storage and associated infrastructure (the solar and battery energy storage system (BESS) project). The solar component of the project will have an indicative capacity of around 600 megawatts (MW) and will include a centralised BESS of up to 600 MW for a 2 hour duration (1,200 MWh). The BESS will enable energy from solar to be stored and then released during times of demand, as well as providing grid stability services and back-up capacity to ensure security of supply.

The project is in the localities of Birriwa and Merotherie, approximately 15 kilometres (km) southwest of the township of Dunedoo, New South Wales (NSW) (refer to Figure 1.1). The project is within the Central-West Orana (CWO) Renewable Energy Zone (REZ) and is within Mid-Western Regional and Warrumbungle Shire local government areas (LGA).

The Project is State significant development (SSD) pursuant to Schedule 1, section 20 (electricity generating works) of State Environmental Planning Policy (Planning Systems) 2021. Project approval is sought under Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The development application and environmental impact statement (EIS) (application number SSD-29508870) were submitted to the NSW Department of Planning and Environment (DPE) and publicly exhibited from 14 October 2022 to 10 November 2022.

Following the public exhibition of the EIS, 92 submissions were received from the public, councils, and special interest groups. In addition, 14 government agencies provided advice on the project. A submissions report (EMM, Birriwa Solar and Battery Project: Submissions report, 2023) has been prepared to respond to matters raised in these submissions and agency advice, as well as an amendment report (EMM, 2023b). This social impact assessment addendum is appended to the amendment report (Appendix F.5 of the amendment report) and should be read in conjunction with the amendment report. Original project summary

The key components of the solar and BESS project as described in the EIS (EMM 2022), for which ACEN seeks development consent, include:

- Installation of approximately 1 million solar PV panels and associated mounting infrastructure.
- A BESS with a capacity of up to 600 MW and a storage duration of up to 2 hours (1,200 MWh).
- An on-site substation with a connection voltage of up to 500 kilovolts (kV).
- Electrical collection and conversion systems, including inverter and transformer units, switchyard, control room and staff car park.
- Underground and aboveground cables.
- An operational infrastructure area, including demountable and permanent offices, amenities and equipment sheds.
- Internal access roads.

- A temporary construction compound (during construction and decommissioning phases).
- An access route upgrade from Castlereagh Highway to the project site via Barneys Reef Road and Birriwa Bus Route South.

The project layout as presented in the EIS is shown in Figure 1.2 of the amendment report.

The solar and BESS project will connect to the proposed Merotherie Energy Hub via the connection point. The exact location of the interface point between the solar and BESS project and the Merotherie Energy Hub is currently being defined in consultation with EnergyCo.

The project development footprint will be accessed via the Castlereagh Highway, Barneys Reef Road and Birriwa Bus Route. From the project site access point, private internal roads will be used to traverse the project development footprint.

Construction of the project is expected to commence in late 2025, subject to planning approval, labour and equipment availability. The anticipated period of construction for the project is approximately 28 months.

The operational lifespan of the solar component of the project will be in the order of 30 years, unless the solar project is re-powered at the end of the PV modules' technical life. The decision to re-power the solar project will depend on the economics of solar PV technology and energy market conditions at that time. Should the PV modules be replaced during operations, the lifespan of the project may extend to up to 50 years. The BESS operating life is likely to be 20 years, with the potential for replacing components to extend its life if the market conditions and the cost of the batteries warrant this.

1.2 Proposed amendments

In response to matters raised in submissions and outcomes of ongoing engagement with the local community, government agencies, project landholders, and other stakeholders, ACEN has made amendments to the project, as follows:

1. The addition of a temporary accommodation facility, on an adjacent property south-east of the original project study area presented in the EIS (refer to Figure 1.2), to provide temporary accommodation for up to 500 construction staff during the construction phase of the project.
2. A refinement to the development footprint associated with the solar component of the project, to include the south-eastern corner (approximately 5 ha). This area was conservatively mapped as derived native grassland (DNG) of plant community type (PCT) 80 (and therefore a threatened ecological community) and previously excluded from the EIS and BDAR. Subsequently, this area has been surveyed by EMM ecologists since submission of the Environmental Impact Statement (EIS) and Biodiversity Development Assessment Report (BDAR), and is confirmed as low condition DNG of PCT 479 (rather than DNG of PCT 80), and therefore does not need to be avoided on the basis of ecological constraints.

The temporary accommodation facility will be suitable to accommodate up to 500 people (construction workforce). The accommodation facility will have the potential to expand, enabling capacity for up to 1,000 people subject to future approvals, to accommodate a workforce from future ACEN developments within the CWO REZ, if deemed required and subject to future accommodation needs.

1.2.1 Terminology

The following key terms are used throughout this amendment report:

- **The project:** The project comprises of the solar and BESS project assessed in the Birriwa Solar and Battery Project Environmental Impact Statement (EIS), and the accommodation facility assessed in this amendment report, as shown in Figure 1.2.

- **The solar and BESS project:** The project assessed in the Birriwa Solar and Battery Project EIS.
- **The project area:** The solar and BESS study area (1,330 ha) and the accommodation facility study area (205 ha), in which the DA will apply. The total project area considered for the project is approximately 1,535 ha.
- **Accommodation facility study area:** The area of assessment (approximately 205 ha) for baseline surveys and studies conducted for the amendment report. The study area comprises the maximum area considered for the Birriwa accommodation facility (refer to Figure 1.2), as part of the site selection process for the accommodation facility infrastructure and access. Note, this area is not the development footprint and hence is not the maximum extent of ground disturbing work (impact footprint).
- **Solar and BESS study area:** The area of assessment (approximately 1,330 ha) for baseline surveys and studies conducted for the EIS. This study area comprises the maximum area considered in the EIS, based on the extent of land where ACEN holds landholder agreements and the area of potential impact for road upgrades.
- **Project development footprint:** The maximum extent of ground disturbing work (impact footprint) associated with the amended project, comprising approximately 1,197 ha of land, associated with construction and operation of the project including the solar, BESS, road upgrades, re-inclusion of south-eastern corner, and accommodation facility components (refer to Figure 1.2), including:
 - **Accommodation facility development footprint (approximately 33 ha):** Comprises all operational components of the accommodation facility (approximately 23 ha, which includes the accommodation infrastructure area), the access track from the solar and BESS study area to the accommodation facility (approximately 6 ha), and an emergency access track which provides a secondary access from the accommodation facility infrastructure area to the south-east (approximately 4 ha).

The solar and BESS development footprint and road upgrade corridor (approximately 1,164 ha): This is the impact footprint of the original project as assessed in the EIS (approximately 1,159 ha) *and the re-inclusion of the grassland area south-east of the solar and BESS study area (approximately 5 ha)*. It comprises the area to be developed within land where ACEN holds landholder agreements, including all operational components of the project, areas of direct impact for construction of the public road crossings, and the area of direct impact for public road upgrade works along the access route (i.e. part of Barneys Reef Road and its intersection with the Castlereagh Highway and Birriwa Bus Route South, connecting the access point to the project with the Castlereagh Highway). A refinement to the development footprint is included in the amended project, associated with the solar component of the project, to include the south-eastern corner (approximately 5 ha) of the solar and BESS study area into the development footprint. This area was conservatively mapped as derived native grassland and previously excluded from the solar and BESS development footprint.

- **Associated residence:** A dwelling whose owners have entered into a land agreement with ACEN for the project. Residences identified with an 'A' are associated residences.
- **Non-associated residence:** A dwelling whose owners do not have an agreement with ACEN for the project. Residences identified with an 'R' are non-associated.

1.3 Assessment approach and requirements

This SIA supports the project SIA (EMM, 2022a) prepared for the EIS, in delivering assessment of social impacts and benefits in accordance with the Secretary’s Environmental Assessment Requirements (SEARs), as well as relevant government assessment requirements, guidelines, and policies, including:

- the *Social Impact Assessment Guideline for State Significant Projects* (SIA Guideline 2023) (DPE, 2023a)
- the *Technical Supplement: Social Impact Assessment Guideline for State significant Projects* (SIA Technical Supplement 2023) (DPE, 2023b)
- the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE, 2022a).
- the *State significant development guideline – preparing an amendment report* (DPE, 2022b)

Additionally, ACEN Australia’s Social Performance and Communications Policy has provided guidance.

The SEARs outline what is required to be addressed in the EIS and were issued on 5 November 2021. The SEARs for the project, and where each element is addressed in this SIA technical report, are provided in Table 1.1.

Table 1.1 SEARs requirements – Social

Reference	Requirements	Section addressed
The EIS must include an assessment of the social and economic impacts in accordance with <i>Social Impact Assessment Guideline</i> (DPIE, July 2021) and benefits of the project for the region and the State as a whole, including:		
1.	consideration of any increase in demand for community infrastructure services	<ul style="list-style-type: none">• Chapter 7, Section 7.1• Chapter 7, Section 7.1
2.	assessment of impact on agricultural production on the site and region	<ul style="list-style-type: none">• Chapter 7, Section 7.2

The SIA Guideline has subsequently been updated, and this assessment references the current version (DPE, 2023a). The guideline checklist of SIA review questions and corresponding responses are presented in Attachment A (Table A.1). The responses in both Table 1.1 and Table A.1 identify where each element of the SEARs and SIA Guideline requirement is addressed in this report.

1.4 Authorship and SIA Declarations

The authorship and SIA Declarations for this report are provided in the following sections.

i Authorship

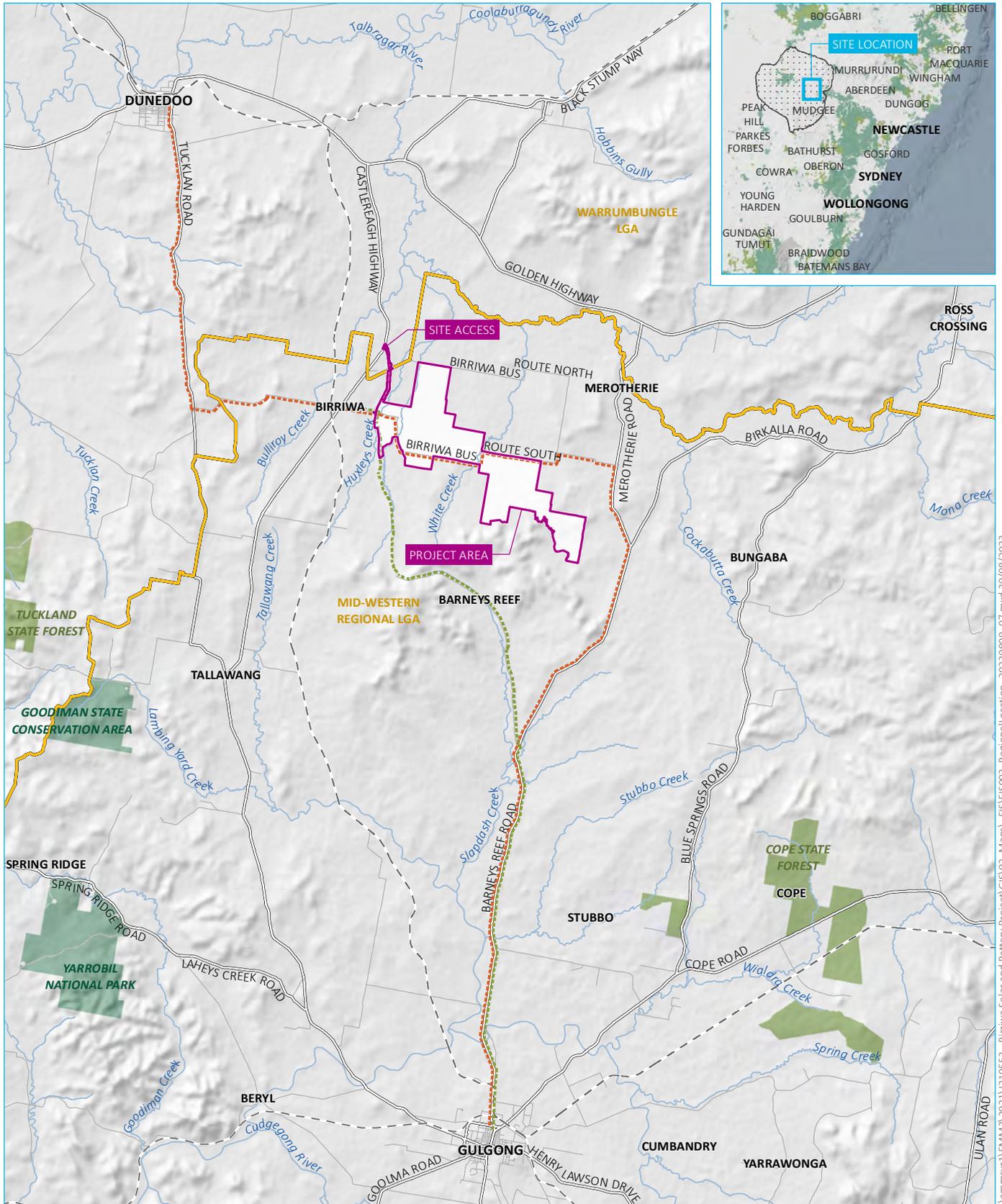
This report has been prepared by a suitably qualified and experienced lead author, Chris Mahoney and co-author Breannan Dent, consistent with SIA Guideline 2023 requirements. All contributors hold appropriate qualifications and have the relevant experience to carry out the SIA for this project. The curriculum vitae for each author is provided in Attachment B.

ii SIA Declarations

The authors declare that this SIA report:

- was completed in August 2023
- has been prepared in accordance with the EIS process under the *EP&A Act 1979*
- has been prepared in accordance with the SIA Guideline 2023
- contains all reasonably available project information relevant to the SIA
- as far as EMM is aware, contains information that is neither false nor misleading.

Assumptions and limitations of this report are outlined in Section 3.3.



Source: EMM (2023); DFSI (2017); DPIE (2022); GA (2011); ASGC (2006); ACEN (2022)



KEY

- Project area
- Central West Orana Renewable Energy Zone (see inset)
- Existing environment**
- Rail line
- Major road
- Minor road
- Named watercourse
- Local government area
- NPWS reserve
- State forest
- Central West Cycle (CWC) Trail**
- CWC main route - Gulgong to Dunedoo
- CWC alternate route - Slap Dash Creek side trail

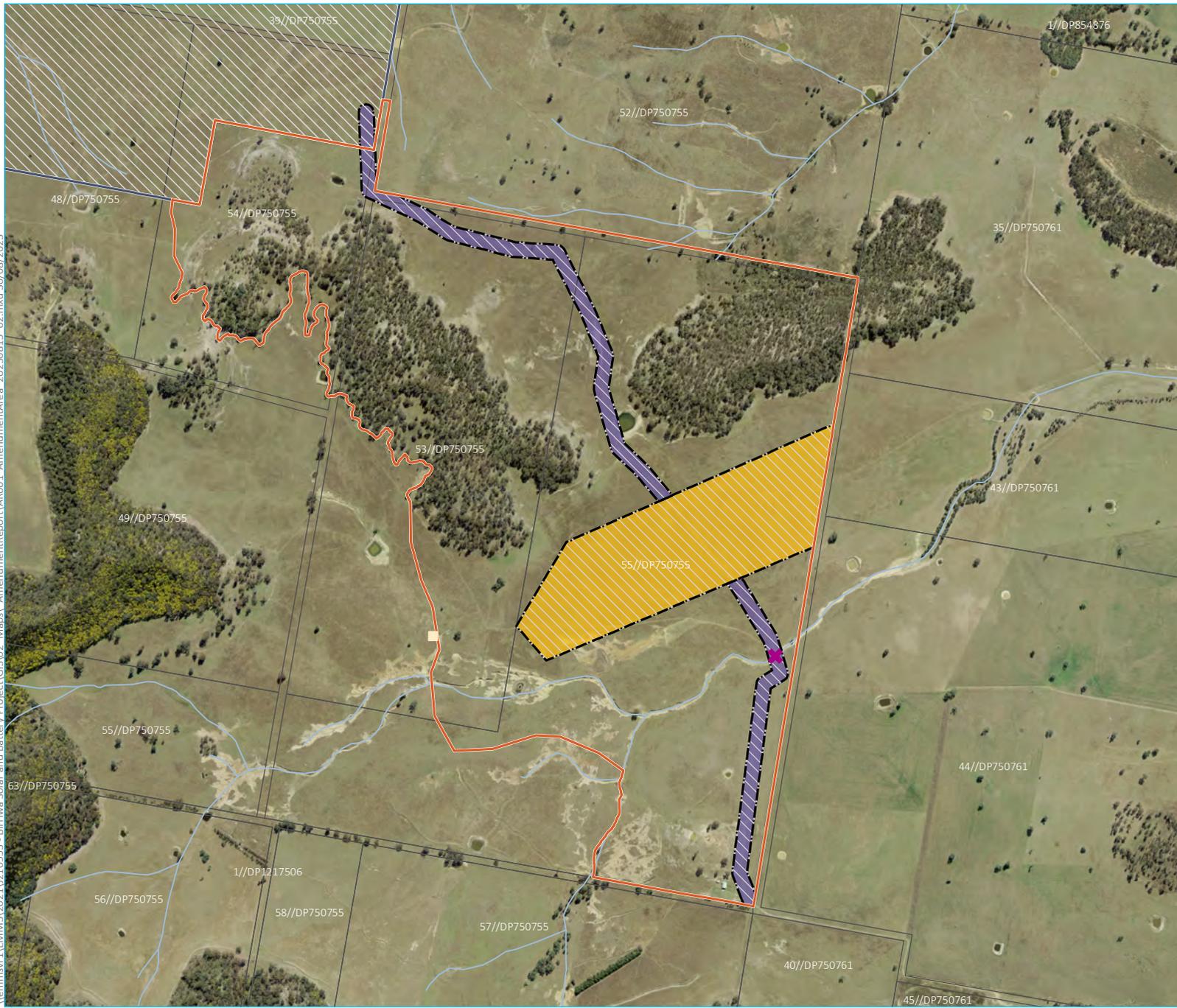
Regional context

Birriwa Solar and BESS Project
Amendment Report
Social Impact Assessment Addendum
Figure 1.1



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Source: EMM (2023); DFSI (2017, 2023); GA (2011); ACEN (2023)



- KEY**
- Solar and BESS study area
 - Accommodation facility study area
 - Development footprint
- Project layout**
- ✕ Potential creek crossing point (refer to inset below for indicative design)
 - Birriwa accommodation facility
 - Access track
- Existing environment**
- Aboriginal heritage site (to be avoided)
 - Major road
 - Minor road
 - Watercourse/drainage line
 - Cadastral boundary

Accommodation facility study area and development footprint

Birriwa Solar and BESS Project
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Figure 1.2



0 0.5 1 km
GDA 1994 MGA Zone 55

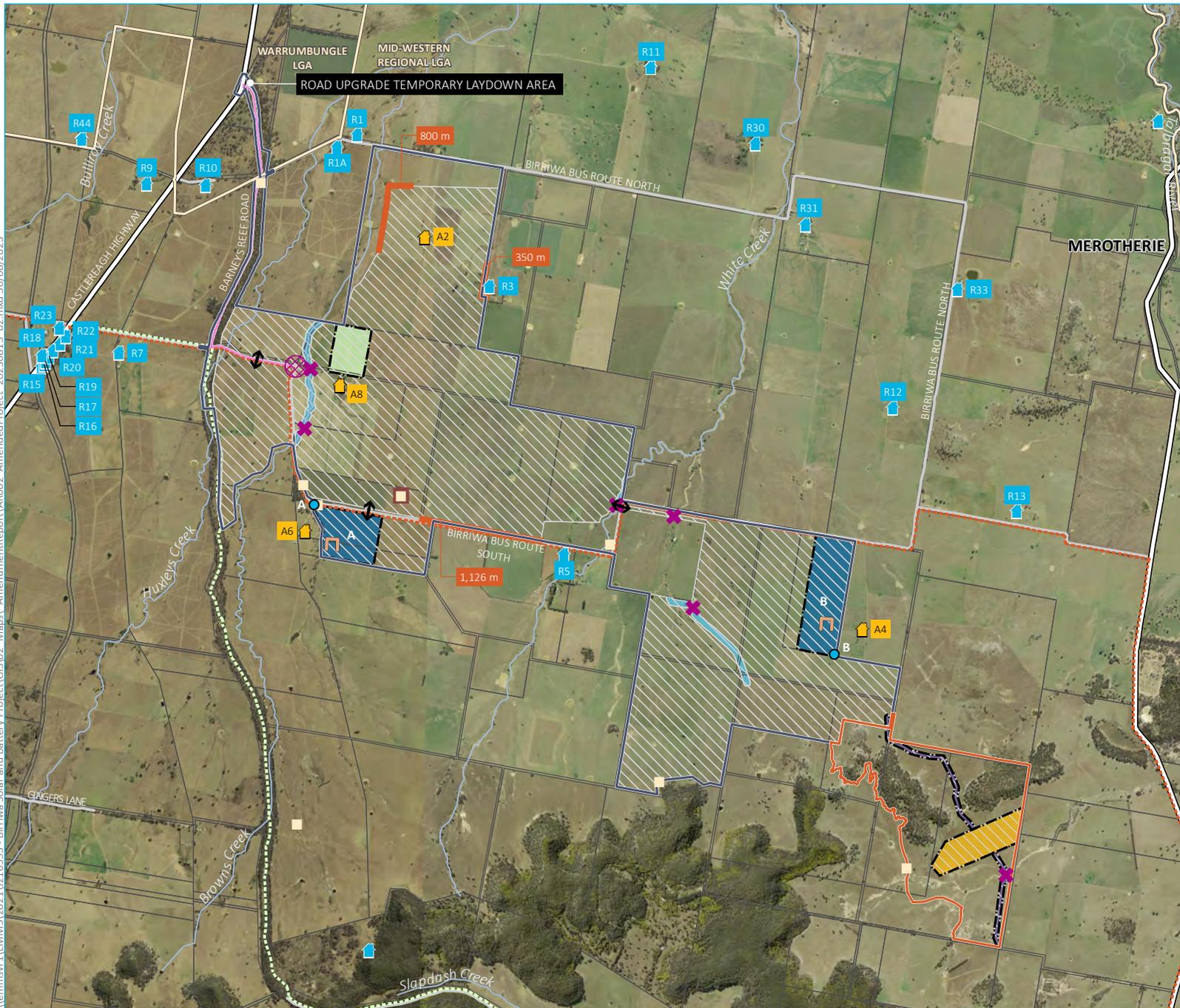
2 Description of amendments

2.1 Overview

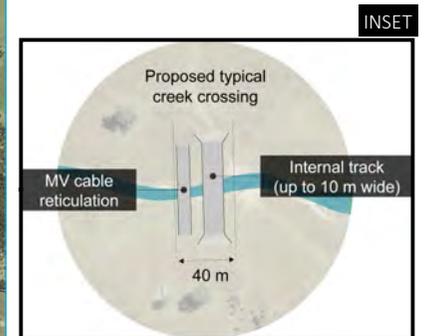
The high demand for workforce generated by energy projects in the CWO REZ means that a large portion of the construction workforce for projects will need to be sourced from outside the region. This will significantly increase the demand for local and temporary accommodation.

In response to matters raised in submissions and outcomes of ongoing engagement with the local community, government agencies, project landholders, and other stakeholders (i.e. to minimise the impact upon limited local and temporary accommodation in the CWO REZ), ACEN has made amendments to the project and seeks approval to construct and operate an accommodation facility near the Birriwa Solar and Battery Project (hereafter referred to as the 'accommodation facility') to accommodate the temporary construction workforce required for the project.

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- KEY**
- Solar and BESS study area
 - Accommodation facility study area
 - Development footprint
 - Road upgrade corridor
 - Restricted development area
 - Potential public road crossing location
 - Project layout**
 - ✖ Potential creek crossing point (refer to inset below for indicative design)
 - Connection point (option A or B)
 - Indicative noise wall location
 - Landscape screen planting
 - Proposed access point to the project
 - Proposed operational infrastructure area including substation, operational facility and BESS (option A or B)
 - Birriwa accommodation facility
 - Access track
 - Temporary construction compound
 - Existing environment**
 - 🏠 Dwelling not associated with the project
 - 🏠 Dwelling associated with the project
 - Aboriginal heritage site (to be salvaged)
 - Aboriginal heritage site (to be avoided)
 - Major road
 - Minor road
 - Named watercourse
 - Cadastral boundary
 - Local government area boundary
 - Central West Cycle (CWC) Trail**
 - CWC main route - Gulgong to Dunedoo
 - CWC alternate route - Slap Dash Creek side trail

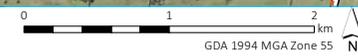


Amended project

Birriwa Solar and BESS Project
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Figure 2.1



Source: EMM (2023); DFSI (2017, 2023); GA (2011); ACEN (2023)



2.2 Accommodation facility layout and design

The proposed accommodation facility infrastructure area will comprise prefabricated demountable units, that will be delivered to site. Photograph 2.1 provides examples of a typical accommodation facility for a construction workforce. The final design and layout of the accommodation facility will be confirmed during detailed design; however, all components will sit within the development footprint identified for the accommodation facility as shown in Figure 1.2. The amendment report (EMM, 2023b) and associated assessments are based on consideration of reasonable worst case impacts to allow flexibility in design and construction methodology.



Photograph 2.1 Examples of typical construction workforce temporary accommodation facilities

It is proposed that the construction workforce will be accommodated in industry standard four-bed units that feature four self-contained bedrooms with ensuite bathroom facilities. Up to 125 four-bed units will be installed, to accommodate 500 people. A small number of two-person executive style modules may also be installed. Other facilities, such as kitchen, dining room, licensed social area, gymnasium, recreation area, medical centre and laundry, will be provided through communal infrastructure. An example of workforce accommodation units (external view) is provided in Figure 2.2. An example of the typical layout of a four-bed unit is provided in Figure 2.2.

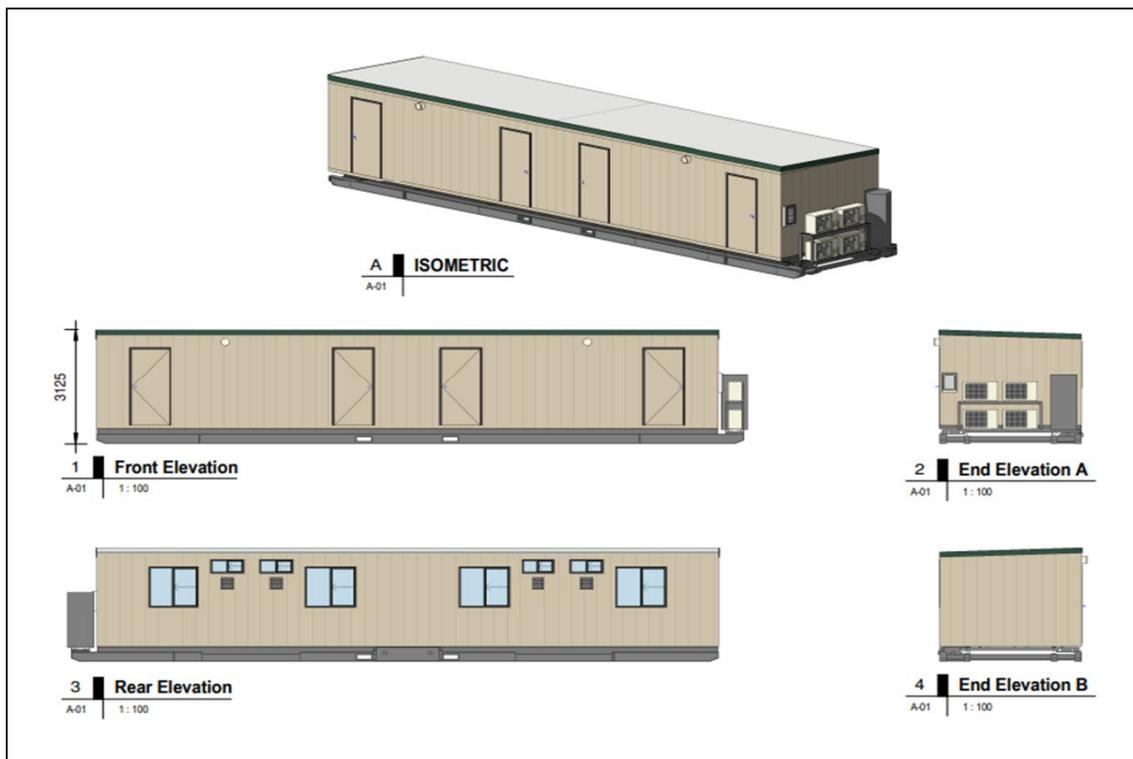


Figure 2.2 Example of workforce accommodation units – external view

The accommodation facility will be designed to meet demand as construction of the project progresses. Communal infrastructure that can accommodate up to 500 people, and readily upgradable if required, will be installed alongside 125 four-bed units.

Communal facilities will include:

- kitchen and dining hall
- recreational facilities such as a gymnasium
- BBQ facilities
- licensed social area
- laundry and linen store facilities
- medical centre.

The licensed social area will include the requirement for training of service staff in the Responsible Service of Alcohol. All workforce will be required to register zero drug and alcohol readings when scheduled to work and will be subject to testing.

Medical staff will be appointed at the accommodation facility and be available to ACEN’s workforce to reduce strain on local health services.

2.3 Accommodation facility access

No change will occur to the project’s primary vehicle access route as described and assessed in the EIS (EMM, 2022b) which will be via the Castlereagh Highway, Barneys Reef Road and Birriwa Bus Route South. The primary vehicle access point on Barneys Reef Road will provide access to the development footprint of the project.

The accommodation facility will be accessed from the primary vehicle access route of the project through to a new internal access track between the solar and BESS project and the accommodation facility (Figure 1.2).

An internal emergency access track will be constructed south of the accommodation facility infrastructure area, suitable for emergency vehicles (Figure 1.2). This will enable an alternative emergency access to the public road network, directed towards the south-eastern corner of the property. For further clarity, it is noted that this track is not intended for general access purposes.

3 Methodology

3.1 Introduction

This section presents the methodology which guided completion of the SIA. The methodology was tailored to update the EIS SIA (EMM 2022a) to consider the amendment to the project as well as adhere to the SIA Guideline 2023 (DPE, 2023a). Completion of the SIA has also been informed by best practice guidance and standards set out by the International Association for Impact Assessment (IAIA).

Figure 3.1 below illustrates the phases of the SIA methodology which reflects the SIA process outlined in the SIA Guideline 2023 (DPE, 2023a).

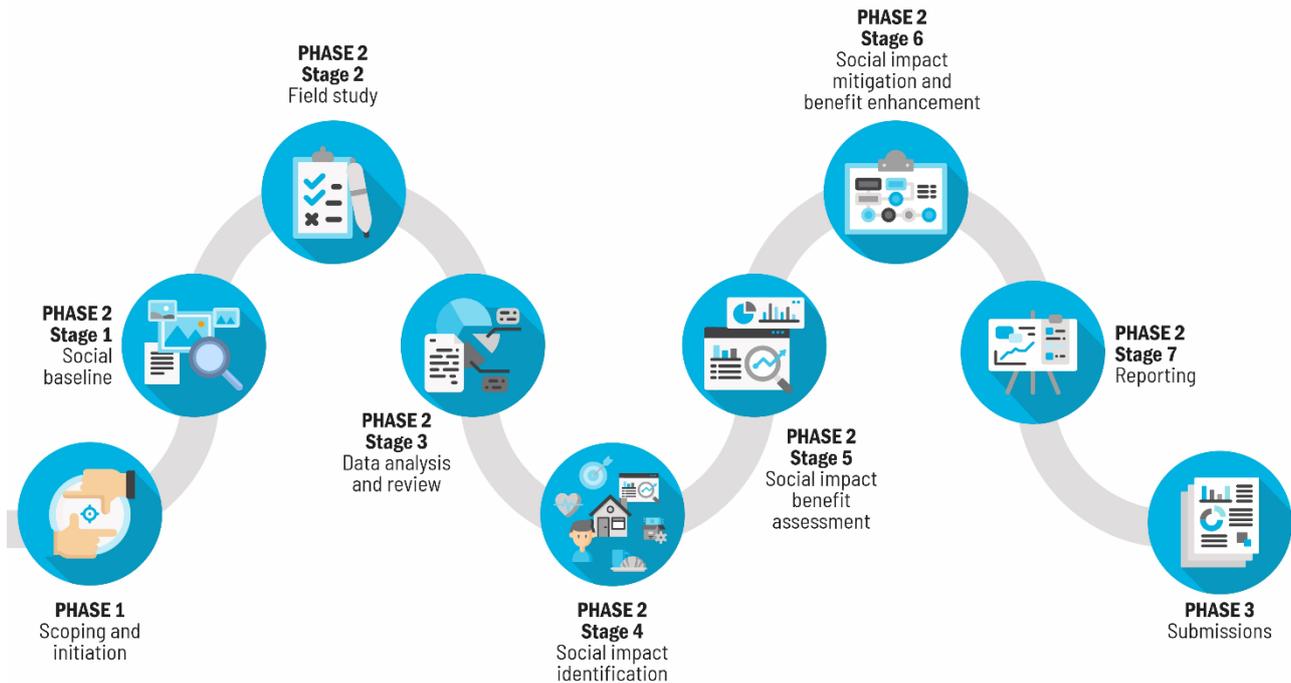


Figure 3.1 Phases of the SIA methodology

3.2 Methodological phases

The phases of the SIA methodology are described below.

- i Phase 1
- a EIS SIA review

An initial undertaking was the review of the amended project description and the impacts identified in the EIS. The review included an analysis of which impacts would continue to occur in terms of the broader study area and the addition of the workforce accommodation facility (see Chapter 4).

The review of the EIS SIA considered the following:

- potentially affected stakeholders
- an understanding of the SIA study area
- potential, negative and positive social impacts for further investigation

- the level of assessment required to address potential social impacts associated with the amendment

Impacts from the EIS SIA Report which were found to require no further assessment are outlined in Section 4.3.

ii Phase 2

a Stage 1 – Revised social baseline study

Building upon the understanding of the existing social environment attained in the EIS SIA, a revised social baseline study was completed. Key sources of information included existing demographic, health, housing, and socio-economic data from the ABS, state government agencies, and local government; published literature and social research; government policies and plans; and documents relating to similar projects. A wide range of social indicators were reviewed and assessed for relevance. Data not relevant to assessing the amendment has either been summarised or replaced with references to the previous SIA.

The social baseline study provides a community profile, including a socio-economic profile and analysis of social infrastructure and capacity, as well as housing and accommodation indicators within the SIA study area. The social baseline defines characteristics of the existing social environment against which potential social impacts are identified and assessed. The social baseline study is presented in Chapter 5.

b Stage 2 – Engagement informing the SIA

A primary source of information drawn upon was EIS feedback generated through engagement with potentially affected stakeholders and communities. A second round of engagement was completed with key stakeholders to understand the effects of the proposed amendment. Engagement was conducted in accordance with Attachment A of the SIA Guideline 2023 (DPE, 2023a) which prescribes key engagement objectives and methods. The specific activities and outcomes of the community engagement and SIA engagement are presented Chapter 6.

The engagement component of the SIA employed contemporary social research methods including in-depth stakeholder interviews and participation in a community information session in Dunedoo to collect qualitative and quantitative data to:

- validate baseline data and assumptions
- identify/test impacts that may be experienced by nearby neighbours and the broader community
- confirm identified impacts and determine potential management strategies, and
- provide stakeholders an opportunity to express any concerns.

c Stage 3 – Data analysis and review

Qualitative and quantitative data collected during engagement conducted for the SIA was analysed to identify community values strengths and vulnerabilities. Data analysis provides a basis to identify and develop social impact themes and confirm potential social impacts.

d Stage 4 – Social impact identification

Social impacts and benefits relevant to the amendment were identified by suitably qualified social scientists (see Attachment B) through analysis of the nature of project activities, baseline characteristics of potentially affected communities and feedback generated through engagement processes.

The SIA Guideline 2023 (DPE, 2023a) notes that social impacts may be tangible and intangible or may manifest as rational or justified fears or aspirations. As such, a valid social impact may only be perceived rather than actual. Social impacts may be experienced differently by individuals within a community or by different communities and at different times/stages of the project.

Identification and assessment of impacts was undertaken with consideration of the impact categories outlined in the SIA Guideline 2023 (DPE, 2023a) which refers to potential changes to people's:

- **way of life:** how people live, work, play and interact
- **community:** its composition, cohesion, character, how it operates and sense of place
- **accessibility:** how infrastructure provided by public, private or not for profit organisations, including services and facilities is accessed and used
- **culture:** shared beliefs, customs, values and stories, and connection to Country, land, places, waterways and buildings, both Aboriginal and non-Aboriginal
- **health and wellbeing:** physical and mental health
- **surroundings:** access to and use of ecosystem, public safety and security, access to and use of natural and built environment, aesthetic value and/or amenity
- **livelihoods:** how people sustain themselves through employment or business, their capacity to do so and whether disadvantage is experienced, and
- **decision-making systems:** extent community can have a say in decisions that affect their lives, access to complaint, remedy, and grievance mechanisms.

Identification of the project's potential social impacts and benefits was completed through several complementary approaches, helping to triangulate the findings and confirm accuracy. These approaches included consideration of:

- environmental impacts – review of similar projects in the area, as well as available academic and grey literature to identify potential impacts
- local plans and policies – findings from the review aided to contextualise and understand the local priorities as well as to identify local values
- the existing social environment – demographic and social analysis in the form of a social baseline study
- feedback generated through stakeholder engagement including findings from SIA engagement along with ongoing broader engagement on the project
- findings from other technical disciplines that contributed to the amendment report (EMM 2023) were reviewed and potential social impacts defined. These included:
 - traffic and transport
 - soils, erosion and agriculture
 - landscape and visual impact assessment
 - bushfire

- noise and vibration
- biodiversity
- consideration of cumulative impacts – review of documentation from other existing projects in the study area (DPE, 2022a).

A full description of each social impact is provided in Chapter 7 of this report.

e Stage 5 – Social risk assessment

This stage involved the systematic assessment of each identified social impact to predict the nature and scale of potential social risk associated with construction and operation of the amended project. The risk approach adopted assesses the consequence and likelihood of potential positive and negative social impacts with and without mitigation. The social risk assessment matrix, including the assessment framework, is provided in the SIA Guideline Technical Supplement (DPE, 2023b) and presented in Figure 3.2.

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

Source: SIA Guideline Technical Supplement, Social impact significance matrix

Figure 3.2 Social impact significance matrix

f Stage 6 – Social impact mitigation and management

A mitigation and management framework was prepared with consideration of all potential social impacts and benefits to allow for the identification of:

- required impact mitigation measures
- enhancement measures to maximise potential benefits
- partnership opportunities to manage broader, cumulative effects.

Findings from Stages 1–5 were used to distil and analyse recommendations for the SIA report. This stage used a multidisciplinary approach led by EMM’s social scientists supported by environmental advisers.

g Stage 7 – SIA reporting

Development of this SIA technical report and internal peer review were conducted by EMM’s social scientists and environmental scientists.

3.3 Research limitations

3.3.1 Limitations of secondary data sources

This SIA has been based on the best available information relevant to the amended project.

The SIA assessment is based on the current, amended project design. The amended project is subject to detailed design. It has been noted that while project components are generally fixed, some aspects of the project (including the siting of project elements within the development footprint and construction methodology) are subject to change during the detailed design process. The objective is to ensure that the detailed design can meet construction requirements while continuing to minimise social and environmental impacts and deliver benefits.

The SIA relies on several assumptions regarding workforce estimates that will be refined during later stages of project planning and development. The outcomes of the impact assessment and related mitigation strategies may differ upon confirming detailed project plans.

Other assumptions and limitations of the research include:

- A key source of data describing social conditions is the ABS Census of Population and Housing, the latest of which was in 2021. There may have been changes to social characteristics since this census event. A consideration is that the 2021 Census occurred during the height of COVID epidemic restrictions which may have impacted upon socio-economic trends and characteristics as recorded.
- Social infrastructure reviewed in the social baseline predominantly considers government-provided facilities or services. In some instances, it is possible that local communities access services through private providers for which data is not available.
- Data presented from the SIA engagement program is based on the interviewee's knowledge and experience and on their willingness to participate and share data openly. The data collected through the SIA engagement process may not be representative of the perspectives of all community members.
- During stakeholder interviews data is recorded in note form by the SIA specialist conducting the interview. Comments and quotes in this report are summarised as accurately as possible but may not be verbatim.
- Potential social impacts have been informed by evidence from primary and secondary data and engagement sources, including:
 - in-depth interviews conducted by EMM's social scientists
 - engagement for the EIS and amendment report, by ACEN's engagement team
 - academic, government, and grey literature (e.g. community engagement materials, reports, working papers, government documents, white papers and evaluations)
 - baseline data.

4 SIA context and scope

As outlined in the SIA Guideline, scoping is the first phase of SIA and focuses on gaining an appreciation of the social context and the nature of the project in order to complete initial identification of the potential impacts and benefits which need to be taken forward for detailed assessment in the SIA.

This section outlines the SIA study areas, provides a summary of key features of the area within which the project and the workforce accommodation facility will be developed, the policy and planning context and the outcomes of the review of the previous SIA to determine which impacts and benefits need to be re-assessed due to the amendment.

4.1 Revised SIA study area

The SIA study area (referred to as 'social locality' in the SIA Guideline) is defined with reference to stakeholders who could potentially be directly or indirectly affected by the project. This includes landholders, nearby neighbours, community members, businesses, service providers and indigenous groups who may have an interest in the project or could be directly or indirectly impacted. The SIA study area identifies the social and geographical areas for the SIA, and takes into account:

- the nature and scale of the proposed project, including associated infrastructure
- the scope of the potential social impacts throughout the project lifecycle
- the location and characteristics of potentially affected communities
- land use patterns, infrastructure, and urban/rural centres.

The local area and key townships consist of the communities likely to experience direct social impacts from the project (i.e. impacts related to local social infrastructure and services, road infrastructure, amenity and workforce accommodation).

The regional study area includes the geographic areas likely to experience fewer direct and more indirect social impacts of the project. Indirect impacts are associated with use of infrastructure, employment, supply chains, roads, transportation of goods, materials and equipment and cumulative impacts arising from other projects in the area.

Some minor changes were made to the study area identified in the EIS SIA (EMM, 2022a) to align with updated Australian Bureau of Statistics (ABS) data categories (as per the Australian Statistical Geography Standard (ASGS)).

The statistical categories used in the report, as defined by the ASGS, include:

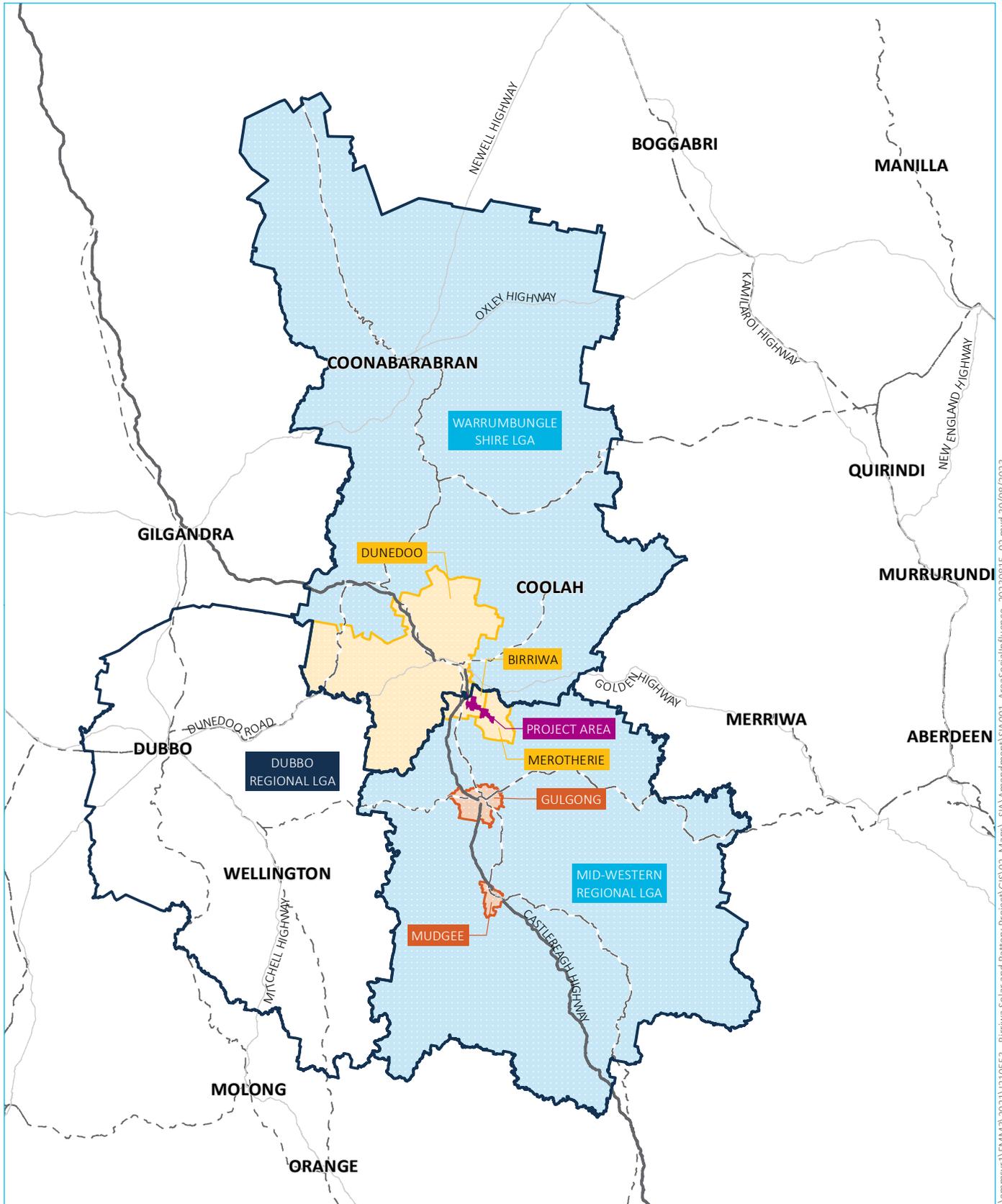
- Suburbs and Localities (SAL): an approximation of the officially recognised boundaries of suburbs and localities as defined by the State and Territory governments of Australia.
- State Suburb Classification (SSC): as of the 2021 ABS Census, SAL classifications replaced the SSC classification however remains comparable. This report refers to SALs when discussing the 2021 ABS Census data and, where relevant, refers to SSCs when citing ABS Census data from previous years.
- Local Government Area (LGA): approximate representation of gazetted local government boundaries as defined by each state and territory.
- State and Territory (STE): the state and territory boundaries within Australia.

The SIA study area includes a local area, key townships and a regional study area as outlined in Table 4.1 and illustrated in Figure 4.1.

Table 4.1 **SIA study area**

Study area	Geographic area	2016 ABS data category	2021 ABS data category	Referred to in report as:
Local area	Birriwa	Birriwa SSC	Birriwa SAL	Local area
	Merotherie	Merotherie SSC	Merotherie SAL	
	Dunedoo	Dunedoo SSC	Dunedoo SAL	
Key townships	Gulgong	Gulgong SSC	Gulgong SAL	Key townships
	Mudgee	Mudgee SSC	Mudgee SAL	
Regional area	Mid-Western Regional LGA	Mid-Western Regional LGA	Mid-Western Regional LGA	Regional area
	Warrumbungle LGA	Warrumbungle LGA	Warrumbungle LGA	
Area of reference	Mid-Western Regional LGA	Mid-Western Regional LGA	Mid-Western Regional LGA	Area of reference
	Warrumbungle LGA	Warrumbungle LGA	Warrumbungle LGA	
	Dubbo Regional LGA (formerly known as Western Plans Regional LGA)	Western Plans Regional LGA	Dubbo Regional LGA	
State of New South Wales	New South Wales	New South Wales STE	New South Wales STE	NSW

Note: Any reference to these defined geographic areas in this report is a reference to the corresponding ABS data category.



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Source: EMM (2023); ACEN (2022); ABS (2017); DFSI (2017)



SIA study area



- KEY**
- Project area
 - Area of reference
 - Regional area
 - Local area
 - Key townships
 - Rail line
 - Castlereagh Highway
 - Major road

- INSET KEY**
- NPWS reserve
 - State forest

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Figure 4.1



4.2 SIA Context

4.2.1 Key features of the area

The project area is situated on the traditional lands of the Wiradjuri peoples. The project area is located on private land, zoned RU1 Primary Production. The area is characterised by flat to gently undulating cleared land with areas of native vegetation and creek lines.

The project area is located away from towns, in an area with low population density and a small number of surrounding residents. There are several scattered rural residential properties within and surrounding the development footprint, including agricultural buildings and infrastructure (e.g. silos and livestock yards). There is one associated residence in close proximity to the accommodation facility study area. There is one non-associated local residence within two kilometres of the accommodation facility study area and another nine non-associated residences between 2 km and 5 km from the study area.

Current land use includes sheep and cattle grazing as well as dry land cropping. The study area and surrounds have been modified by historical land use practices and past disturbances associated with land clearing, cropping and intensive livestock grazing. The site has flat to gently undulating topography and is predominantly cleared of native vegetation, having been greatly disturbed by agricultural activities.

There are five proposed REZ infrastructure projects adjacent, or within about 5 km, to the Project footprint. These projects include the CWO REZ Transmission project (Merotherie Energy Hub component and parts of the transmission line component), Orana Wind Farm, Barneys Reef Wind Farm, Narragamba Solar and Valley of the Winds. The potential interaction of the Project with this infrastructure is discussed further in Chapter 8.

The main vehicular access point for the accommodation facility will remain the same as proposed in the EIS for the project; that is via the Castlereagh Highway, Barneys Reef Road and Birriwa Bus Route (see Figure 1.1). An internal access track will link the solar and BESS project area with the accommodation facility.

The nearest national parks to the study area are the Goulburn River National Park, approximately 30 km to the south-east, and the Yarrobil National Park, approximately 20 km to the south-west. Other areas of environmental conservation associated with state conservation areas are west of the Castlereagh Highway. More locally, Barneys Reef Ridge just south of the study area comprises a rocky ridgeline with native vegetation and is zoned C3 Environmental Management under the *Mid-Western Regional Local Environmental Plan 2012* (LEP).

4.2.2 Key features of the accommodation facility study area

Key features of the accommodation facility study area and surrounds are presented in the Amendment Report (EMM, 2023), Table 2.1), and are also shown below in Table 4.2.

Table 4.2 Key features of the accommodation facility site and surrounding area

Aspect	Description
LGA	The accommodation facility study area is within the Mid-Western Regional LGA. The accommodation facility will be accessed via the project's access route as presented and assessed in the EIS. A section of this access route along Barneys Reef Road is within the Warrumbungle Shire LGA.
Land zoning	The accommodation facility development footprint in its entirety is zoned RU1 Primary Production under the <i>Mid-Western Regional Local Environmental Plan 2012</i> (Mid-Western Regional LEP).
Nearby townships	The accommodation facility study area is within the locality of Birriwa, which has a population of 45 (ABS 2021) and includes a small cluster of residences and rural infrastructure on the Castlereagh Highway approximately 9.5 km west of the accommodation facility development footprint. Birriwa is situated between Dunedoo (15 km north-west), Gulgong (20 km south), Coolah (40 km north), Mudgee (60 km south) and Dubbo (80 km west).

Table 4.2 Key features of the accommodation facility site and surrounding area

Aspect	Description
Landscape	<p>The accommodation facility study area lies on the lower slopes of Barneys Reef, which runs east -west along the southern boundary of the solar and BESS study area.</p> <p>Land surrounding the accommodation facility study area is characterised by flat to gently undulating cleared land with scattered rural residences and agricultural buildings and infrastructure (e.g. silos and livestock yards). Areas of native vegetation occur within and surrounding the accommodation facility study area in the form of scattered paddock trees, vegetation along local roads, a woodland area, and an unnamed third order stream.</p>
Land use	<p>The accommodation facility study area is located in a rural setting. Key land uses in the local and broader region include agriculture, consisting primarily of sheep and cattle grazing and dry land cropping, with areas of mining, viticulture and production forestry within the broader region (in the vicinity of Gulgong and Mudgee).</p>
Site history	<p>The accommodation facility study area and surrounds have been modified by historical land use practices and past disturbances associated with land clearing, cropping and intensive livestock grazing.</p>
Land ownership	<p>The accommodation facility development footprint comprises of one freehold land parcel owned by one landholder on Lot 53, 55/DP 750755 and Crown land paper roads.</p>
Residences	<p>There are a total of 11 residences within 4 km of the accommodation facility development footprint. One associated residence (A4) is approximately 940 m from the accommodation development footprint (closest point to the access track), and one non-associated residence (R37) is approximately 1.8 km from the accommodation facility development footprint (closest point to the emergency access track). The non-associated residence (R37) is approximately 2.5 km from the accommodation facility infrastructure area and the associated residence (A4) is approximately 2.1 km from the accommodation facility infrastructure area. Nine non-associated residences are located between 2 km and 4 km from the accommodation facility development footprint (Figure 2.1)</p>
Nearby natural features	<p>An unnamed third order stream south of the accommodation facility development footprint flows in a north-easterly direction. The proposed emergency access track crosses this stream.</p> <p>The nearest national parks to the project area are the Goulburn River National Park, approximately 30 km to the south-east, and the Yarrobil National Park, approximately 20 km to the south-west. Other areas of environmental conservation associated with state conservation areas are west of the Castlereagh Highway. More locally, Barneys Reef Ridge just south of the study area comprises a rocky ridgeline with native vegetation and is zoned C3 Environmental Management under the Mid-Western Regional LEP.</p>
Nearby infrastructure	<p>The project and accommodation facility can be accessed by the Castlereagh Highway (via Birriwa Bus Route South and Barneys Reef Road).</p> <p>The primary vehicle access route as described and assessed in the Birriwa Solar and Battery Project EIS (EMM 2022), will be via the Castlereagh Highway, Barneys Reef Road and Birriwa Bus Route South. The primary vehicle access point on Barneys Reef Road will provide access to the development footprint of the project.</p> <p>The accommodation facility will be accessed from the primary vehicle access route of the project through to a new internal access track between the solar and BESS Project and the accommodation facility (Figure 2.1).</p> <p>An emergency access track will be constructed south of the accommodation facility infrastructure area, suitable for emergency vehicles (Figure 2.1).</p> <p>The Gwabegar railway line crosses the Castlereagh Highway at Birriwa and travels in a south-south-easterly direction towards Gulgong. This railway no longer provides a passenger service; however, it is understood the Australian Rail Track Corporation uses the railway for freight services.</p>
Surrounding development	<p>Renewable energy development is a growing land use in the area, with the declaration of the CWO REZ in 2021. There are a number of other renewable energy projects (either approved or proposed) within 25 km of the accommodation facility study area. In addition to those identified in the EIS, the Narragamba Solar Project is in the EIS preparation phase and is located approximately 2 km south-east of the accommodation facility study area.</p>

Table 4.2 Key features of the accommodation facility site and surrounding area

Aspect	Description
Planning context	<p>The accommodation facility study area is not within any land identified as:</p> <ul style="list-style-type: none"> • biophysical strategic agricultural land (BSAL) • flood planning area • bushfire prone land, or • mine subsidence district. <p>A small area of the accommodation facility study area is identified as ‘high biodiversity sensitivity’ or ‘moderate biodiversity sensitivity’ on the Mid-Western Regional LEP. Note, this is outside the accommodation facility development footprint.</p>

4.3 Scope of SIA amendments

The impacts and benefits identified in the EIS SIA were reviewed against the proposed amendments to determine what changes need to be made.

The amendment will not result in changes to the assessment of certain impacts identified by the original SIA. As such, matters which do not require further investigation are outlined in Table 4.3 below.

Table 4.3 Matters identified in the EIS SIA which require no further assessment

Impact	Reason no further assessment is required
Community investment and involvement	The amendment is not proposed to alter the existing planned scope of community investment and involvement.
Way of life impacts to intergenerational equity	The amendment is not proposed to alter the impacts to intergenerational equity as these principally relate to benefits associated with solar energy generation.
Livelihood benefits related to rural income diversification through landholder agreements and Neighbour Benefit Sharing Program (NBSP) payments	The amendment is not proposed to alter the existing planned scope of landholder agreements and NBSP payments.
Health impacts arising due to proximity to project infrastructure	The amendment is not proposed to alter health impacts arising due to proximity to project infrastructure, as these were assessed in relation to electric and magnetic fields (EMF).
Changes in community cohesion due to the inequitable distribution of project benefits.	The amendment is not proposed to alter distribution of project benefits.

The identified impacts requiring further assessment as a result of the amendment are outlined in Table 4.4.

Table 4.4 Matters identified in the EIS SIA which require further assessment

Impact	Reason further assessment is required	Response
Way of life impacts (personal disadvantage) related to access to affordable housing.	The amendment directly alters project impacts on access to affordable housing.	Chapter 7 Section 7.2.1
Accessibility impacts due to capacity of short-term accommodation.	The amendment directly alters project impacts on accessibility to short-term accommodation.	Chapter 7 Section 7.2.2

Table 4.4 Matters identified in the EIS SIA which require further assessment

Impact	Reason further assessment is required	Response
Accessibility related to community infrastructure and services.	The amendment responds to community feedback around the lack of available services within the regional area, and assists in reducing the effect of this impact.	Chapter 7 Section 7.1.3
Livelihood benefit related to use of local goods and services	The amendment alters the pathway through which services for project workers are attained.	Chapter 7 Section 7.2.1
Community benefit related to growth and economic development	This benefit has been assessed under the heading 'Livelihood benefit related to use of local goods and services', to address the flow-on economic benefits associated with the amendment.	Chapter 7 Section 7.2.1
Livelihood benefit related to access to employment and training opportunities (Youth)	The project amendment provides an opportunity to diversify employment and training opportunities. This has been assessed under the heading 'Enhanced employment opportunities'.	Chapter 7 Section 7.2.2
Livelihood benefit related to access to employment and training opportunities (Aboriginal and Torres Strait Islander People).	This benefit has also been addressed under the heading 'Enhanced employment opportunities'.	Chapter 7 Section 7.2.2
Livelihood impact due to limited workforce supply and job competition (Construction)	This has been assessed under the heading 'Limited workforce supply and job competition', to address the effect of additional accommodation facility employment.	Chapter 7 Section 7.2.3
Livelihood impact due to limited workforce supply and job competition (Operation)	This impact has been reassessed to address the effect of additional accommodation facility employment.	Chapter 7 Section 7.2.3
Livelihood impacts to the agricultural sector	The amendment will result in a slight increase to the project disturbance footprint, and may decrease the previously anticipated effects of worker light vehicle travel outside the site.	Chapter 7 Section 7.2.4
Way of life impacts (changes in social amenity) resulting from construction activities	This impact has been reassessed to address the effect of accommodation facility construction and operation.	Chapter 7 Section 7.3.1
Way of life impacts (changes in social amenity) resulting from project operation.	This impact has been reassessed to address the effect of accommodation facility construction and operation.	Chapter 7 Section 7.4.1
Health impacts arising from sleep disturbance due to operational noise	This impact has been reassessed to address the effect of accommodation facility construction and operation.	Chapter 7 Section 7.4.1
Surroundings impacts experienced by near neighbours due to changes in the visual landscape	This impact has been reassessed to address the addition of the accommodation facility.	Chapter 7 Section 7.4.2
Surroundings impacts experienced by other stakeholders due to changes in the visual landscape	This has been assessed as 'Changes to the visual landscape affecting how people view their rural surroundings' to address the addition of the accommodation facility, as the views and vistas include both private and public viewpoints.	Chapter 7 Section 7.4.2
Surroundings impacts due to changes in ecological values and the quality of natural assets	The amendment increases the project footprint and disturbance area.	Chapter 7 Section 7.4.3
Livelihood impacts due to changes in rural property values	To address the temporary additional perceived effect of the accommodation facility on property values.	Chapter 7 Section 7.4.4
Cultural impacts related to Aboriginal and Torres Strait Islander Values	One additional site of aboriginal cultural significance will be affected as a result of the amendment	Chapter 7 Section 7.5.1

Table 4.4 Matters identified in the EIS SIA which require further assessment

Impact	Reason further assessment is required	Response
Public safety related to increased traffic movements on the local road network	There will be an overall reduced traffic risk due to fewer worker vehicle trips in the local area when the facility is operational. Also, possible impacts associated with worker recreational travel to local towns.	Chapter 7 Section 7.6.1
Health and wellbeing impacts related to safe use of the Central West Cycle Trail	This impact has been reassessed to address the effect of accommodation facility construction and operation.	Chapter 7 Section 7.6.1
Health and wellbeing due to fire risk to public safety	Having on-site workers within this remote location increases the perception of overall risk and provides additional mitigation opportunities	Chapter 7 Section 7.6.4
Health and wellbeing impacts due to project related stress and anxiety (associated and non-associated landholders).	Address escalated community concern about the project, as a result of the increased number of nearby projects.	Chapter 7 Section 7.6.5
Health and wellbeing impacts due to project related stress and anxiety (Broader communities of the local area).	As above	Chapter 7 Section 7.6.5
Community impacts related to reduced social cohesion due to an influx of temporary workers.	The accommodation facility affects the ways this impact may be experienced by the community.	Chapter 7 Section 7.6

One impact identified in the SIA (EMM, 2022a) has been identified as being avoided by the proposed amendment, and thus requires no further assessment. This impact is discussed in Table 4.5.

Table 4.5 Matters identified in the EIS SIA which have been resolved by the amendment

Impact	Reason no further assessment is required
Impact on tourism sector	A direct effect of the amendment is reduced reliance on short term accommodation, which is detailed in Section 7.1.2. It is considered that the degree of change is such that the residual risk of related impact on the tourism sector is negligible.

4.4 Policy and planning context

This section provides a summary of the relevant policy, plans and strategies that inform an appreciation of potential social impacts and benefits associated with the amended project. A more detailed discussion of the policy and planning context is provided as Attachment C. The project’s overall consistency with relevant policies and plans is also addressed in Chapter 4 of the Amendment Report.

4.4.1 State strategies, plans, and guidelines

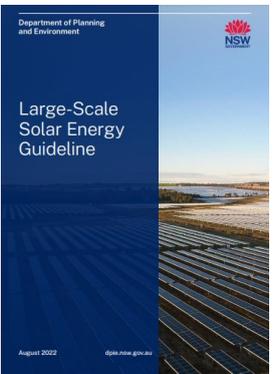
The project is classified as State significant development (SSD) pursuant to Schedule 1 of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP). Accordingly, approval for the project is required under Part 4, Division 4.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

This section provides a summary of the relevant strategies, plans, and guidelines to the project at the NSW and state level which have been published since the SIA was prepared for the EIS, or which have particular bearing on assessment of the amendment.

Table 4.6 State strategies, plans, and guidelines

Name	Description and relevance to the amended project
<p><i>Central Orana Regional Economic Development Strategy – 2023 Update</i> (Department of Regional NSW, 2023)</p> 	<p>The <i>Central Orana Regional Economic Development Strategy – 2023 Update</i> guides the long-term economic vision and associated strategy for the Central West Orana (CWO) region, which include the Dubbo Regional LGA and the Warrumbungle Shire LGA.</p> <p>This strategy establishes the CWO region as experiencing shifts in engine industries, where renewable energy generation is emerging in this space, thanks to its natural endowments and connectivity to high-voltage transmission infrastructure. This presents opportunity to leverage capacity within the construction industry to attract investment that will ultimately grow local supply chains to serve existing needs and those for REZ infrastructure.</p> <p>The strategy also refers to the potential for land use conflict noting that large-scale renewable energy projects places demand on rural land, increasing competition for land, and placing upward pressure on land values. Another vulnerability accompanying this opportunity is the potential for the workforce demand amongst concurrent delivery of major projects and its impact on an existing housing supply challenge within the CWO region.</p> <p>The project will support this strategy through its contribution to economic opportunities within the region through REZ infrastructure. It will also have implications to housing supply challenges, through cumulative impacts with other REZ projects related to the presence of non-local workforce and the need to house them during construction.</p>
<p><i>A 20-Year Economic Vision for Regional NSW</i> (NSW Government, 2021)</p> 	<p>A <i>20-Year Economic Vision for Regional NSW</i> (the 20 Year Economic Vision) presents a strategy with NSW government priorities for Regional NSW. The strategy provides an overview of the current economic and demographic environment, including the external economic forces impacting regional growth.</p> <p>The 20 Year Economic Vision recognises a significant economic opportunity in the Central West, where the CWO REZ is expected to draw in private investment and diversify regional development and employment opportunities.</p> <p>The project will allow for investment opportunities in renewable energy, particularly in the upskilling and reskilling of workers to drive employment and economic growth.</p>
<p><i>Social Impact Assessment Guideline for State Significant Projects</i> (DPE, 2023a)</p> 	<p>The <i>Social Impact Assessment Guideline for State Significant Projects</i> (SIA Guideline) provides direction on assessing social impacts arising from State significant projects in the context of the environmental impact assessment process under the EP&A Act. The Guideline states that SIA is the process of identifying, predicting, evaluating and developing responses to the social impacts of a proposed State significant project which requires proportionate and tailored assessment to suit each project’s context and the nature and scale of its potential impacts and benefits. The SIA Guideline requires that all State significant projects have a clear and consistent approach to assessing social impacts. The SIA Technical Supplement 2021 accompanies the SIA Guideline to provide specific methods and techniques for the identification and assessment of social impacts and benefits (DPE, 2023b).</p>

Table 4.6 State strategies, plans, and guidelines

Name	Description and relevance to the amended project
<p><i>Cumulative Impact Assessment Guidelines for State Significant Projects</i> (DPE, 2022a)</p> 	<p>The <i>Cumulative Impact Assessment Guidelines for State Significant Projects</i> (the CIA Guidelines) form part of the government guidelines that are to be taken into consideration during the assessment of State significant projects. The CIA Guidelines set expectations for assessing and addressing project interactions with other projects in the same area.</p> <p>The CIA Guidelines are relevant to project planning due to its unique position amongst a cluster of proposed REZ infrastructure, indicating potential to result in cumulative visual amenity and land use impacts. Concurrent major infrastructure projects in the region also have the potential to create cumulative impacts relating to the presence of large non-local workers in the area. This includes access to housing, accommodation, and services as well as traffic changes.</p> <p>Concerns regarding cumulative impacts were also raised frequently throughout EIS engagement and SIA specific engagement. Section 8 of this SIA addendum report identifies and discusses the amendment’s potential contribution to cumulative social impacts.</p>
<p><i>Undertaking Engagement Guidelines for State Significant Projects</i> (DPE, 2022b)</p> 	<p>The <i>Undertaking Engagement Guidelines for State Significant Projects</i> (the Engagement Guidelines) describes the requirements for effective engagement on State significant projects in NSW. The Engagement Guidelines outlines requirements for proponents to engage with the community, councils, and government agencies at each phase of the environmental assessment. The engagement guideline also outlines the actions that DPE will take and identifies opportunities for community participation during each phase. It emphasises early planning and engagement, effective engagement, proportionate engagement, innovation, and transparency. The primary audience of this guideline is proponents and their teams, who are responsible for engaging with the community and other stakeholders during each phase of the environmental assessment process. The engagement guideline also provides the community and other stakeholders with a better understanding of how, when and on what they can provide feedback, and how it will be addressed by proponents and decision-makers.</p>
<p><i>Revised Large-Scale Solar Energy Guideline</i> (DPE, 2022c)</p> 	<p>The <i>Revised Large-Scale Solar Energy Guideline</i> provides guidance on the planning framework for the assessment and determination of large-scale solar energy projects under the EP&A Act. The guideline identifies the key planning considerations relevant to solar energy development in NSW and provides policy and technical guidance on key issues including visual impacts, land use conflicts and benefit sharing. This includes guidance on how issues can be avoided, managed, and mitigated to optimise the environmental, social, and economic outcomes of a solar energy project.</p>

4.4.2 Regional strategies and plans

This section provides a summary of the relevant strategies and plans to the project amendment at the regional level. A summary of these plans and strategies, and their relevance to the project, are provided in Table 4.7.

Table 4.7 Regional strategies and plans

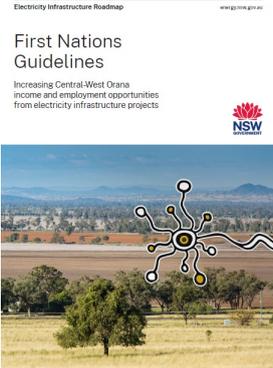
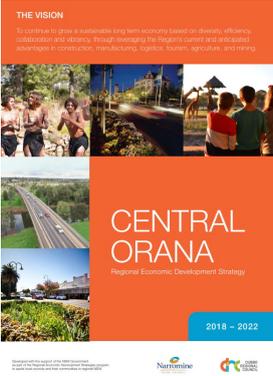
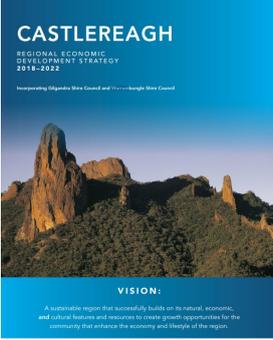
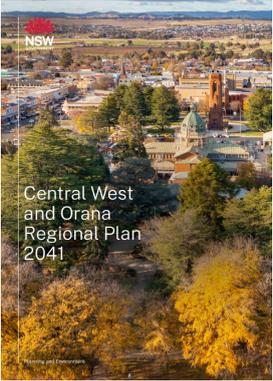
Name	Description and relevance to the project
<p><i>First Nations Guidelines: Central-West Orana</i> (Office of Energy and Climate Change, 2022)</p>  <p>Electricity Infrastructure Roadmap www.energy.nsw.gov.au</p> <p>First Nations Guidelines Increasing Central-West Orana income and employment opportunities from electricity infrastructure projects</p> <p>NSW GOVERNMENT</p>	<p>The <i>First Nations Guidelines: Central-West Orana</i> is a region-specific guidance for the development of an Aboriginal Participation plan for Electricity Infrastructure Roadmap Projects. The region-specific guidelines were developed in consultation with a Central-West Orana working group, consisting of local community representatives, including those that provide support and services to the various Aboriginal communities in the region.</p> <p>The guidelines provide a profile on the Aboriginal community, including demographic profile, the landscape of organisations, businesses, and groups, as well as significant annual dates and events for the community. The community profile contained within the guidelines provides a basis for understanding potential social impacts and benefits in this region.</p> <p>Additionally, the guidelines provide a general outline on how local Aboriginal communities may wish to be engaged with, or participate in, various aspects of the Electricity Infrastructure Roadmap. This is an important consideration for planning EIS and SIA engagement activities to build respectful and ongoing relationships.</p>
<p><i>Central Orana Regional Economic Development Strategy 2018-2022</i> (NSW Government, 2018a)</p>  <p>THE VISION To continue to grow a sustainable long term economy based on diversity, efficiency, innovation and energy through leveraging the Region's natural and developed advantages in energy, manufacturing, agri-food, tourism, agriculture and mining</p> <p>CENTRAL ORANA Regional Economic Development Strategy 2018 - 2022</p> <p>Narrabri Central West Orana</p>	<p>Developed by the NSW Government, the <i>Regional Economic Development Strategies</i> provides a long-term economic vision and associated strategy for all regions across NSW. The <i>Central Orana Regional Economic Development Strategy 2018-2022</i> covers two LGAs relevant to this SIAs study area - Dubbo and Narromine LGAs.</p> <p>The vision for the Central Orana Region is “to capitalise on the Region’s location as a significant natural endowment by promoting strong community cohesion and a pro-business environment” through various strategies. In particular, the fourth strategy outlines promoting industries such as energy, manufacturing, and transportation through the well-established industries of agriculture, mining and tourism founded from the Region’s natural features.</p> <p>It is recognised by the report that the multiple renewable projects in planning, construction or operation in the Central Orana Region can provide a broad economic base for the construction and manufacturing industry to grow. The report identified the utility of encouraging “investment in renewable energy projects with small scale co-generation in design to feed into the local economy”. As such, the project will contribute to the aims of this report by increasing activity in construction and employment opportunities.</p>

Table 4.7 Regional strategies and plans

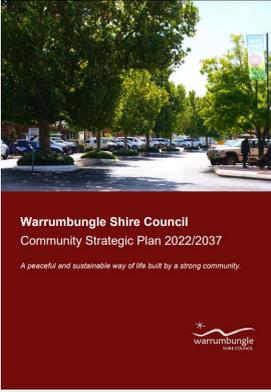
Name	Description and relevance to the project
<p><i>Castlereagh Regional Economic Development Strategy 2018-2022</i> (NSW Government, 2018b)</p> 	<p>Developed by the NSW Government, the <i>Regional Economic Development Strategies</i> provide a long-term economic vision and associated strategy for all regions across NSW. The <i>Castlereagh Regional Economic Development Strategy 2018-2022</i> includes one LGA relevant to this SIA - Warrumbungle LGA. However, it is noted that while a portion of the access road for the project sits within the Warrumbungle LGA, the proposed accommodation facility sits entirely within the Mid-Western Regional LGA, as does all of the solar and BESS infrastructure associated with the project.</p> <p>Renewable energy was recognised by the Strategy as an endowment which plays a key role in the economic development of regions. The Region’s abundance of solar and wind energy resources allows for “significant opportunities for exploring the potential for further investment in projects within the Region and link to supporting local industries”.</p> <p>The report identifies various strategies to assist with the economic development of the Region, which includes investment in water and energy utilities infrastructure. In particular, it aims to address gaps in the current energy transmission network through partnerships with renewable energy farms or investment in small-scale co-generation infrastructure. This is to lower business costs and disperse benefits to the community particularly for local residents and businesses.</p> <p>The project will contribute to the aims of the Strategy by providing more opportunities and energy infrastructure for the Castlereagh Region.</p>
<p><i>Central West and Orana Regional Plan 2041</i> (DPE, 2022d)</p> 	<p>The <i>Central West and Orana Regional Plan 2041</i> (DPE, 2022d) is the five-year update to the <i>Central West and Orana Regional Plan 2036</i>. The plan covers three LGAs relevant to the project – Dubbo, Narromine, and Warrumbungle Shire LGAs. The aim of the plan is to “guide land use planning decisions in the region by the NSW Government, councils and others to the year 2041”.</p> <p>One of the plan’s objectives include supporting the NSW’s transition to Net Zero by 2050 and deliver the Central-West Orana Renewable Energy Zone. It is noted by the plan that there should be careful management of the transition from fossil fuels to renewables to “ensure the region benefits from economic diversification opportunities” as well as ongoing support for existing industries.</p> <p>The project aligns with the plan’s renewable aims as well as supporting workforce and employment in the region to ensure ongoing community benefits.</p>

4.4.3 Local government strategies and plans

The proposed accommodation facility is within the Mid-Western Regional LGA; however, the project effects (direct and indirect) are anticipated to extend to the Warrumbungle Shire LGA. The plans for Dubbo Regional Council have also been included. A summary of the governance structure in each LGA is presented in Attachment C.

The Mid-Western Regional Council (MWRC), Warrumbungle Shire Council (WSC), and Dubbo Regional Council (DRC) have local plans and strategic plans that articulate their vision for the future of their communities. Plans relevant to the amended report, or which have been recently amended, are summarised in Table 4.8 with additional information presented in Attachment C.

Table 4.8 Local government strategies and plans

Name	Description and relevance to the project
<p><i>Mid-Western Region Community Plan (MWRC, 2022)</i></p> 	<p>The Mid-Western Region Towards 2040 Community Plan 2022–2026 encourages active communication between Council and the community through engagement and participation in planning processes.</p> <p>The plan represents an opportunity to create and foster community based goals, values, and aspirations – to drive a sustainable community that reconciles the economic, social, environmental, and civic leadership priorities for the region.</p> <p>The plan aims to:</p> <ul style="list-style-type: none"> • look after the community • protect the natural environment • build a strong local economy • connect and link the regions to the rest of NSW • good governance and meeting the needs of the community.
<p><i>Warrumbungle Shire Council Community Strategic Plan 2022/2037 (Warrumbungle Shire Council, 2022)</i></p> 	<p>The <i>Warrumbungle Shire Council Community Strategic Plan 2022/2037</i> (Warrumbungle Shire Council, 2022) captures the needs and aspirations of the community in Warrumbungle Shire LGA. The CSP outlines the community’s values which included having a unique natural environment that is protected and enhanced and a broad range of markets to ensure economic resilience. More specifically, the theme of strengthening the local economy identified an objective of ensuring that “the community benefits from the economic returns of local renewable energy production, and mining and extractive industries”. This included the strategy of identifying and developing opportunities to realise Warrumbungle Shire LGA’s potential as a location for the production of renewable energies.</p> <p>The project is relevant to the visions of the CSP by contributing to economic returns of local renewable energy production, particularly through workforce capacity.</p>
<p><i>Towards 2040: Community Strategic Plan (Dubbo Regional Council, 2022)</i></p> 	<p>Published by Dubbo Regional Council, <i>Towards 2040: Community Strategic Plan</i> (Dubbo Regional Council, 2022) outlines the community’s aspirations and priorities for the future of the region through to 2040. The Community Strategic Plan (CSP) covers high-level strategy that will influence the direction of Dubbo Regional Council.</p> <p>The plan found that the values of the regional community includes:</p> <ul style="list-style-type: none"> • Growth of villages and rural areas • Planning for climate change as well as protecting and managing natural assets and resources • Strong and diverse local jobs and businesses. <p>More specific to the project, there is an objective of encouraging and supporting investment in renewable energy opportunities. Further, there is an objective of fostering employment and investment opportunities for all sectors of the community, which is addressed by the project’s workforce capacity.</p> <p>Challenges for the community in Dubbo Regional LGA include ensuring the capability of emergency organisations and local State Emergency Services to respond to emergencies, which will be considered in this SIA. The project is also relevant to the challenges of short-term accommodation in the Dubbo Regional LGA, as the CSP aims to ensure that “short-term accommodation is available for the workforce associated with significant infrastructure, major projects and employment generators”.</p>

4.5 Relevant studies and assessments

This section draws upon studies relevant to the amendment, or which have been introduced since completion of the EIS SIA. It also provides a review of SIA reports completed for similar, nearby REZ projects.

Table 4.9 Relevant studies and assessments

Name	Description and relevance to the project
<p><i>Employment, Skills, and Supply Chains: Renewable Energy in NSW</i> (Briggs, et al., 2022)</p> 	<p>Commissioned by the NSW Renewable Energy Sector Board and the DPE, the Institute of Sustainable Futures, University of Technology Sydney and SGS Economics and Planning developed this assessment of employment and industry development opportunities associated with the Electricity Infrastructure Roadmap. The report details renewable energy supply chains, employment and skills, and also provides a skills an employment assessment for each REZ.</p> <p>The report is relevant to identifying and assessing potential social impacts and benefits associated with the project. The report provides insights to regional and broader drivers, and an assessment of workforce and skills requirements across the life of projects, which is drawn upon in the baseline section (Section (Baseline chapter on workforce)) of this report to build a more nuanced basis for assessing potential impacts.</p> <p>Some overall findings from this report include:</p> <ul style="list-style-type: none"> • the pace of change in the energy sector poses a challenge to predict and plan for local workforce capacity and skilling • skills shortages emerged as the number one identified constraint during stakeholder interviews • short construction timeframes and uncertainty on contracts discourages investment in training workers and can even deter new entrants.
<p><i>Central-West Orana Renewable Energy Zone: Coordinating community impacts and benefits in the REZ</i> (EnergyCo, 2023)</p> 	<p>Published by the Energy Corporation of NSW (EnergyCo), this report summarises community impacts and benefits from renewable energy projects in the Central-West Orana REZ. The report is relevant as the Central-West Orana REZ is the overarching REZ for the project.</p> <p>Potential impacts of multiple renewable energy projects identified by the report include:</p> <ul style="list-style-type: none"> • the potential accommodation impacts from construction workforce on the existing constrained accommodation and housing supply • increasing demand for skilled labour in the energy sector in light of current skill shortages. <p>Potential benefits / opportunities include:</p> <ul style="list-style-type: none"> • road upgrades to facilitate the construction of projects in the REZ • renewable energy infrastructure could help improve telecommunication coverage for communities in the region • promoting efficient waste management and circular economy.

Table 4.9 Relevant studies and assessments

Name	Description and relevance to the project
<p><i>Renewable energy generation and agriculture in NSW's rural landscape and economy – growth sectors on a complementary path</i> (NSW Agriculture Commissioner, 2022)</p>  <p>Renewable energy generation and agriculture in NSW's rural landscape and economy – growth sectors on a complementary path A report by the NSW Agriculture Commissioner 8 November 2022</p>	<p>This report was formed as a review of existing framework to manage issues and opportunities relating to growth in the renewable energy and agriculture sectors. Informed by submissions to the <i>Renewable Energy and Agriculture in NSW: Issues paper</i>, (NSW DPI, 2022), this report recognises competing needs for land, including for agricultural, housing, and renewable energy infrastructure. Differing interests are recognised as rendering different patterns of land use, leading to land use conflict.</p> <p>The report provides an assessment of potential impacts to the agricultural sector in NSW using four growth scenarios for the rollout of Roadmap infrastructure.</p> <p>The report provides a land-use profile for the CWO REZ, describing the region as highly a highly diverse and the total area is made up of 88% rural land, where 34% of rural land is considered state significant agricultural land (SSAL).</p> <p>Across broader NSW, the study found that in the worst-case scenario for land use changes associated with the roll out of renewable energy infrastructure to 2051, there is no material impact to agricultural production. It does suggest, however, that in some specific cases, there will be 'small local effects', mainly attributable to the sheer number of projects.</p> <p>For example, in the Central West Orana, there are some higher land use change results under the worst-case scenario, where 21.5% of SSAL would be required for wind and solar projects. The step change scenario, considered to be the most likely scenario, sees 9.2% of SSAL would be required.</p>
<p><i>Stubbo Solar Farm Environmental Impact Statement</i> (Ramboll, 2020)</p>  <p>STUBBO SOLAR FARM ENVIRONMENTAL IMPACT STATEMENT November 2020</p> <p>Ramboll UPC/AC Renewables</p>	<p>A socio-economic assessment was undertaken for the Stubbo Solar Farm for UPC/AC Renewables Australia Pty Ltd by Ramboll. The proposed project is located in the Mid-Western Regional Council LGA, in the suburb of Stubbo. The current land use of the project site is sheep and cattle grazing, and dryland cropping. The outcomes of this study are considered relevant to this SIA due to proximity, nature of the project, and currency. As such, key findings have informed the understanding of potential impacts reported in this SIA.</p> <p>The socio-economic assessment found that the local area faces challenges such as high demand for short term accommodation, skill and labour shortages, higher unemployment rates (particularly in the communities of Rylstone and Kandos), and a decreasing household size from an aging population and emigration from the region. A summary of engagement outcomes is provided in Section 6.3.</p> <p>The socioeconomic assessment found the following potential social impacts associated with the proposed project:</p> <ul style="list-style-type: none"> • an influx of construction workers impacting on traffic, accommodation pressure and skilled labour competition • housing and accommodation shortages which could result in tourism impacts, overcrowding of low-cost accommodation, and further pressure on a residential rental market • impacts to the host community's values by causing change to the social fabric of the area. <p>The socio-economic found the following potential social benefits associated with the project: employment opportunities resulting in economic diversification, employment and training, and procurement opportunities.</p>

5 Social baseline

5.1 Introduction

This section provides a summary of baseline social conditions across the SIA study areas. It outlines existing social characteristics with reference to relevant social indicators.

A key source of baseline information is data collected through ABS Censuses (ABS 2021, 2016 and 2011).

ABS statistical geographies for respective SIA study areas are summarised below:

- Local study area: Birriwa, Merotherie, and Dunedoo – ABS ‘SAL’ data category.
- Key townships: Gulgong and Mudgee – ABS ‘SAL’ data category.
- Regional study area: Mid-Western Regional LGA and Warrumbungle LGA – ABS ‘LGA’ data category.
- Area of reference: the regional study area along with Dubbo Regional LGA – ABS ‘LGA’ data category.
- State: NSW-ABS ‘STE’ data category.

The SIA study areas are represented in Section 4.1 of this report.

This Chapter is a summary of the complete Social Baseline, which is provided in Attachment D.

5.2 Baseline summary

In 2021, the local study area had a total population of 1,166 people, of which the majority (94.1% or 1,097 people) resided within Dunedoo SAL. The population of the local study reduced by 9.9% between 2016 and 2021. The local area exhibited low levels of population mobility and high rates of volunteering. The local area is relatively well serviced with social infrastructure and services particularly for vulnerable members of the community, but with more options for services in larger regional centres. This is also the case for educational services and institutions available in the key townships and regional study area. Another strength is the comparatively low rates of homelessness within the regional area.

The high proportion of people occupied as technicians and trade workers and the high proportion of construction businesses, particularly in the key townships, is recognised as a strength and opportunity in relation to the project in terms of local procurement for construction of the facility.

Unemployment rates across the study area were generally lower than the NSW rate of 4.9%, except for the Dunedoo SAL, which has an unemployment rate of 4.9%, consistent with the state. Mudgee SAL had one of the lowest unemployment rates of the study area at 3.6%, consistent with its high labour force participation rate. Dubbo Regional LGA also has a low unemployment rate of 3.6%.

The key townships demonstrate a substantial proportion of the population are susceptible to relative disadvantage. The local area has the lowest proportion of family households out of the study area. One reason for the higher proportion of lone person households may be the number of retired and single people in the local area and the very limited access to retirement home facilities, creating a vulnerability in the local area in terms of service provision.

5.3 Demographic profile

5.3.1 Population

In 2021, the local study area had a total population of 1,166 people, of which the majority (94.1% or 1,097 people) resided within Dunedoo SAL (Table 5.1). The population of the local study reduced by 9.9% between 2016 and 2021. Conversely, the area of reference demonstrated population growth of 7.6% growth between 2016 and 2021. Such population growth in the area of reference is expected to continue with an 8.8% population increase projected by 2041. This is in spite of Warrumbungle Shire's population decline of 1.7% between 2016 and 2021, and further projected decline of 20.5% by 2041.

Table 5.1 Population trends and projections

Location	Population trends 2006 - 2021				Projected population 2016 - 2041		
	Population 2016 (no.)	Population 2021 (no.)	Change 2016 – 2021 (%)	Change 2006 – 2021 (%)	Change 2016 – 2041 (no.)	Change 2016 – 2041 (%)	Ave. annual growth rate 2016 - 2041 (%)
Birriwa	49	45	-8.2%	N/A	N/A	N/A	N/A
Merotherie	24	24	0.0%	NA	N/A	N/A	N/A
Dunedoo	1,221	1,097	-10.2%	-33.6%	N/A	N/A	N/A
Local area	1,294	1,166	-9.9%	N/A	N/A	N/A	N/A
Gulgong	2,521	2,680	6.3%	-8.1%	N/A	N/A	N/A
Mudgee	10,923	11,457	4.9%	31.3%	N/A	N/A	N/A
Key townships	11,642	12,213	4.9%	10.1%	N/A	N/A	N/A
Mid-Western LGA	24,076	25,713	6.8%	21.9%	5,103	20.8%	0.83%
Warrumbungle LGA	9,384	9,225	-1.7%	-6.0%	-1,964	-20.5%	-0.82%
Regional area total	33,460	34,938	4.4%	13.1%	149	0.4%	0.02%
Dubbo Regional LGA	50,077	54,922	9.7%	45.1%	12,195	23.7%	0.95%
Area of reference total	83,537	89,860	7.6%	30.7%	7,522	8.8%	0.35%
NSW	7,480,228	8,072,163	7.9%	23.3%	2,140,076	27.7%	1.11%

Source: ABS 2006; ABS 2016a; ABS 2021a, Census of Population and Housing: General Community Profiles, DPE 2022, NSW 2022 Population Projections; ASGS 2022 LGA projections.

Notes: 1. Population totals for Birriwa SSC and Merotherie SSC are not available for 2006 and 2011.

2. Population projection data was not available at the SSC level.

3. The projected population has been determined by using the ABS ERP population count which takes Census counts of people where they usually live (accounting for interstate visitors and removing overseas visitors), adjusts for Census undercount and overcount using the Census Post Enumeration Survey (PES), adds in Australians who are temporarily overseas, and applies further demographic adjustments.

5.3.2 Age and socio-cultural characteristics

The population of the local study area was typically older, with median ages 47 years or above compared to NSW's 39 years. This was consistent with the local study area's higher proportion of people aged 65 years and older (31.5%) compared to the regional area (22.8%), area of reference (19.4%), and NSW (17.6%). There was also a higher proportion of people aged 0-14 years in the key townships (21.1%), regional area (19.1%), and area of reference (20.2%) compared to NSW (18.2%). This could indicate a greater burden on the working-age population in terms of caring requirements.

The population of the regional study area generally showed higher proportions of people who identify as Indigenous compared to NSW (Table 4.3 of Attachment D). The local study area had a higher proportion of Indigenous persons than the regional study area, largely due to the higher Indigenous population in Dunedoo, as there were no Indigenous persons recorded in Merotherie. In terms of households who speak a language other than English at home, the study area had a significantly lower proportion than NSW (22.4%).

5.3.3 Vulnerable groups

i Socio-economic advantage and disadvantage

Levels of relative disadvantage and advantage in a population can be measured through the Socio-Economic Indexes for Areas (SEIFA). Using ABS Census data, these indexes utilise a broad range of indicators to derive a relative score for geographical areas. There are four SEIFA summary measures:

- the Index of Relative Socio-Economic Disadvantage (IRSD)
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)
- the Index of Education and Occupation (IEO)
- the Index of Economic Resources (IER).

The SEIFA decile ranking system allocates the lowest 10% of areas to the decile number of 1 and the highest 10% of areas to a decile number of 10. While there are variations to interpreting the decile scores across the four indexes, generally a low decile rank is associated with disadvantage, and a high decile rank is associated with less disadvantage.

Birriwa and Merotherie recorded similar SEIFA scores to broader Mid-Western Regional LGA, with scores between 4th decile and 8th decile (Figure 5.1). This suggests that people in Birriwa and Merotherie were neither relatively advantaged nor disadvantaged, had medium access to economic resources and had a mid-level of education and skills relative to other areas. In comparison, the SEIFA rankings showed that people in Gulgong and Dunedoo were disadvantaged with rankings between the 1st decile and the 4th decile. As such, people in these localities had low access to economic resources and a low level of education and skills relative to other areas.

Within the area of reference, the Mid-Western LGA had roughly similar rankings to Dubbo Regional LGA, and both LGAs have higher rankings than the Warrumbungle LGA. The 2021 SEIFA rankings showed that people in the Warrumbungle LGA were relatively disadvantaged as they had low access to economic resources relative to other areas. The Warrumbungle LGA also had a similar level of education and skills as the Mid-Western Regional LGA but lower than Dubbo Regional LGA. Overall, the Dubbo Regional LGA showed the least level of disadvantage of the LGAs of the area of reference.

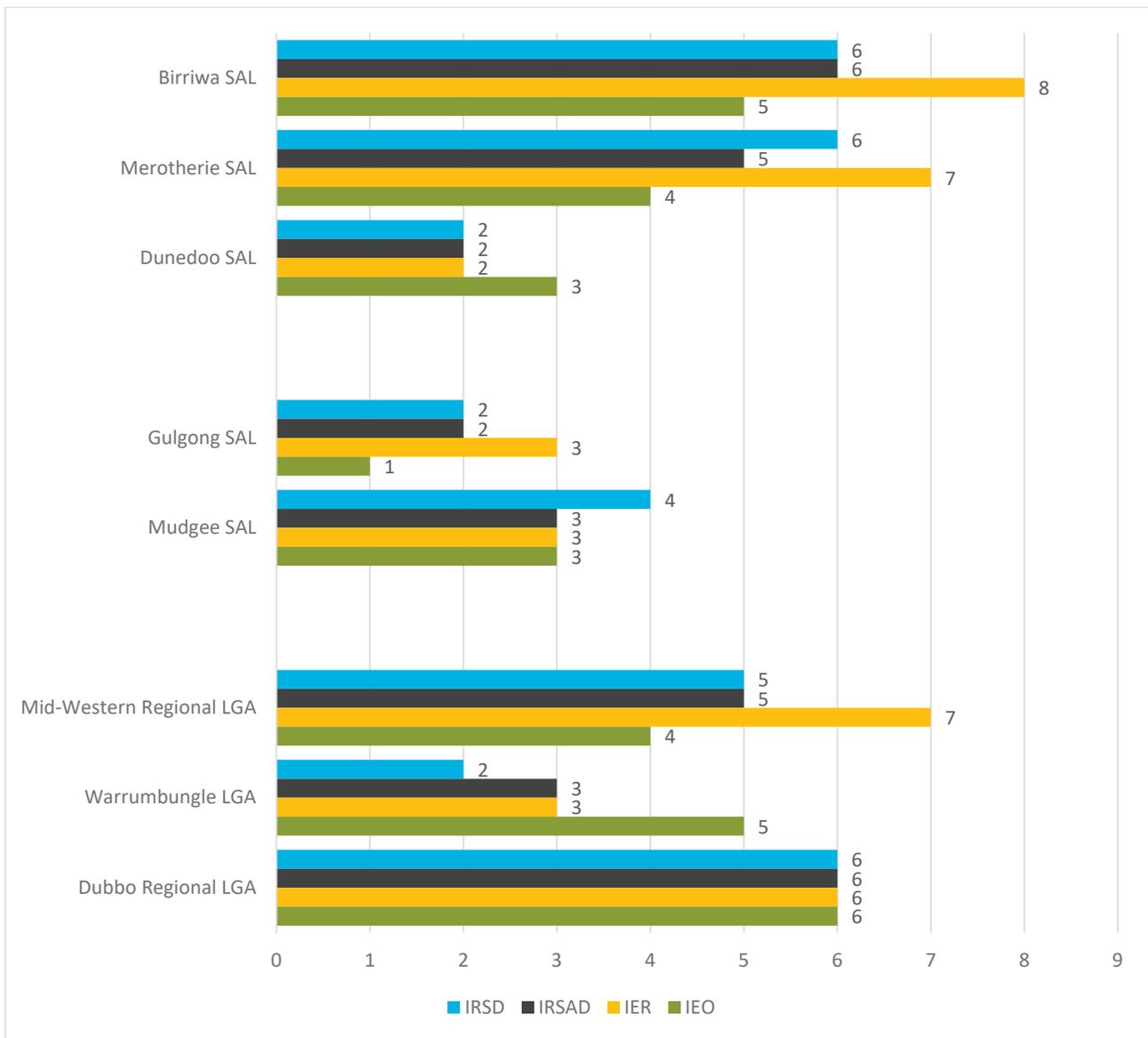


Figure 5.1 SEIFA deciles for the study area, 2021

ii Homelessness

As explained by the Australian Human Rights Commission (AHRC), “the causes of homelessness are numerous and complex. Homelessness can be caused by poverty, unemployment or by a shortage of affordable housing, or it can be triggered by family breakdown, mental illness, sexual assault, addiction, financial difficulty, gambling, or social isolation” (AHRC, n.d.). Homelessness can lead to health problems including poor nutrition, depression, substance abuse, poor dental health, and mental health conditions (AHRC, 2008). For homeless persons, hardships with finances, transport, identification, Medicare, and difficulty with appointment maintenance/treatment plans make accessing health care services more difficult than the average person (AHRC, 2008). As such, homeless persons are at greater risk of being negatively affected by potential impacts on livelihoods and health and wellbeing.

The 2021 Census estimated rates of homelessness in the regional study area (by LGA), area of reference (by SA4), and the NSW average, which are shown below:

- Mid-Western Regional LGA – 16.7 per 10,000 population
- Warrumbungle Shire LGA – 35.8 per 10,000 population

- Dubbo Regional LGA– 43.9 per 10,000 population
- NSW – 46.8 per 10,000 population.

While high rates of homelessness are usually less common in regional areas compared to metropolitan areas, rates of homelessness in Dubbo Regional LGA were high compared to the other LGAs, but slightly lower than NSW.

5.4 Community culture, values, and aspirations

A summary of community culture, values and aspirations is provided in Chapter 5 of Attachment D. This assessment has remained consistent with the findings of the EIS SIA (EMM, 2022a) , and findings include values around:

- Jobs and economic opportunities through existing and growth industries (tourism, agriculture, mining)
- rural lifestyle
- the landscape, environment and sustainability
- access to services and public facilities and community groups/activities.

Both the Warrumbungle Shire Council and Mid-Western Regional Council expressed an aspiration to grow jobs and economic opportunities, and to foster activities and employment for young people in particular.

Both regions also expressed a strong sense of community care, spirit and safety.

5.5 Social infrastructure

5.5.1 Education

There are five primary schools, four secondary schools, two combined schools, in the local area. Of these, six are government schools and three are non-government schools. The schools with the largest enrolments are in Mudgee. Residents of the local area can access schooling in the regional area with minimal travel required. Educational attainment (i.e. the highest level of schooling completed) in the local area is similar to the regional area and the area of reference, however all three areas of interest experience lower levels of educational attainment compared to NSW.

The only tertiary education institution with campuses in the local area and regional area is TAFE NSW. TAFE campuses are located in Mudgee and Dunedoo in the local area, and also Coonabarabran and Gilgandra in the broader regional area (Warrumbungle LGA). This is consistent with a lower proportion of people with non-school qualifications in the local area compared with the rest of the study area. Of those with non-school qualifications, certificate-level qualifications have the highest proportion in the local study area as well as the key townships, regional area, and area of reference.

The prevalence of certificate level qualifications in the local and regional area reflects a combination of access to further education institutions and the dominant regional employment sectors (i.e. agriculture, mining and health care and social assistance) which in turn inform the dominant occupation types (i.e. technicians and trades workers and machinery operators and drivers). These occupations typically require a certificate level qualification or above. The pattern of non-school qualifications in the area of social influence is also consistent with the higher proportion of person attending post-school alternative educational institutions.

5.5.2 Health and emergency services

As per the 2022 Social Impact Assessment (EMM, 2022a), in the local area there are five general practitioner (GP) services which primarily offer standard GP services. The Multipurpose Services (MPSs) located in Gulgong and Dunedoo, and the Mudgee HHS also offer a range of health-related services to the local area and broader regional area. The MPSs and the Mudgee HHS provide services relating to community health, Aboriginal health, mental health, maternal, child and family health, aged care, and special services.

The Western NSW LHD are responsible for public hospitals and healthcare facilities provision in the local study area. Dubbo Hospital is the main referral hospital for the northern network of the Western NSW LHD. Mudgee Hospital (part of the Mudgee Hospital and Health Service [HHS]) is the only procedural hospital in the northern network and provides emergency, acute medical, surgical, maternity, and subacute inpatient services as well as a range of primary, ambulatory and community health services. Mudgee HHS is the closest hospital to the local area. Gulgong Multipurpose Service (MPS) and Dunedoo MPS are smaller hospitals in the northern network.

Admissions to Mudgee Hospital saw a significant increase of 46.0% from 2019-2021. Most of all the hospital stays in Mudgee Hospital are attributed to medical emergencies and medical non-emergencies. There were low admissions for the other admissions categories, particularly mental health.

In terms of emergency services, there are three police stations, three ambulance stations, and three fire and rescue stations in the local area. The local area also has a local State Emergency Service (SES) unit and is home to the SES Western Zone Headquarters. The project site is in the Cudgegong District of the NSW Rural Fire Service (RFS) and adjoins the Castlereagh District. Within the local area RFS brigades are located in Birriwa, Gulgong, Mudgee and Dunedoo. The Cudgegong District is the primary combat agency for bush and grass fire incidents in the Mid-Western Regional LGA.

In addition to the listed emergency services, the Ambulance Service of NSW Western Regional Office and the Orana-Mid Western Police District office are located in Mudgee. Additional emergency services are located in the broader regional area and area of reference.

5.5.3 Transport infrastructure

Transportation in the local area is facilitated through the provision of three movement networks: a public transport network, a bike/walk network, and a road network.

Public transport services within the local area are limited to bus transport. The nearest and accessible train station is located in Lithgow. There is no public transport service within the towns of Gulgong or Dunedoo.

Odgen's Coaches operate the Mudgee interlink, a series of bus routes around the Mudgee township. Mudgee Community Transport, funded by Transport for NSW, provides a transport service for eligible seniors, pensioners, those with accessibility needs or those who have limited access to public transport. The service is especially designed to help residents access medical appointments, participate in social activities, complete shopping and maintain independent living at home.

The project is located immediately east of the village of Birriwa on the Castlereagh Highway (B55) and south of the Golden Highway (B84). The towns of Gulgong and Mudgee are both located on the Castlereagh Highway, part of the Great Inland Way which links Sydney and Cairns. Dunedoo is located at the junction of the Castlereagh Highway and Golden Highway. The Golden Highway connects Newcastle in the east with Dubbo in the west.

Mudgee airport is the only commercial airport located in the local area. A larger commercial airport is located at Dubbo. Mudgee Airport is owned and managed by the MWRC. As of March 2022, FlyPelican operates weekly return flights from Mudgee to Sydney (Mid-Western Regional Council, 2022).

The 2021 Census indicated the predominant mode of travel to work in the local area is by car, either as the driver or as a passenger (59.1%), which is higher than the NSW average (46.3%), but lower than the key townships (72.8%), regional area (67.2%) and the area of reference (72.3%).

5.5.4 Community services

Community services are concentrated in the three centres of Dunedoo, Gulgong and Mudgee, with the majority of services provided in Mudgee consistent with the town's population size. Many community services in the local area are provided by the respective local councils (i.e. MWRC and WSC). These services include childcare services, public health, cultural development, Aboriginal and Torres Strait Islander services, youth services, and social planning (Mid-Western Regional Council, 2022; Warrumbungle Shire Council, 2022; Ask Izzy, 2021).

There are also numerous multifaceted service provision organisations (e.g. Salvation Army, Lifeline, Anglicare, St Vincent de Paul Society) with services in the local area and key townships. These organisations provide a range of services for various demographics, including programs and services for youth, seniors, homeless persons, and specialised Aboriginal and Torres Strait Islander services, among others.

5.5.5 Regional events

Within the local area the townships of Dunedoo, Gulgong, and Mudgee, each hold an annual local agricultural show. Other well established local and regional annual events include:

- Henry Lawson Festival held in Gulgong on the June long weekend
- Mudgee Classic a cycling event that attracts 2,000 people
- Mudgee food and wine month that consist of a range of events attracting approximately 12,000 visitors to the area over September and October
- the Wildflower music festival held in May at Mudgee which draws in approximately 14,000 attendees
- Mudgee small farm field days.

The large number of people brought in by regional events such as the Mudgee food and wine month and Wildflower Music Festival could demonstrate a restriction of short-term accommodation availability particularly around May to June.

Coonabarabran, and Mudgee also hold a country and picnic race day that attracts large crowds to the events that support the progress and development of community and picnic days supporting regional and rural communities (NSW Country and Picnic Racing, n.d.).

5.6 Workforce and income

5.6.1 Labour force characteristics

Table 5.2 demonstrates the overall unemployment and labour force participation rates for 2021. Care should be taken when interpreting data for the areas of Birriwa and Merotherie due to the small population sizes, rounding errors and a need to ensure data confidentiality. The local study area had lower labour force participation rate (49.8%) compared to NSW (58.7%) which can be attributed to relatively low labour force participation in Dunedoo (48.4%). This corresponded with Dunedoo having the highest proportion of people aged 65 years and over (see Section 5.3.2). Warrumbungle LGA also has a lower labour force participation rate (47.2%) than NSW. Key townships had a higher labour force participation rate (60.8%) out of the study area, largely attributed to Mudgee SAL's rate of 62.0%.

Unemployment rates across the study area were generally lower than the NSW rate of 4.9%, with Dunedoo SAL having a similar unemployment rate of 4.9%. Mudgee SAL had one of the lowest unemployment rates of the study area with 3.6%, consistent with its high labour force participation rate. Dubbo Regional LGA also had a low unemployment rate of 3.6%.

Table 5.2 Unemployment and labour force participation rates, 2021

Area	Labour force (no.)	Labour force participation rate (%)	Unemployment rate (%)	Unemployed persons (no.)	Youth unemployment rate (15 to 24 years) (%)	Aboriginal and/or Torres Strait Islander unemployment rate (%)
Birriwa SAL	23	62.2%	0.0%	0	-	-
Merotherie SAL	19	95.0%	0.0%	0	-	-
Dunedoo SAL	447	48.4%	4.9%	22	8.2%	9.7%
Local study area	489	49.8%	4.5%	22	8.2%	9.7%
Gulgong SAL	1,173	55.4%	4.5%	53	7.3%	0.0%
Mudgee SAL	5,598	62.0%	3.6%	202	6.4%	6.8%
Key townships	6,771	60.8%	3.8%	255	6.5%	5.5%
Mid-Western Regional LGA	11,895	57.8%	4.0%	470	7.0%	8.1%
Warrumbungle LGA	3,619	47.2%	6.1%	221	12.9%	14.2%
Regional study area	15,514	54.9%	4.5%	691	8.1%	10.1%
Dubbo Regional LGA	26,334	60.7%	3.6%	946	7.8%	9.4%
Area of reference	41,848	58.4%	3.9%	1637	7.9%	9.5%
NSW	3,874,012	58.7%	4.9%	189,852	9.8%	9.8%

Current unemployment in the regional area can be further analysed with reference to Jobactive caseload data from the Australian Government (2022). Jobactive is the Australian Government’s employment service. Caseload data by Jobactive service provider is available for the LGAs of the local area. There were three primary providers of Jobactive in these LGAs (i.e. Joblink Plus, Sureway Employment and Training Pty Ltd and Verto Ltd). In February 2022 there were 851 people registered with Jobactive providers in the local area. The majority (53.3%) of the caseload were females aged 15 years and older. Approximately 34.5% (293 people) of the caseload were mature aged people (i.e. people aged 50 years or older) and 15.4% were Indigenous people aged 15 years and older.

i Recruitment experience

The Recruitment Experience and Outlook Survey (REOS) (Jobs and Skills Australia, 2023) shows a steady, but fluctuating increase in the number of employers recruiting between September 2020 and March 2023 (i.e. 39% compared to 63%) in regions outside of the greater capital cities in Australia. In March 2023, 68% of employers recruiting outside of greater capital cities in Australia experienced recruitment difficulties. Trend data for the recruitment difficulty rate shows a fluctuating but steady increase in the proportion of employers experiencing recruitment difficulties. NCS national data for December 2021 shows high recruitment rates across all industries (i.e. 55% of employers were seeking to recruit in Australia) and in the construction industry 50% of employers were seeking to recruit.

REOS (NSC, 2022) data for the Central West shows of the recruiting employers, 49% had difficulty recruiting. Employers in the Central West ER were most likely to report the following reasons for recruitment difficulty:

- lack of applicants
- lack of suitable applicants
- location, i.e. remote or regional
- COVID-19 (impacting recruitment).

Recruitment methods included online jobs boards and company websites (40%), social media (37%), newspapers (15%), recruitment agencies (15%) and word of mouth (40%) (NSC, 2022) .

5.6.2 Occupation

Table 5.3 presents occupations within the study area in 2021. In 2016 the top three occupations in the local area and key townships were technicians and trades workers (17.5%), professionals (13.7%) and machinery operators and drivers (12.9%). This is consistent with the mining industry being the dominant industry of employment in the local area in 2021 (Section 5.8).

In 2021, when breaking down the local study area, managers were the main occupation followed by professionals in Birriwa and Merotherie SALs and labourers in Dunedoo SAL. The key townships demonstrated the more mining-oriented professions with the top occupation being technicians and trades workers (19.2% for Gulgong SAL and 18.4% for Mudgee SAL). This was followed by machinery operators and drivers in Gulgong SAL (18.0%) and professionals in Mudgee SAL (15.6%).

In the area of reference, there was a mix of top occupations between managers and professionals, and labourers and technicians and trades workers as well as community and personal service workers.

Table 5.3 Top three occupations, 2021

Area	First	%	Second	%	Third	%
Local study area						
Birriwa SAL	Managers	30.8%	Professionals	15.4%	Technicians and trades workers	11.5%
Merotherie SAL	Managers	47.4%	Professionals	15.8%	Sales workers	15.8%
Dunedoo SAL	Managers	28.1%	Labourers	15.8%	Professionals	10.5%

Table 5.3 Top three occupations, 2021

Area	First	%	Second	%	Third	%
Key townships						
Gulgong SAL	Technicians and trades workers	19.2%	Machinery operators and drivers	18.0%	Labourers	13.4%
Mudgee SAL	Technicians and trades workers	18.4%	Professionals	15.6%	Machinery operators and drivers	13.0%
Area of reference						
Mid-Western Regional LGA	Technicians and trades workers	17.5%	Professionals	14.1%	Managers	13.9%
Warrumbungle LGA	Managers	25.9%	Labourers	15.5%	Professionals	13.6%
Dubbo Regional LGA	Professionals	18.3%	Community and personal service workers	15.1%	Technicians and trades workers	14.0%

Source: ABS 2016, Census of Population and Housing: General Community Profiles.

5.6.3 Income

In 2021, with the exception of Dubbo LGA’s individual income, all of the areas of interest (i.e. SALs and LGAs) recorded median weekly income levels below NSW. For individual income, Dubbo LGA had the highest income of the study area with \$837 whereas Warrumbungle LGA had the lowest income with \$559. For household income, Mudgee SAL had the highest income with \$1,678 and Dunedoo SAL had the lowest income with \$985.

5.7 Housing and accommodation

5.7.1 Housing statistics

In 2021, the local area had the smallest proportion of occupied dwellings out of the study area with 81.5%. In comparison, the regional area had 84.4% of occupied dwellings and the area of reference had 88.9% of occupied dwellings.

The most common housing type in the local area was separate houses, which was higher than the key townships (86.4%), regional area (92.4%) and the area of reference (88.2%). Key townships had one of the highest proportions of semi-detached, row or terrace house, or townhouse (10.6%) compared to the regional area (5.0%) and area of reference (6.6%) but was lower than NSW (11.7%).

Most households in the local area were lone family households however, there was a higher proportion of lone person households compared to the rest of the study areas. As such, the local area had the lowest proportion of family households out of the study area. One reason for the higher proportion of lone person households may be the number of retired and single people in the local area and the very limited access to retirement home facilities. Increased longevity means people often outlive their partners. In rural areas in particular, connection to place is strong and people often seek to remain in their communities as they age rather than move away.

Finally, the majority of dwellings were owned outright in the local area but there was also a higher proportion of other tenure type compared to the other study areas. The key townships had a higher proportion of rented dwellings compared to the rest of the study area. The high rates of rental tenure may be attributable to a number of factors including: the presence of a sizeable health sector and education sector workforces, which cycle through on a contractual basis; the attractiveness of the locations as base locations for workforces associated with the construction of major projects (e.g. mining, renewable energy and infrastructure) in the regional area; and the overall residential rental costs and rental availability at the time of the 2021 census.

5.7.2 Housing and rental market trends

Mortgage and rent repayments can help understand housing affordability in the area. When housing is unaffordable, it can lead to overcrowding, homelessness, and financial strain (AIHW, 2022).

Housing stress is considered to occur when households in the lower 40.0% of income distribution spend more than 30.0% of their income on rental payments (rental stress) or mortgage repayments (mortgage stress) (AHURI, 2019). This may indicate that local people with lower income may be unable to afford local rents which can be pushed up by those with higher income entering the local rental market. There was growth in mortgage repayments in Mid-Western Regional LGA as a whole which is likely associated with the tightening of the housing market due to a parallel increase in population (the growth rate during this period was above NSW) and expansion of the surrounding mining industry sector. Whilst Gulgong experienced a population decline during this period, the expanding mining industry sector in the Mid-Western Regional LGA between 2006 and 2021 would also have impacted housing market conditions in Gulgong.

Affordable housing is a key dimension of economic wellbeing. Housing costs, such as rent payments or mortgages, are often the largest regular expense in a household budget. Spending a high proportion of disposable income on housing costs reduces what households can afford to consume and save to support other aspects of their wellbeing (OECD 2020).

Analysis of rental stress in the local area (Table 5.4) showed that in 2016, a high proportion of households in Mudgee (14.2%) and Gulgong (12.4%) experienced rental stress compared to other communities in the local area, the LGAs of the regional area and the area of reference. In comparison, a smaller proportion of households in the communities of the local area (i.e. 6.0% Mudgee, 3.0% Dunedoo, and 5.2% Gulgong) experienced mortgage stress compared to NSW (7.4%). In 2021, Gulgong (37.0%), Mid-Western Regional LGA (33.4%), and Mudgee (33.1%) had similar or greater proportions of households with rental stress than NSW (33.1%). Households in the study area with higher levels of mortgage stress included the same localities of Mudgee (6.0%), Mid-Western Regional LGA (5.9%), and Gulgong (5.2%). However, mortgage stress in the study area is lower than the NSW proportion of 7.4%.

Table 5.4 Housing affordability, c2016 and c2021

	Households where rent payments are greater than or equal to 30% of household income (%) ¹		Households where mortgage payments are greater than or equal to 30% of household income (%) ¹	
	c2016	c2021	c2016	c2021
Birriwa	NA	NA	NA	NA
Merotherie	NA	NA	NA	NA
Gulgong	12.4%	37.0%	5.2%	14.2%
Dunedoo	6.9%	30.1%	3.0%	11.0%
Mudgee	14.2%	33.1%	6.0%	9.7%

Table 5.4 Housing affordability, c2016 and c2021

	Households where rent payments are greater than or equal to 30% of household income (%) ¹		Households where mortgage payments are greater than or equal to 30% of household income (%) ¹	
	c2016	c2021	c2016	c2021
Mid-Western Regional LGA	10.0%	33.4%	5.9%	11.9%
Warrumbungle LGA	6.2%	23.2%	3.2%	11.8%
Dubbo Regional LGA	6.2%	26.2%	3.2%	9.5%
NSW	12.9%	33.1%	7.4%	17.3%

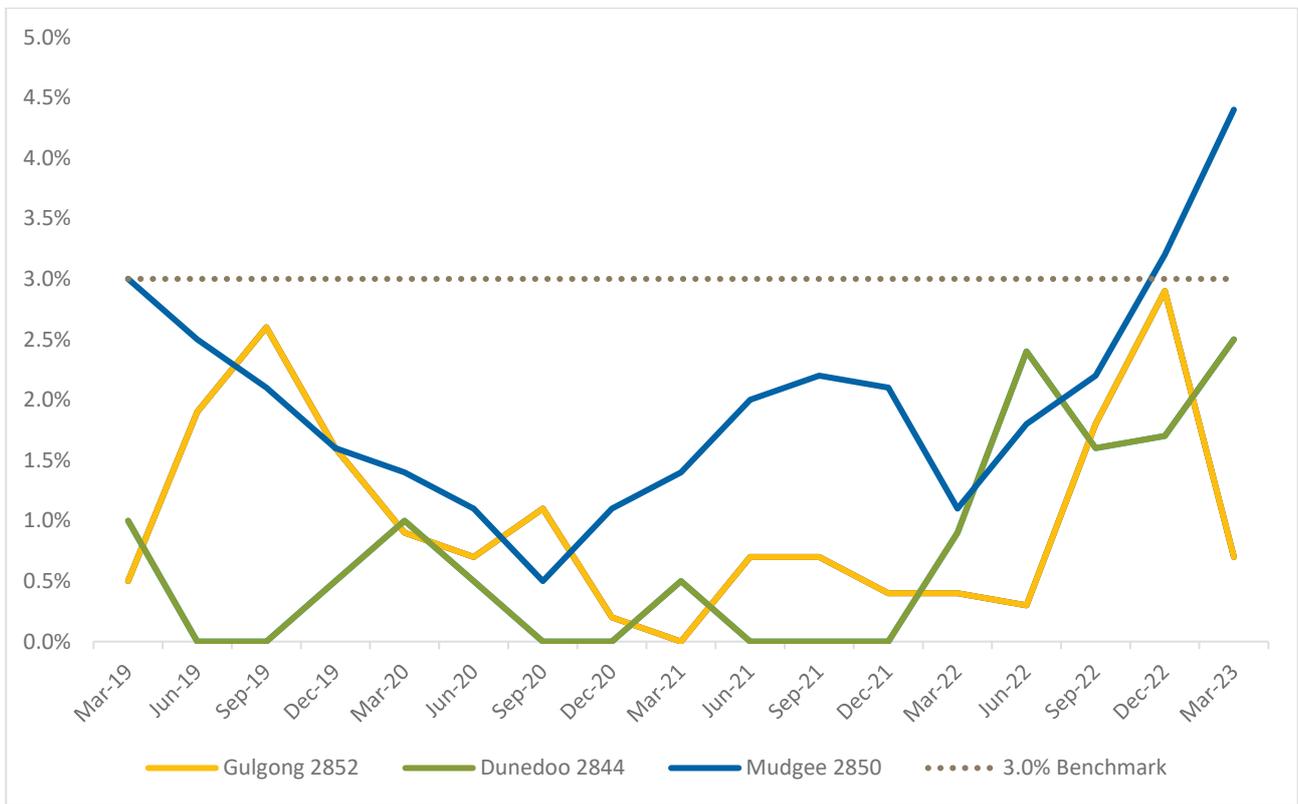
Source: ABS 2016, Quickstats, ABS 2021, QuickStats.

Notes: 1. Data for the total local area median mortgage repayments and rent payments was not available.

Analysis of median property prices supports the evidence of growing mortgage stress. In Figure 8.1 of Attachment D, there is a significant increase in property prices from 2020 to 2021 for Mudgee and Dunedoo. Gulgong’s house prices are still increasing, but less dramatically.

i Residential vacancy rates

The residential vacancy rate trends for postcode 2844 Dunedoo, 2852 Gulgong and 2850 Mudgee is presented in Figure 5.2 for the period March 2019 to March 2023. With the exception of Mudgee, from December 2022 to March 2023 the vacancy rate in the local area during was consistently below the 3.0% benchmark, indicating a tight rental market with an undersupply of rental housing during that time. Whilst the data shows considerable fluctuation in rental vacancy rates across the three communities, within Gulgong rental vacancy rates spiked from 0.3% in June 2022 to 2.9% in December 2022 before decreasing again to 0.7% in March 2023, indicating an erratic market.



Source: SQM Research 2021, Residential Vacancy Rates.

Figure 5.2 Residential vacancy rate trends, 2018–2021

5.7.3 Short-term accommodation

The term short-term accommodation refers to accommodation options that are typically provided to visitors or tenants for a short period of time for example, motels, hotels, serviced apartments, bed and breakfast, self-contained homes, caravan and camping parks. The length of tenancy in these forms of accommodation can often extend to lengthy stays, depending on accommodation availability, price and personal circumstances.

Short-term accommodation providers in the local and regional area service a number of different industry sectors including tourism, mining, renewable energy and agricultural industry sectors. The MWRC estimates there are currently 3,200 rooms of short-stay accommodation in the Mid-Western Regional LGA, with an average occupancy rate of over 80% (EIS SIA interview program).

Within the local area short-term accommodation is concentrated in the larger communities of Dunedoo, Gulgong and Mudgee and consists of a combination of hotels, motels, bed and breakfast accommodation, farm-stay, holiday home rentals (Airbnb) and caravan parks. The majority of short stay accommodation in the Mid-Western LGA is concentrated in and nearby the town of Mudgee. Short-term accommodation in the local area is summarised in Table 8.10 of Attachment D.

The most abundant form of short-term accommodation in the local area, key townships and regional area is private holiday rentals through platforms such as Airbnb and booking.com. Analysis of short-term accommodation data suggests that in 2023 there are more than 600 active Airbnb rentals in the Mid-Western LGA including an estimated 270 properties in Mudgee and 11 properties in Gulgong. There were an estimated 50 Airbnb properties in the Warrumbungle LGA including 4 properties in Dunedoo. The findings of SIA interviews with service providers, real estate agents and the MWRC suggests that the number of Airbnb properties in the Mid-Western LGA has increased substantially in the past three to five years. There was a trend of properties being purchased and transferred out of the stock of private rental or owner-occupied housing and into the short-term accommodation or holiday rental market (EIS SIA interview program).

5.8 Local business and industry

In terms of the top industries of employment, the ABS 2021 Census illustrated that the mining industry sector had the largest employment share in the local area and key townships (17.2%), followed by the health care and social assistance (11.5%) and retail trade (10.1%).

The order of the top industries in 2021 in the regional area were mining (12.7%), agriculture, forestry and fishing (11.8%), and health care and social assistance (11.5%).

In 2022, the industry sector in the Mid-Western Regional LGA and the Warrumbungle LGA with the largest share of registered businesses was the agriculture, forestry, and fishing industry (33.9% and 56.0% respectively). However, the proportion of registered businesses in this industry had slightly decreased from 2020 from 35.7% in Mid-Western Regional LGA and 57.2% in Warrumbungle LGA. The construction industry sector had the second largest share of registered businesses in the Mid-Western Regional LGA and the Warrumbungle LGA (15.2% and 8.2% respectively). It is notable that despite the strong employment share in the mining industry sector in the Mid-Western LGA, there were few registered businesses in the sector.

Table 5.5 Registered businesses by industry, regional area, 2020-2022

Industry sector	Mid-Western Regional LGA			Warrumbungle LGA		
	2020	2021	2022	2020	2021	2022
Agriculture, forestry and fishing	35.7%	35.3%	33.9%	57.2%	58.1%	56.0%
Mining	1.1%	1.1%	1.1%	0.0%	0.0%	0.0%
Manufacturing	4.3%	3.9%	4.1%	1.6%	1.8%	1.6%
Electricity, gas, water and waste services	0.1%	0.1%	0.2%	0.2%	0.3%	0.2%
Construction	14.1%	14.5%	15.2%	8.0%	7.7%	8.2%
Wholesale trade	1.9%	2.0%	1.8%	2.0%	1.8%	1.9%
Retail trade	5.6%	5.4%	5.4%	4.1%	4.2%	3.8%
Accommodation and food services	5.8%	5.6%	5.6%	5.2%	4.7%	5.1%
Transport, postal and warehousing	3.5%	3.5%	3.8%	5.4%	5.9%	6.0%
Information media and telecommunications	0.4%	0.4%	0.5%	0.3%	0.4%	0.3%
Financial and insurance services	1.8%	2.0%	1.8%	0.6%	0.4%	0.7%

Table 5.5 Registered businesses by industry, regional area, 2020-2022

Industry sector	Mid-Western Regional LGA			Warrumbungle LGA		
	2020	2021	2022	2020	2021	2022
Rental, hiring and real estate services	6.2%	6.3%	6.8%	3.9%	4.0%	3.7%
Professional, scientific and technical services	6.5%	6.6%	6.4%	3.3%	3.1%	3.8%
Administrative and support services	2.7%	2.9%	3.3%	1.6%	1.8%	1.8%
Public administration and safety	0.2%	0.2%	0.1%	0.2%	0.0%	0.0%
Education and training	1.1%	1.0%	0.9%	0.6%	0.4%	0.6%
Health Care and Social Assistance	3.3%	3.2%	3.0%	2.3%	1.9%	2.2%
Arts and recreation services	0.9%	1.2%	1.1%	0.4%	0.4%	0.6%
Other services	4.7%	4.8%	5.0%	3.2%	3.2%	3.3%
Total number	2,553	2,684	2,856	1,201	1,188	1,248

Source: ABS 2022, 8165.0—Counts of Australian Businesses, including Entries and Exits, June 2020 to June 2022.

Notes: Excludes businesses with industry 'not stated'.

5.9 Health and community wellbeing

5.9.1 Community health

Social determinants of health, described as “the circumstances in which people grow, live, work, age, and the systems put in place to deal with illness...which are shaped by political, social, and economic forces” (AIHW 2020), are measures of the health and wellbeing of a population. These measures include factors such as conditions of employment, provision of social services and support, and socio-economic position.

Although the local area and regional area have a slightly lower level of unemployment compared to greater NSW, there are greater rates of youth unemployment, relatively more households with low income and fewer people in high-skill occupations compared to the rest of NSW, suggesting higher rates of socio-economic disadvantage. Furthermore, the provision of social infrastructure and services particularly health related services is less comprehensive in comparison to more urban regions of NSW, necessitating travel outside of the regional area to access specialist health and community services e.g. at a referral hospital in Dubbo.

The 2022 Social Impact Assessment analysed three major health risk factors can be used as indicators of population health: alcohol consumption, smoking, and obesity (EMM, 2022a). It revealed vulnerabilities within the Western NSW LHD concerning alcohol consumption, which was a consistently higher proportion than NSW, as well as obesity, which was trending higher than NSW.

5.9.2 Volunteering rates

Volunteering rates can give an indication of social cohesion in a community, and willingness of people to help each other out. In 2021, there were high volunteering rates in the study area with 25.3% for the local area and 17.6% for the regional area. However, the key townships of Gulgong and Mudgee have lower proportions of volunteerism than the rest of the study area with 14.5% but is still higher than the NSW rate of 13.0%.

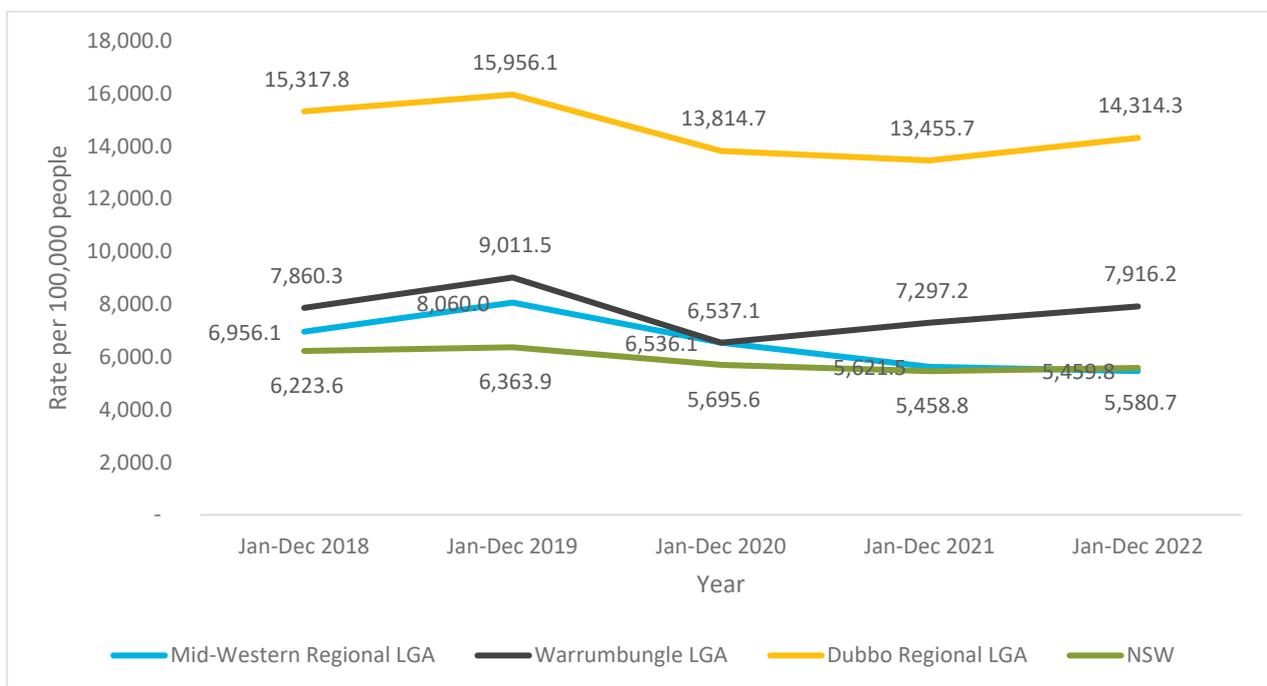
5.9.3 Road incidents

Between 2017 and 2021 the number of non-casualty (towaway) road incidents increased in Warrumbungle LGA and Dubbo LGA. In Warrumbungle LGA there was an increase from 6 incidents in 2017 to 18 incidents in 2021, and in Dubbo Regional LGA there was an increase from 33 incidents in 2016 to 48 incidents in 2021. The number of fatal road incidents increased in Mid-Western Regional LGA during this period from 1 incident in 2017 to 3 incidents in 2021.

5.9.4 Community safety and crime

Data describing the incidence of crime in the regional area and NSW is presented in Figure 5.3 and sourced from the NSW Bureau of Crime Statistics and Research (BOCSAR). BOCSAR is a statistical and research agency within the Department of Communities and Justice. Data is only available at the LGA level.

Since 2018, the rate of total offences (per 100,000 people) in each of the LGAs of interest has generally been higher than the NSW average. In 2022, the rate of total offences (per 100,000 people) in Mid-Western Regional LGA was 5,459.8 compared to 7916.2 in the Warrumbungle LGA, 14,314.3 in Dubbo Regional LGA and 5,580.7 in NSW.



Source: BOCSAR 2022 — NSW Local Government Area excel crime tables.

Notes: Total excludes transport regulatory offences.

Figure 5.3 Total offences rates per 100,000 population, 2018–2022

6 Community and stakeholder engagement

6.1 Introduction

This section summarises engagement activities which have informed the amendment report and the preparation of this SIA addendum. Also outlined is the community and stakeholder feedback generated through engagement undertaken specifically to inform the SIA which included in depth interviews with stakeholders including surrounding landholders, local government and service providers.

6.2 Amendment report engagement

Stakeholder engagement for the project has been comprehensive to date and reflects the importance ACEN places on this aspect to its business. Since the lodgement of the EIS, ACEN continues to engage with stakeholders including local authorities, government agencies, the local community and neighbouring landholders, as the project design is refined with the addition of the accommodation facility.

ACEN's engagement for the accommodation facility and participation in the SIA were advertised on the project's Facebook page and an advertisement in the newspaper, and included:

- Further consultation with community members who expressed concern in their submission on the project relating to the extent of consultation, was undertaken by ACEN in late January and early February 2023.
- ACEN held an information stand at the Dunedoo show on 11 February 2023, to allow members of the public to discuss the project. Approximately 25 members of the public interacted with the ACEN representatives. of the Birriwa Amendment Report.
- ACEN held a public community information day on 6 July 2023. Matters discussed are summarised below:
 - the availability of essential services (police, doctors, water, sewerage).
 - safety risks potentially associated with an accommodation facility near rural residential areas (personal safety, traffic, waste).
 - fire risks and the ability for RFS to manage.
 - the benefit of including an accommodation facility in the project avoids impacts on tourist accommodation.
 - feedback that an accommodation facility should be located near a township rather than isolated, to allow for potential benefits of re-use of the accommodation, and ongoing economic development opportunities.
 - concerns about the impacts from the project as a whole, including traffic, bushfire, community impacts, availability of essential services, and cumulative impacts of the REZ.
- A three page, paid advertisement was placed in the Dunedoo Diary, that contained information about the community information session, as well as a two page information sheet on the accommodation facility.
- An editorial piece from the Gulgong Business Chamber, in the July edition of the Gulgong Gossip featured information about ACENs workers facility.
- A briefing with State Member for Dubbo on 30 June to discuss ACENs projects as well as the accommodation facility.

- EnergyCo also held community sessions in mid-February 2023 providing additional information about the CWO REZ. Information provided to the public included the indicative location of the proposed Merotherie Hub, approximately 1.5 km east of the project area and to the north of the proposed accommodation facility, and the location of proposed CWO REZ network infrastructure (RNI), including the proposed 500 kV main transmission line and 330 kV transmission line network extensions connecting to the CWO REZ generators' gates.

Further information on consultation undertaken as part of the preparation of the amendment report is described in Chapter 5 of the amendment report (EMM 2023x). A summary of the community engagement undertaken post-submission of the EIS on the project, the matters raised and how these matters have been addressed, is provided in Table 6.13 of the amendment report.

6.3 SIA addendum engagement

SIA engagement involved interviews with key stakeholders and attendance at a community information session.

Table 6.1 below provides a summary of SIA engagement activities relating to the amendment, and participants. A number of stakeholders were offered to participate in an in-depth interview, but either declined or did not respond after multiple attempts to initiate dialogue.

Table 6.1 SIA specific engagement activities and participants

Stakeholder type	Stakeholder	Engagement activity	Date
Adjacent and nearby landholders	Landholder 1	Phone interview	4 July 2023
	Landholder 2	Phone interview	4 July 2023
	Landholder 3	Face-to-face interview	7 July 2023
	Landholder 4	Phone interview	10 July 2023
	Landholder 5	Phone interview	10 July 2023
Local stakeholders	Stakeholder 1	Community information session interview	6 July 2023
	Stakeholder 2	Community information session interview	6 July 2023
	Stakeholder 3	Community information session interview	6 July 2023
	Stakeholder 4	Community information session interview	6 July 2023
	Stakeholder 5	Face-to-face interview	7 July 2023
Service providers	JobLink Plus Mudgee	Face-to-face interview	6 July 2023
	Gulgong Multipurpose Service	Phone interview	11 July 2023
	Mudgee Tourism	Phone interview	13 July 2023
	Policing services for Mudgee, Gulgong and Birriwa	Phone interview	21 July 2023
Business representatives	Gulgong Chamber of Commerce	Phone interview	11 July 2023
Local community	8 residents of the local community, including a member of the Dunedoo Men's Shed	Attendance at a community information session Ad-hoc one-on-one engagement	6 July 2023

6.4 Key issues and themes

This section provides a summary of engagement feedback, along with the key themes and issues that emerged for each stakeholder type. Notes have had names, addresses and other identifiers removed where necessary to preserve anonymity and privacy of the respondents.

6.4.1 Adjacent and nearby landholders – combined summary

This section provides a summary of in-depth interviews carried out with adjacent and nearby landholders in July 2023. Adjacent landholders were identified as those who owned property that shares a boundary with development footprint, or were within 5 km.

Table 6.2 provides a summary of the matters raised in interviews conducted with adjacent and nearby landholders relating to the proposed accommodation facility. Feedback captured principally relates directly to the amendment however, comments raised in relation to community cohesion which relate to the effect of the broader project have also been captured.

Table 6.2 Adjacent and nearby landholders SIA engagement outcomes – combined summary

Theme/issue	Notes
Privacy and safety	<ul style="list-style-type: none">• Safety concerns about workers accessing nearby private properties were highlighted by several landholders, including:<ul style="list-style-type: none">– Concerns included illegal hunting and camping.– Concern that property gates would be left open by people walking through which could result in livestock getting mixed up causing a nuisance for local landholders.• Concern about security of the workforce accommodation facility – <i>“will there be private security onsite all the time?”</i>.• Concern about worker’s antisocial behaviours was often raised in relation to a lack of recreation opportunities.
Biosecurity	<ul style="list-style-type: none">• Littering concerns
Access and traffic	<ul style="list-style-type: none">• Potential for dust from unsealed roads.• Damage to roads from recent rain.• Roads and infrastructure should be upgraded to handle an increase in traffic.• Concerns that an increase of vehicles on local roads could affect businesses and livelihoods – <i>“We use the same roads for our farming operations”</i>.• Interaction of workforce traffic and school bus times.• Concern that extra road traffic would affect bus route.
Visual amenity	<ul style="list-style-type: none">• Disruption of views from certain angles• One landholder expressed concerns there could be a significant impact from views of the workforce accommodation facility, decreasing property value.
Livelihoods	<ul style="list-style-type: none">• Discussion of disruption of livestock activities such as lambing or calving, particularly from people on the property during lambing or calving.• The workforce could bring extra work to cafes and services, particularly in Dunedoo.• There was a concern about an increase in competition for local businesses to get local workers as well as seasonal workers and casual labour – <i>“local businesses are reliant on that type of labour”</i>.• Project related power outages may impact shearing and swimming.• Stock transport businesses affected by road closures and potential impacts of traffic from the facility.• The potential for the facility to reduce land that remains available for grazing within the site.

Table 6.2 Adjacent and nearby landholders SIA engagement outcomes – combined summary

Theme/issue	Notes
Project employment and procurement	<ul style="list-style-type: none"> • There was a concern about an increase in competition for local businesses to get local workers as well as seasonal workers and casual labour. It was reported that local businesses are reliant on that type of labour. • There are local business opportunities from the amendment, for example, hiring construction or catering businesses. • It was reported that there are labour shortages for every industry in the area. • The project could benefit in keeping young people in the community by providing jobs and careers to come back to – <i>“Very few jobs for younger people nearby, most have to move away.”</i>
Local values	<ul style="list-style-type: none"> • Respect for people’s properties was raised by several landholders to be a significant community value. One landholder expressed that there should be rules and regulations to protect values and enforce respectfulness. • One landholder explained that living remotely means that you need to have a certain amount of people to feel close to neighbours.
Access to services and social infrastructure	<ul style="list-style-type: none"> • Concerns that with more people from the influx of construction workers, there is a higher likelihood of incidents and accidents which would put pressure on hospitals and nurses. • Services would struggle in the event of an accident, particularly in cases where the roads were impassable – the isolation factor does raise a few issues. • There was a desire for long-term positives from the workforce accommodation facility. If more people move to towns and live there permanently in the operational stage of the broader project, it could pave the way for more social infrastructure and permanent resources such as a new supermarket. • Towns in the area are dependent on a stable population to support services and social infrastructure. • Could be a plus for nearby towns, where improved infrastructure and services are needed. However, additional people could place strain on these services. • There is general concern about extra service requirements.
Community cohesion	<ul style="list-style-type: none"> • Concerns that the project is dividing community as there are some associated landholders who get financial payments. • It was raised that the construction workforce would mainly be young males. • It was suggested that the construction workforce could facilitate connections through community sports such as football. • Volunteering is good for community connection. • Concerns of community division from project, based on support/objection.
Accommodation facility logistics	<ul style="list-style-type: none"> • One landholder mentioned that <i>“it is alright to put the facilities in, but there needs to be more doctors and staff as it is like building a small town for a few years.”</i> • One landholder expressed concerned about how the facility will be powered. • Waste is currently an issue for the [Mid-Western Regional] LGA – concerns about rate payers having to pay for waste removal. • Questions raised about what will happen to the facility after the construction period of the project finishes. In particular, whether it will be pulled down, what type of rehabilitation will take place, and whether the portable buildings will be offered to people in the local area. Could be used as accommodation for workers or tourists, offices, shearers quarters. • Concerns relating to the logistic viability of the site of the workforce accommodation facility particularly in relation to the social effects – <i>“The project needs greater consideration of location”</i>.
Positive impacts	<ul style="list-style-type: none"> • If the facility was built near a town, the town would benefit more directly.

Table 6.2 Adjacent and nearby landholders SIA engagement outcomes – combined summary

Theme/issue	Notes
Engagement	<ul style="list-style-type: none"> One landholder expressed that the information provided does not match a billion-dollar project and that the local people need more specific information. One landholder felt like there is not the level of transparency that was communicated to happen. Mention of over-engagement of the community – <i>“There are so many people who are over-engaged and don’t want to talk about it anymore – it’s too draining and too much.”</i>
Cumulative impacts	<ul style="list-style-type: none"> Concerns were raised about the cumulative impacts of the Birriwa accommodation facility and an EnergyCo worker accommodation facility, which could bring a ‘town-size population’; however, this hasn’t been coordinated, and no consideration has been given to where such a high density of people should be located. There were concerns about the cumulative impact of construction workforces – <i>“If you add up all of the projects in and around Dunedoo, you could be reaching up to 10,000 workers. While all of these might not go through - even if it was just half of that, how do you consider the cumulative impact? There’s nothing positive to come out of this”.</i> Concern for cumulative traffic – <i>“Cumulative truck movements are a huge problem, especially when you count both existing and proposed projects”.</i>

6.4.2 Local stakeholders – combined summary

Table 6.3 provides a summary of interviews carried out with local stakeholders in July 2023. Local stakeholders are contacts from the broader local study area and include contacts from the community information session who participated in interviews.

Table 6.3 Local stakeholders SIA engagement outcomes – combined summary

Theme / Issue	Notes
Health and wellbeing	<ul style="list-style-type: none"> Concerns about the increased fire risk from workers, particularly from cigarettes.
Privacy and safety	<ul style="list-style-type: none"> Due to the majority of construction workers likely being male, there was a concern raised about the safety risk presented by the workers to (potentially vulnerable) women in their community. Further concern of safety risks with the increased road use and risk of accidents (particularly from drink driving). Concerns about facility security, particularly in terms of violating facility rules (i.e. drug and alcohol testing).
Access and traffic	<ul style="list-style-type: none"> Stakeholders noted that traffic impacts depend on the direction of travel for the different vehicles. If the route goes along Birriwa Bus Route North, there could be problems from the road condition. Concerns of increased heavy vehicle movements along the Golden Highway. Concerns about facility access as the roads have been washed out in floods.
Access to health services	<ul style="list-style-type: none"> Concerns about access to local (Dunedoo) and regional (Mudgee and Gulgong) doctors who either already have full books, or where it can be difficult to get an appointment within a reasonable time. <i>“You can wait weeks to get into the doctors. People often get referred to Dubbo for simple issues.”</i> The Dunedoo pharmacy was also identified as being extremely busy and reliant on one qualified pharmacist.

Table 6.3 Local stakeholders SIA engagement outcomes – combined summary

Theme / Issue	Notes
Surroundings	<ul style="list-style-type: none"> Concerns about noise pollution from hammering and the increase of people in the area. Concerns about changes to the water flows – <i>“levee banks or changes to contours of the land could affect the way water flows, and change the effects those water movements have”</i>.
Rehabilitation	<ul style="list-style-type: none"> Questions if the success of the project will affect rehabilitation of the site.
Livelihoods and economy	<ul style="list-style-type: none"> Concerns of property devaluation from the several projects occurring in the region.
Housing and accommodation	<ul style="list-style-type: none"> Accommodation for non-local workers is an issue. One local stakeholder noted that contracted shearers from outside the area stay in local motels and B&Bs’. Without the facility, there would be competition for accommodation with the shearers, causing livelihood issues. It was noted by local stakeholders that the nearby community of Wellington has seen an economic and population rise because of solar farms. In particular, rent has increased which has affected locals, and are concerned about this happening locally. They note that the community relies on cheap rentals, particularly for non-local contractors such as shearers. A stakeholder explained how grey nomads generate income for the town and that booking an entire motel impacts the ability for tourists to stay.
Community values	<ul style="list-style-type: none"> Value the ruralness of the community – <i>“our lifestyle is that we like the isolation our property has, and that we also have facilities within 25 km”</i>.
Project related stress and engagement fatigue	<ul style="list-style-type: none"> One local stakeholder identified they have dedicated considerable personal energy and time to providing feedback on local renewables projects including this one, and that this, combined with a lack of faith that their voice will be heard in the planning process, is causing stress and fatigue.
Community cohesion	<ul style="list-style-type: none"> Stakeholders noted that the community connects through sport. Tourism events such as Mudgee small farm field days also provide opportunities to learn and connect with people. One stakeholder noted that <i>“farmers with solar on their properties don’t live there, so the owners aren’t as worried about the effects these projects could have on our community”</i>. Thus, there could be tension between the local community and absentee farmers. Lack of trust in projects in the region with regards to lack of trust in decision making systems.
Unequal benefits	<ul style="list-style-type: none"> Multiple stakeholders noted that there is distributive inequity of benefits and impacts from renewables projects as the power from the rural renewable projects is transmitted to the eastern seaboard. One stakeholder stated that <i>“Projects have lost their social licence to operate”</i>. One stakeholder felt that <i>“the bush is being treated as dispensable”</i> from the people/decisionmakers in Sydney, and that their views aren’t being considered – <i>“it doesn’t how much we’re interested”</i>. Lack of trust in projects in the region with regards to unequal benefits from the project.
Accommodation facility logistics	<ul style="list-style-type: none"> Questions about how the facility will get water and the potential competition for water with local farms. In particular, local stakeholders asked if bores will be used for water. Concerns about whether the workers will have all the necessary amenities as well as how long the work week will be.
Cumulative impacts	<ul style="list-style-type: none"> One stakeholder noted cumulative traffic impacts, particularly along Castlereagh Highway. Cumulative visual impacts from the changing landscape was noted as a concern – <i>“The country used to be for farm, now it seems to be for solar”</i>. It was noted that the establishment of several accommodation facilities in the area could mean an influx of 5,000 cumulative workers to local towns. One stakeholder noted the cumulative impact that <i>“once the projects leave, everyone’s gone.”</i> Concerns that the scenery of the whole area will be affected

6.4.3 Service providers

The outcome of engagement with local service providers is summarised in Table 6.4.

Table 6.4 Service providers SIA engagement outcomes - summary

Theme/issue	Notes
Gulgong Multipurpose Service (Health service)	
Service demand	<ul style="list-style-type: none"> Concerns about how the workforce accommodation facility population will be serviced <i>“as the project will increase the service population for the local hospital by 25.0%”</i> There needs to be two more doctors in town as well as a lack of nurses. Instead, the area relies on agency nurses and non-nursing staff. All medical services in the local area are experiencing similar levels of demand with a shortage of nurses and doctors – rural areas are the last places to get filled as people would rather live in the city
Vulnerabilities	<ul style="list-style-type: none"> Project would increase the stress and the workload on staff. Risk of staff burnout. 500 or 100 people will temporarily increase workload without any hope of substantially more assistance. Low socio-economic town, with a population that is not proactive with health due to cost, resulting in more pressure on the hospital rather than health issues being addressed earlier, and only 1 GP servicing 3,000 people. If there is an 18.0% population increase from the project workforce, we’ll be entirely responsible for servicing that population. What this means is that there will be increased strain on service – longer wait times for transport, emergency.
Emergency service access	<ul style="list-style-type: none"> Concerns about the availability of emergency vehicles due to increased risk of an accident – <i>“If you’ve got someone out there on-site with a laceration or broken bone requiring surgical intervention the person then needs to be transported to Dubbo by either ambulance at night or patient transport during the day. This means van not available for local transport or travel ... [which] increases the likelihood of transport delays ... [and] means people stay longer in hospital. In turn, this reduces beds available for new patients”.</i>
Cumulative impacts	<ul style="list-style-type: none"> Cumulative will create compounded pressure on medical services – there would be an increase workload without any assistance.
Mitigations	<ul style="list-style-type: none"> Could provide a health service for workers – the more the better. Need to recruit from outside.
Mudgee Tourism	
Service demand	<ul style="list-style-type: none"> Concerns of capacity with general visitor flow – <i>“we already have periods where peak tourism equals 99% occupancy”.</i> It was reported by the service provider that there has been over 50.0% growth in occupancy for the tourism sector – <i>“2023 has been economically one of the best years we’ve ever had”.</i> Regional events create great demand for tourist accommodation in the area – if that availability is reduced by the project construction workforce <i>“events like that can’t come to town”.</i> Examples of regional events includes: <ul style="list-style-type: none"> July: Small farm field days September: Food and wine month (including Flavour of Mudgee) October: NSW Touch Football Country Championship November: Mudgee Cup. The growth in the tourism, while currently very high, is also stable. It was reported that there was a 59.0% growth in total economic spend. One of the main attractions of the area is the strong wine scene and country charm, which brings in more regional tourists than international travellers. The Mid-Western LGA is home to approximately 107 Hotels and motel and 711 Airbnb’s

Table 6.4 Service providers SIA engagement outcomes - summary

Theme/issue	Notes
Vulnerabilities	<ul style="list-style-type: none"> It was reported that all tourism businesses struggle to attract workers. For example, there is a need for more cleaning staff – <i>“some hotels and motels can’t run at full capacity because they can’t turn over the rooms”</i>. While operators having full occupancy for a year from renewable energy project workforces is beneficial, it depends on the local spending done by the workforce in the town – some businesses are <i>“dependant on visitor trade but if that isn’t there, that’ll affect the broader economy”</i>.
Mitigations	<ul style="list-style-type: none"> There was a suggestion to position relationship building with local businesses in the area – <i>“showcase opportunities to help all businesses – not the same spread of spending as tourists”</i>. There was a desire for more long-term opportunities to maximise retention of employees for local businesses. Weekday occupancy is usually between 35 and 40%.
Policing services for Mudgee, Gulgong and Birriwa	
Service demand	<ul style="list-style-type: none"> The stakeholder explained that their station always maintains full staff on current social and community needs however, there is a minimum staffing level of a one car crew.
Community characteristics	<ul style="list-style-type: none"> The stakeholder described the community as tight knit. They explained that crime is generally quite good, particularly from high community involvement in relation to information about criminal activity – <i>“If you get a good community, they will police themselves – if they see something out of the ordinary, they’ll ring us”</i>.
Vulnerabilities	<ul style="list-style-type: none"> Traffic issues due to country roads due to factors such as fatigue, dangerous driving behaviour, use of mobile phones, speeding, and not using seatbelts. With the mines in the areas, workers often do 12-hour shifts which causes fatigue when driving home. It was mentioned that dawn and dusk are particularly dangerous due to significant wildlife collisions. It was mentioned that there is currently a significant burden on doctors and health services. The stakeholder also mentioned that there are currently assaults and pubs where alcohol has been a significant factor.
Project challenges	<ul style="list-style-type: none"> Due to the remoteness of the facility, there would be a significant drain on resources to attend an incident. Asked if there are any plans to restrict behaviours in relation to drink and drug driving. Concerns that with a worksite and people living out of home it increased the likelihood of assaults and physical harm – <i>“We find people use or drink more alcohol because of boredom/remoteness [which] affects behaviour”</i>.
Cumulative	<ul style="list-style-type: none"> Mentioned that all the new renewable development projects seem to be happening in isolation – <i>“this renewable energy project isn’t the only project in the area, so all of the considerations we’ve discussed, is this project talking to other projects to understand and resolve joint impacts”</i>.
Accommodation facility logistics	<ul style="list-style-type: none"> The isolation of the facility was noted by the stakeholder, who raised the question of where the supply of food would come from. This is particularly in relation to the demand on local shopping services – <i>“will that service be able to cope with the influx, and also provide for residents”</i>.

Table 6.4 Service providers SIA engagement outcomes - summary

Theme/issue	Notes
Mitigations	<ul style="list-style-type: none"> • The stakeholder suggested that education should be part of the induction package. • Asked if it would be a dry facility, noting that some of the mines in the area have a breath test before workers come onto the work site. • Hard to manage drugs and alcohol while people are off duty, but behaviour whilst in the community should be something workers can be held accountable for. There should be conditions. • A couple of site inspections would be good to be organised throughout the project – to familiarise with the project, the location, and the facility.
JobLink Plus Mudgee (Indigenous employment services)	
Existing employment context in Mudgee and outreach locations in Dunedoo, Gulgong, Coolah, Coonabarabran and Leadville	<ul style="list-style-type: none"> • Most workers would be happy to relocate for work. • There is a lack of opportunities in entry-level positions like labouring, traffic control and cleaning. These roles are required for younger workers, and workers with lower literacy. • <i>“We’re supportive of renewables projects – the more the merrier”</i> • The region’s social fabric has changed significantly over the last 30 years, and key elements of the cultural changes are focused on the arts and industries like tourism, mining and agriculture. Now, renewables are seen as becoming a part of this. • Because rural communities are small, it’s easy for people to make one bad choice that affects their reputation and ability to get jobs with locals. Having bigger external employers in the region can provide opportunities to people who otherwise wouldn’t have them. • Some large local employers for unskilled workers have been bought out and/or moved out of town in the last 10 years. <i>“There are older men in our community who lost their jobs and have experienced issues with alcohol and depression as a result. The mines changed this by opening up opportunities.”</i> However, <i>“Some employers, like the mines, might be reducing their numbers of workers – we’re not seeing as many local opportunities in that space.”</i>
Barriers to employment	<ul style="list-style-type: none"> • <i>“Transport is the biggest issue in the Central West. If you’re unemployed, the money to travel out to [the project location] is a lot”.</i> • <i>“Public transport routes and schedules are designed for older people doing their shopping at 10am, there’s limited access in the mornings and evenings for workers.”</i> • <i>People often have to temporarily move to larger towns to avoid using their wages and time on travel to work.</i> • People over 65 struggle to find new work, and this issue is likely to become more of a concern as existing employers close and the population ages. • <i>We always address personal barriers before placing people in work and we have to build relationships and connections to get results. There could be unknown triggers and we wouldn’t want anyone to feel less. Most workplaces have barriers and stigma. While everywhere has employee assistance programs these days, they’re often under-utilised.</i> • <i>“The transition from not working to working itself is a barrier.”</i> • <i>“FIFO/DIDO work can be isolating and cliquy. Workers need support and a sense of connection.”</i>
Social cohesion	<ul style="list-style-type: none"> • <i>There is some animosity from mine workers towards solar projects and the renewable energy transition in general. They’re earning a lot of money and aren’t affected by housing prices.</i> • <i>We have seen that the mining lifestyle of FIFO/DIDO work has an effect on workers happiness and their relationships.</i>

Table 6.4 Service providers SIA engagement outcomes - summary

Theme/issue	Notes
Housing affordability	<ul style="list-style-type: none"> Concerns that rent and housing prices are unaffordable for low-income earners – <i>rent used to be \$120 a week in Mudgee 20 years ago. Since the mines have opened up, all of the cheaper accommodation and flats jumped to around \$600 a week. The only solution for some people is to leave.</i> FIFO/DIDO work is a solution to lifting wages and giving low-income earners in the regional area access to housing. Concerns that housing will continue to become less affordable in ‘trendy’ areas like Mudgee and Gulgong, where high incomes from Airbnb present an alternative to renting properties out.
Access to health services	<ul style="list-style-type: none"> <i>“Access to health services is an issue for people who come to us. They often find it hard to find an appointment so that they can get doctors certificates when they’re not well, and employers can’t get new workers medical checks done”</i>
Mitigations/ Enhancements	<ul style="list-style-type: none"> Onsite project housing <i>“offers a great opportunity for local workers who are seeking employment, but wouldn’t be able to travel to the site from their home [due to lack of public transport, cost, lack of vehicle ownership and travel time from Mudgee]”</i> and means the project can capture jobseekers from other areas in the Central West, like Parkes. The service contacts were highly supportive of onsite accommodation as a means to reduce risks and barriers presented by travel to work sites. <i>“If employment was going to be offered, shuttle buses to site would enable local workers to access the jobs”.</i> It would be good if the project could offer onsite training for workers at all levels and help them to upskill and transition between projects. The site accommodation could be used or re-used as a cheap option for shearers or other short-stay farm workers. It would be good to have a registered nurse onsite who can perform health checks and reduce the need for travel to get a medical. It would be good to have someone onsite, or a visiting psychologist or support person who can apply trauma informed practice, and who is conscious of potential triggers for aboriginal people. It needs to be run by someone local, who’s connected to the community. <i>The accommodation facility should support good sleep and rest.</i> <i>“Many of our workers need job skills. To get them, they need people to help with mentoring and information sharing. The things people are struggling with aren’t always obvious, so observation and interaction are important. Workers need to be engaged to get progress, and there needs to be an awareness that it’s not a process. Everyone needs support and unconditional equality. It’s about caring – every voice matters.”</i> <i>There should be policies that apply to all aspects of the project, including facility construction and operation, around equality in employment ages and which include identified indigenous positions.</i>

6.4.4 Business representatives

The outcome of engagement with the Gulgong business chamber is summarised in Table 6.5.

Table 6.5 Gulgong Business Chambers SIA engagement outcomes - summary

Theme/issue	Notes
Local community values and characteristics	<ul style="list-style-type: none"> • United and fairly safe community • Gulgong is community orientated; most people look after other people’s interests as well as their own.
Community cohesion	<ul style="list-style-type: none"> • There are clubs and activities that people can get involved in. For people who are staying a reasonable length of time, joining would be welcome, although this is less likely for people staying for the short term. For now, people come to local hotels and motels.
Business and livelihoods	<ul style="list-style-type: none"> • <i>“Off-peak periods are school terms (no activities). School holidays mean more tourists, particularly families, RV’s and caravans. We also see motorcyclists and coaches visiting the historic town”.</i>
Accommodation and housing	<ul style="list-style-type: none"> • The whole accommodation situation is very tight in Gulgong, Dunedoo and Mudgee – increasing issue, people have wanted to move from Sydney out to the area.
Local services and social infrastructure	<ul style="list-style-type: none"> • Gulgong has general hardware and one chemist – there is more in Mudgee and Dubbo (longer trip but has a greater range of products and services). • Health services – Dubbo has a good hospital, Mudgee has the building, but not necessarily the staff/facilities.
Access and traffic	<ul style="list-style-type: none"> • Merotherie Road has potentially poor access, which could create issues for how goods and people will get to and from the site. • TFNSW supports a community bus project that allows people to go from town facilities to their homes within 15 km of town centre, so they don’t have to rely on their own transport at night. No trains or buses. Support for people who live out of town. • Concerns that workers would travel after work to Gulgong, Dunedoo or Merriwa for meals and social outings, and this raises some concerns for road safety and night travel.
Accommodation facility benefits	<ul style="list-style-type: none"> • The facility will bring in new people and skills. The region needs more mechanical and electrical people as local providers are again –at capacity. • Accommodation could be re-used for tiny houses where council permits. Planning permissions to be addressed – for use on property. • <i>“We have a need for a community office space. For example, the chamber doesn’t have a meeting place of its own, we meet in the RSL club.”</i>
Accommodation facility logistics	<ul style="list-style-type: none"> • Questions raised about where the power for the facility would come from. • There is a need to consider ongoing food supplies, and basic living needs for workers – how it will all be managed so people have time to get what they need. • Phone reception at the facility area is likely to be poor.

6.4.5 Local community

A member of the SIA team attended a community information session hosted by ACEN and spoke with several members of the community. The engagement with community members varied, including ad-hoc one-on-one interviews and discussions with small groups of people. All community members engaged were aware of the proposed project and live locally. Generally, community members were aware of existing and proposed REZ infrastructure in the area, and many had direct experiences with proponents (government and private) regarding REZ projects. The comments refer to all renewable energy projects and infrastructure planned for the area generally, unless specified. The engagement is summarised in Table 6.6.

Table 6.6 Local community SIA engagement outcomes - summary

Theme/issue	Notes
Safety, health and wellbeing	<ul style="list-style-type: none"> Main concern was bushfire – wanted to understand <i>“how you can make sure that the solar project and accommodation could be serviced.”</i> Concerns about security arrangements for the accommodation facility.
Access to services and social infrastructure	<ul style="list-style-type: none"> Concerns of availability of health and emergency services. In particular, the limited police presence in Dunedoo and the small number of doctors in the area – <i>“access to medical services is hard enough already”</i>.
Biodiversity impacts	<ul style="list-style-type: none"> Concerns for native wildlife – <i>“What’s happening with all the wallabies, wombats and koalas?”</i>.
Access and traffic	<ul style="list-style-type: none"> Effect on the use of Merotherie Road and changing routines of the local landholders.
Unequal benefits	<ul style="list-style-type: none"> The power from these projects benefits people who live on the coast.
Accommodation facility logistics	<ul style="list-style-type: none"> Concerns about sewage and waste disposal – <i>“Dunedoo’s sewerage system isn’t set up for it given that there’s only 800 people”</i>. Concerns about water licensing for the accommodation facility – <i>“It’s impossible to get a licence to pump out of Talbragar Riber, and in a dry year Dunedoo is on water restrictions”</i>.
Cumulative impacts	<ul style="list-style-type: none"> Need to consider the concept of community impact, in particular, distinguishing this project from EnergyCo and other projects. Government bringing transmission lines. Perceived sense of displacement from the high volume of projects in the area – <i>“All these projects are treading over us”</i>. One stakeholder mentioned that the cumulative impacts are <i>“overwhelming”</i> as other projects having been causing visual impacts such as trees being knocked down – <i>“Our view is full of wind towers, and we’ll soon see solar too”</i>.

6.5 SIA engagement outcomes from other projects

To supplement SIA specific engagement carried out for this project, this section draws upon SIA specific engagement activities carried out for Spicers Creek Wind Farm, the most recently published nearby EIS at the time this assessment was prepared. A summary of key SIA engagement outcomes is provided in Table 6.7 below.

The proposed Spicers Creek Wind Farm is located approximately 45 km south-west of the project, within the Dubbo Regional LGA suburb of Spicers Creek, bordering Mid-Western Regional LGA. It is located between Wellington and Gulgong along Goolma Road. SIA engagement for Spicers Creek Wind Farm was carried out by Umwelt between May 2021 and March 2023 (Umwelt, 2023).

Because of the similar setting and project type, relevant engagement outcomes from the Spicers Creek Wind Farm SIA have been drawn upon to gain depth into key issues, such as accommodation and employment, from the perspectives of key stakeholders such as First Nations stakeholders, local government, community groups, service providers, accommodation providers, landholders, and the broader community (Umwelt, 2023).

Table 6.7 SIA engagement outcomes from other projects - summary

Theme/issue	Notes
Accommodation and housing	<ul style="list-style-type: none"> Access to housing and accommodation were most frequently noted during consultation with stakeholders. There were concerns that the demand for housing could significantly impact other sectors, such as health or tourism given the competition for accommodation by workers and tourists to the area. Housing availability and affordability there also considered to be an issue at the regional and state level.

Table 6.7 SIA engagement outcomes from other projects - summary

Theme/issue	Notes
Economy and business	<ul style="list-style-type: none"> • Positive economic contribution was noted by stakeholders in relation to local community investment and sponsorship from the project owner. • Stakeholders welcomed to potential growth in employment opportunities that construction may offer, including procurement opportunities for local supplies. However, the short-term nature of renewables construction was brought up as a potential draw for local employment and procurement.
Livelihoods	<ul style="list-style-type: none"> • Concerns about disrupting existing farming practices, particularly during construction. Further, the renewable projects are seen to be taking place on viable agricultural land. • Perceived reduction in rural property values associated with land, houses or property close the renewable infrastructure. The effect on property prices is perceived to be impacted by views and a loss of productive land. • Landholder benefits from diversifying household income through hosting payments. However, some stakeholders raised concerns relating to the distributive equity of these payments and benefits potentially resulting in community division.
Surroundings	<ul style="list-style-type: none"> • Concerns about the project’s impact on environmental values, which were noted as being of high importance to the community. Stakeholder comments also discussed the damage to the general environment and landscape particularly from the scale/extent of cumulative projects in the region. • A perceived concerns about a reduction in visual amenity was noted by stakeholders. The natural surroundings were of high value to stakeholders, noting that tourists come for the natural landscapes.
Accessibility	<ul style="list-style-type: none"> • The existing conditions and the ongoing deterioration of local roads was consistently mentioned throughout the consultation process. There was a particular concern about the impact increased traffic could have on the continued deterioration of local roads.
Safety, health, and wellbeing	<ul style="list-style-type: none"> • There were concerns about the potential hazard the project may create for local fire services. • Stress and anxiety concerns particularly in relation to a perceived lack of control and distress induced by environmental and social change connected to the community’s home environment.
Social cohesion	<ul style="list-style-type: none"> • Concerns about community division from people who are for and against renewable projects.
Culture	<ul style="list-style-type: none"> • Impacts to Aboriginal cultural values and heritage was raised as a concern by one stakeholder, particularly in relation to the issue of ongoing land rights.
Engagement	<ul style="list-style-type: none"> • Stakeholders noted a desire for more transparency in information given to the community about renewable projects and recognised the need for ongoing engagement with key stakeholders and the local community. • Some local stakeholders felt they did not have enough power in the decision-making process, particularly in terms of the number of developments in the broader REZ.

6.6 Summary of key findings

Key themes, issues and findings emerging from engagement in relation to the construction workforce accommodation facility are summarised in Table 6.8.

Table 6.8 Summary of engagement key findings

Themes	Issues
Safety, health and wellbeing	<ul style="list-style-type: none"> The influx, isolation and concentration of non-local workers was a concern, as a presence of a large, non-local population would pose a risk to personal and property safety onsite and in the community, including risks of illegal property access. There are few local recreation opportunities for workers.
Business and livelihoods	<ul style="list-style-type: none"> Nearby landholders noted concerns around disruption to livestock farming through workers accessing private property, or through traffic disruptions affecting movement and transport of stock. There is high competition for a small pool of workers in the Mid-Western Regional LGA. Farmers, service providers and small businesses can struggle to fill entry level, key worker and professional positions. The positive effect of the amendment reducing project impacts to the local tourism sector was supported.
Housing and accommodation	<ul style="list-style-type: none"> Accommodation and housing availability and affordability is crucial in supporting rental access, social housing, emergency and temporary accommodation needs in the Mid-Western Regional LGA. Accommodation availability supports the visitor economy in the regional area, and it is usually full during peak periods. Accommodation and housing are in high demand, and stakeholders expect that without an appropriate strategy, REZ projects will contribute to existing challenges that locals are experiencing to gain affordable and stable housing.
Access to services and social infrastructure	<ul style="list-style-type: none"> Stakeholders expect that the presence of a non-local workforce in the area would place additional stress on high demand services and facilities. Health, GP and emergency services were identified as the key services that would be most impacted. Key worker shortages are a key issue for health and emergency service provision in the region. Worker demand for health services would be alleviated by recruitment of an onsite nurse and visiting specialist services from outside the region. As the worker accommodation facility will be located outside of regional centres, emergency and police services are considered to not be equipped to respond to any incidents in a timely manner.
Project employment, procurement, and training	<ul style="list-style-type: none"> Suggestions to maximise local benefits in employment and capacity building in the local area included focusing on people over 65, youth, First Nations people and low-skilled workers. First Nations employment service operators observed training and employment opportunities should include on-site training and the option to reside within the facility, as travel times and lack of transport options are often a barrier for local workers. First Nations employment service operators also observed the need for support for workers in the form of a suitably qualified visiting psychologist or support person, particularly where workers reside in a facility. Stakeholders identified that a procurement strategy with clear expectations and ACEN oversight and accountability is crucial for project contractors to achieve agreed goals and targets for employment and capacity building.
Road safety and access	<ul style="list-style-type: none"> Road safety is a key concern as a result of increased vehicle movements along local and major roads during construction. Road conditions are notoriously poor (flood damage), and vehicular accidents are common. Local stakeholders noted that the conditions of the roads are vital for businesses and livelihoods. Stakeholders feel that traffic routes used for project construction will require upgrades prior to use, and likely afterwards. Long shifts and driver fatigue was a concern, particularly due to dangerous driving behaviour from nearby mine sites.
Land use	<ul style="list-style-type: none"> There are concerns about land use conflicts from the project and amendment, which include additional water run-off, change in water flows and quality and a reduction in land available for grazing.

Table 6.8 Summary of engagement key findings

Themes	Issues
Value for local amenity and character	<ul style="list-style-type: none"> • The local area is known for its visual amenity and rural character, and is valued by residents for being beautiful, peaceful and isolated. Nearby landholders and members of the community are concerned about impacts of REZ infrastructure. • Stakeholders noted a concern for a reduction in property values due to views of the facility. • Local landholder concerns about noise from additional vehicle movements and construction activities.
Engagement and decision making	<ul style="list-style-type: none"> • Effective coordination and engagement from government and proponents of REZ projects are seen by the community as essential for managing cumulative impacts and achieving positive outcomes. Some community members feel they are relied on to repeatedly advocate for the interests of themselves and the community, across multiple REZ project engagement streams. • The decentralised nature of community and stakeholder engagement on REZ projects has resulted in many experiencing consultation fatigue and frustration.
Social cohesion	<ul style="list-style-type: none"> • Concerns about uneven project impacts and benefits experienced across stakeholders and the community, related to distribution of direct project impacts (adjacent landholders) and project benefits (across the region). This causes some frustration and tensions amongst the local community. • Members of the community and local landholders feel that the presence of REZ infrastructure may drive some out of the area, impacting community connections.

7 Assessment of social impacts

7.1 Overview

This section discusses potential social impacts generated by the amended project as a whole and provides an assessment of relative social risk utilising the methodology outlined in Section 2.3 of the SIA Guideline Technical Supplement (DPE, 2023b).

The assessed impacts and benefits address changes to the project as a whole, as do the levels of risk identified against each impact and benefit. For an outline of the reasoning behind this approach, please refer to Section 4.3 of this report.

Findings from technical reports and stakeholder perceptions have been used to capture expert and local knowledge in the identification and assessment of social impacts, and to develop appropriate impact mitigation, and enhancement strategies.

Assessment of social impacts considers a range of factors and potentially competing interests. The impact assessment is reflective of this and has:

- assessed some aspects of the project as both negative and positive as they relate to different groups of people
- included potential impacts and benefits on local communities and the broader region
- considered potential impacts on vulnerable sectors of affected communities
- considered community access to services such as housing and health care.

Social impacts have been assessed on a worst-case scenario initially and then the residual impact is assessed on the basis that proposed mitigation or enhancement measures are effectively implemented. The assessment uses the terms unmitigated and mitigated when referring to negative impacts and un-enhanced or enhanced when referring to positive impacts (benefits).

The following data and information have been used to identify the impacts and their associated risks:

- data collected as part of the social baseline
- findings from community and stakeholder engagement activities
- findings from technical studies
- academic research
- relevant high-quality government and agency reports.

Application of the likelihood and magnitude framework as outlined in Section 3.2 of this report informs assessment of the level of significance of a social impact as being low, moderate, high, or very high. Both impacts and benefits have been assessed.

Potential social impacts and benefits are summarised in Table 7.1 below, along with the related category as listed in the SIA Guideline.

Table 7.1 Impact themes

Social impact category	ID	Impact on people	Affected parties	Duration	Extent
Accessibility	A01	Impact on affordability and availability of rental housing	Homeless and at risk of homelessness. Low-income households.	Construction	Mid-Western Regional LGA
	A02	Project contribution to restricted access to short-term accommodation	Local tourist accommodation providers. Visitors to the regional area. Other industry sectors who use short-term accommodation.	Construction	Local area Regional Area
	A03	Reduced capacity and availability of community services	Project construction workforce, local residents, and health service providers.	Construction	Local Area Regional Area
Livelihoods	L01	Use of local goods and services (benefit)	Businesses within the local area and regional area	All phases of the project	Local area and regional area
	L02	Enhanced employment and training opportunities (benefit)	Underrepresented groups, including youth, people over 65, people with a disability, Aboriginal and Torres Strait Islander People	Construction	Local area and regional area
	L03	Limited workforce supply and job competition	Local businesses servicing the project and local residents who use those local services required of the project.	Construction	Local area and regional area
	L04	Impacts to nearby agricultural producers	Local farmers	Construction and operation	Local area
Surroundings	S01	Changes in amenity due to generation of dust, noise and vibration and lighting.	Near-neighbours, particularly those with residences closest to the local road network and the battery site.	Construction (temporary and medium-term)	Immediate surrounds of study area
	S02	Changes to the visual landscape affecting how neighbours and other stakeholders experience their surroundings	Near neighbours.	Construction and operation	Localised
	S03	Impact to surroundings from changes in ecological values and natural assets	Associated and non-associated landholders. Broader community. People with attachment to the locality. Environmental groups and organisations.	Construction and operation	Within the development footprint
	S04	Perceived reduction in local property values.	Near neighbours	Medium term	Nearby and adjoining properties
Culture	C01	Change to land use results in a sense of loss of cultural heritage for Aboriginal and Torres Strait Islander people	Aboriginal and Torres Strait Islander People	Construction and operation, permanent	Local area

Table 7.1 **Impact themes**

Social impact category	ID	Impact on people	Affected parties	Duration	Extent
Health and wellbeing	HW0 1	Safety risks for transport network users	Landholders, residents of the local area, workforce, road users.	Construction	Regional area
	HW0 2	Improved worker health and wellbeing (benefit)	Landholders, residents of the local area, workforce, road users.	Construction	Regional area
	HW0 3	Risks associated with an increase in population in an isolated location, close to rural properties	Landholders, residents of the local area, workforce.	Construction	Local area
	HW0 4	Health and wellbeing impacts related to bushfire risk	Landholders, residents of the local area, construction workforce, road users.	Construction and operation	Regional area
	HW0 5	Health and wellbeing impact due to project related stress and anxiety	Associated and non-associated landholders and broader communities of the local area.	Pre-approvals and construction	Local Area
Decision-making systems	D01	Lack of trust in decision-making systems	Residents of the local area.	Project planning	Local area

7.2 Accessibility

7.2.1 Impact on affordability and availability of rental housing

The EIS SIA assessed restricted access to affordable housing due to the influx of the construction workforce from the project as a ‘very high’ risk (EMM, 2022a). The report found that if the project workforce utilises rental housing in the local area, the subsequent increase in rental prices could mean that tenants are evicted or unable to afford rental costs and vulnerable residents in the local area may have to relocate to other areas. This was found to have a potentially major consequences for the local community, particularly if the inflation of the rental market remained after the construction phase of the process.

The amendment provides alternative accommodation for the construction workforce in the form of a workforce accommodation facility for up to 500 people, which is anticipated to be the project’s entire non-local construction workforce. This will avoid placing additional strain on the local property market, which otherwise continues to experience pressure.

During engagement with local stakeholders, it was noted that the nearby community of Wellington had experienced a pronounced increase in economic activity and population rise associated with the construction of solar farms. In particular, it was suggested that rental prices in Wellington increased sharply which affected the accessibility of housing stock for local residents.

The trend of rising rental prices was observed to be consistent throughout the region, with one resident observing rental prices have more than doubled in the last 10 years. This is supported by a recent ABC News article, which confirmed average rental prices in Mudgee have increased by 45% in the last 5 years (Sato, 2023). The community has historically relied on affordable rentals, particularly for non-local contractors such as shearers, and it was reported that some low-income earners were forced out of the area due to escalating housing and rental prices.

Business representatives identified that housing availability continues to be limited in Gulgong, Dunedoo, and Mudgee, and that it is likely this trend will continue as people move to the area from Sydney.

The social baseline supported that Mudgee, Gulgong and the broader Mid-Western Regional LGA had similar or greater proportions of households with rental stress than NSW, and that rental stress has been increasing since the 2016 census.

SEIFA rankings show that within the local area, a proportion of the population of Gulgong and Dunedoo are disadvantaged with low access to economic resources and have a low level of education and skills relative to other areas. This indicates a relatively high number of people on low incomes and will continue to be susceptible to a lack of available properties for rent.

The findings of engagement with service providers, real estate agents and the MWRC suggested that the number of Airbnb properties in the Mid-Western LGA has increased substantially in the past three to five years. There is a trend of properties being purchased and transferred out of the stock of private rental or owner-occupied housing and into the short-term accommodation and holiday rental market.

The amendment to include the accommodation facility largely avoids the possibility of non-local project workers impacting local housing availability; however, it is likely there will still be some personnel associated with the project who will choose to stay in nearby towns, which may have some effect on the highly sensitive local rental market.

The unmitigated significance of impacts on affordability and availability of rental housing is assessed as **low**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minor**.

In addition to provision of the accommodation facility, ACEN will prepare a Construction Workforce and Accommodation and Employment Strategy (AES) for the project. The AES will seek to mitigate negative impacts and facilitate an increase in the extent of the geographic area for local hires, workforce accommodation, and enhanced local employment.

ACEN will also progress industry engagement (i.e. with EnergyCo) in relation to the management of cumulative workforce accommodation issues.

The mitigated significance of impacts on affordability and availability of rental housing is assessed as **low**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minimal**.

A summary of the assessment is provided in Table 7.2.

Table 7.2 Summary of impacts related to availability and affordability of rental housing

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Availability and affordability of rental housing	Homeless and at risk of homelessness. Low-income households.	Construction	Mid-Western Regional LGA	Low	Low

7.2.2 Project contribution to restricted access to short-term accommodation

Without mitigation the impact of project construction on access to short-term accommodation was assessed as a major risk in the EIS SIA. The report found the project would generate a greater demand for short-term accommodation than can reasonably be met by existing supply in the local and regional area. This could impact “visitors to the region accessing affordable short-term accommodation, vulnerable groups seeking access to emergency accommodation, and the capacity of local short-term accommodation providers to service their existing business” (EMM, 2022a).

Through the provision of accommodation for up to 500 workers, the proposed accommodation facility will largely avoid the need for the project's non-local construction workforce to access short-stay accommodation.

Accommodation availability continues to be an issue in the local and regional area, particularly for non-local workers. One local stakeholder noted that contracted shearers from outside the area stay in local motels and B&Bs' and if these were not available it could cause livelihood issues for farmers.

Stakeholders also explained that grey nomads and other tourists generate valuable income for the town. Projects booking out an entire motel impacts availability for tourists, who often inject more money into the broader local economy due to expenditure outside of accommodation services.

Tourism service providers also raised concerns around capacity which related to general visitor flow, noting *"we already have periods where peak tourism equals 99% occupancy"* and that *"average room prices rise to around \$361"*. It was also reported that there has been over 50.0% growth in occupancy for the tourism sector, and *"2023 has been economically one of the best years we've ever had"*.

The baseline indicates short-term accommodation providers in the local and regional area service tourism, mining, renewable energy and agricultural industry sectors.

In 2022, the MWRC estimated there were 3,200 rooms of short-stay accommodation in the Mid-Western Regional LGA, with an average occupancy rate of over 80%.

This year, Mudgee Tourism identified the Mid-Western Regional LGA has approximately 107 hotels and motels and 711 Airbnb listings which includes 270 properties in Mudgee and 11 properties in Gulgong. There are a further 50 Airbnb properties in the Warrumbungle Shire LGA, including four properties in Dunedoo which also has two motels.

While overall capacity in the accommodation industry is growing, peak occupancy and pricing continue to create a vulnerability for low-income earners and other at-risk people seeking temporary accommodation. It is further recognised that some project personnel may choose to access local short-term accommodation rather than stay at the accommodation facility.

The unmitigated significance of the project's contribution to restricted access to short-term accommodation is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

ACEN will prepare an AES for the project, which will include how the construction workforce will be accommodated, and how the facility will be operated. The AES will also describe the actions ACEN has taken or plan to take to collaborate with other accommodation providers in the area, particularly for short term workers, and further minimise pressure on the existing capacity of short-term accommodation in the local area if required.

ACEN will continue to advocate with industry bodies such as EnergyCo for a strategic approach to understanding and managing cumulative workforce accommodation impacts from CWO REZ development and will apply this approach to other ACEN projects.

A Mudgee Tourism stakeholder suggested that project coordination with local businesses could broaden worker expenditure patterns and grow off-peak accommodation occupancy. It was observed that weekday occupancy is usually between 35 and 40%. For example, project staff who are only staying for short periods or who are DIDO workers returning home on weekends may assist in raising weekday occupancy outside of peak tourism periods, which are usually during school holidays.

The mitigated significance of impacts on the project's contribution to restricted access to short-term accommodation is assessed as **low**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minor**.

A summary of the assessment is provided in Table 7.3.

Table 7.3 Summary of project contribution to restricted access to short-term accommodation

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Project contribution to restricted access to short-term accommodation	Local tourist accommodation providers. Visitors to the regional area. Other industry sectors who use short-term accommodation.	Construction	Local area Regional Area	Medium	Low

7.2.3 Reduced capacity and availability of community services and facilities

In the EIS SIA, there were concerns that existing health services in the local area would be unable to support existing local needs, along with that created by the project’s temporary construction workforce (EMM, 2022a). The EIS SIA evaluated the social risk associated with increased pressure on existing health services as being high.

The EIS SIA baseline identified that the local area and key urban areas have full access to services, with three police stations, three ambulance stations, and three fire and rescue stations. The local area also has a local State Emergency Service (SES) unit and is home to the SES Western Zone. Each community has a range of services including general practitioner services, hospital or multi-purpose service (MPS), preschool, primary and secondary education facilities, emergency services (i.e. rural fire brigade, police station), employment services, youth and Aboriginal and Torres Strait Islander services. Additional services are accessible in the regional area.

It is anticipated there will be up to 500 non-local project workers. It is expected that pre-construction works prior to accommodation facility construction (such as road upgrades and site preparation) will be undertaken by local workers, therefore additional accommodation will generally not be required.

The project is 15 km southwest of the township of Dunedoo, 20 km north of Gulgong, 60 km from Mudgee and 80 km from Dubbo. Access distances reduce availability for other service users in an already constrained service capacity environment. Proportionally to the existing population of the Mid-Western Regional LGA, the non-local project workforce represents an 18% population increase.

During interviews conducted for this SIA addendum, the local community and Gulgong Business Chambers again identified access to services as a principal concern due to the existing lack of access (as was also identified in the EIS SIA), as well as the distance between the facility and emergency service providers and the concentration of population outside of existing town centres.

Adjacent landholders identified concerns around the number and concentration of workers potentially creating a higher likelihood of incidents and accidents, thus increasing demand for health and policing services. Landholders also identified that the isolation of the facility adds to travel times, and may increase vulnerability during times when there are road closures due to flooding.

A Gulgong Multipurpose Service representative also raised this as a concern, stating: *“If you’ve got someone out there on-site [with an injury] the person then needs to be transported to Dubbo by either ambulance at night or patient transport during the day. This means the van isn’t available for local transport or travel ... [which] increases the likelihood of transport delays ... [and] means people stay longer in hospital. In turn, this reduces beds available for new patients”*. The representative also identified the project as an additional stressor, as the project will *“increase the top service population for the local hospital [Gulgong District Hospital] by 25%”* and identified the need for additional doctors, nurses and non-nursing staff, as well as high levels of existing demand leading to staff burnout. The service representative identified that the project would increase staff workload, and it’s unlikely that the additional temporary population would result in further service allocation. Any additional increase to demand for health services would result in longer wait times for transport and emergency services.

Mudgee and Gulgong Police services also identified that due to the remoteness of the facility, there would be a significant drain on resources to attend an incident.

Some stakeholders also raised project infrastructure servicing as a concern, noting that the project should not rely on Mid-Western Regional LGA services. The amendment report (Section 3.3) identifies that there is no existing water, sewerage or electricity infrastructure at the proposed site, and that ACEN will continue to consult with Mid-Western Regional Council during detailed design and prior to construction of the accommodation facility to limit and avoid relying on Council waste, water and sewerage systems. Electricity will be generated onsite using solar panels, and may also be sourced via the local distribution network where available, or via diesel generation where access to the grid is unavailable.

The unmitigated significance of impacts related to reduced capacity and availability of community services and facilities is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

Whilst some concerns were raised regarding the capacity and availability of services in the local area, the amendment offers the opportunity for onsite provision of first aid facilities at the accommodation facility. A registered nurse will also be onsite at the facility to address complex health concerns to reduce the reliance on local health services. They will be responsible for care and supervision of medical services including formulating care plans, ordering and/or administering medication and referring to external health providers (preferably telehealth services).

The provision of a medical centre and first aid station with an onsite nurse at the accommodation facility will reduce pressure on local health service providers however, it is important that this does not draw any resources or capacity from existing service providers. The onsite nurse should not be sourced from the regional workforce due to existing issues with recruitment for rural positions.

Provision of onsite security will also assist in reducing the likelihood of incidents and police callouts. A further measure recommended by police is onsite drug and alcohol testing for workers, which has been observed to work well at other accommodation facilities in the region. To respond to risks presented by drugs and alcohol, ACEN intends to conduct drug and alcohol testing when workers enter the project construction site for work.

ACEN would seek to further reduce pressure through:

- engaging in regular communication with services and health care providers across the regional area
- encouraging investment in community and health services via the Project’s Planning Agreement with MWRC. prioritising local employment (where existing high competition would not result in negative impacts) and early investment in partnerships that provide job readiness, training and education outcomes that benefit different sectors of the community and the regional area
- advocating with industry bodies such as EnergyCo for a strategic approach to understanding and managing cumulative impacts from REZ development

- engaging with other renewable energy proponents in the regional area in relation to a coordinated response to manage potential workforce impacts on services and facilities across the regional area.

Landholders identified that towns in the area are dependent on a stable population to support services and social infrastructure. There was a related desire for long-term positives from the workforce accommodation facility. If more people move to towns and live there permanently in the operational stage of the broader project, it could pave the way for more social infrastructure and permanent resources such as a new supermarket. *“Could be a plus for the town, we need better infrastructure and services.”* With the amendment, ACEN has a better ability to respond to targeted infrastructure requirements and manage their relationships with service providers.

ACEN recognises that local health and human services are strained. There may be opportunities for accommodation facility services to be available to the local community during its operation, for example, having an afternoon each week where the nurse is available for the local community. It may also be possible, once the accommodation facility has been decommissioned, for associated services or infrastructure to be used by the community. ACEN will continue to engage with the Mid-Western Regional Council to explore these options so they can benefit local businesses without adversely impacting the local communities.

The mitigated significance of impacts related to reduced capacity and availability of community services and facilities is assessed as **low**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minor**.

A summary of the assessment is presented in Table 7.4.

Table 7.4 Summary of reduced capacity and availability of community services and facilities

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Reduced capacity and availability of community services and facilities.	Project construction workforce, local residents, and health service providers.	Construction phase	Local Area Regional Area	Medium	Low

7.3 Livelihoods

7.3.1 Use of local goods and services

Engagement conducted for the EIS SIA found that some participants expressed that the flow-on economic benefits arising from the project and the cumulative development of renewable energy projects in the Central West Region would create a range of opportunities within the local and regional area. This includes the demand for goods and services generated by project construction and the construction workforce, thus increasing opportunities for revenue for local business and having a positive impact on livelihoods. In EIS SIA engagement, participants identified that the procurement of local goods and services could include accommodation and meals as well as the electrical and civil requirements of projects as benefiting the regional area. As such, the matter was assessed as providing a moderate unenhanced benefit, which could be enhanced through actions such as developing a Local Participation Plan, establishing a community advisory group, and acknowledging the capacity limitations of short-term accommodation across the regional area.

As outlined in the amendment description, the accommodation facility will be managed by an experienced operator engaged by ACEN. The operator will work closely with ACEN to manage relationships with accommodation providers (responsible for delivering, installing and removing demountable units) and service providers (responsible for servicing the accommodation facility during its operation). Catering services may be provided onsite and alcohol may be sold in a dedicated, licensed social area. This may avoid construction workers putting additional pressure on local hospitality venues.

Some local stakeholders and service providers noted the isolation of the facility, and raised the question of where the supply of food would come from. This was raised in relation to the demand on local shopping services “*will that service be able to cope with the influx, and also provide for residents*”.

While the amendment avoids strain on short term accommodation, workers will not be as directly linked with local businesses as they would have been under the original project description. However, the amendment will not affect project service or resource demand, and it is likely to offer more coordinated and reliable opportunities for local businesses, such as caterers and maintenance workers, security services as well as the local construction industry.

The unenhanced significance of benefits related to the use of local goods and services is assessed as **high**. The likelihood of the benefit occurring is assessed as being **likely** and the magnitude of the benefit is assessed as being **moderate**.

ACEN will support local business by utilising established supply networks and providing sufficient opportunities and information for local businesses to tender for supply contracts. Wherever possible and practical, ACEN will work with the local businesses and the local community to prioritise and use local goods and services.

The enhanced significance of benefits related to the use of local goods and services is assessed as **high**. The likelihood of the benefit occurring is assessed as being **likely** and the magnitude of the benefit is assessed as being **major**.

A summary of the assessment is presented in Table 7.5.

Table 7.5 Summary of use of local and goods and services

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihoods	Use of local goods and services	Businesses within the local area and regional area	All phases of the project	Local area and regional area	High	High

7.3.2 Enhanced employment opportunities

The amended proposal offers employment opportunities in additional sectors, including catering and maintenance, thereby providing up opportunities for workers and appealing to a wider number of workers with a broader range of skills. A broader range of employment opportunities and related training has a flow-on legacy benefit through further supporting regional economic diversity.

Engagement with employment service providers indicated most workers would be happy to or would be likely to relocate for work. However, there are a lack of appropriate opportunities in entry-level positions like labouring, traffic control and cleaning. These roles are required for younger workers and workers with lower literacy. It was also indicated that it can be difficult for workers over the age of 65 to gain employment, particularly where they have worked in one industry for many years. Other barriers to workforce participation include transport, as it can be difficult to travel long distances to work, and additional support needs in the form of workplace etiquette and processes, trauma informed practice and upskilling.

The significance of benefits related to enhanced employment opportunities is assessed as **medium**. The likelihood of the benefit occurring is assessed as being **likely** and the magnitude of the benefit is assessed as being **minor**.

Two key groups which the project could target for local employment are Aboriginal and Torres-Strait islander people and youth. Engagement feedback also indicated older workers previously employed at other sites, such as the mines, could contribute experience and benefit from the opportunity of employment at the facility. The provision of accommodation for those employed at the facility would enhance the benefit for some local workers, for whom the expense of travel can reduce access to employment opportunities.

ACEN remain committed to:

- prioritising hiring or upskilling of workers residing within the local area.
- developing a Local Participation Plan and an Aboriginal Participation Plan that commits to employment and investment in job readiness by ACEN and its contracting partners. The APP will be supported by the Construction Phase SEP.

ACEN will work with local employment, apprenticeship and training agencies to enhance the potential of hiring local and regional workers.

Provision of onsite accommodation, along with medical support and training opportunities would make this project an attractive offering for lower-income local workers and affords the project an opportunity to provide employment for people from sectors of the population that may otherwise find it difficult to access employment (youth, people with disabilities and Indigenous people, as well as people over 65). It is noted that ACEN will preference hiring and upskilling of these workers in unskilled facility service positions, where competition would otherwise reduce access for other local businesses and where it is suitable to do so.

The enhanced significance of benefits related to employment opportunities is assessed as **high**. The likelihood of the benefit occurring is assessed as being **likely** and the magnitude of the benefit is assessed as being **major**.

A summary of the assessment is presented in Table 7.6.

Table 7.6 Summary of access to employment opportunities

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihoods	Enhanced employment opportunities	Under-represented groups including youth, people over 65, people with a disability, Aboriginal and Torres strait Islander People	Construction	Local area and Regional area	Medium	High

7.3.3 Limited workforce supply and job competition

The EIS SIA indicated that in addition to the externally sourced project construction workforce, there were likely to be indirect employment opportunities for local businesses, such as accommodation service providers, as well as operational roles. The community expressed that nearby towns were already experiencing labour shortages, and that there were an insufficient number of local workers available for unskilled, skilled or highly skilled roles during construction. A number of participants expressed the view that the necessary workers, training, and skills would be sourced from outside the Mid-Western Regional LGA.

The project will require a peak construction workforce of up to 500 people. ACEN acknowledges that the majority of this workforce will be non-local (anticipated up to 90%) and have therefore designed the accommodation facility to cater for the full peak construction workforce of 500 people. This is consistent with feedback provided by MWRC, which suggested that the local workforce percentage could be lower than 10%.

Engagement undertaken for the proposed amendment confirmed that this trend has continued, particularly feedback provided from local residents, service providers and businesses around lack of availability of key workers and service industry workers.

There is potential for the project to generate competition for local goods and service providers such as fencing contractors, food and accommodation services, security services, electrical services, ground maintenance, and road maintenance services; thereby reducing their availability to work on other jobs within the study area. This may be further exacerbated by the additional construction and maintenance requirements of the accommodation facility.

The EIS SIA identified that this may have the effect of both reducing worker availability and increasing the expense of service provision due to heightened overall demand. It was noted that the local community has experienced similar effects from other major projects in the region, which assists in ameliorating the impact risk.

During 2023 interviews, landholders indicated local unskilled and skilled workers, (e.g. seasonal labour and shearers) are critical to the operation of farming businesses, as are local spraying and fencing contractors. Farmers are susceptible to competition for these resources.

The unmitigated significance of impacts on limited workforce supply and job competition is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

ACEN will ensure that project workforce and subcontracting needs are clearly communicated to subcontractors, so that impacts to their existing business can be avoided through mitigations such as communicating delays to customers or hire of additional employees.

ACEN remain committed to:

- prioritising hiring or upskilling of workers residing within the local area.
- developing a Local Participation Plan and an Aboriginal Participation Plan (APP) that commits to employment and investment in job readiness by ACEN and its contracting partners. The APP will be supported by the Construction Phase SEP.

The mitigated significance of impacts on limited workforce supply and job competition is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

Table 7.7 Summary of limited local workforce supply and increased job competition

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Livelihoods	Limited local workforce supply and increased job competition.	Local businesses servicing the project and local residents who use those local services required of the project.	Construction – 28 months	Local area and Regional area	Medium (negative)	Medium (negative)

7.3.4 Impacts to nearby agricultural producers

There are three identified pathways for social impacts to nearby producers - disruptions resulting from project traffic and transport requirements, direct effects of the development footprint and changes to water access, flows and quality.

i Traffic and transport

The EIS SIA indicated that increased traffic on Birriwa Bus Route South and internal traffic crossing at the proposed public road crossings may interrupt or present a risk to livestock movement along the road network. Mismanagement of gates within and on the perimeter of the study area during construction activities also presents a risk to livestock. If not managed properly, the additional loss of livestock as a consequence of project construction traffic could further impact the livelihoods of local landholders.

The amendment would further internalise traffic, reducing risk to farm business operation by reducing instances where workers would be accessing areas outside of the development footprint. Landholders and business operators engaged in 2023 still held some concerns around the effects of additional vehicle traffic on local roads on their livelihoods, through affecting stock movement or delivery to sale yards.

Section 6.2.3 of the Amendment Report details the traffic and transport requirements for accommodation facility construction and operation. The assessment concludes there are no expected additional traffic impacts as a result of the proposed accommodation facility. Rather, the provision of the accommodation facility will reduce light vehicle movements during construction, due to non-local workers staying onsite and travelling between the accommodation and the solar and BESS construction area via an internal road.

It is considered that social and traffic mitigation measures proposed in the EIS are sufficient to resolve any remaining community concerns around these outcomes.

ii Development footprint

The 2022 SIA indicated that during the construction phase, intensive construction on paddocks may temporarily reduce the quality and productivity of land and interrupt existing stock grazing patterns. Several participants in the engagement program expressed concern in relation to the potential conflict from the use of agricultural land for renewable development. These stakeholders raised issues relating to the change in land use from agriculture to energy generation in the local area including:

- potential impact on local and regional agricultural productivity and output, given a potential reduction in the area of land under agricultural production
- potential reduction in the diversity and supply frequency of specialised agricultural services that are currently offered direct to agricultural operations in the local area attributable to a reduction in the number and/or size of agricultural operations
- interruptions to livestock grazing regimes due to site access restrictions.

The Land Use Conflict Resolution Assessment (LUCRA) (LSEA, EMM 2022) determined that without mitigation, the project may result in some land use conflicts that would affect adjoining and nearby properties.

An assessment of the impact on agriculture due to the inclusion of the accommodation facility was undertaken as part of the amendment report (refer to section 6.2.7 of the amendment report (EMM 2023)). This assessment found that the land within the accommodation facility development footprint is mapped with a Land and Soil Capability of LSC 5, which is low to moderate capability land, and that overall, the soils within the accommodation facility development footprint are or low capability and low fertility. There is no mapped Biophysical Strategic Agricultural Land (BSAL) in the footprint.

Further, the accommodation facility would remove some 25 ha of the land utilised for livestock, which accounts for just 0.005% of the regional annual agricultural productivity associated with livestock in the Mid-Western Regional LGA. This is a minor and temporary loss based on the assumption that the land will be returned to a similarly productive state at the end of the accommodation facility lifecycle with suitable soil management. It was also identified that erosion and flow lengths must be controlled during construction to reduce the risk of adverse impacts.

iii Water

Landholders engaged raised concerns about the potential effects of additional water run-off and change in water flows and quality from the accommodation facility. Concerns about changes to the water flows included *“levee banks or changes to contours of the land could affect the way water flows, and change the effects those water movements have”*.

The amendment report (Table 2.1 and Table 2.2) confirms there are no expected additional impacts to watercourses or groundwater levels as a result of the amendment. There is an unnamed third order stream which has been avoided by the accommodation facility development footprint and main access track. A track for emergency use only will be constructed over the stream.

iv Overall impact

The unmitigated significance of impacts to the local producers is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

As identified in the EIS SIA, ACEN will implement measures including:

- engage in frequent communication with landholders and ensure early provision of information regarding the predicted construction impacts to prepare landholders for impacts that cannot be fully mitigated and to provide an opportunity for landholder feedback and engagement
- implement gate and property access procedures, specific to individual landholder needs and requests
- applying relevant design controls and best practice principles for stormwater and sediment control as part of the Surface Water Management Plan, and
- designing fencing and internal access roads to consider flood levels and risks

These measures will also address potential impacts of conflicting land uses related to the accommodation facility.

The mitigated significance of impacts to the nearby agricultural producers is assessed as **low**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minor**.

A summary of the assessment is provided in Table 7.8.

Table 7.8 Impacts to agricultural sector

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Livelihoods	Impacts to nearby agricultural producers	Local farmers	Project construction and operation	Local area	Medium	Low

7.4 Surroundings

7.4.1 Changes in amenity due to generation of dust, noise, vibration and night lighting

Certain aspects of construction and operation of the accommodation facility may have a direct effect on residential amenity experienced by nearby receivers through the generation of dust, noise and vibration, and lighting. Impacts on visual amenity is addressed separately in Section 7.3.2.

The EIS SIA identified that the risk of impacts on amenity was medium without mitigation for both construction and operational impacts, and identified a series of mitigations including compliance with environmental management procedures. Stakeholders engaged cited concerns regarding a potential decline in amenity due to the impact of construction activities such as noise from traffic movements, noise and vibration from construction activities and intrusion of night lighting.

a Air quality (dust)

The EIS SIA identified that construction activities, principally earthworks, can give rise to temporary changes in air quality which has the potential to reduce amenity. Engagement with nearby landholders indicated there is an existing issue with dust from dirt roads around the project site. However, key air quality risks were avoided through site selection, and mitigation measures detailed in Section 6.15 of the EIS which limit potential dust generation from project-related construction activities. Mitigations include speed reduction along unsealed roads, use of water trucks for dust suppression and regular maintenance of unsealed road surfaces. Air quality impacts were considered to be temporary, and of medium unmitigated significance.

(The amendment will not result in significant changes to generation of dust or overall air quality, and will continue to apply mitigation measures to reduce/resolve potential air quality impacts for nearby receivers.)

b Noise, vibration and sleep disturbance

The EIS SIA indicated that near neighbours highly value the “rural feel” of their community, with interview participants describing it as “quiet and peaceful”. Some participants raised concerns that project noise would detract from the existing rural amenity and may become a nuisance.

The noise and vibration impact assessment (NVIA) (EMM 2022d) (EIS Appendix J) identified principal impacts would occur during site establishment, but indicated that construction and operational noise and vibration would comply with noise management levels under the relevant regulatory guidelines by implementing setbacks and planning potentially impactful works during times of least impact for receivers. The assessment found that project operation and construction are unlikely to lead to sleep disturbance. The EIS SIA acknowledged that while noise and vibration are estimated to be within the relevant criteria, noise during construction may be audible to certain landholders and therefore may still impact their sense of social amenity.

In the community engagement undertaken in 2023, local stakeholders indicated noise impacts from additional vehicle movements and construction activities required for the amendment were a continuing concern. However, the NVIA Amendment Report (EMM 2023) found that noise and vibration impacts from construction and operation of the accommodation facility are predicted to be negligible and satisfy all relevant controls, including during night time operation.

c Lighting

The EIS SIA identified operational night lighting for security and maintenance purposes would be confined to the operational infrastructure areas and to maintenance activities. It was identified that if required, lighting would be managed to minimise impacts on surrounding areas (including neighbouring residences) to reduce intensity and comply with Dark Sky Region controls for the Siding Springs observatory.

The Landscape and Visual Impact Assessment (LVIA) (EMM 2023) for the amendment report indicates that night lighting will be required for safety and security within the accommodation facility, for vehicles along the access road to the solar farm and for maintenance purposes. The night lighting would be inwardly focused and shielded so it does not result in light spill impacts to neighbouring properties or the night sky.

In summary, potential changes amenity due to the combined effect of air quality, noise, vibration and lighting resulting from the proposed addition of the accommodation facility will be experienced primarily by neighbours closest to the development footprint.

The unmitigated significance of amenity impacts for the project as a whole are assessed as **medium**. The likelihood of the impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **moderate**.

ACEN will implement a Complaints and Grievances Procedure. The procedure will provide an opportunity for stakeholders to raise complaints, grievances, and provide feedback. The procedure will facilitate the timely response to stakeholder complaints and grievances and enable the monitoring and reporting of grievances and ACEN response.

The mitigated significance of amenity impacts is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

A summary of the assessment is provided in Table 7.9.

Table 7.9 Summary of social amenity impacts - construction

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
 LIFESTYLE	Changes in amenity due to generation of dust, noise, vibration and lighting.	Near-neighbours, particularly those with residences closest to the local road network and the battery site.	Construction (temporary and medium-term)	Immediate surrounds of study area	Medium	Medium

7.4.2 Changes to the visual landscape affecting how people experience their rural surroundings

The EIS SIA assessed that changes to the visual landscape from the project’s construction and operation was an impact of high significance. Changes would impact how people experience their rural surroundings which is influenced by a number of factors including a person’s attachment to the surrounds, proximity to the project and established vistas. Engagement undertaken in the EIS SIA reported that community members were concerned about the visual amenity impact from their properties as well as broader and surrounding rural vistas. Furthermore, some community members were concerned that vegetation and particularly mature trees may need to be removed to accommodate project infrastructure and there was uncertainty around the decommissioning process and the ability to return the area to agricultural land.

The LVIA (EMM 2023) determined that only one residence to the south-east of the accommodation facility development footprint (R37) will experience views of the facility. The impact of this was found to be low given distance and topography.

During 2023 engagement, local stakeholders indicated the local area is known for its visual amenity and rural character, and is valued by local residents for being beautiful, peaceful and isolated. Nearby landholders and members of the community expect that attributes would be diminished by visual impacts of the surrounding REZ infrastructure.

Anticipation of visual impacts can be a stressor for local residents, alongside the actual effects during construction, as can impacts which are perceived to be unequal amongst the community. One affected landholder identified that their property has direct views to the project area from the living room, and they anticipated the effects of the project, increased by the presence of the accommodation facility, would have a direct impact on their property value, as well as on daily views of the surrounding landscape.

While the addition of the accommodation facility does not significantly change the visual impact of the project, the unmitigated significance of changes to the visual landscape affecting how people experience their rural surroundings remains assessed as **high**. The likelihood of the impact occurring is assessed as being **likely** and the magnitude of the impact is assessed as being **moderate**.

The visual mitigation measures committed to in the EIS will continue to be adopted for the amended project.

The mitigated significance of changes to the visual landscape affecting how people experience their rural surroundings is assessed as **medium**. The likelihood of the impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **moderate**.

A summary of the assessment is provided in Table 7.10.

Table 7.10 Summary of impacts to surrounds due to changes in visual landscape

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Changes to the visual landscape affecting how people experience their rural surroundings.	Near neighbour	Construction and Operation	Localised	High	Medium

7.4.3 Impact to surroundings from changes in ecological values and natural assets

The EIS SIA assessed the impact associated with potential changes in ecological values and natural assets as medium. During SIA consultation participants expressed concern in relation to how the project may change the natural environment and affect existing ecological values, which in turn could impact how individuals experience their surrounds. The EIS assessed the potential impacts of the project on the natural environment and with mitigation, negative consequences of this impact were anticipated to be minor. Mitigation measures included preparation and implementation of a construction environmental management plan (CEMP) and an operations environmental management plan (OEMP).

The amendment will result in a small addition to the disturbance footprint.

During 2023 engagement, stakeholders indicated continued interest in understanding the amendment’s potential effects on local native fauna and flora. Such values are reflected in local strategic planning documents for the Mid-Western Regional Council and Warrumbungle Shire Council, which are summarised in Attachment D, and specify the community’s strong connection with the rural landscape.

The accommodation facility development footprint was specifically sited to avoid impacts on significant biodiversity values. The development footprint comprises cleared agricultural land, and there are no listed endangered ecological communities within the footprint.

The unmitigated significance of impact to surroundings from changes in ecological values and natural assets for the project remains at **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

Residual impacts to biodiversity values will be mitigated through pre-clearance surveys, planting locally native species characteristic of Box Gum woodland and Grey Box woodland in future landscaping, retention of logs and debris in the subject land post-construction, and weed hygiene measures.

These measures will be outlined in the project CEMP and the OEMP, which will apply to facility construction, operation and removal.

The mitigated significance of impact to surroundings from changes in ecological values and natural assets. is assessed as **low**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minimal**.

A summary of the assessment is presented in Table 7.11.

Table 7.11 Summary of impacts to surrounds due to changes in ecological values

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
 SURROUNDINGS	Impact to surroundings from changes in ecological values and natural assets.	Associated and non-associated landholders. Broader community. People with attachment to the locality. Environmental groups and organisations.	Construction and operation	Within the development footprint	Medium	Low

7.4.4 Perceived reduction in local property values

Concerns outlined in the EIS SIA regarding changes to the visual landscape and reduced residential amenity also related to the potential devaluation of neighbouring properties which was rated as an impact of medium significance. The EIS SIA found changes to visual amenity were not anticipated to have a noticeable effect on property prices, as land value was more strongly tied to agricultural production qualities.

During 2023 engagement, stakeholders including nearby landholders noted concerns that a reduction in property values could occur due to views of the workforce accommodation facility. Engagement undertaken by ACEN for the amendment report has indicated that this is a significant concern for the local community, and that addition of the accommodation facility has escalated existing levels of concern.

With regard to the amendment, the LVIA has identified there will be low and well mitigated visual impacts to nearby landholders. This impact will only occur during construction, operation and decommissioning of the accommodation facility, and potentially to a lesser degree during rehabilitation of the accommodation site.

As outlined in Section 7.3.4 of this report, the amendment will have a low mitigated risk of impacts to the agricultural use of nearby properties, and on the broader local and regional agricultural sector.

The social baseline indicates an overall rise in house prices in the local area between 2020 and 2021, and no available houses for sale or rent in Birriwa and Merotherie in June of 2022 and 2023, and limited availability in both Dunedoo and Gulgong.

Given the temporary nature of the accommodation facility, the lack of local housing supply and lift in prices, the continued agricultural value of the land, and the low to nil mitigated visual impacts of the project it is expected the amendment will not have a material effect on property values beyond the existing effects of the broader project.

The unmitigated significance of perceived reduction in local property values is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

In addition to mitigations proposed for the above impacts and consideration in siting the workforce accommodation facility, ACEN will also include the facility in the following measures proposed in the previous SIA to reduce impacts to neighbouring properties, and thus minimise potential risk of property devaluation:

- buffer zones during construction works to minimise potential noise impacts at neighbouring residences
- a Traffic Management Plan (TMP) and Driver Code of Conduct to minimise potential impacts on the safety and serviceability of the local road network
- an Accommodation and Employment Strategy (AES) to manage potential for adverse impacts to occur from the construction workforce.

In addition, the facility location will be remediated upon cessation of use.

As ACEN engagement has identified that this concern persists and has escalated, the mitigated significance of perceived reduction in local property values is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **moderate**.

A summary of the assessment is presented in Table 7.12.

Table 7.12 Summary of livelihood related to perceived reduction in local property values

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Perceived reduction in local property values	Near neighbours	Medium term	Nearby and adjoining properties	Medium	Medium

7.5 Culture

7.5.1 Change to land use results in a sense of loss of cultural heritage for Aboriginal and Torres Strait Islander people

The EIS SIA assessed the potential for impacts to Aboriginal and Torres Strait Islander values as high. This was due to the fact that one site will be impacted by the project and all sites are regarded by Aboriginal and Torres Strait Islander people as having cultural significance. As such, the change in land use associated with the project has the potential to result in a sense of loss of cultural heritage and values for Aboriginal and Torres Strait Islander people. The Aboriginal Cultural Heritage Assessment (ACHA) completed for the project EIS (OzArk 2022) provided a suite of management and mitigation measures for the salvage of affected sites of cultural heritage.

As described in amendment report Table 2.5 (EMM, 2023) a field survey of the accommodation facility study area and surrounds identified five Aboriginal sites, including three artefact scatters and two isolated finds. Only one of these sites, (isolated artefact site Winora IF-2), is located in the vicinity of the proposed access track. The addendum ACHA (OzArk 2023) identifies that 2 Registered Aboriginal Parties (RAPs) provided advice on the report, and did not identify additional cultural values relating to the addendum study area.

The unmitigated significance of cultural impacts related to Aboriginal and Torres Strait Islander values is assessed as **high**. The likelihood of the impact occurring is assessed as being **almost certain** and the magnitude of the impact is assessed as being **moderate**.

Long-term management of Aboriginal objects identified within the development footprint (including the facility site) will be undertaken in consultation with the RAPs through an Aboriginal Cultural Heritage Management Plan. Identified sites outside the disturbance footprint will be protected during the construction of the project through the use of high-visibility temporary fencing. The location of all sites will be shown on all appropriate plans to

ensure that they are not inadvertently harmed. Aboriginal and Torres Strait Islander organisations in the regional area or with cultural interests in the local area will be encouraged to engage with ACEN regarding shared value investment opportunities.

The mitigated significance of cultural impacts related to Aboriginal and Torres Strait Islander values is assessed as **medium**. The likelihood of the impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **moderate**.

A summary of the assessment is presented in Table 7.13.

Table 7.13 Summary of cultural impacts related to Aboriginal and Torres Strait Islander values

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Change to land use results in a sense of loss of cultural heritage values for Aboriginal and Torres Strait Islander People.	Aboriginal and Torres Strait Islander People	Construction and operation, permanent	Local area	High	Medium

7.6 Health and wellbeing

7.6.1 Safety risks for transport network users

The EIS SIA identified transport safety risks during the construction of the facility due to increased traffic on the local and regional road networks. This was due to the existing condition of the local road network as well as the variety of road users such as pedestrians, cyclists, school bus users and other vehicles. In particular, the Central West Cycle Trail (CWC Trail) intersects with the project access route at the Barneys Reef Road and Birriwa Bus Route South. The Traffic Impact Assessment (TIA) conducted as part of the 2022 EIS assessed there would be a total of 401 daily vehicle movements which included a maximum of 360 passenger vehicle movements. Further, there were road safety concerns for driver fatigue experienced by both workers travelling to and from the project as well as logistics and transportation drivers who have been driving for extended periods, often through the night. As such, the SIA assessed the impact to public safety due to an increase in traffic as having a high level of significance.

As described in Chapter 2 of this report, there will be no change to the project’s primary vehicle access route, with internal access routes to be used between the accommodation facility and the work site.

Section 6.2.3 of the amendment report confirms that the amendment will not result in any further traffic impacts to those assessed in the EIS. The addition of the accommodation facility will reduce light vehicle movements on the local road network during the construction phase, as the construction workforce will travel to and from the accommodation facility and the solar and BESS worksite via internal roads. The proposed emergency access route further improves site safety.

Deliveries and heavy vehicle movements are most likely to originate from Newcastle and Sydney, and it is anticipated that approximately 180 semi-trailers will travel to the site during the construction of the accommodation facility, for the transportation of temporary prefabricated units and other relevant construction materials over a period of 3-7 months within the 28- month construction window for the project.

The project anticipates 360 daily light vehicle movements, which includes people travelling to and from site from Gulgong, Mudgee, Dunedoo, Dubbo and surrounds. A further 240 daily heavy vehicle movements and 1 Over Size Over Mass (OSOM) vehicle movement will be required during project construction, though OSOM vehicles will not be required for the accommodation facility. The total number of daily traffic movements for the project is now proposed to be 720.

As described in Section 7.3.4, and Chapter 6 of the Amendment Report it is not expected that the amendment will change assessed impacts resulting from project traffic and road safety, and the matters and measures identified in the EIS SIA sufficiently mitigate project risks.

However, local residents and service providers, including police continued to indicate this is a concern when engaged in 2023 with feedback including:

- Road safety is a key concern in relation to increased vehicle movements throughout construction activities within the local road network and along the major roads (due to flood damage). Road conditions are notoriously poor (flood damage), and vehicular accidents are common.
- Local stakeholders noted that the conditions of the roads are vital for businesses and livelihoods.
- Stakeholders feel that traffic routes that would be used for Project construction will require upgrades prior to use, and likely afterwards.

Mudgee and Gulgong Police services identified that there are existing traffic issues on country roads due to factors such as fatigue, dangerous driving behaviour and the role of drugs and alcohol in these behaviours, use of mobile phones, speeding and not using seatbelts. With the mines in the areas, workers often do 12-hour shifts which causes fatigue when driving home. Dawn and dusk are also particularly dangerous due to the significant number of wildlife collisions.

Multiple stakeholders identified alcohol and drug use as a key issue in relation to traffic incidents and safety within and outside operational facilities. Police services identified the need for the project to restrict behaviours in relation to drink and drug driving, and implement worker drug and alcohol testing as a safety measure.

Chapter 2 of this report identifies that the licensed social area will include the requirement for training of service staff in the Responsible Service of Alcohol. All construction staff will be required to register zero drug and alcohol readings when scheduled to work and will be subject to testing.

The unmitigated significance of safety risks for transport network users is assessed as **high**. The likelihood of the impact occurring is assessed as being **almost certain** and the magnitude of the impact is assessed as being **moderate**.

A detailed CTMP will be developed and implemented for all phases of the project and will involve engagement with school bus operators, CWC Trail Inc. MWRC, WSC and TfNSW. The CTMP will include a Drive Code of Conduct. Road upgrades will be undertaken such as resurfacing and widening along Barneys Reef Road and Birriwa Bus Route South, and new intersection treatment on Castlereagh Highway at the Castlereagh Highway/Barneys Reef Road intersection. Subject to demand ACEN will implement a bus service to and from the project for construction workers residing in Mudgee and Gulgong. ACEN will also encourage carpooling.

ACEN has engaged and will continue to engage in frequent and tailored communication with CWC Trail Inc. The CTMP will include a Driver Code of Conduct and will include direction for drivers on the road to not travel within 100 m of, or overtake, cyclists on Birriwa Bus Route South. Speed limits on Birriwa Bus Route South and Barney's Reef Road will be reduced to 80 km/hr for regular traffic.

The mitigated significance of safety risks for transport network users is assessed as **medium**. The likelihood of the impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **moderate**.

A summary of the assessment is presented in Table 7.14.

Table 7.14 Summary of safety risks for transport network users

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Safety risks for transport network users	Landholders, residents of the local area, workforce, road users.	Construction	Up to regional area	High	Medium

7.6.2 Improved worker health and wellbeing

As outlined above, police and the local community services identified that worker fatigue and travel between the site and accommodation are key risks associated with large construction projects, as are drink-driving and driving under the influence of drugs.

Provision of onsite access to alcohol supervised by RSA requirements provides a direct means for the project to reduce the likelihood of drink-driving. In addition to community feedback summarised in Section 7.5.1 of this report, the importance of these measures is supported by baseline data which indicates that between 2017 and 2021 the number of non-casualty (towaway) road incidents doubled in Warrumbungle Shire LGA and increased by a third in Dubbo Regional LGA. The number of fatal road incidents also increased in the Mid-Western Regional LGA from 1 incident in 2017 to 3 incidents in 2021.

The NRSPP (2016) identified that “Drink driving is the number one contributing factor in approximately 30% of fatal crashes in Australia.” and “Over 1 in 4 drivers and riders killed on Australian roads have a BAC exceeding the legal limit”. Transport for NSW’s (2020) report on Drink driving attitudes and behaviours in NSW identified “driving when over the legal blood alcohol concentration limit remains a prominent road safety issue in NSW. Overall, from 2014 to 2018, there were 275 fatalities from crashes involving alcohol, and 1,951 people were seriously injured.”

Co-location of the project site and worker accommodation, and provision of onsite shuttle buses will also serve to reduce worker fatigue risks related to project travel, when compared with the previous project description. SafeWork NSW (2023) identified that FIFO and DIDO workers, as well as shift workers, are particularly at risk of work related fatigue and “Fatigue can increase the likelihood of incidents and injuries in the workplace, particularly when doing safety critical tasks where significant consequences may arise if errors occur - for example, when driving a vehicle...”.

Considering the above, it is likely the accommodation facility will have a net positive effect on worker health and wellbeing, when compared with the previous proposal.

The unenhanced significance of benefits related to improved worker health and wellbeing is assessed as **medium**. The likelihood of the benefit occurring is assessed as being **likely** and the magnitude of the benefit is assessed as being **minor**.

The accommodation facility provides a benefit for worker health and safety (and the safety of other road users) by reducing the risk of fatigue associated with travel from the site to accommodation. This benefit could be further enhanced by ensuring facility design further facilitates rest and relaxation and provision of health support through the onsite nurse, which is also aligned with beneficial outcomes for employment diversity.

The enhanced significance of benefits related to improved worker health and wellbeing is assessed as **high**. The likelihood of the benefit occurring is assessed as being **likely** and the magnitude of the benefit is assessed as being **major**.

A summary of the assessment is presented in Table 7.15.

Table 7.15 Summary of improved worker health and wellbeing

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
	Improved worker health and wellbeing	Landholders, residents of the local area, workforce, road users.	Construction	Up to regional area	Medium	High

7.6.3 Risks associated with an increase in population in an isolated location, close to rural properties

The EIS SIA reported that the introduction of new groups of people to an area, such as an influx of non-local hires, can alter existing values, sense of community and overall social cohesion. Whilst the communities of Mudgee and Gulgong are familiar with sudden and temporary increases in population and have demonstrated some resilience to induced changes, the findings of engagement undertaken in 2022 indicated these communities have experienced difficulties protecting their sense of community, identity and social cohesion during periods of increased temporary population. Impacts associated with an influx of temporary population can include perceived changes in safety and security within townships, increased occurrence of antisocial behaviour in public places, overcrowded living conditions with streets heavily utilised by parked vehicles, prevalence of people sleeping in vehicles overnight in public areas, considerable increases in traffic on the local road network. The EIS SIA assessed this impact to social cohesion as high.

The introduction of the accommodation facility concentrates the workforce to a more condensed area outside of the existing town centres. Issues related to social integration and cohesion remain and will be focused on the adjoining landholders and services and facilities accessed by the workforce in nearby towns. This assessment focuses on related community safety concerns and the effect the new accommodation facility may have on adjoining and nearby landholders.

Multiple local residents raised safety concerns about worker behaviour both onsite and in the community. In particular, the issues of illegal hunting and camping, leaving property gates open, and drug and alcohol consumption were raised.

Police service providers advised that with a worksite and people living out of home it increased the likelihood of assaults and physical harm – *“We find people use or drink more alcohol because of boredom/remoteness [which] affects behaviour”*.

In addition to the measures outlined in Section 7.6.2, the project description affirms that security personnel will be situated onsite 24 hours every day to ensure the safety of workers and the surrounding community. Security officers will be responsible for monitoring access to and from the site and managing people within the site. This includes mobile security checks of the accommodation facility and the site perimeter, crowd control for social areas, incident control and emergency response. Officers will have a relevant security licence and will be first aid certified.

The unmitigated significance of risks associated with an increase in population in an isolated location, close to rural properties is assessed as **medium**. The likelihood of the impact occurring is assessed as **unlikely** and the magnitude of the impact is assessed as **moderate**.

Mitigations which may assist in reducing overall project risks include implementation of safety measures within the facility, including security patrols and adequate fencing and worker training. In addition, a Complaints and Grievances Procedure will provide an opportunity for stakeholders and workers to raise complaints, grievances, and provide feedback. The procedure will facilitate the timely response to stakeholder complaints and grievances and enable the monitoring and reporting of grievances and ACEN's response.

The mitigated significance of risks associated with an increase in population in an isolated location, close to rural properties is assessed as **low**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **minimal**.

A summary of the assessment is presented in Table 7.16.

Table 7.16 Summary of risks associated with an increase in population in an isolated location, close to rural properties

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Risks associated with an increase in population in an isolated location, close to rural properties	Landholders, residents of the local area, workforce.	Construction	Local area	Medium	Low

7.6.4 Health and wellbeing impacts related to bushfire risk

Public safety issues arising from fire-hazards on the project site was assessed as a high-risk impact by the EIS SIA. The report found that bushfire risk is a prevalent concern across rural communities in Australia, with previous major fire incidents in Warrumbungle Shire LGA. EIS SIA engagement with the Birriwa Rural Fire Service (RFS) identified fire risks associated with worker travel and project and machinery operation during construction. Consultation activities also revealed a need to ensure a safe emergency access route in times of bushfire for nearby landholders and the project workers. The Preliminary Hazard Assessment (PHA) conducted for the 2022 EIS found that hazardous events resulting in potential fire and/or explosion are not expected to have significant offsite impacts due to the rural location of the development and the likelihood that fires would likely be localised to the individual unit.

The development footprint is in the Cudgong District of the NSW Rural Fire Service (RFS) and adjoins the Castlereagh District. Within the local area RFS brigades are located in Birriwa, Gulgong, Mudgee and Dunedoo.

The amendment includes emergency access, and the Bushfire Assessment Report (BAR) for the accommodation facility (Coolburn 2023) indicates the proposed workers accommodation facility will introduce a large number of people to an area that has potential bushfire risk. The BAR indicates that increased resident densities on existing lots that are bush fire prone may heighten the level of risk to the occupants. The presence of additional dwellings can impact on the evacuation and sheltering of residents during a bush fire.

The community continued to raise bushfire risk as a concern in 2023. A local stakeholder noted concerns about the increased fire risk from workers, particularly from cigarettes, and a local community member's main concern regarding the amendment was bushfire, "how you can make sure that the solar project and accommodation could be serviced by RFS".

The BAR identifies that development requirements will include ensuring an asset protection zone, along with suitable provision for construction, access, water and landscaping. These are in addition to standard development controls for smoking areas and vehicle access, which also have the effect of limiting bushfire risk.

The unmitigated significance of health and wellbeing impacts related to bushfire risk is assessed as **high**. The likelihood of the impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **major**.

In addition to mitigations proposed in the BAR, the measures previously proposed in the EIS SIA, which also apply to the amendment, include:

- ACEN will prepare a BMP including an ERP for all phases of the project. In preparing and implementing the BMP and ERP, ACEN will consult with the Gulgong and Dunedoo Fire Services, the Birriwa RSF as well as the Cudgegong RFS, MWRC, WSC, and NSW Fire and Rescue. Measures outlined in the BMP may include work with landholders after construction has finished to establish a grazing protocol to enable sheep back into the area to assist with vegetation management and bushfire risk.
- A dedicated water storage facility will be located on the development footprint, to allow for permanent emergency supply and ease of access.
- Equipment in use will be monitored (i.e. fire and smoke detectors) and will provide early detection to reduce fire risk.
- Internal access roads will be maintained at all Health and wellbeing due to stress and times to provide safe, reliable and unobstructed passage for fire vehicles.
- The proposed CW and Orana solar projects CBSP would provide an opportunity for the local RFS operations to access funding for training and infrastructure investments.

In addition, the facility offers the opportunity to have trained volunteer firefighters from the project workforce permanently onsite to reduce risk. Further measures, such as designated smoking areas and cigarette bins within the facility will also need to be included in the BMP and ERP.

Internal vehicle traffic between the accommodation facility and worksites will also be limited to established access roads.

The mitigated significance of health and wellbeing impacts related to bushfire risk is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **major**.

A summary of the assessment is presented in Table 7.17.

Table 7.17 Summary of health and wellbeing related to bushfire risk

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Health and wellbeing impacts related to bushfire risk.	Landholders, residents of the local area, construction workforce, road users.	Construction and operation	Up to regional area	High	Medium

7.6.5 Health and wellbeing impact due to project induced stress and anxiety

The planning and development of major projects can give rise to feelings of stress and anxiety for local communities and landholders, especially due to uncertainty and poor communication. Stress and anxiety are more likely to be experienced by near-neighbours and people with strong connections to the location affected by a major project. The EIS SIA Report found that while issues related to stress and anxiety were not openly identified by stakeholders engaged as part of the SIA, feedback from ACEN illustrated evidence of this issue.

The amendment to include the workforce accommodation facility increases the degree of change which will be experienced by nearby landholders which may result in additional stress and anxiety. One local stakeholder identified they have dedicated considerable personal energy and time to providing feedback on local renewables projects including this one, and that this, combined with a lack of faith that their voice will be heard in the planning process, is causing stress and fatigue. Given this feedback and the broader context of increasing community anxiety over renewables projects in the region, this impact is expected to continue as a concern.

As outlined in Chapter 5 of the amendment report, ACEN has continued to maintain a proactive approach to engagement with associated and non-associated landholders and the broader communities of the local area.

Based on the findings of engagement (EIS and SIA) and considering the current baseline conditions for mental health, including a consistently lower proportion of persons accessing allied mental health services in the Western NSW Public Health Network and fewer hospital admissions for mental health reasons, compared to national rates. Health service providers indicated that they generally have fewer admissions due to costs and wait times.

The potential impact of the project on the health and wellbeing of associated and non-associated landholders and the broader community is assessed as **medium**. It is **likely** that the project will generate feelings of stress and anxiety in some associated and non-associated landholders, and the magnitude of the impact is assessed as **minor**.

ACEN has engaged and will continue to engage in frequent and tailored communication with associated and non-associated landholders. This will ensure individuals are kept informed of the project and provided with an opportunity to ask questions or raise issues and concerns.

With the implementation of the above social management measures, the potential impact of the project on the health and wellbeing of surrounding landholders is assessed as **medium**. It is **possible** that the project will continue to generate feelings of stress and anxiety in some associated and non-associated landholders, however the potential impact is assessed as **minor**.

A summary of the assessment is presented in Table 7.18.

Table 7.18 Summary of health and wellbeing related to stress and anxiety

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Health and wellbeing impact due to project induced stress and anxiety.	Associated and non-associated landholders and broader communities of the local area.	Pre-approvals and construction	Local Area	Medium	Medium

7.7 Decision-making systems

7.7.1 Lack of trust in decision making systems

Multiple local stakeholders expressed concerns that the project principally benefits people who live outside of the region (on the east coast of NSW). This perception was supplemented by the idea that rural communities are bearing the burden of the impacts from REZs and energy transition. Residents expressed the belief that the government and the overall decision-making process doesn't matter, as project decision-makers won't take local interests and views into account.

The effects of this distrust include high levels of consultation fatigue, and rising resistance to renewables projects in the region (as demonstrated through the engagement summary in Chapter 5 of the amendment report).

The unmitigated significance of lack of trust in decision making systems is assessed as **high**. The likelihood of the impact occurring is assessed as being **possible** and the magnitude of the impact is assessed as being **major**.

In addition to mitigations proposed in Section 7.5.5, the NSW government and particularly Energy Co have a role in ensuring that approval processes sufficiently consider impacts on communities, as per the Central Orana Regional Economic Development Strategy – 2023 Update, the Central Orana Regional Economic Development Strategy 2018-2022 (NSW Government, 2018a) the Central West and Orana Regional Plan 2041 (DPE, 2022d), the Renewable energy generation and agriculture in NSW's rural landscape and economy – growth sectors on a complementary path (NSW Agriculture Commissioner, 2022) and the Central-West Orana Renewable Energy Zone: Coordinating community impacts and benefits in the REZ (EnergyCo, 2023).

The mitigated significance of safety risks for lack of trust in decision making systems is assessed as **medium**. The likelihood of the impact occurring is assessed as being **unlikely** and the magnitude of the impact is assessed as being **major**.

A summary of the assessment is presented in Table 7.19.

Table 7.19 Summary of lack of trust in decision making systems

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
	Lack of trust in decision making systems	Residents of the local area.	Project planning	Up to local area	Medium	Low

8 Cumulative impacts

8.1 Overview

In acknowledgment of the number of energy projects being advanced in the CWO REZ, there is a focus on understanding and planning for cumulative impacts across a number of key impact areas. Cumulative impacts are a key concern raised by communities and stakeholders.

This section provides consideration of the project's potential to generate cumulative impacts and/or benefits in the region related to the context and existing trends within the local and regional study areas. A community may experience cumulative impacts when multiple projects occur in a similar timeframe or will be located in a similar geography to other projects.

The *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE, 2022a) are part of the Rapid Assessment Framework introduced in 2021, aimed at improving the assessment of major projects in NSW.

The Project is located within the Mid-Western Regional LGA, with impacts extending to the Warrumbungle Shire LGA. The cumulative impact assessment has considered other projects (as listed on the DPE Major Projects Planning Portal) that have the potential to interact with the project. As such, future projects within a 100 km distance from the Project site have been considered regarding potential cumulative impacts such as demand on services, accommodation, and for local workforces. Because here is also significant awareness of potential cumulative operational impacts (visual, land use) with other, nearby REZ infrastructure, existing REZ infrastructure has also been considered in relation to these impacts.

Since the amendment focuses on the workforce accommodation facility, the consideration of cumulative impacts has been broken down into investigating a radius around the urban centres of Dunedoo and Gulgong. For Dunedoo, projects within 30 km radii have been considered due to the higher concentration of projects/project components and for Gulgong, projects within 10 km radii have been considered. Other REZ projects within 100 km of the site have also been included. As such, the cumulative impact projects/project components include:

- **Projects within 30 km of Dunedoo** – fourteen projects were identified in this category, including the Merotherie Energy Hub which is a component of the Central-West Orana REZ Transmission project.
- **Projects within 10 km of Gulgong** – there were two more projects identified in this category. This includes an operational solar farm.
- **Other REZ projects** – there were 27 projects identified in this category, of which many were renewable energy projects located in Dubbo Regional LGA in the Central-West Orana REZ.

Table 8.1 below provides a summary of the key projects from the full list that may result in cumulative impacts with the Birriwa Solar and Battery Project and which may proceed around the same timeframe (2025), particularly in terms of workforce and accommodation. These are arranged by the three categories as described above and provide a summary of anticipated impacts and/or benefits. To assess these impacts, an indicative construction timing of 2025 to early 2028 (approximately 28 months) for the project has been assumed.

Table 8.1 Cumulative impact assessment – summary of key Project interactions

Project	Location	Expected construction workforce (peak FTE)	Expected number of jobs sourced locally
Projects within 30 km of Dunedoo			
Dunedoo Solar Farm	Dunedoo	125	90

Table 8.1 Cumulative impact assessment – summary of key Project interactions

Project	Location	Expected construction workforce (peak FTE)	Expected number of jobs sourced locally
Orana Wind Farm	Dunedoo	580	-
Birriwa Solar and BESS project	Birriwa	800	240
Cobbora Solar Farm	Cobbora	700	-
Spicers Creek Wind Farm	Spicers Creek	590	118
Sandy Creek Solar Farm	Dunedoo	600	-
Dapper Solar Farm	Dapper	350	-
Barneys Reef Wind Farm	Barneys Reef	340	-
Stubbo Solar project	Stubbo	400	200
Central-West Orana Renewable Energy Zone Transmission project	Merotherie	650	-
	Elong Elong		
Valley of the Winds Wind project	Coolah	400	280
Tallawang Solar Farm	Tallawang	580	190
Narragamba Solar project	Merotherie	400	-
Projects within 10 km of Gulgong			
Bellambi Heights Solar Farm	Bellambi Heights	400	-
Beryl Solar Farm	Beryl		Operational
TOTALS		6,515	1,118

8.2 Traffic

Cumulative traffic increases due to multiple projects being constructed often impacts on social conditions through deteriorating the level of amenity experienced by communities, levels of safety (including perceived safety) and the ease of day-to-day movements.

As mentioned in Section 7.5.1 of the amendment report (Section 6.2.3 Traffic and Transport) identified that no additional impacts from vehicle movements are anticipated due to the accommodation facility, over and above what was assessed in the EIS.

The EIS SIA reported traffic concerns of the community, including the perception that the large number of developments in the region could contribute to increased traffic levels and road degradation. These concerns are still prevalent in the community. During the engagement undertaken regarding the proposed amendment, trucks from existing and future projects were raised as a particular concern to the community. Furthermore, there were concerns about the cumulative traffic impacts on Castlereagh Highway.

The EIS (EMM, 2022b) acknowledged there may be cumulative traffic impacts associated with two nearby proposed developments, Tallawang Solar Farm and Barneys Reef Wind Farm. There is the potential, if all projects are approved, for the construction periods to overlap. The TIA (EMM 2022) also considered the CWO REZ Transmission Project and the Merotherie Energy Hub, which may also generate cumulative traffic impacts. ACEN will continue to engage with EnergyCo and monitor the progress of these projects.

8.3 Employment and economic growth

Having multiple projects in the area could exacerbate existing skill shortages in the region. However, it could also provide more procurement opportunities for local businesses, expanding economic growth.

In the EIS SIA, engagement with the local community identified renewable projects as a primary source of employment. As such, some service providers recognised significant employment benefits associated with a large number of ongoing projects and developments. During in-depth interviews, stakeholders also identified potential indirect flow-on benefits arising from use of local goods and services by employees and contractors, such as spending in local retail shops and use of local services (public and private).

Engagement conducted in 2023 found continuing concerns regarding the influx of workers to the towns and how it could impact competition with casual labourers and shearers that usually come to the area. Further, there was concern for the ongoing sustainability of employment opportunities, with one stakeholder stating, “once the projects leave, everyone’s gone”.

Table 8.1 presents a conservative estimate of local hires needed for projects within 30 km of Dunedoo and 10 km of Gulgong which totals to 1,118 workers. This demand for employees may cause potential impacts on the availability of skilled labour across the region, should construction periods overlap substantially.

8.4 Workforce and accommodation

Without accommodation facility, it is expected that rental and short-term accommodation would face highly elevated demand in the local and regional areas. This is evidenced by engagement feedback received for the EIS SIA (EMM, 2022a) as well as other projects in the area, including Spicers Creek Wind Farm (Umwelt, 2023). The EIS SIA explained “that the local area had limited capacity to absorb the housing demand generated by the construction phase of the project given the multiple SSD projects in the area” (EMM, 2022a). As such, cumulative impacts on both rental housing and short-term accommodation were identified as critical issues.

With the establishment of workforce accommodation facilities, as proposed by the amendment, the impact from this project is expected to decrease substantially. However, in engagement completed in 2023, concerns were raised that the establishment of several facilities in the area “could mean an influx of 5,000 cumulative workers to local towns”.

This could have a flow-on effect to areas such as services, where health services noted that the cumulative workforce could create compounded pressure on medical services, resulting in an increased workload without extra assistance. This issue and mitigation, including provision of an onsite nurse, are discussed in section 7.2.3

8.5 Visual

Multiple projects in one locality can result in cumulative visual impacts on how the landscape is experienced. Cumulative visual impacts can arise from the presence of similar projects that may have a low impact individually, but when viewed together, can have a significant visual impact on the landscape. This may occur when:

- Multiple renewable energy projects within close proximity change perceptions of the area due to repeated exposure – this can be referred to as ‘sequential viewing’ and projects do not have to be seen simultaneously.
- Simultaneous views of multiple renewable energy projects from public or private viewing locations.

There are multiple renewable energy projects proposed in the surrounding area including a mix of solar and wind projects. Each of these projects will result in changes to the regional landscape which will likely affect how people experience their rural surroundings.

Cumulative views of renewable projects were a significant concern to stakeholders during 2023 SIA engagement. One stakeholder stated that the cumulative impacts of renewable projects in the area were “*overwhelming*”, particularly as other projects have been causing visual impacts, such as trees being knocked down. These concerns were repeated by several stakeholders, as another stakeholder mentioned that “*the country used to be for farm, now it seems to be for solar*”.

Arising from visual impacts is the concern from stakeholders of property devaluation from the several projects occurring in the region. The EIS SIA also reviewed consultation findings for similar projects in the locality such as Stubbo Solar Farm and Tallawang Solar Farm which reported similar existing concerns regarding potential property value impacts from cumulative major projects in the local and regional area.

The VIA (EMM 2023) found that within a 25 km radius, there is one operational solar farm, two approved solar farms, three solar farms in the planning stage, one wind farm in the planning stage and one wind farm on exhibition. The anticipated cumulative impacts from Barneys Reef Wind Farm are expected to have a low visual impact for residents near the accommodation facility and a low visual impact for travellers along the Central West Cycle Trail (Merotherie Road and Birriwa Bus Route South).

9 Mitigation and management

This section provides a summary of the identified social impacts along with the corresponding perceived stakeholder risk rankings and mitigated technical risk rankings. In addition, key potential stakeholder partners have been identified to participate in the monitoring and management of impacts, along with a range of proposed social impact mitigation and management strategies.

Not all of the potential impacts will be the responsibility of the applicant to mitigate or manage, their role may be to cooperate or inform the mitigation, provide data and information, through to direct responsibility for mitigation and management of the identified potential social impacts and the opportunity for partnerships.

This section assumes implementation of the monitoring and management framework from the EIS SIA.

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
A01	Accessibility	Impact on affordability and availability of rental housing	Way of life impacts (personal disadvantage) related to access to affordable housing. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium. 	Low	In addition to provision of the accommodation facility, ACEN will prepare a Accommodation and Employment Strategy (AES) for the project. The AES will seek to mitigate negative impacts and facilitate an increase in the extent of the geographic area for local hires, workforce accommodation, and enhanced local employment. ACEN will also progress industry engagement (i.e. with EnergyCo) in relation to the management of cumulative workforce accommodation issues.	Low
A02		Project contribution to restricted access to short-term accommodation	Accessibility impacts due to capacity of short-term accommodation. <ul style="list-style-type: none"> • Unmitigated: Very High • Mitigated: Medium. 	Medium	ACEN will prepare an AES for the project. The AES will include how the facility construction workforce will be accommodated, and where they will be accommodated. The AES will also describe the actions ACEN has taken or plan to take to further minimise pressure on the existing capacity of short-term accommodation in the local area. ACEN will continue to advocate with industry bodies such as EnergyCo for a strategic approach to understanding and managing cumulative workforce accommodation impacts from CWO REZ development, and will apply this approach to other ACEN projects. A Mudgee Tourism stakeholder suggested that project coordination with local businesses could broaden worker expenditure patterns and grow off-peak accommodation occupancy.	Low

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
A03		Reduced capacity and availability of community services	Accessibility related to community infrastructure and services. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium. 	Medium	<p>The approach to workforce accommodation of including a medical centre and first aid station with an onsite nurse is likely to reduce pressure on local health service providers, however the onsite nurse should not be sourced from the regional workforce due to existing issues with recruitment for rural positions.</p> <p>ACEN would seek to further reduce pressure through means previously proposed in the SIA by:</p> <ul style="list-style-type: none"> • engaging in regular communication with services and health care providers across the regional area • community benefit sharing with potential investment in initiatives that support service delivery and health awareness • prioritising local employment (where existing high competition would not result in negative impacts) and early investment in partnerships that provide job readiness, training and education outcomes that benefit different sectors of the community and the regional area • advocating with industry bodies such as EnergyCo for a strategic approach to understanding and managing cumulative impacts from REZ development • engaging with other renewable energy proponents in the regional area in relation to a coordinated response to manage potential workforce impacts on services and facilities across the regional area. 	Low

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L01	Livelihoods	Use of local goods and services (benefit)	Livelihood benefit related to use of local goods and services (Benefit) <ul style="list-style-type: none"> • Unenhanced: High • Enhanced: High. Community benefit related to growth and economic development <ul style="list-style-type: none"> • Unenhanced: Medium • Enhanced: Medium. 	High	ACEN will support local business by utilising established supply networks and providing sufficient opportunities and information for local businesses to tender for supply contracts. Wherever possible and practical, ACEN will work with the local businesses, and the local community to prioritise and use local goods and services.	High

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L02		Enhanced employment and training opportunities (benefit)	<p>Livelihood benefit related to access to employment and training opportunities (Youth). (benefit)</p> <ul style="list-style-type: none"> • Unenhanced: Medium • Enhanced: High. <p>Livelihood benefit related to access to employment and training opportunities (Aboriginal and Torres Strait Islander People). (benefit)</p> <ul style="list-style-type: none"> • Unenhanced: Low • Enhanced: Medium. 	Medium	<p>Two sectors to target for local employment for the project are Aboriginal and Torres-Strait islander people and youth. Engagement for this SIA has also indicated older workers previously employed at other sites, such as the mines, could contribute experience and benefit from the opportunity of employment at the facility. The ability to accommodate facility workers within the facility site would enhance the benefit for some local workers, for whom the expense of travel can reduce access to employment opportunities. Per the previous report:</p> <ul style="list-style-type: none"> • ACEN will prioritise hiring of workers with relevant skills residing within the local area. • ACEN will develop a Local Participation Plan and an Aboriginal Participation Plan that commits to employment and investment in job readiness by ACEN and its contracting partners. The APP will be supported by the Construction Phase SEP. • ACEN will work with local employment, apprenticeship and training agencies to enhance the potential of hiring local and regional workers. 	High

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L03		Limited workforce supply and job competition	<p>Livelihood impact due to limited workforce supply and job competition (construction)</p> <ul style="list-style-type: none"> • Unmitigated: Medium (negative) • Mitigated and enhanced: High (positive) <p>Livelihood impact due to limited workforce supply and job competition (operations)</p> <ul style="list-style-type: none"> • Unmitigated: Low (negative) • Mitigated and enhanced: Medium (positive) 	Medium	<p>As communicated against previous competition impacts related to infrastructure delivery, ACEN will ensure that project workforce and subcontracting needs are clearly communicated to subcontractors so that they can communicate any delays to their customers or hire additional employees to service their existing business.</p> <p>With the implementation of the described employment and training measures, more than likely the capacity of the local workforce and local businesses will have increased by the time the project is operational, thereby reducing potential for labour force competition during operations.</p>	Medium

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
L04		Impacts to nearby agricultural producers	Livelihood impacts to the agricultural sector. <ul style="list-style-type: none"> • Unmitigated: High (negative) • Mitigated and enhanced: Medium (positive). 	High	As identified in the previous SIA, ACEN will implement measures including: <ul style="list-style-type: none"> • Landholder agreements for associated and non-associated landholders. • Engage in frequent communication with landholders and ensure early provision of information regarding the predicted construction impacts to prepare landholders for impacts that cannot be fully mitigated and to provide an opportunity for landholder feedback and engagement. • Implement gate and property access procedures, specific to individual landholder needs and requests. These measures will also address potential impacts of conflicting land uses related to the accommodation facility.	Low

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
S01	Surroundings	Changes in amenity due to generation of dust, noise, vibration and lighting.	<p>Way of life impacts (changes in social amenity) resulting from construction activities.</p> <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Medium <p>Way of life impacts (changes in social amenity) resulting from project operation.</p> <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Medium. <p>Health impacts arising from sleep disturbance due to operational noise</p> <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low. 	Medium	ACEN will implement a Complaints and Grievances Procedure. The procedure will provide an opportunity for stakeholders to raise complaints, grievances, and provide feedback. The procedure will facilitate the timely response to stakeholder complaints and grievances and enable the monitoring and reporting of grievances and ACEN response.	Medium
S02		Changes to the visual landscape affecting how neighbours and other stakeholders experience their surroundings	<p>Surroundings impacts experienced by near neighbours due to changes in the visual landscape.</p> <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium <p>Surroundings impacts experienced by other stakeholders due to changes in the visual landscape.</p> <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low. 	High	Adaptation of previous proposed mitigation to incorporate landscape and visual screening elements for the facility as part of the project to reduce the visual impact of the project, as viewed from the local road network and key visual receivers.	Medium

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
S03		Impact to surroundings from changes in ecological values and natural assets	Surroundings impacts due to changes in ecological values and the quality of natural assets. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Low 	Medium	Adaptation of the CEMP and OEMP prepared for the project to include facility construction, operation and removal.	Low
S04		Perceived reduction in local property values.	Livelihood impacts due to changes in rural property values. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Low 	Medium	In addition to mitigations proposed for the above impacts and consideration in siting the workforce accommodation facility, ACEN will also include the facility in the following measures proposed in the previous SIA to reduce impacts to neighbour properties and thus minimise potential risk of property devaluation: <ul style="list-style-type: none"> • buffer zones during construction works to minimise potential noise impacts at neighbouring residences • a TMP and Driver Code of Conduct to minimise potential impacts on the safety and serviceability of the local road network • an AES to manage potential for adverse impacts to occur from the construction workforce. In addition, the facility location will be completely remediated upon cessation of use.	Medium

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
C01	Culture	Change to land use results in a sense of loss of cultural heritage for Aboriginal and Torres Strait Islander people	Cultural impacts related to Aboriginal and Torres Strait Islander Values: <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium. 	High	Long-term management of Aboriginal objects identified within the development footprint (including the facility site) will be undertaken in consultation with the RAPS. Identified sites outside the disturbance footprint will be protected during the construction of the project through the use of high-visibility temporary fencing. The location of all sites will be shown on all appropriate plans to ensure that they are not inadvertently harmed. Aboriginal and Torres Strait Islander Organisations in the regional area or with cultural interests in the local area will be encouraged to engage with ACEN regarding shared value investment opportunities.	Medium
HW01	Health and wellbeing	Safety risks for transport network users	Public safety related to increased traffic movements on the local road network. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium. Health and wellbeing impacts related to safe use of the Central West Cycle Trail <ul style="list-style-type: none"> • Unmitigated: Very High • Mitigated: High. 	Very High	A detailed CTMP will be developed and implemented for all phases of the project and will involve engagement with school bus operators, CWC Trail Inc. MWRC, WSC and TfNSW. The CTMP will include a Drive Code of Conduct. Road upgrades will be undertaken such as resurfacing and widening along Barneys Reef Road and Birriwa Bus Route South, and new intersection treatment on Castlereagh Highway at the Castlereagh Highway/Barneys Reef Road intersection. Subject to demand ACEN will implement a bus service to and from the project for construction workers residing in Mudgee and Gulgong. ACEN will also encourage carpooling. ACEN has engaged and will continue to engage in frequent and tailored communication with CWC Trail Inc. The CTMP will include a Driver Code of Conduct and will include direction for drivers on the road to not travel within 100 m of, or overtake, cyclists on Birriwa Bus Route South. Speed limits on Birriwa Bus Route South and Barney’s Reef Road will be reduced to 80 km/hr for regular traffic.	Medium

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
HW02		Improved worker health and wellbeing (benefit)	New benefit	Medium	The accommodation facility provides a benefit for worker health and safety (and the safety of other road users) by reducing the risk of fatigue associated with travel from the site to accommodation. This benefit could be further enhanced by ensuring facility design further facilitates rest and relaxation and provision of onsite mental health support.	High
HW03		Risks associated with an increase in population in an isolated location, close to rural properties	Changes to the character and cohesion of communities in the local area due to an influx of temporary population. <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Medium. 	Medium	Implementation of safety measures within the facility, including security patrols and adequate fencing and worker training, as well as complaints reporting processes for nearby landholders.	Low

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
HW04		Health and wellbeing impacts related to bushfire risk	Health and wellbeing due to fire risk to public safety. <ul style="list-style-type: none"> • Unmitigated: High • Mitigated: Medium 	Very High	<p>Measures to manage bushfire risk include:</p> <ul style="list-style-type: none"> • ACEN will prepare a BMP including an ERP for all phases of the project. In preparing and implementing the BMP and ERP, ACEN will consult with the Gulgong and Dunedoo Fire Services, the Birriwa RSF as well as the Cudgegong RFS, MWRC, WSC, and NSW Fire and Rescue. • A dedicated water storage facility will be located on the development footprint, to allow for permanent emergency supply and ease of access. • Equipment in use will be monitored (i.e. fire and smoke detectors) and will provide early detection to reduce fire risk. • Internal access roads will be maintained at all Health and wellbeing due to stress and times to provide safe, reliable and unobstructed passage for fire vehicles. • The proposed CW and Orana solar projects CBSP would provide an opportunity for the local RFS operations to access funding for training and infrastructure investments. <p>In addition, the facility offers the opportunity to have trained volunteer firefighters from the project workforce permanently onsite to reduce risk. Further measures, such as designated smoking areas and cigarette bins within the facility will also need to be included in the BMP and ERP.</p> <p>Internal vehicle traffic between the accommodation facility and worksites will also be limited to established access roads.</p>	Medium

Table 9.1 Summary of mitigation and management strategies for the amended project

ID	Social impact theme	Matter (Impact on people)	Impact previously assessed in the EIS	Perceived risk (Unmitigated/Unenhanced)	Proposed mitigation and management strategies	Residual impact significance (Mitigated/Enhanced) of the amended project
HW05		Health and wellbeing impact due to project related stress and anxiety	Health and wellbeing impacts due to project related stress and anxiety (associated and non-associated landholders). <ul style="list-style-type: none"> • Unmitigated: Medium • Mitigated: Medium. Health and wellbeing impacts due to project related stress and anxiety (Broader communities of the local area). <ul style="list-style-type: none"> • Unmitigated: Low • Mitigated: Low. 	Medium	ACEN has engaged and will continue to engage in frequent and tailored communication with associated and non-associated landholders. This will ensure individuals are kept informed of the project and provided with an opportunity to ask questions or raise issues and concerns.	Medium
D01	Decision-making systems	Lack of trust in decision-making systems	New impact	Medium	In addition to mitigations proposed in Section 7.5.5, the NSW government and particularly Energy Co have a role in ensuring that approval processes sufficiently consider impacts on communities, per relevant regional plans and strategies.	Medium

10 Conclusion

This SIA addendum report identifies and evaluates the potential social impacts and benefits of the project by undertaking a review of impacts and benefits identified in the SIA (EMM, 2022a) to consider the effect of the workforce accommodation facility and updated community feedback. The SIA was completed in compliance with applicable legislation and guidelines, including the SIA Guideline (DPE 2021a).

The SIA study areas were defined to reflect the geographic distribution of different types of social impacts and benefits. The local study area and key townships consist of the communities that may experience both direct and indirect social impacts from the project and includes Birriwa, Merotherie and Dunedoo. Key townships within the local study area expected to act as service hubs are Gulgong and Mudgee. The regional study area is the Mid-Western Regional, Warrumbungle Shire, and Dubbo Regional Local Government Areas, which are likely to experience few direct and more indirect social impacts of the Project.

Through primary and secondary research, this SIA addendum has sought to identify social impacts and benefits associated with the construction and operation of the project. Project impacts and benefits accrue particularly in the local area, and will also be experienced in key townships and the regional study area.

The assessment of impacts and benefits associated with the amendment concludes that the addition of the accommodation facility substantially reduces the significance of key social impacts which would otherwise be experienced by the community. It would also further enhance a number of social benefits associated with the project and generate new benefits. Specifically, the accommodation facility:

- Limits the impact on regional housing availability and affordability during the construction phase of the project as demonstrated by:
 - Impact on affordability and availability of rental housing - previously Medium (negative), now Low (negative) mitigated risk.
 - Project contribution to restricted access to short-term accommodation - previously Medium (negative), now Low (negative) mitigated risk.
 - Reduced capacity and availability of community services - previously Medium (negative), now Low (negative) mitigated risk.
- Avoids temporary construction workers utilising the limited tourist accommodation available, which is important to the regional economy:
 - The effect of the proposed amendment is to resolve the tourism impact identified in the EIS SIA.
- Provides contracting and employment opportunities for local providers for the construction and servicing of the accommodation facility:
 - Enhanced employment and training opportunities remain a High (positive) enhanced benefit.
- Reduces safety risks associated with traffic movements through accommodating the majority of the workforce in one location:
 - Risks associated with an increase in population in an isolated location, close to rural properties - previously medium community cohesion risk, now low (negative) mitigated risk.
- Enhances health and well-being for workers through appropriate accommodation design and reduced fatigue:

- New improved worker health and wellbeing (High) enhanced benefit.

There are no High or Very High mitigated impacts. The residual 'medium' mitigated impacts associated with the accommodation facility principally include amenity impacts during project construction, and are outlined in Table 10.1.

Table 10.1 Medium mitigated impacts

ID	Category	Impact	SIA 2022 Impact and Significance (mitigated)	Significance (mitigated)
L03	Livelihoods	Limited workforce supply and job competition	Livelihood impact due to limited workforce supply and job competition (construction) Significance (Mitigated and enhanced): High (positive) Livelihood impact due to limited workforce supply and job competition (operations) Significance (Mitigated and enhanced): Medium (positive)	Medium
S01	Surroundings	Changes in amenity due to generation of dust, noise, vibration and lighting.	Way of life impacts (changes in social amenity) resulting from construction activities. Significance (mitigated): Medium Way of life impacts (changes in social amenity) resulting from project operation. Significance (mitigated): Medium Health impacts arising from sleep disturbance due to operational noise Significance (mitigated): Low	Medium
S02		Changes to the visual landscape affecting how neighbours and other stakeholders experience their surroundings	Surroundings impacts experienced by near neighbours due to changes in the visual landscape. Significance (mitigated): Medium Surroundings impacts experienced by other stakeholders due to changes in the visual landscape. Significance (mitigated): Low	Medium
S04		Perceived reduction in local property values	Livelihood impacts due to changes in rural property values. Significance (mitigated): Low	Medium
C01	Culture	Change to land use results in a sense of loss of cultural heritage for Aboriginal and Torres Strait Islander people	Cultural impacts related to Aboriginal and Torres Strait Islander Values: Significance (mitigated): Medium	Medium
HW01	Health and wellbeing	Safety risks for transport network users	Public safety related to increased traffic movements on the local road network. Significance (mitigated): Medium Health and wellbeing impacts related to safe use of the Central West Cycle Trail Significance (mitigated): High	Medium
HW04		Health and wellbeing impacts related to bushfire risk	Health and wellbeing due to fire risk to public safety. Significance (mitigated): Medium	Medium
HW05		Project related stress and anxiety	Health and wellbeing impacts due to project related stress and anxiety (associated and non-associated landholders). Significance (mitigated): Medium Health and wellbeing impacts due to project related stress and anxiety (Broader local communities). Significance (mitigated): Low	Medium

Table 10.1 Medium mitigated impacts

ID	Category	Impact	SIA 2022 Impact and Significance (mitigated)	Significance (mitigated)
D01	Decision-making systems	Lack of trust in decision-making systems	New impact	Medium

The assessment merged previous livelihood and community benefits and introduced one new benefit and found that social benefits had a high enhanced level of significance. The social benefits of the amendment are presented in Table 10.2.

Table 10.2 Social Benefits

ID	Category	Benefit	EIS SIA Benefit and Significance (enhanced)	Significance (enhanced)
L01	Livelihoods	Use of local goods and services	Livelihood benefit related to use of local goods and services Significance (Enhanced): High	High (benefit)
			Community benefit related to growth and economic development Significance (Enhanced): Medium	
L02		Enhanced employment and training opportunities	Livelihood benefit related to access to employment and training opportunities (Youth). Significance (Enhanced): High	High (benefit)
			Livelihood benefit related to access to employment and training opportunities (Aboriginal and Torres Strait Islander People). Significance (Enhanced): Medium	
HWO 2	Health and wellbeing	Improved worker health and wellbeing	New benefit	High (benefit)

Acronyms and abbreviations

Acronym/abbreviation	
ABS	Australian Bureau of Statistics
AC	Alternating current
ACHA	Aboriginal cultural heritage assessment
AHIMS	Aboriginal Heritage Information Management System
AHRC	Australian Human Rights Commission
AHURI	Australian Housing and Urban Research Institute
AIHW	Australian Institute of Health and Welfare
BESS	Battery energy storage system
BOCSAR	Bureau of Crime Statistics and Research
CWO	Central-West Orana
DC	Direct current
DAWE	Department of Agriculture, Water and the Environment
DPIE	Department of Planning, Industry and Environment (Old DPE reference)
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EIS	Environmental Impact Statement
EMM	EMM Consulting Pty Ltd
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPA	Environment Protection Authority
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EEC	Endangered ecological community
EIS	Environmental Impact Statement
EMM	EMM Consulting Pty Limited
EnergyCo	Energy Corporation of NSW
ha	Hectares
IAIA	International Association for Impact Assessment
Km	Kilometres
kV	Kilovolt
LALC	Local Aboriginal Land Council
LGA	Local Government Area

Acronym/abbreviation	
LHD	Local Health District
LEP	Local Environmental Plan
MW	Megawatts
NBSP	Neighbour Benefit Sharing Program
NSW	New South Wales
Planning Systems SEPP	<i>State Environmental Planning Policy (Planning Systems) 2021</i>
PV	Photovoltaic
RAPs	Representative Aboriginal Parties
REZ	Renewable Energy Zone
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	Socio-Economic Indexes for Areas
SES	State Emergency Service
SIA	Social impact assessment
SIA Guideline 2023	Social Impact Assessment Guideline for State Significant Projects
SIA Technical Supplement 2023	Technical Supplement: Social Impact Assessment Guideline for State significant Projects
SSC	State suburb classification
SSD	State Significant Development
STE	State/Territory
SIA	Social impact assessment
TIA	Traffic impact assessment
ACEN	ACEN Australia Pty Ltd

References

- ABS. (2021a). Census of Population and Housing: General Community Profiles. Australian Bureau of Statistics.
- ABS. (2022, August 25). Counts of Australian Businesses, including Entries and Exits. Australian Bureau of Statistics.
- AHRC. (2008). *Homelessness is a Human Rights Issue*. Sydney: Australian Human Rights Commission.
- AHRC. (n.d.). *Homelessness*. Retrieved from Australian Human Rights Commission: <https://humanrights.gov.au/our-work/education/homelessness>
- AHURI . (2019a). *Understanding the 30:40 indicator of housing affordability stress*. Retrieved from Australian Housing and Urban Research Institute: <https://www.ahuri.edu.au/policy/ahuri-briefs/3040-indicator>
- AHURI. (2019). *Understanding the 30:40 indicator of housing affordability stress, Australian Housing and Urban Research Institute*. Retrieved from <https://www.ahuri.edu.au/policy/ahuri-briefs/3040-indicator>
- AIHW. (2022). *Indigenous mental health, housing and homelessness*. Australian Government.
- Ask Izzy. (2021). *Search*. Retrieved from Ask Izzy: <https://askizzy.org.au/>
- Briggs, C., Gill, J., Atherton, A., Langdon, R., Jazbec, M., Walker, T., . . . Nagrath, K. (2022). *Employment, Skills and Supply Chains: Renewable Energy in NSW - Final Report*. Sydney, NSW: Sydney: University of Technology Sydney and SGS Economics and Planning.
- Burdge, R. (2015). *A Community Guide to Social Impact Assessment: . Fourth Edition*, Colorado: University Press of Colorado, p.87.
- Clean Energy Council. (2021). *Australian Guide to Agrisolar for Large-Scale Solar: For proponents and farmers*. Clean Energy Council.
- Department of Regional NSW. (2023). *Central Orana Regional Economic Development Strategy – 2023 Update*. NSW Government.
- DPE. (2022a). *Cumulative Impact Assessment Guidelines for State Significant Projects*. NSW Government.
- DPE. (2022b). *State significant development guidelines - preparing an amendment report*. NSW Government.
- DPE. (2022b). *Undertaking Engagement Guidelines for State Significant Projects*. Sydney: NSW Government.
- DPE. (2022c). *Revised Large-Scale Solar Energy Guideline*. NSW Government. Retrieved from https://shared-drupal-s3fs.s3.ap-southeast-2.amazonaws.com/master-test/fapub_pdf/Lisa+Drupal+Documents/16007_DPIE+Large+Scale+Solar+Energy+Guidelines_26-9-22.pdf
- DPE. (2022d). *Central West and Orana Regional Plan 2041*. Retrieved from NSW Department of Planning and Environment: <https://www.planning.nsw.gov.au/-/media/Files/DPE/Plans-and-policies/Plans-for-your-area/Regional-plans/Central-West-and-Orana-Regional-Plan-2041.pdf?la=en>
- DPE. (2023a). *Social Impact Assessment Guideline for State Significant Projects*. Canberra: NSW Government. Retrieved from NSW Government.
- DPE. (2023b). *SIA Guideline Technical Supplement*. Sydney: NSW Government.
- DPIE. (2019). *NSW Electricity Strategy*. Department of Planning, Industry and Environment.

- DPIE. (2020a). *NSW Electricity Infrastructure Roadmap: Building an Energy Superpower Detailed Report*. Department of Planning, Industry and Environment.
- DPIE. (2020b). *Energy Security Target and Safeguard*. Parramatta: State of NSW and Department of Planning, Industry and Environment.
- DPIE. (2020c). *Net Zero Plan Stage 1 2020–2030*. Parramatta: Department of Planning, Industry and Environment.
- Dubbo Regional Council. (2022). *Towards 2040: Community Strategic Plan*. Retrieved from Dubbo Regional Council: <https://www.dubbo.nsw.gov.au/About-Council/Our-Responsibilities/community-strategic-plan>
- EMM. (2021). *Birriwa Solar Farm and Battery Project: Scoping Report*. UPC\AC Renewables Australia.
- EMM. (2022a). *Birriwa Solar and Battery Project: Social Impact Assessment*. ACEN Australia.
- EMM. (2022b). *Birriwa Solar and Battery Project: Environmental Impact Statement*. ACEN Australia.
- EMM. (2023). *Birriwa Solar and Battery Project: Submissions report*. EMM Consulting.
- EMM. (2023b). *Birriwa Solar and Battery Project: Addendum Report*. EMM Consulting.
- EnergyCo. (2023). *Central-West Orana Renewable Energy Zone*. Sydney: NSW Government.
- Jobs and Skills Australia. (2023, June). *Recruitment Experiences and Outlook Survey*. Retrieved May 2023, 21, from Jobs and Skills Australia: <https://www.jobsandskills.gov.au/work/recruitment-experiences-and-outlook-survey>
- Mid-Western Regional Council. (2022). *Delivery Program 2017/18 - 2012/22 Operational Plan 2021/22*. Mid-Western Regional Council.
- MWRC. (2018). *Regional Economic Development Strategy 2018-2022*. Retrieved March 29, 2022, from Mid-Western Regional Council: <https://www.midwestern.nsw.gov.au/Business/Invest-in-the-Mid-Western-Region/Economic-Development-Strategy>
- MWRC. (2022). *Towards 2040 Mid-Western Region Community Plan*. Mid-Western Regional Council. Retrieved March 29, 2022, from <https://www.midwestern.nsw.gov.au/files/assets/public/council/plans-and-strategies/plan-community-plan-towards-2030.pdf>
- NRSPP. (2016). *National Road Safety Partnership Program*. Retrieved from Fact Sheet: Drink Driving: <https://www.nrspp.org.au/resources/fact-sheet-drink-driving/#:~:text=This%20fact%20sheet%20focuses%20on,of%20fatal%20crashes%20in%20Australia.&text=Over%201%20in%204%20drivers,BAC%20exceeding%20the%20legal%20limit.>
- NSC. (2022, April). *Recruitment Experiences and Outlook Survey*. Retrieved from National Skills Commission.
- NSW Agriculture Commissioner. (2022). *Renewable energy generation and agriculture in NSW's rural landscape and economy – growth sectors on a complementary path*. NSW Government.
- NSW Country and Picnic Racing. (n.d.). *About Us*. Retrieved April 28, 2022, from NSW Country and Picnic Racing: <https://www.nswcountryandpicnicracing.com.au/sample-page/>
- NSW DPI. (2022). *Renewable Energy and Agriculture in NSW: Issues paper*. NSW Government.
- NSW Government. (2013). *Warrumbungle Local Environmental Plan 2013*.

- NSW Government. (2018a). *Central Orana Regional Economic Development Strategy 2018-2022*. Retrieved from Regional Economic Development Strategy: <https://www.nsw.gov.au/sites/default/files/2020-05/Central%20Orana%20REDS.pdf>
- NSW Government. (2018b). *Castlereagh Regional Economic Development Strategy 2018-2022* . Retrieved from Regional Economic Development Strategy: <https://www.nsw.gov.au/sites/default/files/2020-06/Castlereagh%20REDS.pdf>
- NSW Government. (2021). *20-Year Economic Vision for Regional NSW*. NSW Government. Retrieved from https://www.nsw.gov.au/sites/default/files/2021-02/20%20Year%20Vision%20for%20RNSW_0.pdf
- NSW Government. (2021). *Mid-Western Regional Local Environmental Plan 2012*. (Version for 1 December 2021). NSW Government. Retrieved March 29, 2022, from <https://legislation.nsw.gov.au/view/html/inforce/current/epi-2012-0374#sec.1.1>
- NSW Government. (2022). *Central-West Orana Renewable Energy Zone*. Energy Corporation of NSW.
- OEH. (2016). *NSW Climate Change Policy Framework*. Sydney South: Office of Environment and Heritage.
- Office of Energy and Climate Change. (2022). *First Nations Guidelines: Central-West Orana* . Retrieved from EnergyCo: https://www.energy.nsw.gov.au/sites/default/files/2022-08/first-nations-guidelines-increasing-central-west-orana-income-and-employment-opportunities-from-electricity-infrastructure-projects_0.pdf
- Ramboll. (2020). *Stubbo Solar Farm Environmental Impact Statement* . Ramboll.
- SafeWork NSW. (2023). *SafeWork NSW*. Retrieved from Hazards - Fatigue: SafeWork NSW
- Sato, K. (2023, July 10). <https://www.abc.net.au/news/2023-07-10/locals-forced-to-leave-mudgee-amid-rental-crisis/102574266>. Retrieved from ABC News: <https://www.abc.net.au/news/2023-07-10/locals-forced-to-leave-mudgee-amid-rental-crisis/102574266>
- TfNSW. (2020). *Transport for NSW | Centre for Road Safety*. Retrieved from Drink driving attitudes and behaviours in NSW: <https://www.transport.nsw.gov.au/system/files/media/documents/2023/Drink%20driving%20attitudes%20and%20behaviours%20in%20NSW%20-%20Summary%20Report.pdf>
- Tuck, J. T. (2013). *Wellbeing of fly-in/fly-out and drive-in/drive-out employees: Evidence from Australia. s.l., s.n.*
- Umwelt. (2023). *Appendix 21.0: Social Impact Assessment*. Umwelt.
- UTS Institute for Sustainable Futures and SGS Economics and Planning. (2022). *Employment, Skills and Supply Chains: Renewable Energy in NSW. Prepared for Department of Planning, Industry and Environment on behalf of the Renewable Energy Sector Board*. Retrieved from <https://www.energy.nsw.gov.au/sites/default/files/2022-09/employment-skills-and-supply-chains-renewable-energy-in-nsw-final-report.pdf> (Accessed: 11th July 2023).
- Warrumbungle Shire Council. (2022). *Community Strategic Plan 2022-2037*. Warrumbungle Shire Council.
- Warrumbungle Shire Council. (2022). *Warrumbungle Shire Council Community Strategic Plan 2022/2037*. Retrieved from Warrumbungle Shire Council: https://www.warrumbungle.nsw.gov.au/ArticleDocuments/707/Warrumbungle%20Shire%20Community%20Strategic%20Plan%202022-2037_FINAL.pdf.aspx#:~:text=The%20Community%20Strategic%20Plan%20provides,by%20Council%20in%20the%20future.

WSC. (2022). *Warrumbungle Shire Council Community Strategic Plan 2022/2037 Draft*.

Attachment A

SIA Guideline Response

The SIA review questions as outlined in the SIA Guideline 2023 (DPE, 2023a) and corresponding responses are presented in Table A.1.

Table A.1 Responses to SIA Guideline review questions

Reference number	SIA Guideline review question	Response
General		
1	Does the lead author of the SIA Report meet the qualification and experience requirements?	Yes – see Section 1.4i and Attachment B
2	Has the lead author of the SIA Report provided a signed declaration certifying that the assessment does not contain false or misleading information?	Yes – see Section 1.4ii
3	Would a reasonable person judge the SIA Report to be impartial, rigorous, and transparent?	Yes.
Project’s social locality and social baseline		
4	Does the SIA Report identify and describe all the different social groups that may be affected by the project?	Yes – see Chapters 3, 5, 6
5	Does the SIA Report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	Yes – see Chapters 5, 6, 7
6	Does the SIA Report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects?	Yes – see Chapters 3, 4, 5, 6, 7
7	Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the full diversity of views and potential experiences?	Yes – see Chapters 3, 4, 5, 6, 7 and Attachment D
8	Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Yes – see Chapters 3, 5 and 7.
Identification and description of social impacts		
9	Does the SIA Report adequately describe potential social impacts (whether negative, positive, tangible, intangible, perceived, and/or cumulative) from the perspectives of how people may experience them, and explain the research used to identify them? Where the assessment is partially complete, and expected to be completed in Phase 2 SIA, has this been explained?	Yes – see Chapters 6, 7, and 8
10	Does the SIA Report apply the precautionary principle to social impacts, and consider how they may be experienced differently by different people and groups (i.e. distributive equity)?	Yes – see Chapters 3, 4, 5, and 7
11	Does the SIA Report describe how the preliminary analysis influenced both the project design and EIS Engagement Strategy?	Yes – see Chapters 6 and 7
Community engagement		
12	Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	Yes – see Chapters 2, 4, and 5 and Attachment F
13	How have the views, concerns, and insights of affected and interested people influenced both the project design and each element of the SIA Report (e.g. the social baseline, predicting impacts, and mitigation/enhancement measures)?	Yes – see Chapters 3, 4, 5, 6 and 7 and Attachment D

Table A.1 Responses to SIA Guideline review questions

Reference number	SIA Guideline review question	Response
Predicting and analysing social impacts		
14	Does the SIA Report impartially focus on the most material social impacts at all stages of the project life cycle, without any omissions or misrepresentations?	Yes – see Chapters 6 and 7
15	Does the SIA Report identify the matters to which the precautionary principle could or should be reasonably applied?	Yes – see Chapter 6
16	Does the SIA Report analyse the distribution of both positive and negative social impacts, and the equity of this distribution?	Yes – see Chapter 6
17	Does the SIA Report identify its assumptions, and include sensitivity analysis and alternative scenarios (including ‘worst-case’ and ‘no project’ scenarios where relevant)?	Yes – see Chapters 3.3, 4, 5, 6 and 7
Evaluating significance		
18	Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the project, including any cumulative effects?	Yes – see Chapters 5, 6, 7
19	Are the evaluations of significance disaggregated to consider the potentially different experiences for different people or groups, especially vulnerable groups?	Yes – see Chapters 4, 5 and 7
Responses, monitoring and management		
20	Does the SIA Report propose responses (i.e. mitigations and enhancements) that are tangible, deliverable by the proponent, likely to be durably effective, and directly related to the respective impact(s)?	Yes – see Chapters 7 and 9
21	How can people be confident that social impacts will be monitored and reported in ways that are reliable, effective, and trustworthy?	See Chapters 7 and 9
22	How will the proponent adaptively manage social impacts and respond to unanticipated events, breaches, grievances, and non-compliance?	See Chapters 7 and 9

Attachment B

Authors Curriculum vitae



Breannan Dent
Senior Social Planner
EMM Consulting Pty Limited

Professional Overview

Breannan is a Senior Social Planner with 8 years' experience in urban planning and community engagement.

With a track record of robust research and a comprehensive understanding of planning policy, Breannan can distil complex information into simple and approachable documents and conversations.

Breannan has managed and delivered planning proposals, new local planning controls and community engagement strategies.

Breannan taps into existing expertise and opportunities by fostering collaborative relationships through genuine interest and integrity.

Breannan's outstanding customer focus, intrapersonal skills, problem solving skills and work ethic have allowed her to support her colleagues in delivering future-focused projects with excellent design, sustainability and resilience outcomes for the community.

Qualifications and licences

Masters of Urban Management and Planning, University of Western Sydney, 2014

Bachelor of Social Science, University of Western Sydney, 2013

Major in Urban Geography, University of Western Sydney, 2013

Sub-Major in Peace and Development Studies, University of Western Sydney, 2013

Specialisation

Social Impact Assessment

Community and Stakeholder Engagement

Statutory Planning

Representative experience

Senior Planner Penrith City Council

- Employment Zones Reform, reviewing and reconciling proposed changes to Commercial Centre and Heavy Industrial zones from the existing Penrith Local Environment Plan (LEP) 2010 controls to the proposed changes under the Standard Instrument (Local Environmental Plans) Order 2006.

Acting Senior Planner Penrith City Council

- 61–79 Henry Street, Penrith Planning Proposal to amend Penrith LEP 2010, assessment of a planning proposal which involved extensive negotiations with the proponent and reporting to the Local Planning Panel and Councillor Briefings.
- DCP Controls for Urban Heat, revised and refined considerations previously posted as part of the proposed future sustainability controls in Development Control Plan Review 2022 which involved working on project deliverables, leading internal and industry engagement and reporting the project to Council for endorsement.

Planner Penrith City Council

- DCP Review 2022, Stage 1, reviewing and amending controls for Stage 1 of Penrith's Development Control Plan Review, developing controls for sustainability and industrial land, amending and developing controls for business and commercial land, manor houses and the Erskine Park precinct. Involved reviewing strategies, studies, demographic information and community engagement responses to determine the community's needs.

- Rodgers Street Planning Proposal to amend Penrith LEP 2010, managing the Gateway process, Local Planning Panel referral, public exhibition, heading and traffic, flood evacuation and property history matters; managing the engagement of consultants and demonstrating transparency and superior stakeholder management.
- Four Sites in Penrith and St Marys Planning Proposal to amend Penrith LEP 2010, planning proposal for a gateway determination with DPIE, engagement and reporting within prescribed timeframes and planning legislation and processes.
- Penrith DCP 2014 amendment to Site Planning and Design, Vegetation Management, Notification and Advertising, Boarding Houses and Outdoor Dining and Trading chapters. Involved managing a series of amendments to improve consistency with local and state policies, address contentious boarding house development matters, coordinate internal contributions, address community needs and ensure legal consistency.
- Seven sites at Reynolds Road and The Driftway, Londonderry Planning Proposal to amend Penrith LEP 2010, managing initial stages of the planning proposal including communication and developing proponent relations.
- Community Engagement Strategy and Community Participation Plan (CPP), development and participation in specialised engagement processes for the CPP; prepared, exhibited, reported and finalised housekeeping amendments to the CPP.
- Australian Arms Hotel Planning Proposal to amend Penrith LEP 2010, project managed the planning proposal from commencement to conclusion in accordance with the procedure for preparing a Local Environmental Plan.
- 176–202 Victoria St, Werrington Planning Proposal to amend Penrith LEP 2010, assessment of a planning proposal seeking reclassification and rezoning of Council owned land involving key considerations of rezoning and traffic management.
- 11–13 Chesham St, St Marys Planning Proposal to amend Penrith LEP 2010, managing the public exhibition, public hearing and reporting processes for the project within tight deadlines.

- Boarding Houses and Multi Dwelling Housing DCP 2014 amendment, amendment of DR Residential Development and chapters of the DCP 2014, included addressing priority issues with boarding houses and multi-dwelling housing developments, identifying outcomes through community submissions, application assessments and management plans.

Community and Stakeholder Relations Office RPS

- Garden Island Wharf Extension Proposal, proposal to extend the Garden Island wharf, involving communicating elements of the proposal to the public and developing communication strategies and materials to ensure the project complied with conditions of consent (Department of Defence).
- Green Square Stormwater Drain Project, community and stakeholder relations office responsible for internal communications and liaising with the community and stakeholders (City of Sydney Council and Sydney Water Corporation).
- Sydney Water Delivery Management team, assessed the community impact of new infrastructure and renewal projects, delivered communication strategies for work on multiple assets across the Sydney Water network (Sydney Water Corporation).
- Balmain Pumping Station renewal, delivered effective communication to the community for the high profile project, assisting to complete both project work and manage existing community issues (Sydney Water Corporation).

Graduate Community Relations Officer

- Priority Sewerage Program, community relations officer. Communicating the complex infrastructure project program, liaising with government officials, stakeholders and project leaders, communicating with and representing community members and producing communications materials including newsletters and web content. Breannan offered expert advice on the projects history during project planning for an investigation of customer connections into the PSP systems (Priority Sewerage Program Alliance and Sydney Water Corporation).
- Lime Kiln Bay Overflow, graduate consultant for the project involving collating community responses and producing reports outlining community feedback on the proposed site (Sydney Water Corporation).
- Northern Beaches Hospital Project, worked to establish first contact with residents regarding contentious infrastructure plans, provided community relations services including stakeholder engagement and collating community feedback (Roads and Maritime Services).
- Lord Howe Island LEP Review, developed community surveys to capture community views on the plans and identify opportunities for project improvement which involved data management, reporting and research, events management and project launch management (Lord Howe Island Board).



Chris Mahoney

Associate Director, National Technical Leader
EMM Consulting Pty Limited

Professional Overview

Chris is one of Australia's most experienced social analysts. With over 25 years' professional experience, Chris has delivered social and economic assessments, social analysis and advice for a multitude of major projects and policy initiatives.

Chris focusses is on providing practical, grounded research to find solutions to complex social problems and enable social opportunities to be realised. He is highly adept at managing the interface between governments, industry and the community to derive the best possible outcomes. He has had the opportunity to work in a diverse range of social settings, having led projects throughout Australia, the Pacific and Asia. As a qualified land use and social planner Chris has contributed to major infrastructure plans, development plans and land use planning policy. Chris also maintains operation of a family farm and is passionate about social opportunities for residents of rural and regional Australia.

Chris possesses exceptional social research skills which have been refined in the course of delivering over 150 complex social impact assessments and other forms of social analysis. He brings a technically skilled yet pragmatic approach which focuses on the realisation of optimal solutions for complex social problems. Chris fosters a highly collaborative approach to development and implementation of social risk mitigation and management and the adaptive management of social risk and opportunity.

Qualifications and licences

Master of Urban and Regional Planning (Environmental Planning),
Griffith University

Bachelor of International Economic Relations, Griffith University

Member of the International Association of Impact Assessment
(IAIA): Social Impact Assessment Group

Member of the Planning Institute of Australia (PIA)

Specialisation

Provision of Social Performance specialist advice

Delivery of Impact Assessments (SIA) for large projects

Provision of community engagement programs

Design and delivery of community development initiatives

Representative experience

- Warragamba Dam Project, Chris was the lead author of the Socio-economic Impact Assessment (SEIA) for this contentious project. Chris designed and delivered a stakeholder engagement program to inform the SEIA involving 9 local government authorities, more than 80 different business interests and 250 representatives of community interests. The SEIA included a rigorous assessment of social vulnerability across a study area of more than 2 million people. NSW (Water Infrastructure NSW).
- The Oven Mountain Pumped Hydro Energy Storage project is situated in the New England Renewable Energy Zone and will provide reliable energy generation and storage capability with reservoirs able to store water for up to 12 hours of energy generation. Chris provided technical oversight of the Social Impact Assessment (SIA). This was informed by an extensive community and stakeholder engagement program which included two public surveys and interviews with over 50 key stakeholders. The SIA met all requirements of the NSW Social Impact Assessment Guideline (2021).
- North Coast Connect Faster Rail, Chris was the Social Technical Lead for the North Coast Connect Consortium which delivered the Business Case for a fast rail service between Brisbane and the Sunshine Coast. He was responsible for the delivery of the Service Needs and Social Risk Assessment, the Social chapter of the Feasibility Study and Business Case along with technical oversight across all social inputs to options assessments and design considerations. (NCC Consortium)
- MacIntyre Wind Farm, the MacIntyre Wind Farm is one of the largest onshore wind farms in the world. With a total investment of AU\$1.96 billion, the 1,026MW MacIntyre Wind Farm Precinct is Acciona's biggest renewable energy facility. Chris was commissioned to complete a full technical review of the Social Impact Assessment and Social Impact Management Plan (SIMP) which comprised sub-plans dedicated to Workforce Management, Local Industry and Procurement, Community Health and Wellbeing, Housing and Accommodation and Community and Stakeholder Engagement. Chris also participated in the establishment of the MacIntyre Community Consultative Committee.
- ARTC Inland Rail project, provided specialist technical assessments and expert advice as lead advisor, review of social and economic impact assessments, community development and social management plans, overseeing the development of frameworks supporting the projects monitoring and evaluation program, National (ARTC)
- Salisbury to Beaudesert Corridor Protection Study, project manager for the delivery of engineering design and consultation programs to support the gazettal of a transport and infrastructure corridor of 70 km connecting Brisbane to high population growth which stretch to the south through to Beaudesert. Delivery of the project involved development of innovative engagement mechanics such as interactive web-based tools and collateral and direct engagement methods to refine project design and enable gazettal of the corridor (Department of Transport and Main Roads).
- Hunter Valley Operations (HVO) project, Chris provided technical oversight across the SIA process as part of the EIS for continued operation and expansion of Glencore's HVO mine. The SIA included extensive engagement with a broad range of stakeholders including landholders, Aboriginal groups, nearby residents, horse studs and other agricultural enterprises. To understand the social impacts which would occur if HVO were to cease operations, research was undertaken with the existing operations workforce and local and regional businesses which provide goods and services to the project. The SIA was delivered in accordance with the NSW SIA Guideline.

- Coal Infrastructure Masterplan, Chris was the author of the 'social effects' chapter in the coal infrastructure master plan, Queensland (Department of the Coordinator General).
 - Cross River Rail project – community infrastructure assessments, Chris was the lead social planner advising on the community infrastructure elements of the project precincts, preparation of detailed baseline assessments and negotiation with stakeholders, Brisbane Queensland (Cross River Rail Development Authority).
 - South East Queensland Priority Infrastructure Plan, preparation of policy guiding the delivery of essential infrastructure to service a region comprising 2.5 million people, involved extensive population modelling and collaborative policy development (Queensland Department of Planning)
 - Valeria project, Chris provided technical oversight of the social impact assessment and associated social impact management plan along with strategic communications and engagement support to the project. Completion of a detailed assessment of housing and accommodation options including potential utilization of the Glencore occupied township of Tieri. Implementation of an engagement program which included requirements for the Progressive Rehabilitation and Closure Plan (PRCP). Central Queensland (Glencore) .
 - Moreton Bay Regional Public Transport Strategy, Chris provided expert social opinion and advice along with facilitating workshops and other stakeholder engagement activities which informed development of the Moreton Bay Regional Public Transport Strategy (Moreton Bay Regional Council).
 - Winchester South project, lead author and project manager of the social impact assessment and social impact management plan for a proposed coal project involving developing comprehensive suite of management plans relating to housing and accommodation, workforce management, local industry procurement and community health and wellbeing, Central Queensland (Whitehaven Coal).
 - Meadowbrook project, lead author and project manager for delivery of the social impact assessment and social impact management plan for the underground expansion of the existing Lake Vermont coal mine. A focus of the SIA was analysis of the social opportunity cost of the project not proceeding and the subsequent closure of open cut operations. Project included a targeted program of stakeholder engagement informed the development of social commitments measures formalised through the social impact management plan, Central Queensland (Jellinbah Resources).
 - Social Infrastructure Model, development of a GIS-based social infrastructure model to determine social infrastructure gaps and the prediction of social infrastructure requirements in line with growth across the Mackay Regional Council area. Included the prediction of costs and an outline of delivery options (Mackay Regional Council)
 - Townsville Port Expansion, project manager for the delivery of the social impact assessment and economic impact assessment for a major port expansion project, including the development and implementation of an extensive stakeholder engagement program (North Queensland Bulk Ports)
 - Lake Macdonald Dam Upgrade Project, SEQ Water, Queensland, Lead author of the Social Impact Assessment (SIA) for this complex project which involves the draining of Lake Macdonald which is a central to the community of Cooroy in Queensland in order to undertake a full upgrade so to protect community safety downstream. Also had oversight of the community and stakeholder engagement program associated with the Impact Assessment Report (IAR) process- the first to be completed in Queensland.
 - Isaac Downs Coal project, author of the social impact assessment and social impact management plan in the EIS for a greenfield coal project, completed a detailed assessment of land use compatibility and potential conflict, Central Queensland (Stanmore Coal).
 - Ravenswood Gold project, update and revision of the social impact management plan to align with the requirements of the Queensland Social Impact Assessment Guideline (2018) and document the current social context and community sentiment towards the project's planned transition. A primary objective was to design a SIMP which is a useable adaptive management tool, providing the rationale and schedule of delivery for investments in community infrastructure and other initiatives which serve to ensure the ongoing sustainability of the Ravenswood township, Central Queensland (Ravenswood Gold).
 - Cape York Water Planning Project, delivery of a social values assessment which included engagement with 12 communities, and the development of a decision support tool to assist the government to properly consider community values in natural resource planning processes (Department of Resources).
 - Telfer Mine, socio-economic baseline assessment of Traditional Owners of lands surrounding the mine which involved primary data collection in remote Aboriginal communities, included the preparation of a business development plan to assist in meeting ILUA obligations, Pilbara Region WA (Newcrest Mining).
 - United Nations Development Program (UNDP), social expert responsible for completing social and environmental risk assessments for climate change projects nominated by the countries for Global Environment Fund funding, Egypt, Bangladesh and Kyrgyzstan (UNDP).
 - Wafi Golpu project, lead social performance advisor for the approvals phase of the project, responsible for the delivery of the Socio-economic Baseline and Socio-economic Impact Assessment in accordance with national and international standards, development of social management plans relating to community development, in-migration management and re-settlement, Papua New Guinea (Newcrest/Harmony Gold).
 - Frieda River project, social technical lead for the approvals phase for a large proposed open cut mine, delivery of the social impact assessment and social studies including resettlement, alluvial mining and in-migration management, Papua New Guinea (PanAust).
 - PNG LNG Expansion project (P'nyang Project), development of a major gas field and pipeline including oversight across all social aspects of the project approvals process including socio-economic baseline, socio-economic impact assessment, stakeholder engagement program, health impact assessment and cultural heritage assessment, Western Province of PNG (Exxon Mobil).
- Waisoi Copper Project, technical oversight across all social elements of the environmental and social impact assessment, expansive fieldwork in 23 villages was undertaken to inform the ESIA and included implementation of stakeholder engagement programs involving studies on macro-economic effects, cultural heritage, traffic and land use, Fiji (Newcrest).

Attachment C

Planning Context

This section provides a summary of the relevant plans and strategies across the project that inform the social risk assessment and mitigation and management strategies. The current project is well-aligned with current policy priorities of both the Federal and State Governments.

C.1 Federal

The project is located within the federal electorate of Calare, which is currently represented (in the house of Representatives) by the Hon Andrew Gee Member of Parliament (MP), member of the National Party of Australia.

Relevant federal legislation includes:

- the *Environmental Protection and Biodiversity Conservation Act 1999* administered by the Department of Agriculture, Water, and the Environment (DAWE) that seeks to protect and conserve cultural heritage sites and protected areas of national environmental significance.
- the *Renewable Energy (Electricity) Act 2000*, administered by the Department of Industry, Science, Energy and Resources.

C.2 State

The NSW Parliament consists of a Legislative Assembly (lower house) and Legislative Council (upper house). The project is within the NSW State electorate of Dubbo. The current member for Dubbo is the Hon. Dugald Saunders of the National Party of Australia.

The project is classified as State significant development (SSD) in accordance with the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *State Environmental Planning Policy (Planning Systems) 2021*. The EP&A Act and its subordinate legislation and policies sets out the environmental planning and assessment process for projects classified as SSD. The NSW Department of Planning and Environment (DPE) is responsible for administering the EP&A Act and its subordinate legislation and policies.

C.3 State strategies and plans

C.3.1 A 20-Year Economic Vision for Regional NSW

A 20-Year Economic Vision for Regional NSW (NSW Economic Vision) (NSW Government 2021) is the NSW Government's plan to drive sustainable, long-term economic growth in regional NSW. The NSW Economic Vision, previously released in 2018, sets out the Government's priorities and plans to achieve long-term social and economic success for regional communities across the state.

The NSW Economic Vision sets out a long-term plan and framework for how the NSW Government will support businesses to invest in the regions with confidence. The NSW Economic Vision responds to the changed economic landscape and opportunities that have emerged in regional NSW since the 2018 Vision was released following the drought, bushfires, flood, and COVID-19 pandemic, and will drive the next stage of recovery by focusing on the key enablers of economic success. It will ensure regional NSW is connected, with reliable transport and freight infrastructure, secure and sustainable water and energy, strong education and training, quality services and a stable business environment.

The NSW Economic Vision:

- Divides regional NSW into the following five types of regional economies, based on their underlying geography, population and economic features: metro satellites; growth centres; coastal; inland; and remote. Regional NSW is defined as all of NSW, with the exception of the metropolitan areas of Greater Sydney, Newcastle and Wollongong. These regional economies also contain smaller local economies, defined as functional economic regions (FERs).
- Identifies seven engine (established) industries (i.e. agribusiness and forestry, resources and mining, tourism and hospitality, tertiary education and skills, health and residential care, freight and logistics, defence) and three emerging industry sectors (i.e. advanced manufacturing, renewable energy, technology-enabled primary industries).
- Provides a snapshot of Regional NSW today that presents the current economic and demographic environment, with reference to the thriving agricultural, energy and resources industries, and strong manufacturing, tourism, and services sectors.
- Describes the global forces shaping regional economies, and the implications of these trends (this considers the major shifts in the global economic outlook and global events, including the COVID-19 pandemic, that influence regional economies particularly through population, trade and investment).
- Presents the current priorities for the NSW Government (NSW Government 2021).

The Mid-Western Regional LGA is identified as a regional economic growth centre and is located within the Mid-Western FER. The future focus for identified growth centres includes opportunities to improve connectivity, ensure water and energy security, and support both engine and emerging industries with the right regulatory settings, research and development and investment attraction (NSW Government 2021).

The Warrumbungle LGA is identified as a remote regional economy and is located within the Castlereagh FER. The future focus for identified remote regions includes a strong focus on building community resilience, research and investment in key enablers such as infrastructure and technology to drive opportunities for emerging industries, based on local endowments, to create more sustainable economies.

C.3.2 Building Momentum: State Infrastructure Strategy, 2018–2038

The *State Infrastructure Strategy 2018–2038* (State Infrastructure Strategy) (Infrastructure NSW 2018) sets out Infrastructure NSW's independent advice on the current state of NSW infrastructure, and the infrastructure needs and priorities over the next 20 years. It looks beyond current projects and identifies policies and strategies needed to provide infrastructure to meet the needs of a growing population and economy.

The State Infrastructure Strategy presents:

- Strategic directions: six cross-sectoral strategic directions are incorporated into the strategy to ensure good-practice across infrastructure sectors and throughout infrastructure lifecycles.
- Geographic infrastructure directions: the strategy recognises the different opportunities and needs experienced within NSW, Regional NSW, and Greater Sydney and Outer Metro, and outlines geographic-specific approaches for infrastructure planning, investment, and policy.
- Policy and investment strategies for sectors: using the strategic and geographic infrastructure directions, policy and investment strategies are outlined across key infrastructure sectors (i.e. transport, energy, water, health, education, justice, culture, sport, and tourism).

The State Infrastructure Strategy identifies energy as a key industry sector. The strategic objective for the energy sector is to encourage private sector investment to deliver secure, reliable, affordable, low emission energy supply.

C.3.3 Central-West Orana Renewable Energy Zone

The Central-West Orana (CWO) Renewable Energy Zone (REZ) was declared on 5 November 2021. The Central West region of NSW was selected by the NSW Government for the development of the CWO REZ due to the region's significant potential for renewable energy infrastructure and regional development (NSW Government 2022). The declaration is the first step in formalising the REZ under the *Electricity Infrastructure Investment Act 2020*. It sets out the intended network capacity (size), geographical area (location) and infrastructure that will make up the REZ. The project site is located wholly within the boundary of the CWO REZ (Figure 1.1). The project aligns with the NSW and Commonwealth Government's objectives for energy security and reliability and emissions reductions and will contribute to the continued growth of renewable energy generation and storage capacity in the CWO REZ.

C.3.4 Central West and Orana Regional Plan 2041

The *Central West and Orana Regional Plan 2041* (DPE, 2022d) is the five-year update to the Central West and Orana Regional Plan 2036. It applies to 19 local government areas including the Mid-Western Region, Warrumbungle and Dubbo Region. The aim of the plan is to "guide land use planning decisions in the region by the NSW Government, councils and others to the year 2041".

The 2041 vision for the region is:

A healthy, connected and resilient region, with a prosperous economy (DPIE 2021d).

The Regional Plan presents 22 regional objectives based on the following four themes:

- region-shaping investment
- a sustainable and resilient place
- people, housing, and communities
- prosperity, productivity and innovation.

The Regional Plan identifies Orange, Bathurst and Dubbo as the key regional cities in the Central West and Orana. Lithgow, Mudgee, Cowra, Forbes and Parkes are identified as strategic centres.

The Regional Plan describes the Central West Orana REZ as supercharging the development and consumption of a mix of renewable energy resources. According to the Regional Plan the REZ is expected to:

Attract \$5.2 billion in private investment to the region by 2030, support around 3,900 construction jobs, 500 ongoing jobs and contribute to achieving a Net-Zero emissions future for NSW (DPIE 2021d).

The project will contribute to achieving the overall vision of the Regional Plan particularly in relation to the following objectives:

- Objective 7: Plan for resilient places and communities – the project responds to the region's identified vulnerability to climate change by avoiding areas of natural hazard, supporting current climate change policy directions, and providing opportunities for diversification of farm income.

- Objective 9: Ensure site selection and design embraces and respects the region’s landscapes, character and cultural heritage – the site selection process for the project considered the landscape and character values of the local area, with strategic planting proposed to reduce potential impacts. Aboriginal cultural heritage values present on the site have been identified and avoided wherever possible.
- Objective 16: Provide accommodation options for temporary workers – project workforce accommodation requirements are clearly described in the Environmental Impact Statement (EIS) and a workforce accommodation strategy proposed to minimise impacts on other industry sectors, e.g. tourism and the broader community.
- Objective 18: Leverage existing industries and employment areas and support new and innovative economic enterprises – the project will generate approximately 800 full-time equivalent (FTE) direct employ opportunities for the local and regional area at peak construction. Direct and indirect project spending (procurement) will support local and regional business sustainability and encourage business diversification.
- Objective 19: Protect agricultural production values and promote agriculture innovation, sustainability and value-add opportunities – the project site selection process, including detailed constraints analysis has considered local and regional agricultural production values and sought to avoid areas identified as good quality agricultural land. The project provides host landholders with opportunities for diversification of farm income.

C.4 Local

C.4.1 Governance structures

The project is located within the Mid-Western Regional LGA; however, the project effects (direct and indirect) are anticipated to extend to the Warrumbungle LGA.

A summary of the governance structure (i.e. relevant Mayors and Councillors (Cr)) in each LGA is provided in Table C.1.

Table C.1 LGA Governance Structures, 2022

LGA	Role	Councillors	
Mid-Western Regional Council	Mayor	Councillor Des Kennedy	
	Deputy Mayor	Councillor Sam Paine	
	Councillors	Councillor Paul Cavalier	Councillor Katie Dicker
		Councillor Alex Karavas	Councillor Robbie Palmer
		Councillor Peter Shelly	Councillor Phil Stoddart
		Councillor Percy Thompson	
Warrumbungle Shire Council	Mayor	Councillor Ambrose Doolan	
	Deputy Mayor	Councillor Aniello Iannuzzi	
	Councillors	Councillor Denis Todd	Councillor Kodi Brady
		Councillor Dale Hogden	Councillor Zoe Holcombe
		Councillor Jason Newton	Councillor Kathryn Rindfleish

Table C.1 LGA Governance Structures, 2022

LGA	Role	Councillors
		Councillor Carlton Kopke

Source: Mid-Western Regional Council 2022, Warrumbungle Shire Council 2022

C.4.2 Local planning context

The Mid-Western Regional Council (MWRC) and the Warrumbungle Shire Council (WSC) have local plans and strategic plans that articulate their vision for the future of the communities in each respective LGA. These plans are summarised in Table C.2.

Table C.2 Mid-Western Regional LGA and Warrumbungle LGA planning context

Plan/strategy	Summary	Responsibility	Timeframe
<i>Our Place 2040</i> <i>Mid-Western Regional Local Strategic Planning Statement (Strategic Planning Statement)</i> (MWRC 2020)	The Strategic Planning Statement sets out the 20-year vision for land use planning in the Mid-Western Regional LGA. Planning Priority 7 of the Strategic Planning Statement is to “support the attraction of a diverse range of business and industries”. The following land use action supports this planning priority “consider renewable energy development in appropriate areas that avoids impacts on the scenic rural landscape and preserves valuable agricultural land”.	MWRC	2022–2040
<i>Mid-Western Region Community Plan</i> (MWRC, 2022)	The Mid-Western Region Towards 2030 Community Plan 2017–2021 encourages active communication between Council and the community through engagement and participation in planning processes. The plan represents an opportunity to create and foster community-based goals, values and aspirations – to drive a sustainable community that reconciles the economic, social, environmental and civic leadership priorities for the region. The plan aims to: <ul style="list-style-type: none"> • look after the community • protect the natural environmental • build a strong local economy • connect and link the regions to the rest of NSW • good governances and meeting the needs of the community. A new community plan is currently in the community engagement phase.	MWRC	2017–2021
<i>Mid-Western Regional Local Environmental Plan 2012 (LEP)</i> (NSW Government, 2021)	The LEP describes the applicable zoning and land use planning regulations, and development standards.	MWRC	2012 – present

Table C.2 Mid-Western Regional LGA and Warrumbungle LGA planning context

Plan/strategy	Summary	Responsibility	Timeframe
<i>Regional Economic Development Strategy 2018–2022 (REDS)</i> (MWRC, 2018)	<p>The REDS identifies economic development opportunities that capitalise on the LGAs endowments and industry specialisations.</p> <ul style="list-style-type: none"> • Develop a mature and diversified tourism sector. • Capitalise on existing viticulture strengths. • Grow industry clusters around mining, manufacturing and agriculture. • Support the attraction and retention of an increased number of diverse businesses and industries while developing a strong entrepreneurial reputation. • Promote the region to target businesses that complement key local industries. • Develop an emerging retiree/aged care sector. 	MWRC	2018–2022
<i>Delivery Program 2017/18–2021/22 and Operational Plan</i> (MWRC 2022)	<p>The Delivery Program and Operational Plan explores the actions to be taken to achieve the strategic outcomes identified in the <i>Mid-Western Region Community Plan</i>.</p> <p>The Delivery Program comprises a timeframe of 3 years, while the Operational Plan presents an annual plan. The contents of the delivery program and operational plan are organised according to 5 themes: community; natural environment; local economy; connecting the region; and governance. Each theme consists of numerous strategies with a set of specific actions to be taken to ensure their realisation. The Delivery Program and Operational Plan provide a guidance framework for the investment of Voluntary Planning Agreement funds.</p>	MWRC	2017/2018 to 2021/2022
<i>Asset Management Strategy 2017–2021</i> (MWRC 2021)	<p>The Asset Management Strategy presents the MWRC’s plan to manage and operate the appropriate mix of sustainable community infrastructure that supports communities in the Mid-Western Regional LGA. This strategy endeavours to help meet the objectives set out in the community plans.</p>	MWRC	2017–2021
<i>Warrumbungle Shire Council Community Strategic Plan 2022/2037</i> (WSC, 2022)	<p>The <i>Warrumbungle Shire Council Community Strategic Plan 2022/2037</i> (WSC, 2022) captures the needs and aspirations of the community in Warrumbungle Shire LGA.</p> <p>The CSP outlines the community’s values which included having a unique natural environment that is protected and enhanced and a broad range of markets to ensure economic resilience. More specifically, the theme of strengthening the local economy identified an objective of ensuring that “the community benefits from the economic returns of local renewable energy production, and mining and extractive industries”. This included the strategy of identifying and developing opportunities to realise Warrumbungle Shire LGA’s potential as a location for the production of renewable energies.</p>	WSC	2022–2037
<i>Warrumbungle Shire Draft Community Strategic Plan 2022/2037</i> (WSC, 2022)	<p>The WSC has recently released a draft community strategic plan for the period 2022-2037. The community vision articulated in the draft community strategic plan is “a peaceful and sustainable way of life built by a strong community”. The draft community strategic plan outlines objectives and actions under the four themes of:</p> <ul style="list-style-type: none"> • caring for the environment • civic leadership • strengthening the local economy • supporting community life. 	WSC	2022–2037

Table C.2 Mid-Western Regional LGA and Warrumbungle LGA planning context

Plan/strategy	Summary	Responsibility	Timeframe
<i>Warrumbungle LEP 2013</i> (NSW Government, 2013)	The LEP describes the applicable zoning and land use planning regulations, and development standards.	WSC	2013 – present
<i>Operational Plan & Delivery Program</i> (WSC 2021))	<p>The WSC Operational Plan and Delivery Program acts as a yearly review of the Council's commitment to the community, and outlines their quarterly progress and achievements, as well as their visionary framework for the preceding years. The plan and program identify seven core goals to address the needs and aspirations highlighted during community consultation:</p> <ul style="list-style-type: none"> • natural environment • local economy • community and culture • rural and urban development • recreation and open space • public infrastructure and services • local governance and finance. <p>In addition to outlining the values of the regional community (including honesty, integrity, fairness, transparency, passion, and opportunity), the plan explores the treasured natural features of the region. The second part of the document outlines the budget and delivery program for achieving these goals, and protecting the unique aspects of the Warrumbungle Shire, while also identifying areas for improvement.</p>	WSC	2020/21–2023/24

Attachment D

SIA Baseline

Social Baseline Study

Birriwa Solar Farm and Battery Project

Prepared for ACEN Australia

August 2023

Social Baseline Study

Birriwa Solar Farm and Battery Project

ACEN Australia

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July 2023

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1 Overview

A social baseline study is a requirement of the New South Wales (NSW) Department of Planning, Industry, and Environment's (DPIE 2023a) *Social Impact Assessment Guideline for State Significant Projects* (DPIE 2023a). The baseline study describes the existing population and social conditions of potentially affected communities within the social impact assessment (SIA) study area which form the benchmark against which the potential social impacts are assessed. A review of relevant social indicators was undertaken to inform an understanding of the existing social conditions and trends. This allowed for the differentiation and measurement of the changes that are likely to occur with the project compared to those that would occur without the project (IAIA 2015). Accordingly, this social baseline identifies the area of social influence for the Birriwa Solar Farm and Battery Project (the project) with the additional amendment for the accommodation camp and describes the existing known and predicted social conditions.

This Baseline is an update of the 2022 *Social Impact Assessment: Birriwa Solar and Battery Project* (EMM 2022a) with a focus on accommodation due to the proposed amendment for the accommodation camp. As such, data not relevant to assessing accommodation has either been summarised or replaced with references to the previous SIA to ensure relevance for the project.

2 SIA study area

The project is within the Birriwa and Merotherie Australian Bureau of Statistics (ABS) State Suburb classification (SSC) areas, is 15 kilometres (km) south-west of the township of Dunedoo and is within the Mid-Western Regional Local Government Area (LGA) with part of the access route within the Warrumbungle Shire LGA. While the site itself is localised, direct and indirect impacts may be farther reaching. As such the project impacts and opportunities have been considered at two spatial scales (or study area): a local area and a regional area. These areas are defined in Table 2.1 and illustrated in Figure 2.1.

The local area consists of the communities anticipated to experience the most direct social impacts of the project (i.e. impacts related to local social infrastructure and services, workforce, business and industry, housing and accommodation, and community health and wellbeing).

The regional area consists of the geographic areas likely to experience few direct and more indirect social impacts of the project. These indirect impacts are associated with use of infrastructure, supply chains, roads, transportation of goods, materials and equipment, the movement of workers (some of which may have drive-in/drive-out (DIDO) arrangements) and cumulative impacts arising from other projects in the area. The Mid-Western Regional LGA and Warrumbungle LGA are identified as the regional area.

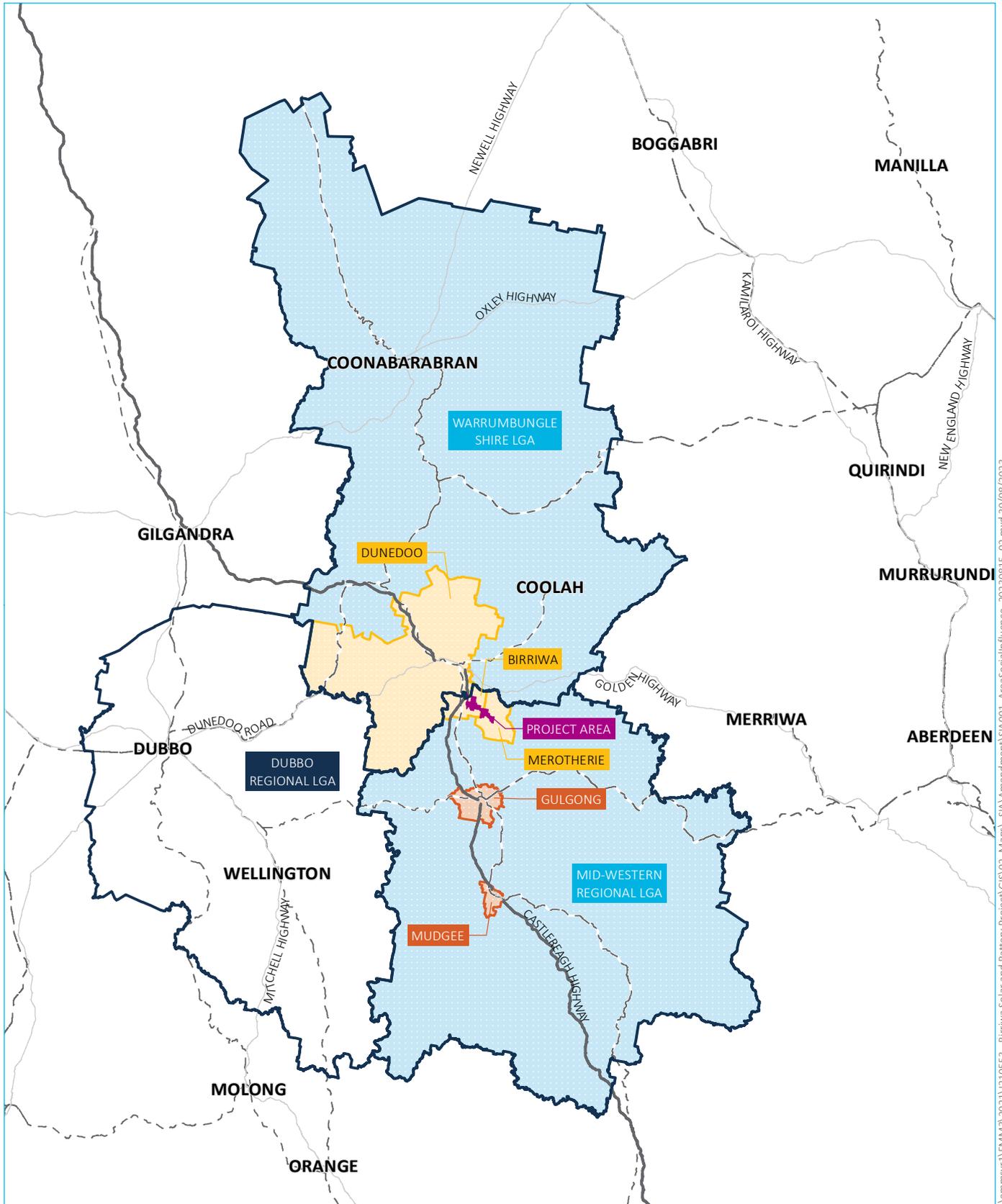
The area of reference includes the Dubbo Regional LGA due to the potential for project workers to be sourced from and accommodated in this LGA.

The communities have been mapped to the ABS categories used for data collection (Table 2.1).

Table 2.1 SIA study area

Study area	Geographic area	2016 ABS data category	2021 ABS data category	Referred to in report as:
Local area	Birriwa	Birriwa SSC	Birriwa SAL	Local area
	Merotherie	Merotherie SSC	Merotherie SAL	
	Dunedoo	Dunedoo SSC	Dunedoo SAL	
Key townships	Gulgong	Gulgong SSC	Gulgong SAL	Key townships
	Mudgee	Mudgee SSC	Mudgee SAL	
Regional area	Mid-Western Regional LGA	Mid-Western Regional LGA	Mid-Western Regional LGA	Regional area
	Warrumbungle LGA	Warrumbungle LGA	Warrumbungle LGA	
Area of reference	Mid-Western Regional LGA	Mid-Western Regional LGA	Mid-Western Regional LGA	Area of reference
	Warrumbungle LGA	Warrumbungle LGA	Warrumbungle LGA	
	Dubbo Regional LGA (formerly known as Western Plans Regional LGA)	Western Plans Regional LGA	Dubbo Regional LGA	
State of New South Wales	New South Wales (NSW)	New South Wales State (STE)	New South Wales State (STE)	NSW

Note: Any reference to these defined geographic areas in this report is a reference to the corresponding ABS data category.



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Source: EMM (2023); ACEN (2022); ABS (2017); DFSI (2017)



SIA study area



- KEY**
- Project area
 - Area of reference
 - Regional area
 - Local area
 - Key townships
 - Rail line
 - Castlereagh Highway
 - Major road

- INSET KEY**
- NPWS reserve
 - State forest

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Figure 2.1



3 Political and planning context

This section provides a summary of the relevant federal, state and local plans and strategies that inform an understanding of the area of social influence.

3.1 Federal

The project is located within the federal electorate of Calare, which is currently represented (in the house of Representatives) by the Hon Andrew Gee Member of Parliament (MP), member of the National Party of Australia.

Relevant federal legislation includes:

- the *Environmental Protection and Biodiversity Conservation Act 1999* administered by the Department of Agriculture, Water, and the Environment (DAWE) that seeks to protect and conserve cultural heritage sites and protected areas of national environmental significance
- the *Renewable Energy (Electricity) Act 2000*, administered by the Department of Industry, Science, Energy and Resources.

3.2 State

The NSW Parliament consists of a Legislative Assembly (lower house) and Legislative Council (upper house). The project is within the NSW State electorate of Dubbo. The current member for Dubbo is the Hon. Dugald Saunders of the National Party of Australia.

The project is classified as State significant development (SSD) in accordance with the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *State Environmental Planning Policy (Planning Systems) 2021*. The EP&A Act and its subordinate legislation and policies sets out the environmental planning and assessment process for projects classified as SSD. The NSW Department of Planning and Environment (DPE) is responsible for administering the EP&A Act and its subordinate legislation and policies.

3.3 State strategies and plans

3.3.1 A 20-Year Economic Vision for Regional NSW

A 20-Year Economic Vision for Regional NSW (NSW Economic Vision) (NSW Government 2021) is the NSW Government's plan to drive sustainable, long-term economic growth in regional NSW. The NSW Economic Vision, previously released in 2018, sets out the Government's priorities and plans to achieve long-term social and economic success for regional communities across the state.

The NSW Economic Vision sets out a long-term plan and framework for how the NSW Government will support businesses to invest in the regions with confidence. The NSW Economic Vision responds to the changed economic landscape and opportunities that have emerged in regional NSW since the 2018 Vision was released following the drought, bushfires, flood, and COVID-19 pandemic, and will drive the next stage of recovery by focusing on the key enablers of economic success. It will ensure regional NSW is connected, with reliable transport and freight infrastructure, secure and sustainable water and energy, strong education and training, quality services and a stable business environment.

The NSW Economic Vision:

- Divides regional NSW into the following five types of regional economies, based on their underlying geography, population and economic features: metro satellites; growth centres; coastal; inland; and remote. Regional NSW is defined as all of NSW, with the exception of the metropolitan areas of Greater Sydney, Newcastle and Wollongong. These regional economies also contain smaller local economies, defined as functional economic regions (FERs).
- Identifies seven engine (established) industries (i.e. agribusiness and forestry, resources and mining, tourism and hospitality, tertiary education and skills, health and residential care, freight and logistics, defence) and three emerging industry sectors (i.e. advanced manufacturing, renewable energy, technology-enabled primary industries).
- Provides a snapshot of Regional NSW today that presents the current economic and demographic environment, with reference to the thriving agricultural, energy and resources industries, and strong manufacturing, tourism, and services sectors.
- Describes the global forces shaping regional economies, and the implications of these trends (this considers the major shifts in the global economic outlook and global events, including the COVID-19 pandemic, that influence regional economies particularly through population, trade and investment).
- Presents the current priorities for the NSW Government (NSW Government 2021).

The Mid-Western Regional LGA is identified as a regional economic growth centre and is located within the Mid-Western FER. The future focus for identified growth centres includes opportunities to improve connectivity, ensure water and energy security, and support both engine and emerging industries with the right regulatory settings, research and development and investment attraction (NSW Government 2021).

The Warrumbungle LGA is identified as a remote regional economy and is located within the Castlereagh FER. The future focus for identified remote regions includes a strong focus on building community resilience, research and investment in key enablers such as infrastructure and technology to drive opportunities for emerging industries, based on local endowments, to create more sustainable economies.

3.3.2 Building Momentum: State Infrastructure Strategy, 2018–2038

The *State Infrastructure Strategy 2018–2038* (State Infrastructure Strategy) (Infrastructure NSW 2018) sets out Infrastructure NSW's independent advice on the current state of NSW infrastructure, and the infrastructure needs and priorities over the next 20 years. It looks beyond current projects and identifies policies and strategies needed to provide infrastructure to meet the needs of a growing population and economy.

The State Infrastructure Strategy presents:

- Strategic directions: six cross-sectoral strategic directions are incorporated into the strategy to ensure good-practice across infrastructure sectors and throughout infrastructure lifecycles.
- Geographic infrastructure directions: the strategy recognises the different opportunities and needs experienced within NSW, Regional NSW, and Greater Sydney and Outer Metro, and outlines geographic-specific approaches for infrastructure planning, investment, and policy.
- Policy and investment strategies for sectors: using the strategic and geographic infrastructure directions, policy and investment strategies are outlined across key infrastructure sectors (i.e. transport, energy, water, health, education, justice, culture, sport, and tourism).

The State Infrastructure Strategy identifies energy as a key industry sector. The strategic objective for the energy sector is to encourage private sector investment to deliver secure, reliable, affordable, low emission energy supply.

3.3.3 Central-West Orana Renewable Energy Zone

The Central-West Orana (CWO) Renewable Energy Zone (REZ) was declared on 5 November 2021. The Central West region of NSW was selected by the NSW Government for the development of the CWO REZ due to the region's significant potential for renewable energy infrastructure and regional development (NSW Government 2022). The declaration is the first step in formalising the REZ under the *Electricity Infrastructure Investment Act 2020*. It sets out the intended network capacity (size), geographical area (location) and infrastructure that will make up the REZ. The project site is located wholly within the boundary of the CWO REZ (Figure 3.1). The project aligns with the NSW and Commonwealth Government's objectives for energy security and reliability and emissions reductions and will contribute to the continued growth of renewable energy generation and storage capacity in the CWO REZ.

3.3.4 Central West and Orana Regional Plan 2041

The *Central West and Orana Regional Plan 2041* (DPE 2022d) is the five-year update to the Central West and Orana Regional Plan 2036. It applies to 19 local government areas including the Mid-Western Region, Warrumbungle and Dubbo Region. The aim of the plan is to "guide land use planning decisions in the region by the NSW Government, councils and others to the year 2041".

The 2041 vision for the region is:

A healthy, connected and resilient region, with a prosperous economy (DPIE 2021b).

The Regional Plan presents 22 regional objectives based on the following four themes:

- region-shaping investment
- a sustainable and resilient place
- people, housing, and communities
- prosperity, productivity and innovation.

The Regional Plan identifies Orange, Bathurst and Dubbo as the key regional cities in the Central West and Orana. Lithgow, Mudgee, Cowra, Forbes and Parkes are identified as strategic centres.

The Regional Plan describes the Central West Orana REZ as supercharging the development and consumption of a mix of renewable energy resources. According to the Regional Plan the REZ is expected to:

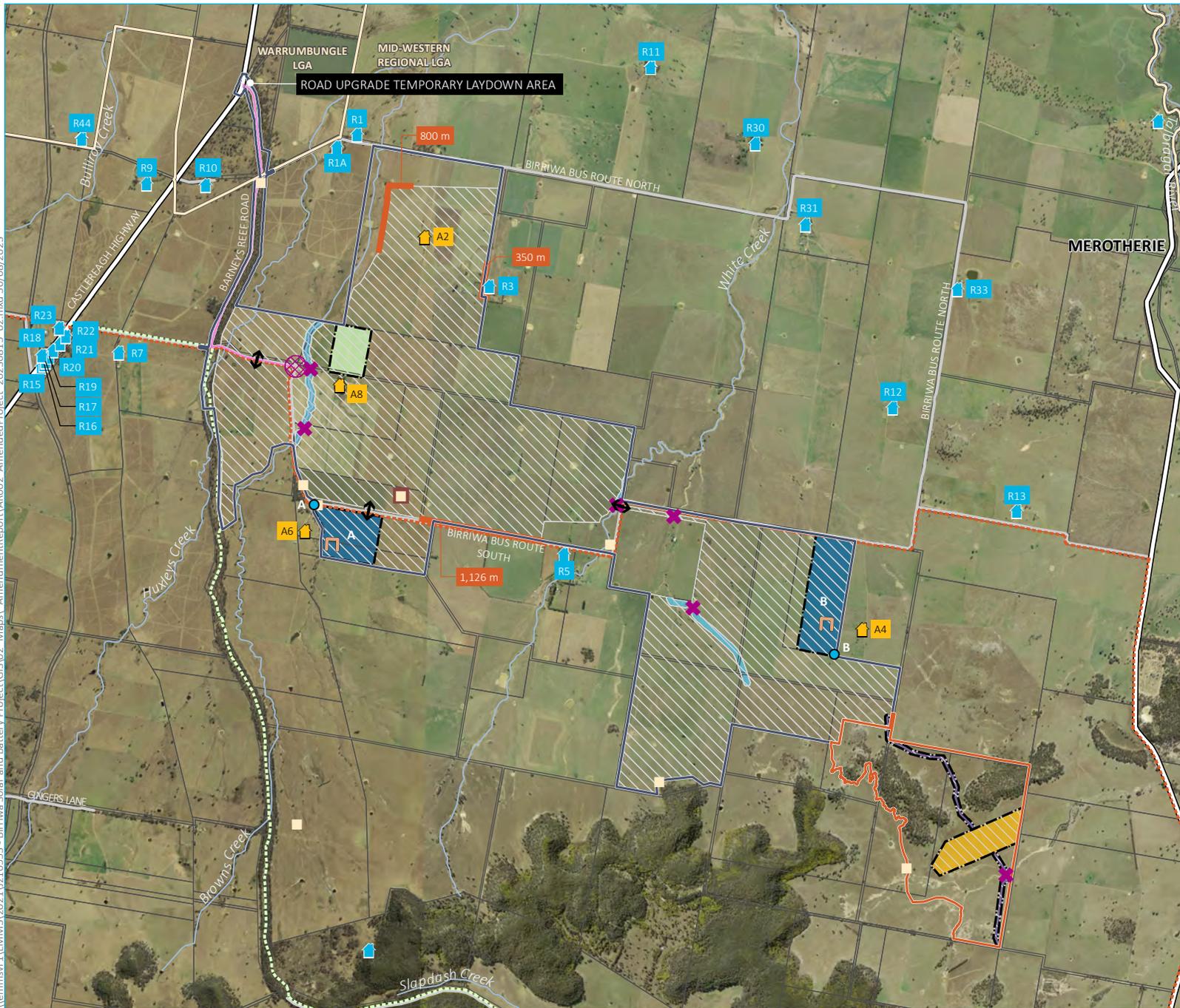
Attract \$5.2 billion in private investment to the region by 2030, support around 3,900 construction jobs, 500 ongoing jobs and contribute to achieving a Net-Zero emissions future for NSW (DPIE 2021b).

The project will contribute to achieving the overall vision of the Regional Plan particularly in relation to the following objectives:

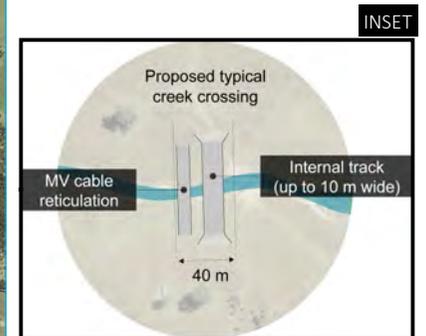
- Objective 7: Plan for resilient places and communities – the project responds to the region's identified vulnerability to climate change by avoiding areas of natural hazard, supporting current climate change policy directions, and providing opportunities for diversification of farm income.

- Objective 9: Ensure site selection and design embraces and respects the region’s landscapes, character and cultural heritage – the site selection process for the project considered the landscape and character values of the local area, with strategic planting proposed to reduce potential impacts. Aboriginal cultural heritage values present on the site have been identified and avoided wherever possible.
- Objective 16: Provide accommodation options for temporary workers – project workforce accommodation requirements are clearly described in the Environmental Impact Statement (EIS) and a workforce accommodation strategy proposed to minimise impacts on other industry sectors, e.g. tourism and the broader community.
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- Objective 19: Protect agricultural production values and promote agriculture innovation, sustainability and value-add opportunities – the project site selection process, including detailed constraints analysis has considered local and regional agricultural production values and sought to avoid areas identified as good quality agricultural land. The project provides host landowners with opportunities for diversification of farm income.

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- KEY**
- Solar and BESS study area
 - Accommodation facility study area
 - Development footprint
 - Road upgrade corridor
 - Restricted development area
 - Potential public road crossing location
 - Project layout**
 - Potential creek crossing point (refer to inset below for indicative design)
 - Connection point (option A or B)
 - Indicative noise wall location
 - Landscape screen planting
 - Proposed access point to the project
 - Proposed operational infrastructure area including substation, operational facility and BESS (option A or B)
 - Birriwa accommodation facility
 - Access track
 - Temporary construction compound
 - Existing environment**
 - Dwelling not associated with the project
 - Dwelling associated with the project
 - Aboriginal heritage site (to be salvaged)
 - Aboriginal heritage site (to be avoided)
 - Major road
 - Minor road
 - Named watercourse
 - Cadastral boundary
 - Local government area boundary
 - Central West Cycle (CWC) Trail**
 - CWC main route - Gulgong to Dunedoo
 - CWC alternate route - Slap Dash Creek side trail

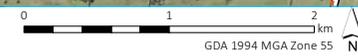


Amended project

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 Amendment Report
 Social Baseline Study
 Social Impact Assessment Addendum
 Figure 3.1



Source: EMM (2023); DFSI (2017, 2023); GA (2011); ACEN (2023)



3.4 State guidelines

3.4.1 SIA Guideline 2021

i Social Impact Assessment Guideline for State Significant Projects

The SIA Guideline (DPIE 2023a) provides direction on assessing impacts arising from SSD projects in the context of the environmental impact assessment process under the EP&A Act. In this guideline, SIA is the process of identifying, predicting, evaluating and developing responses to the social impacts of a proposed State significant development project which requires proportionate and tailored assessment to suit each project's context and the nature and scale of its potential impacts and benefits.

The SIA Guideline requires that all State significant projects have a clear and consistent approach to assessing social impacts. The SIA Guideline aims to:

- build higher levels of community understanding of projects
- help proponents to understand what is required to meet the department's expectations
- give stakeholders and the community confidence that their concerns and perspectives are being considered early in the assessment
- reduce project risks and costs related to unplanned or reactive management of social impacts;
- create better proponent-community relations and more socially sustainable outcomes
- streamline assessments by reducing departmental requests for more information, and
- better integrate the SIA and Environmental Impact Assessment (EIS) (DPIE 2023a).

The SIA Technical Supplement 2021 accompanies the SIA Guideline to provide specific methods and techniques for the identification and assessment of social impacts and benefits (DPIE 2023b).

ii Undertaking Engagement Guidelines for State Significant Projects

The *Undertaking Engagement Guidelines for State Significant Projects 2021* (engagement guideline) (DPIE 2021a) describes the requirements for effective engagement on State significant projects in NSW. The engagement guideline outlines requirements for proponents to engage with the community, councils and government agencies at each phase of the environmental assessment. The engagement guideline also outlines the actions the Department of Planning and Environment (DPE) will take as well as identifies opportunities for community participation during each phase. It emphasises early planning and engagement, effective engagement, proportionate engagement, innovation, and transparency. The primary audience of the engagement guideline is proponents and their teams, who are responsible for engaging with the community and other stakeholders during each phase of the environmental assessment. The engagement guideline also provides the community and other stakeholders with a better understanding of how, when and on what they can provide feedback, and how it will be addressed by proponents and decision-makers.

The engagement guideline outlines specific requirements for engagement for all phases of the planning approvals process, including:

- scoping of the EIS
- preparation of the EIS

- EIS exhibition and responding to submissions
- assessment and determination
- post-approval
- during modifications.

3.5 Local

3.5.1 Governance structures

The project is located within the Mid-Western Regional LGA; however, the project effects (direct and indirect) are anticipated to extend to the Warrumbungle LGA.

A summary of the governance structure (i.e. relevant Mayors and Councillors (Cr)) in each LGA is provided in Table 3.1.

Table 3.1 LGA Governance Structures, 2022

LGA	Role	Councillors	
Mid-Western Regional Council	Mayor	Councillor Des Kennedy	
	Deputy Mayor	Councillor Sam Paine	
	Councillors	Councillor Paul Cavalier	Councillor Katie Dicker
		Councillor Alex Karavas	Councillor Robbie Palmer
		Councillor Peter Shelly	Councillor Phil Stoddart
		Councillor Percy Thompson	
Warrumbungle Shire Council	Mayor	Councillor Ambrose Doolan	
	Deputy Mayor	Councillor Aniello Iannuzzi	
	Councillors	Councillor Denis Todd	Councillor Kodi Brady
		Councillor Dale Hogden	Councillor Zoe Holcombe
		Councillor Jason Newton	Councillor Kathryn Rindfleish
		Councillor Carlton Kopke	

Source: Mid-Western Regional Council 2022, Warrumbungle Shire Council 2022

3.5.2 Local planning context

The Mid-Western Regional Council (MWRC) and the Warrumbungle Shire Council (WSC) have local plans and strategic plans that articulate their vision for the future of the communities in each respective LGA. These plans are summarised in Table 3.2.

Table 3.2 Mid-Western Regional LGA and Warrumbungle LGA planning context

Plan/strategy	Summary	Responsibility	Timeframe
<i>Our Place 2040 Mid-Western Regional Local Strategic Planning Statement (Strategic Planning Statement) (MWRC 2020)</i>	<p>The Strategic Planning Statement sets out the 20 year vision for land use planning in the Mid-Western Regional LGA.</p> <p>Planning Priority 7 of the Strategic Planning Statement is to “support the attraction of a diverse range of business and industries”. The following land use action supports this planning priority “consider renewable energy development in appropriate areas that avoids impacts on the scenic rural landscape and preserves valuable agricultural land”.</p>	MWRC	2022–2040
<i>Mid-Western Region Community Plan (MWRC 2017)</i>	<p>The Mid-Western Region Towards 2030 Community Plan 2017–2021 encourages active communication between Council and the community through engagement and participation in planning processes.</p> <p>The plan represents an opportunity to create and foster community-based goals, values and aspirations – to drive a sustainable community that reconciles the economic, social, environmental and civic leadership priorities for the region.</p> <p>The plan aims to:</p> <ul style="list-style-type: none"> • look after the community • protect the natural environmental • build a strong local economy • connect and link the regions to the rest of NSW • good governances and meeting the needs of the community. <p>A new community plan is currently in the community engagement phase.</p>	MWRC	2017–2021
<i>Mid-Western Regional Local Environmental Plan 2012 (LEP) (NSW Government 2021)</i>	<p>The LEP describes the applicable zoning and land use planning regulations, and development standards.</p>	MWRC	2012 – present
<i>Regional Economic Development Strategy 2018–2022 (REDS) (MWRC 2018)</i>	<p>The REDS identifies economic development opportunities that capitalise on the LGAs endowments and industry specialisations.</p> <ul style="list-style-type: none"> • Develop a mature and diversified tourism sector. • Capitalise on existing viticulture strengths. • Grow industry clusters around mining, manufacturing and agriculture. • Support the attraction and retention of an increased number of diverse businesses and industries while developing a strong entrepreneurial reputation. • Promote the region to target businesses that complement key local industries. • Develop an emerging retiree/aged care sector. 	MWRC	2018–2022

Table 3.2 Mid-Western Regional LGA and Warrumbungle LGA planning context

Plan/strategy	Summary	Responsibility	Timeframe
<i>Delivery Program 2017/18–2021/22 and Operational Plan (MWRC 2022)</i>	<p>The Delivery Program and Operational Plan explores the actions to be taken to achieve the strategic outcomes identified in the <i>Mid-Western Region Community Plan</i>.</p> <p>The Delivery Program comprises a timeframe of 3 years, while the Operational Plan presents an annual plan. The contents of the delivery program and operational plan are organised according to 5 themes: community; natural environment; local economy; connecting the region; and governance. Each theme consists of numerous strategies with a set of specific actions to be taken to ensure their realisation. The Delivery Program and Operational Plan provide a guidance framework for the investment of Voluntary Planning Agreement funds.</p>	MWRC	2017/2018 to 2021/2022
<i>Asset Management Strategy 2017–2021 (MWRC 2021)</i>	<p>The Asset Management Strategy presents the MWRC’s plan to manage and operate the appropriate mix of sustainable community infrastructure that supports communities in the Mid-Western Regional LGA. This strategy endeavours to help meet the objectives set out in the community plans.</p>	MWRC	2017–2021
<i>Warrumbungle Shire Council Community Strategic Plan 2022/2037 (WSC 2022)</i>	<p>The <i>Warrumbungle Shire Council Community Strategic Plan 2022/2037 (WSC 2022)</i> captures the needs and aspirations of the community in Warrumbungle Shire LGA.</p> <p>The CSP outlines the community’s values which included having a unique natural environment that is protected and enhanced and a broad range of markets to ensure economic resilience. More specifically, the theme of strengthening the local economy identified an objective of ensuring that “the community benefits from the economic returns of local renewable energy production, and mining and extractive industries”. This included the strategy of identifying and developing opportunities to realise Warrumbungle Shire LGA’s potential as a location for the production of renewable energies.</p>	WSC	2022–2037
<i>Warrumbungle Shire Draft Community Strategic Plan 2022/2037 (WSC 2022)</i>	<p>The WSC has recently released a draft community strategic plan for the period 2022–2037. The community vision articulated in the draft community strategic plan is “a peaceful and sustainable way of life built by a strong community”. The draft community strategic plan outlines objectives and actions under the four themes of:</p> <ul style="list-style-type: none"> • caring for the environment • civic leadership • strengthening the local economy • supporting community life. 	WSC	2022–2037
<i>Warrumbungle LEP 2013 (NSW Government 2013)</i>	<p>The LEP describes the applicable zoning and land use planning regulations, and development standards.</p>	WSC	2013 – present

Table 3.2 Mid-Western Regional LGA and Warrumbungle LGA planning context

Plan/strategy	Summary	Responsibility	Timeframe
<i>Operational Plan & Delivery Program (WSC 2021)</i>	<p>The WSC Operational Plan and Delivery Program acts as a yearly review of the Council's commitment to the community, and outlines their quarterly progress and achievements, as well as their visionary framework for the preceding years. The plan and program identify seven core goals to address the needs and aspirations highlighted during community consultation:</p> <ul style="list-style-type: none"> • natural environment • local economy • community and culture • rural and urban development • recreation and open space • public infrastructure and services • local governance and finance. <p>In addition to outlining the values of the regional community (including honesty, integrity, fairness, transparency, passion, and opportunity), the plan explores the treasured natural features of the region. The second part of the document outlines the budget and delivery program for achieving these goals, and protecting the unique aspects of the Warrumbungle Shire, while also identifying areas for improvement.</p>	WSC	2020/21– 2023/24

4 Demographic profile

4.1 Population and population trends

Population trend data for the local area and regional area is presented in Table 4.1. Population data was not available for the Birriwa and Merotherie SSCs in 2006 and 2011 in the local area for the 2006 and 2011 ABS census periods due to changing ABS structures. The population trend in the local area is consistent with the NSW trend (i.e. population has experienced a gradual increase over time but has experienced a lesser overall growth rate).

From 2006 to 2021, Dunedoo SAL experienced the most significant population decline out of the study area by 33.6%, consistent with the population decline of Warrumbungle LGA (6.0%). Mudgee continued to have the greatest population growth out of the local study area and key townships by 31.3%.

The smaller communities of Gulgong and Dunedoo experienced significant population decline between the years 2006 and 2011, a trend that is generally consistent with other small rural communities across Australia. The notable population decline that occurred in Dunedoo between 2006 and 2011 can be attributed to rural property acquisition activities associated with the then proposed Cobbora coal mine. In 2008 these property acquisition activities lead to the ‘boarding up of 114 farms and homes in Dunedoo’ (Innis 2015) and the associated outmigration of former residents (estimated at 95 families [Innis2015]).

Of the three LGAs of interest, Dubbo Regional LGA experienced the greatest population change (45.1%) in the 15 years to 2021. The Mid-Western LGA has continued to experience steady population growth from 2016 to 2021. In contrast, the adjoining Warrumbungle Shire LGA has continued to experience population decline.

Table 4.1 Population trends, 2006–2021

Location	2016	2021	Total % change 2006–2011	Total % change 2011–2016	Total % change 2016–2021	Total % change 2006–2021
Birriwa	49	45	NA		-8.2%	NA
Merotherie	24	24	NA		0.0%	NA
Dunedoo	1,221	1,097	-24.2%	-2.6%	-10.2%	-33.6%
Local area	1,294	1,166	NA		-9.9%	NA
Gulgong	2,521	2,680	-18.3%	5.8%	6.3%	-8.1%
Mudgee	10,923	11,457	12.7%	11.1%	4.9%	31.3%
Key townships	11,642	12,213	13444	10.1%	4.9%	10.1%
Mid-Western LGA	24,076	25,713	5.8%	7.9%	6.8%	21.9%
Warrumbungle LGA	9,384	9,225	-2.3%	-2.1%	-1.7%	-6.0%
Regional area total	33,460	34,938	3.3%	4.9%	4.4%	13.1%
Dubbo Regional LGA	50,077	54,922	2.5%	29.0%	9.7%	45.1%
Area of reference total	83,537	89,860	2.9%	18.1%	7.6%	30.7%
NSW	7,480,228	8,072,163	5.6%	8.1%	7.9%	23.3%

Source: ABS 2006; ABS 2011; ABS 2016a; ABS 2021a, Census of Population and Housing: General Community Profiles.

Notes: Population totals for Birriwa SSC and Merotherie SSC are not available for 2006 and 2011.

4.2 Population projections

Population projections (DPIE 2019) are published by the DPE for the period 2016–2041 at the LGA level (Table 4.2). Population projections suggest that the population of the regional area is estimated to increase by 3,139 people from 34,108 in 2016 to 37,247 in 2041, representing a total increase of 9.2% and an average annual increase of less than 0.37%. This is a greater population growth predicted for the regional area than in the 2022 Social Impact Assessment (EMM 2022a) which reported a growth of 0.4%.

The greater predicted population growth can be attributed to a higher predicted growth for Mid-Western Regional LGA (20.8% compared to 9.7% in the 2022 Social Impact Assessment (EMM 2022a)). Dubbo Regional LGA continues to have high population growth with 23.7% from 2016 to 2041.

The data shows that while the regional area population is projected to grow, the growth is more gradual than NSW. Regional NSW is experiencing a slowing of population growth which may be attributed to a continued ageing population as well as changes in and closures of major industries (Informed decisions 2016).

Table 4.2 Projected population, 2016–2041

Area	2016	2021	2026	2031	2036	2041	Total change 2016–2041	Total % change 2016–2041	Average annual growth rate 2016–2041
Mid-Western LGA	24,546	25,445	26,477	27,555	28,610	29,649	5,103	20.8%	0.83%
Warrumbungle LGA	9,562	9,092	8,718	8,359	7,985	7,598	-1,964	-20.5%	-0.82%
Regional Area	34,108	34,345	34,520	34,556	34,456	34,257	149	0.4%	0.02%
Dubbo Regional LGA	51,404	54,411	56,614	58,967	61,289	63,599	12,195	23.7%	0.95%
Area of Reference	85,512	88,069	90,050	91,482	92,436	93,034	7,522	8.8%	0.35%
NSW	7,732,858	8,166,757	8,462,770	8,933,640	9,404,886	9,872,934	2,140,076	27.7%	1.11%

Source: DPE 2022, NSW 2022 Population Projections: ASGS 2022 LGA projections.

Notes: 1. Population projection data was not available at the SSC level.
2. The projected population has been determined by using the ABS ERP population count which takes Census counts of people where they usually live (accounting for interstate visitors and removing overseas visitors), adjusts for Census undercount and overcount using the Census Post Enumeration Survey (PES), adds in Australians who are temporarily overseas, and applies further demographic adjustments.

4.3 Population mobility

Population mobility is a measure of migration within a population. The ABS measures population mobility through length of residency at the same address, measured as one year ago and five years ago. A high proportion of population living at the same address five years ago shows relative stability in a community.

Residential mobility is driven by a range of factors including housing and location choice, tenure, labour market related decisions as well as household composition. Renters are three times more likely to move as owners, while a person who is unemployed has a 20% change of moving compared to an employed person (James A et al 2021).

In 2016, population mobility across the local area was higher than the regional area and NSW. In the local area, 15.9% of the population reported living at a different address one year ago compared to 12.8% in the regional area, 14.5% in NSW.

Figure 4.1 shows the 2021 data for people living at a different address one year ago and 5 years ago to demonstrate population mobility. Mudgee and Gulgong had a high proportion of people living at a different address 5 years ago (39.6% and 47.7% respectively). This indicates a more transient population which may reflect the high employment share of the health and mining industry sectors (Chapter 9).

Within the local area, Birriwa and Merotherie had the lowest population mobility (11.1% and 0.0% respectively lived at a different address one year ago). This suggests that Birriwa and Merotherie has a relatively stable population which is consistent with long-term rural communities with a strong rural identity. In 2016, Dunedoo had higher population stability than in 2021 (EMM 2022a).

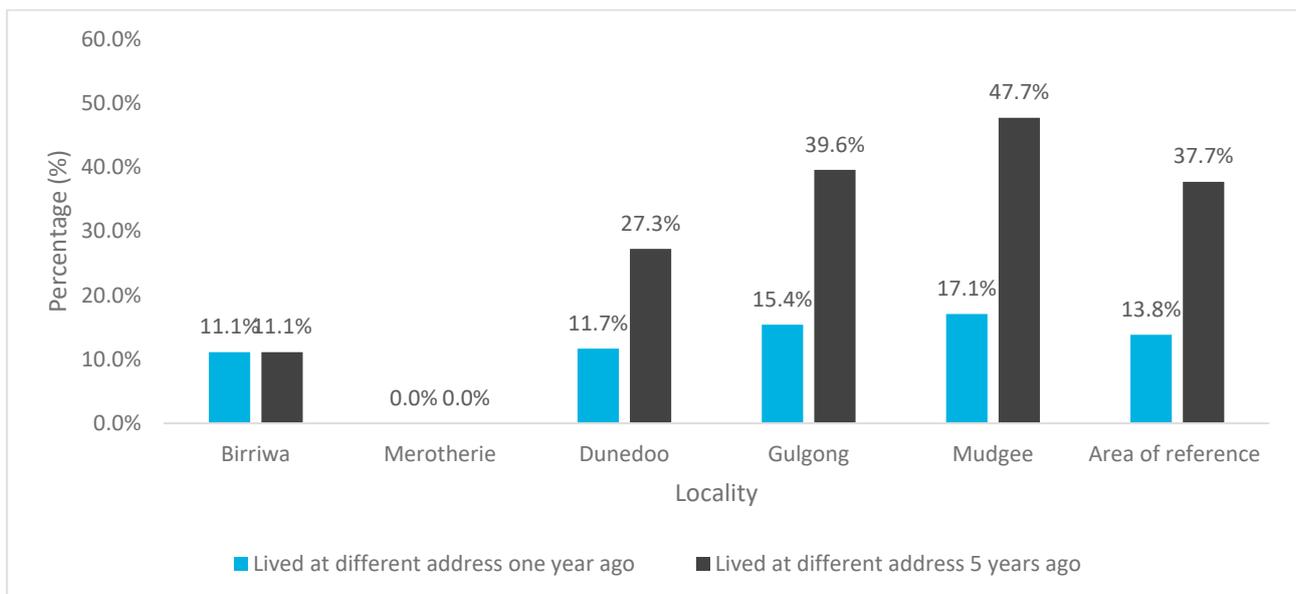


Figure 4.1 Population mobility, 2021

4.4 Age and socio-cultural characteristics

Table 4.3 Age and socio-cultural characteristics, 2021

Indicator	Local area				Key townships			Regional area	Area of reference	NSW
	Birriwa	Merotherie	Dunedoo	Total	Gulgong	Mudgee	Total			
Age and gender distribution										
Total population	45	24	1,097	1,166	2,680	11,457	14,137	34,938	89,860	8,072,163
Female (%)	37.8%	54.2%	50.6%	50.2%	51.5%	51.2%	51.3%	49.7%	50.3%	50.6%
Male (%)	62.2%	45.8%	49.5%	49.9%	48.4%	48.7%	48.7%	50.3%	49.7%	49.4%
Median Age (no.)	47	50	51	-	41	36	-	-	-	39
People aged 14 years or under (%)	26.7%	12.5%	15.8%	16.0%	21.2%	21.2%	21.1%	19.1%	20.2%	18.2%
People aged between 15 and 24 years (%)	6.7%	0.0%	8.8%	8.5%	9.3%	10.8%	10.6%	9.7%	10.7%	11.8%
People aged between 25 and 64 years (%)	26.7%	16.7%	43.4%	43.5%	48.1%	49.3%	49.0%	48.5%	49.7%	52.3%
People aged 65 years or older (%)	31.1%	20.8%	31.8%	31.5%	21.8%	18.7%	19.2%	22.8%	19.4%	17.6%
Family composition										
Number of families (no.)	13	9	286	308	705	2,998	3,703	9,052	22,801	2,135,964
<i>Couple family with no children (%)</i>	38.5%	66.7%	50.3%	50.3%	41.8%	40.1%	40.4%	45.2%	41.7%	37.9%
<i>Couple family with children (%)</i>	46.2%	77.8%	32.5%	34.4%	38.2%	40.5%	40.0%	38.0%	39.3%	44.7%
<i>One parent family (%)</i>	0.0%	0.0%	16.1%	14.9%	18.6%	18.0%	18.1%	15.5%	17.5%	15.8%
Cultural diversity										
Indigenous status (%)	6.7%	0.0%	8.8%	8.6%	8.1%	7.5%	7.6%	7.8%	13.2%	3.4%
Language other than English spoken at home	0.0%	0.0%	2.4%	2.2%	2.2%	4.3%	3.9%	3.0%	5.5%	22.4%
People who do not speak English well or not at all	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.5%	0.3%	0.3%	4.5%
Vulnerability										
Has a need for assistance	8.9%	0.0%	7.3%	7.2%	6.9%	6.3%	6.4%	6.5%	6.2%	5.8%

i Age

Table 4.3 shows the age and socio-cultural characteristics of the study area. The population of the local study area is typically older, with median ages 47 years or above compared to NSW's 39 years. This is consistent with the local study area's higher proportion of people aged 65 years and older (31.5%) compared to the regional area (22.8%), area of reference (19.4%), and NSW (17.6%). There is also a higher proportion of people aged 0-14 years in the key townships (21.1%), regional area (19.1%), and area of reference (20.2%) compared to NSW (18.2%). This could indicate a greater burden on the working-age population in terms of caring requirements. However, there is a lower proportion of people aged 0-14 years in the local study area (16.0%).

ii Gender

The proportion of females to males across the study area is relatively consistent with no more than a 2.0% difference and the majority of localities having a slightly higher proportion of females. The exception to this is in Birriwa SAL with a proportion of 37.8% females to 62.2% males. However, the smaller sample size should be considered as it could skew the analysis.

iii Family composition

In terms of family composition, across the study area there are higher proportions of families with no children compared to NSW. In particular, Merotherie SAL has the highest proportion of families with no children compared to NSW (66.7% compared to 37.9%), and overall, the local study area has a proportion of 50.3%. However, the local study area were the localities that had the lowest proportions of 0–14 year olds. The local study area (14.9%) and the regional area (15.5%) had a lower proportion of one parent families than NSW (15.8%). Alternatively, the key townships had a higher proportion of one parent families (18.8%) indicating a potential vulnerability in the localities of Mudgee SAL and Gulgong SAL.

iv Cultural diversity

The study area generally showed higher proportions of people with Indigenous status compared to NSW. The local study area has a higher proportion of 8.6% of people with Indigenous status, largely due to a significant Indigenous population in Dunedoo but with the exception of Merotherie (0.0%). The area of reference has the highest proportion of people with Indigenous status in the study area with 13.2%. In terms of households who speak a language other than English at home, the study area has a significantly lower proportion than NSW (22.4%). This is similar to people who do not speak English well or not at all, where several study areas reported 0.0% particularly in the local study area and key townships which is lower than the NSW proportion of 4.5%.

4.5 Vulnerable groups

The ABS provides data on the prevalence of disability in a population using the variable core activity need for assistance. This variable records the number of people with a profound or severe core activity limitation who are defined as needing help or assistance in one or more of the three core activities of self-care, mobility, and communication because of a long-term health condition (lasting 6 months or longer), a disability (lasting 6 months or longer), or old age. In 2016, the prevalence of disability in the local area population (5.4%) was analogous with NSW (5.4%) but lower than the regional area (5.9%) and area of reference (5.8%). Within the local area, Birriwa (8.2%) had a significantly greater need for assistance than other communities. The proportion of people needing assistance in the local study area in 2021 was significant with 7.2% and key townships with 6.4%, which is now higher than NSW with 5.8%. This is likely attributable to the small population size in the community and the relatively high medium age when compared to the other communities in the local area. Core activity need for assistance in the area of social influence is demonstrated in Table 4.3.

4.5.1 Socio-economic advantage and disadvantage

The levels of disadvantage and advantage in the population can be indicated by the Socio-Economic Indexes for Areas (SEIFA). Using ABS Census data, these indexes measure aspects such as low-income earners, relatively lower education attainment, high unemployment, and dwellings without motor vehicles. This report uses SEIFA data from the 2021 Census. SEIFA provides four summary measures including:

- the Index of Relative Socio-Economic Disadvantage (IRSD)
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)
- the Index of Education and Occupation (IEO)
- the Index of Economic Resources (IER).

The SEIFA decile ranking system allocates the lowest 10% of areas to the decile number of 1 and the highest 10% of areas to a decile number of 10. While there are variations to interpreting the decile scores across the four indexes, generally a low decile rank is associated with disadvantage, and a high decile rank is associated with less disadvantage. The rankings of the communities within the study area for each of the four summary measures are demonstrated in Figure 4.2. It should be noted that Dubbo Regional LGA is referred to as Western Plains Regional LGA, as was the correct name for the area in 2016.

In 2016, the SEIFA data showed some variation in socio-economic advantage and disadvantage between communities within the local area (EMM 2022a). Decile rankings for all reported SEIFA measures in Birriwa and Merotherie are higher than SEIFA rankings for Gulgong, Dunedoo, and Mudgee, and similar to the broader Mid-Western Regional LGA.

This continued in the 2021 Census, where Birriwa and Merotherie gave similar SEIFA scores to broader Mid-Western Regional LGA. This suggests that people in Birriwa and Merotherie do not particularly lack disadvantage, are neither relatively advantaged or disadvantaged, have medium access to economic resources and have a mid-level of education and skills relative to other areas. In comparison, the SEIFA rankings show that people in Gulgong and Dunedoo are disadvantaged, have low access to economic resources and have a low level of education and skills relative to other areas. This means that compared to other suburbs across NSW, there are likely a lower proportion of households with high income (see Section 7.4), comparatively fewer people with qualifications, and comparatively fewer people in skilled occupations (see Section 7.3) in the local area, regional area and area of reference, as well as a higher proportion of households with low incomes, or a higher proportion of people in low-skilled occupations.

Within the area of reference, the Mid-Western LGA has roughly similar rankings to Dubbo Regional LGA, and both LGAs have higher rankings than the Warrumbungle LGA. The 2021 SEIFA rankings show that people in the Warrumbungle LGA are relatively disadvantaged, have low access to economic resources relative to other areas, but have a similar level of education and skills as the Mid-Western Regional LGA but lower than Dubbo Regional LGA. Overall, the Dubbo Regional LGA shows the least level of disadvantage of the LGAs of the area of reference.

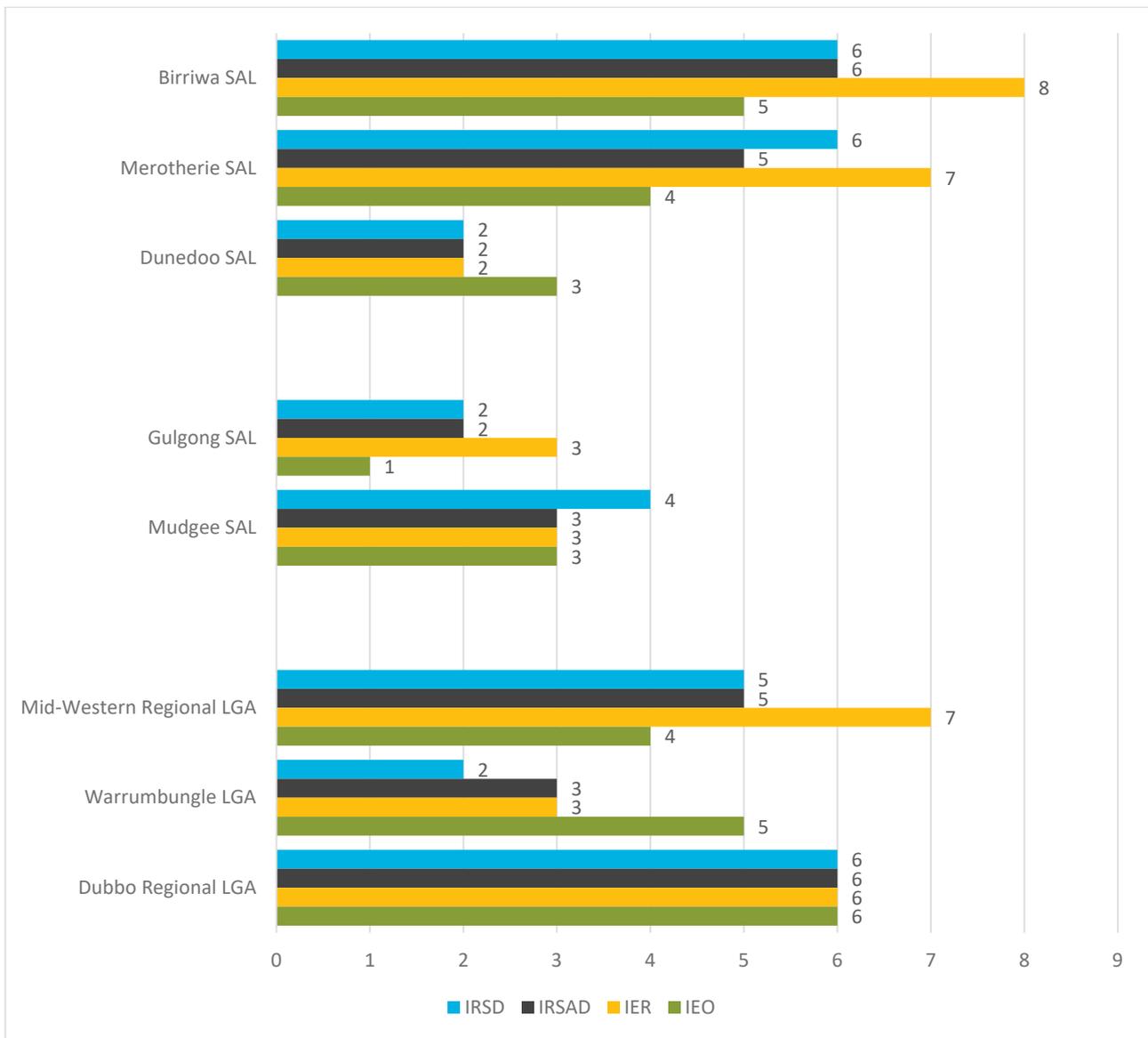


Figure 4.2 SEIFA deciles for the study area, 2021

4.5.2 Homelessness

Rates of homelessness across Australia are reported in the 2021 ABS Census. The ABS statistical definition of homelessness is “when a person does not have suitable accommodation alternatives and their current living arrangement: is in a dwelling that is inadequate; has no tenure, or if their initial tenure is short and not extendable; or does not allow them to have control of, and access to space for social relations” (ABS 2017).

The Australian human rights commission (AHRC) are an independent third party which investigates complaints about discrimination and human rights breaches explained:

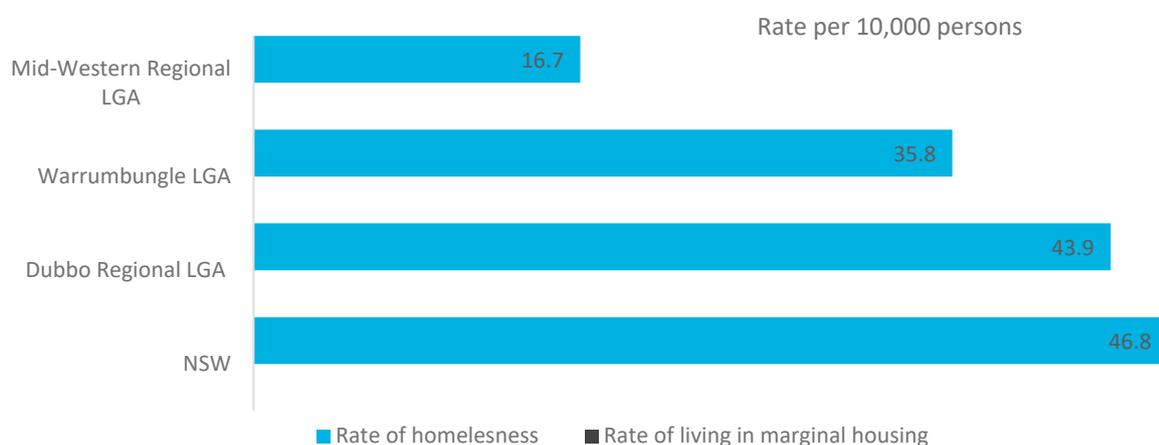
the causes of homelessness are numerous and complex. Homelessness can be caused by poverty, unemployment or by a shortage of affordable housing, or it can be triggered by family breakdown, mental illness, sexual assault, addiction, financial difficulty, gambling or social isolation. Domestic violence is the single biggest cause of homelessness in Australia (AHRC) (n.d.).

Homelessness can lead to health problems including poor nutrition, depression, substance abuse, poor dental health, and mental health conditions (AHRC 2021). For homeless persons, hardships with finances, transport, identification, Medicare, and difficulty with appointment maintenance/treatment plans make accessing health care services more difficult than the average person (AHRC 2021). As such, homeless persons are at greater risk of being negatively affected by potential impacts on livelihoods and health and wellbeing.

Rates of homelessness in the area of reference are presented in Figure 4.3. Rates of homelessness are not available for the local area but are available at the LGA level. Homelessness is measured at a rate per 10,000 persons. In 2016 rates of homelessness across the LGAs of the regional area and area of reference were lower than rates of homelessness across NSW, however the rate of homelessness in the Dubbo Regional LGA was markedly higher than the Mid-Western Regional and Warrumbungle LGAs.

This is similar to 2021, where the Dubbo Regional LGA continued to have the highest rates of homelessness per 10,000 persons (43.9 persons per 10,000) but still slightly below the NSW rate (46.8 persons per 10,000). Warrumbungle LGA's rates of homelessness have almost doubled since the 2016 Census (EMM 2022a)

The increasing rate of homelessness in the Warrumbungle LGA in 2021, may be attributable to the prevalence of disadvantage in the LGA (Section 4.5.1), and the number of low-income households and low income rental households in the LGA (Section 7.4) (NSW Government Communities & Justice (ud)).



Source: ABS 2016, 2049.0 – Census of Population and Housing: Estimating Homelessness.

Figure 4.3 Rates of homelessness per 10,000 persons, 2021

5 Community culture, values, and aspirations

5.1 Mid-Western Regional Council

The community of the Mid-Western Regional LGA values the friendly community, the country lifestyle, beautiful natural environment, the range of parks and facilities for all ages, activities for youth, ongoing improvements to the transport networks and new job opportunities (SIA Interview Program; MWRC, 2017). The community values the diversity of industry including mining, tourism, viticulture and agriculture and growth towards a modern and prosperous economy. During consultation in 2017 to inform a review of the community strategic plan, the community identified the following allocation of resources between the five key themes of the community strategic plan:

- 27% to looking after our community
- 24% to connecting to our region
- 19% to protecting our natural environment
- 19% to building a strong local economy
- 11% to good government (MWRC 2017).

Gulgong is a small rural community with a strong heritage and a unique character. SIA interview participants described the Gulgong community as ‘friendly’, ‘caring and safe’ and as a ‘sporting community’, with ‘wonderful clubs and strong community spirit’ (2022 SIA interview program).

5.2 Warrumbungle Shire Council

The Warrumbungle LGA is recognised for its natural assets encompassing lively towns and villages where communities thrive. The community values the landscape, community and diversity, a diverse economy, mobility and accessibility, and collaboration and creativity. The vision for the new 2022–2037 community strategic plan for the Warrumbungle LGA community is a peaceful and sustainable way of life built by a strong community. The Warrumbungle LGA community is a strong, vibrant community that will build, promote and grow to create a flourishing economy (WSC 2022).

Dunedoo is a friendly rural community with traditional rural values and long-standing community connections. People can rely on one another for support. Creating jobs to retain young people and encourage young people back to the local area is important to the community. Participants in SIA interviews described the Dunedoo community as ‘a strong and tight knit community’ with ‘tremendous community spirit’, a ‘very safe area’ and ‘a great place to bring up children’ (2022 SIA interview program).

5.3 Indigenous history

Information about the socio-cultural structure of Aboriginal society prior to European contact largely comes from ethno-historic accounts made by Europeans. These accounts and observations were made after massive social disruption due to disease and displacement. As a result, this information is often contentious, particularly in relation to language area boundaries.

Aboriginal and/or Torres Strait Islander persons throughout Australia have experienced trauma due to the violence and loss of culture associated with colonisation, and subsequent settler policies including the forced removal of children, known as the Stolen Generations (Australians Together 2020). This trauma can be passed down from the first generation of survivors to future generations in the process of intergenerational trauma. According to Healing Foundation (n.d.), those experiencing intergenerational trauma:

May experience difficulties with attachment, disconnection from their extended families and culture and high levels of stress from family and community members who are dealing with the impacts of trauma. This can create developmental issues for children, who are particularly susceptible to distress at a young age. This creates a cycle of trauma, where the impact is passed from one generation to the next.

Within Australia, intergenerational trauma mainly affects the children, grandchildren, and future generations of the Stolen Generations. Intergeneration trauma is often associated with violence, harmful substance use, and mental health issues amongst Aboriginal and/or Torres Strait Islander populations (Healing Foundation n.d.).

A brief summary of the presence of Aboriginal people in the regional area is provided below and drawn from the *Birriwa Solar Farm and Battery Project Aboriginal Cultural Heritage Assessment Report* (OzArk 2022) (EMM 2022b).

The Dunedoo, Gulgong, Mudgee and surrounding area is the traditional land of the Wiradjuri peoples. The project area is located at the north-eastern extent of Wiradjuri territory. The Wiradjuri tribal group is one of the largest language groups within NSW extending across the districts of Mudgee, Bathurst, Dubbo, Parkes, West Wyalong, Forbes, Orange, Junee, Cowra, Young, Holbrook, Wagga Wagga, Narrandera, Griffith, and Mossgiel (Tindale 1974). Within the Wiradjuri region, the presence of Aboriginal people has been dated to 40,000 years ago (Hope 1981 as cited in Haglund 1985). A spread east into the mountains is thought to have occurred between 14,000 to 12,000 years ago.

Oral tradition records the presence of over 20 clans within the broader Bathurst–Mudgee region, organised according to matrilineal descent (Navin Officer 2005: 48). Clans were made up of several fairly independent groups, of up to 20 members, in friendly contact with each other, moving separately for much of the year over a shared territory (Pearson 1981; Haglund 1985).

Early British explorers and settlers noted considerable variation in the numbers of Aboriginal people that would gather for food procurement activities during different seasons of the year. This seasonality was most obvious in the case of gatherings along major rivers, and it has been suggested that during dry periods the water holes remaining in the major rivers would become focal points for the usually scattered groups (Haglund 1985: 5).

Concerning the Mudgee/Gulgong area, Haglund (1985: 3) notes that the distribution of known sites cannot be seen as accurately reflecting past Aboriginal land use or site location patterns because of site loss since colonial settlement. Those sites known to exist, however, do fit within the general pattern for the various resource zones discerned by Koettig (1985) and Pearson (1981).

5.4 Non-Indigenous history

A brief history of the Mid-Western Region is documented in the *Birriwa Solar Farm and Battery Project Historic Heritage Assessment Report* (Ozark 2022). A summary is presented below.

Early European exploration of the region occurred in the 1820s. One of the first land holders and cattle runs in the area was owned by the sons and grandsons of William Cox, who had built the road across the Blue Mountains (ABD 2020). Their cattle run was called 'Guntawang' and was established 1822, 8 km south-west of the present town site of Gulgong. The original run in the Dunedoo area was leased by the Johnstone family from 1874 called the 'Bolaro Run' which included the original homestead located near where the current silos are located in Dunedoo.

The Gulgong goldfield was gazetted in 1866 but initial finds were negligible. One of Rouse's shepherds, Tom Saunders, uncovered a large find on the future town site (at Red Hill) on April 14, 1870, thereby sparking a major goldrush.

There was spectacular growth in Gulgong during the 1870s, with the mines around Gulgong producing twice as much gold as the Meroo field produced over half a century in 1872 (DUAP 1996). When the town was gazetted in 1872 there were reputedly 20,000 people in the area.

Gulgong became a municipality in 1876 although the gold had already begun to dwindle. By 1881 the population was 1,212 and the boom years were over. From that point, wheat and wool production, boosted by the arrival of the railway in 1909, sustained the town.

The current day township of Gulgong is well known for its historic streetscape and association with gold mining. The township has approximately 130 National Trust listed buildings, as well as Australia's oldest operating opera house (the Prince of Wales Opera House), and many museums relating to the gold rush and pioneer history of the town.

6 Social infrastructure

6.1 Education

6.1.1 Educational institutions

i Primary and secondary

There are five primary schools, four secondary schools, two combined schools, in the local area. Of these, six are government schools and three are non-government schools. The schools with the largest enrolments are in Mudgee. Residents of the local area can access schooling in the regional area with minimal travel required.

ii Tertiary

The only tertiary education institution with campuses in the local area and regional area is TAFE NSW. TAFE campuses are located in Mudgee and Dunedoo in the local area, and also Coonabarabran and Gilgandra in the broader regional area (Warrumbungle LGA). Charles Sturt University has a campus in Dubbo offering a wide range of undergraduate and postgraduate study programs, including Indigenous study programs and courses (Charles Sturt University 2022). The University of Sydney, School of Rural Health has a campus in Dubbo at which Sydney Medical School students are able to pursue a placement aimed towards developing medical skills relevant to rural, regional, and remote regions of Australia (University of Sydney 2022).

6.1.2 Educational attainment

Educational attainment (i.e. the highest level of schooling completed) in the local area is similar to the regional area and the area of reference, however all three areas of interest experience lower levels of educational attainment compared to NSW (Table 6.1). The local area has a slightly higher proportion of persons who have completed Year 12 or equivalent (41.1%) compared to the regional area (37.8%) but a lower proportion than NSW (63.3%). Within the local area and key townships, Mudgee has the highest proportion of persons who have completed Year 12 or equivalent (46.3%) followed by Merotherie (42.9%) and Dunedoo (38.8%). These completion rates remain well below the NSW rate (59.1%). In general, people who have completed Year 12 are more likely to continue with further education or training and have a more successful transition into the workforce (ABS 2011).

Total persons with non-school qualifications in the local area (49.2%), key townships (52.0%), regional area (48.2%) and area of reference (49.2%) are lower than NSW (57.6). Out of the study area, the localities in the local area in particular have a low proportion of people with a non-school qualification. Dunedoo has a proportion of 39.3%, followed by Birriwa with 29.7% and Merotherie (21.1%). The highest non-school qualifications in the study area are certificate-level qualifications. Certificate level qualifications in the local area (40.5%), key townships (48.5%), regional area (44.7%), and area of reference (40.5%) are much higher than in NSW (28.3%) and comprise the largest proportion of non-school qualifications held by people over 15 years. In contrast, the study area consistently has lower proportion of people with a Bachelor Degree level of non-school qualification compared to NSW.

The prevalence of certificate level qualifications in the local and regional area reflects a combination of access to further education institutions and the dominant regional employment sectors (i.e. agriculture, mining and health care and social assistance) which in turn inform the dominant occupation types (i.e. technicians and trades workers and machinery operators and drivers). These occupations typically require a certificate level qualification or above. The pattern of non-school qualifications in the area of social influence is also consistent with the higher proportion of person attending post-school alternative educational institutions.

Table 6.1 Highest level of schooling completed for persons 15 years and over, 2021

	Year 12 or equivalent	Year 10 or equivalent	Certificate-level non-school qualification (%)	Bachelor Degree-level non-school qualification (%)	Total persons with non-school qualification ¹ (%)
Birriwa	32.3%	41.9%	40.0%	15.0%	29.7%
Merotherie	42.9%	28.6%	30.8%	0.0%	21.1%
Dunedoo	38.8%	33.3%	40.3%	14.8%	39.3%
Local area	41.1%	29.5%	40.5%	17.8%	49.2%
Gulgong	36.4%	38.8%	53.1%	11.5%	45.8%
Mudgee	46.3%	33.7%	47.5%	18.5%	53.4%
Key townships	41.3%	32.2%	48.5%	17.2%	52.0%
Mid-Western LGA	43.2%	35.5%	47.0%	16.2%	51.4%
Warrumbungle LGA	39.5%	36.0%	37.7%	13.6%	39.4%
Regional area	37.8%	31.9%	44.7%	15.6%	48.2%
Dubbo LGA	48.9%	31.5%	38.0%	19.2%	49.9%
Area of reference	41.1%	29.5%	40.5%	17.8%	49.2%
NSW	63.3%	21.2%	28.3%	28.8%	57.6%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

Notes: 1. As a proportion of the total population

6.2 Health

The local area is located within the northern network of the Western NSW Local Health District (LHD).

6.2.1 Hospital

The Western NSW LHD looks after all public hospitals and healthcare facilities provisions in the area of social influence. Dubbo Hospital is the main referral hospital for the northern network of the Western NSW LHD. Dubbo hospital has up to 200 beds, a 24-hour emergency department, and offers a range of hospital services.



Source: NSW Health 2022

Figure 6.1 Western NSW LHD

Mudgee Hospital (part of the Mudgee Hospital and Health Service [HHS]) is the only procedural hospital in the northern network and provides emergency, acute medical, surgical, maternity and subacute inpatient services as well as a range of primary, ambulatory and community health services. The hospital has 51 beds including 28 acute general medical and surgical beds. Mudgee HHS is the closest hospital to the local area. Gulgong Multipurpose Service (MPS) and Dunedoo MPS are smaller hospitals in the northern network. These MPS provide integrated acute and subacute inpatient services, emergency, allied health, primary and community health services, health related services and residential aged care under one organisational structure as agreed by the State and Commonwealth.

Gulgong MPS has four inpatient beds, six aged care beds, an emergency department and a primary and community health centre (Gulgong Community Health Centre). Gulgong MPS is also supported by many allied health services.

Dunedoo MPS encompasses the towns and villages of Elong Elong, Mendooran, Neilrex, Cobbora, Birriwa, Uarbry and Leadville and all districts associated with these locations. The Dunedoo MPS is a 30 bed facility comprising of 25 residential aged care beds, five acute beds and 24 hour Emergency Department. Medical support is provided in emergency situations via Virtual Rural Generalist Service (VRGS).

Table 6.2 presents a summary of admissions to Mudgee Hospital for the period 2017–2022. During the period 2015 to 2020 the total number of patients admitted to Mudgee Hospital increased by 33.0% (i.e. 1,031 admissions), with a significant increase from 2019–2020 to 2020–2021 by 46.0%. Most of all the hospital stays in Mudgee Hospital are attributed to medical emergencies and medical non-emergencies. The low admissions for the other admissions categories, particularly mental health, suggest that people within the local area access more specialised care outside of the local area.

Table 6.2 Number of admissions to Mudgee Hospital, 2017–2022

Admission category	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Childbirth	240	216	226	248	273
Medical (emergency)	1,047	921	839	905	871
Medical (non-emergency)	725	718	606	1,617	1,874
Mental health	0	0	0	0	0
Other acute (emergency)	9	9	10	10	11

Table 6.2 Number of admissions to Mudgee Hospital, 2017–2022

Admission category	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Other acute (non-emergency)	575	628	512	583	601
Other subacute and non-acute	<5	8	39	25	14
Palliative	25	28	40	57	21
Rehabilitation	30	23	40	26	0
Surgical (emergency)	22	18	8	11	7
Surgical (non-emergency)	446	395	385	466	482
Total	3,123	2,964	2,705	3,948	4,154

Source: AIHW 2022, Hospitals.

- Notes:
1. Medical is defined as stays to hospital that do not require surgery.
 2. Surgical is defined as stays to hospital that require surgery (i.e. physical medical intervention).
 3. Other acute care is defined as stays that have neither a surgical nor a medical Australian Refined Diagnosis Related Group.
 4. Surgical, medical, and other acute care stays are further divided into ‘emergency’ and ‘other’, based on the recorded urgency of admission i.e. whether admission was considered necessary within 24 hours or not.

6.2.2 Primary health

i General practitioner and health service provision

As per the 2022 Social Impact Assessment (EMM 2022a), in the local area there are five general practitioner (GP) services which primarily offer standard GP services. The Multipurpose Services (MPSs) located in Gulgong and Dunedoo, and the Mudgee HHS also offer a range of health-related services to the local area and broader regional area. The MPSs and the Mudgee HHS provide services relating to community health, Aboriginal health, mental health, maternal, child and family health, aged care, and special services.

6.2.3 Emergency services

There are three police stations, three ambulance stations, and three fire and rescue stations in the local area. The local area also has a local State Emergency Service (SES) unit and is home to the SES Western Zone Headquarters. The project site is in the Cudgegong District of the NSW Rural Fire Service (RFS) and adjoins the Castlereagh District. Within the local area RFS brigades are located in Birriwa, Gulgong, Mudgee and Dunedoo. The Cudgegong District is the primary combat agency for bush and grass fire incidents in the Mid-Western Regional LGA.

In addition to the listed emergency services, the Ambulance Service of NSW Western Regional Office and the Orana-Mid Western Police District office are located in Mudgee. Additional emergency services are located in the broader regional area and area of reference.

6.3 Transport infrastructure

Transportation in the local area is facilitated through the provision of three movement networks: a public transport network, a bike/walk network, and a road network.

6.3.1 Public transport

Public transport services within the local area are limited to bus transport. The nearest and accessible train station is located in Lithgow.

There is no public transport service within the towns of Gulgong or Dunedoo.

Odgen's Coaches operate the Mudgee interlink, a series of bus routes around the Mudgee township. Mudgee Community Transport, funded by Transport for NSW, provides a transport service for eligible seniors, pensioners, those with accessibility needs or those who have limited access to public transport. The service is especially designed to help residents access medical appointments, participate in social activities, complete shopping and maintain independent living at home.

Transport NSW intercity bus services provide daily services between communities of the local area and key townships and Lithgow with onward rail connections to Sydney. There is no direct intercity bus service between the local area and key townships and Dubbo. NSW Transport operate a daily return train service between Sydney Central Station and Dubbo, via Lithgow. Sid Foggs operates a regular return service between Newcastle and Dubbo which stops in Dunedoo.

School bus services operate in the local area and are provided principally by Ogden's Coaches and the East End Bus Service. These services connect with educational institutions in Gulgong and Mudgee. The East End Bus Service provides a school bus service (the Blue Springs Route and Tucklan Route) in the vicinity of the project area (East End Bus Service 2022). There is also a privately owned school bus service called Hogden's Bus service, that operates a service along Barneys Reef Road, Birriwa Bus Route South and Birriwa Bus Route North providing student transport to local schools in Dunedoo.

There is one taxi service in Mudgee, Mudgee radio cabs as well as a limited Uber service. Both the uber and taxi service also service Gulgong. Satellite Taxis operate in Dunedoo.

6.3.2 Road network

The project is located immediately east of the village of Birriwa on the Castlereagh Highway (B55) and south of the Golden Highway (B84). The towns of Gulgong and Mudgee are both located on the Castlereagh Highway, part of the Great Inland Way which links Sydney and Cairns. Dunedoo is located at the junction of the Castlereagh Highway and Golden Highway. The Golden Highway connects Newcastle in the east with Dubbo in the west.

6.3.3 Air

Mudgee airport is the only commercial airport located in the local area. A larger commercial airport is located at Dubbo. Mudgee Airport is owned and managed by the MWRC. As of March 2022, FlyPelican operates weekly return flights from Mudgee to Sydney (Mid-Western Regional Council 2022).

The Dubbo airport consists of two sealed runways, a taxiway, an RPT apron, and a passenger terminal. There are five airline companies offering flights to destinations throughout Australia with daily flights provided by QantasLink between Sydney and Dubbo, Fly Pelican between Dubbo and Newcastle and Ballina, Link Airways to Brisbane and Melbourne, Rex Regional Express to Broken Hill and Sydney and Air Link to Walgett, Bourke and Lightning (Dubbo Regional Airport, 2021).

The nearest major domestic and international airports are Sydney Airport and Newcastle Airport which are both approximately 4.5 hours' drive (367 km and 374 km respectively) from the local area.

6.3.4 Modes of travel

The 2016 Census indicated the predominant mode of travel to work in the local area is by car, either as the driver or as a passenger (73.9%), which is slightly higher than the NSW average (64.6%) but lower than the regional area average (68.5%). This trend continued in the 2021 Census with a high proportion of residents travelling by car in the local area (59.1%), which is higher than the NSW average (46.3%), but lower than the key townships (72.8%), regional area (67.2%) and the area of reference (72.3%).

A substantially lower proportion of people travel to work by public transport in the local area (0.0%), key townships (0.1%), regional area (0.3%), and area of reference (0.4%) compared to NSW (3.8%). The pattern of travel reflects the availability of public transport in the study area. Modes of travel to work in the area of social influence are summarised in Table 6.3.

Table 6.3 Modes of travel, 2021

	By car (as driver, as passenger)	By public transport (train, bus, ferry, tram)
Local area total	59.1%	0.0%
Key townships	72.8%	0.1%
Regional area total	67.2%	0.3%
Area of reference total	72.3%	0.4%
NSW	46.3%	3.8%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

6.4 Community services

A summary of the community services available in the local area is presented in Table 6.4. Services are concentrated in the three centres of Dunedoo, Gulgong and Mudgee, with the majority of services provided in Mudgee consistent with the town's population size. Many community services in the local area are provided by the respective local councils (i.e. MWRC and WSC). These services include childcare services, public health, cultural development, Aboriginal and Torres Strait Islander services, youth services, and social planning (Mid-Western 2022, Warrumbungle LGA 2022, Ask Izzy 2020).

There are also numerous multifaceted service provision organisations (e.g. Salvation Army, Lifeline, Anglicare, St Vincent de Paul Society) with services in the local area. These organisations provide a range of services for various demographics, including programs and services for youth, seniors, homeless persons, and specialised Aboriginal and Torres Strait Islander services, among others.

The 2022 Social Impact Assessment examined the community services presented in Table 6.4. This report will examine Aboriginal community services, housing and homelessness services, employment services, women's services, arts and cultural community facilities, and recreation services due to the potential impact from population change and housing market changes.

Table 6.4 Community services in the local and regional areas, 2021

	Local area	Regional area
Aboriginal services	✓	✓
Child and family services	✓	✓
Youth services	✓	✓
Housing and homelessness services	✓	✓
Employment services	✓	✓
Disability services	✓	✓
Aged care services	✓	✓
Women’s services	✓	✓
Arts and cultural facilities	✓	✓
Recreation services	✓	✓

Source: My Community Directory 2021; Healthdirect 2021; Ask Izzy 2021

6.4.1 Aboriginal community services

There are multiple providers of services for Aboriginal and/or Torres Strait Islanders in the local area. Service providers offer a wide range of services including health, housing and accommodation services, child and family services, elder services, and other support services.

The most comprehensive Aboriginal services in the local area are available through the Mudgee Community Health Centre and provided by Western NSW LHD. Services offered include health services, mental health and counselling services, health education services, and Aboriginal support services. The Gulgong Community Health Centre also provides Aboriginal health services. Hearing Australia provides specific hearing services for Aboriginal people.

The Mudgee Local Aboriginal Land Council provides information, support, advocacy, and referral for Aboriginal people who live in the local community as well as delivering cultural programs, heritage assessments and cultural tours. Gulgong community health also provides a range of services with Aboriginal mental health workers available for the community.

6.4.2 Housing and homelessness services

Within the Mid-Western Regional LGA there are two housing and homelessness services – Barnardo’s and Housing Plus. Services offered by these organisations include tenancy management, Aboriginal housing services, family accommodation, crisis accommodation, transitional accommodation, community housing, and specialist homelessness services. Housing plus specifically provides affordable rental accommodation for families and individuals on low to moderate incomes. Barnardo’s offer a specialised case management and housing and homelessness support services specifically for youth, including crisis and short-term accommodation, as well as intensive support, early intervention, and referral service.

6.4.3 Employment services

There are seven identified employment service providers in the local area, including five located in Mudgee, one in Gulgong and one in Dunedoo. The services vary by location and range from providing the Jobactive program, a service which provides employment placement and training for unemployed young people and adults, individually tailored job plans, assistance looking for work, resume writing, interview preparation, case management and wage subsidies. Other available services from the seven identified providers include career transition assistance, disability employment services, financial counselling, the 'ParentsNext' program, and skills checkpoint programs.

6.4.4 Women's services

There is a range of women's services offered through the Dunedoo, Gulgong and Mudgee Community Health Centres (CHC). CHCs provide a cost-efficient and-effective alternative to hospital-centred care and is at the centre of communities due to its position as a form of primary health care (Rosen et al. 2010).

6.4.5 Arts and cultural community facilities

There are a range of arts and cultural community facilities across the local area, with facilities concentrated in the communities of Dunedoo, Gulgong, and Mudgee. The following arts and cultural community facilities are located in the local area: art galleries and installations, museums and heritage sites, library, hall, and conference/meeting rooms. Most of these facilities are available in Gulgong and Mudgee area. This is a theatre and cinema in Mudgee.

6.4.6 Recreation services

Within the local area there are many recreational services and facilities, including parks and reserves, as well as a variety of sporting facilities (e.g. ovals, aquatic centres/swimming pools, netball courts, soccer fields, indoor courts, golf courses, bowling greens, skate parks, motocross, and racing facilities). Many of the sporting facilities are located in Mudgee. The Mudgee Glen Willow regional sports complex has a capacity of 10,000 people and hosts many large sporting games such as the NRL and A-League matches.

There is also a variety of national parks that support a range of outdoor pursuits including fishing, bird watching, kayaking, caving, canoeing, hiking, and cycling.

Part of the Central West Cycle Trail is in the Mid-Western Regional LGA and Warrumbungle LGA. Section 2 of the cycle trail connects Gulgong with Dunedoo via Birriwa Bus Route South and the township of Birriwa.

6.5 Regional events

Within the local area the townships of Dunedoo, Gulgong, and Mudgee, each hold an annual local agricultural show Other well established local and regional annual events include:

- Henry Lawson Festival held in Gulgong on the June long weekend
- Mudgee Classic a cycling event that attracts 2,000 people
- Mudgee food and wine month that consist of a range of events attracting approximately 12,000 visitors to the area over September and October
- the Wildflower music festival held in May at Mudgee which draws in approximately 14,000 attendees
- Mudgee small farm field days.

The large number of people brought in by regional events such as the Mudgee food and wine month and Wildflower Music Festival could demonstrate a restriction of short-term accommodation availability particularly around May to June.

Coonabarabran, and Mudgee also hold a country and picnic race day that attracts large crowds to the events that support the progress and development of community and picnic days supporting regional and rural communities (NSW Country and picnic racing 2022).

7 Workforce and income

The labour market characteristics of the social area of influence are described with reference to the following indicators:

- Labour force: defined as the total number of persons who are employed or unemployed in a reference period.
- Unemployment rate: the unemployment rate is the number of unemployed people (people aged 15 years and over) expressed as a percentage of the total labour force.
- Persons not in the labour force: people who are not in the labour force are those who are aged 15 years or older and who were neither employed nor unemployed in a reference period. This can include people who are permanently unable to work, retired, full-time students, and discouraged workers.
- Participation rate: the total number of employed and unemployed people in a reference period expressed as a percentage of the population aged 15 years and over.

The presented labour market information draws on:

- ABS labour market information for the 2016 and 2021 census periods.
- Data from the National Skills Commission (NSC) Labour Market Insights portal. This data is the most up-to-date labour market information for the area of social influence. However, this data is only available for geographic areas at or greater than Statistical Area 2 (i.e. LGA, employment region and state level) and is released at quarterly intervals. The latest available data is from the December 2021 quarter.

Table 7.1 demonstrates the overall unemployment and labour force participation rates for 2021. Care should be taken when interpreting data for the areas of Birriwa and Merotherie due to the small population sizes, rounding errors and a need to ensure data confidentiality. The local study area has lower labour force participation rate (49.8%) compared to NSW (58.7%) which can be attributed to low labour force participation in Dunedoo (48.4%). This corresponds with Dunedoo having the highest proportion of people aged 65 years and over (see Section 4.4). Warrumbungle LGA also has a lower labour force participation rate (47.2%) than NSW. Key townships had a higher labour force participation rate (60.8%) out of the study area, largely attributed to Mudgee SAL's rate of 62.0%.

Unemployment rates across the study area is generally lower than the NSW rate of 4.9%, with Dunedoo SAL having a similar unemployment rate of 4.9%. Mudgee SAL has one of the lowest unemployment rate of the study area with 3.6%, consistent with its high labour force participation rate. Dubbo Regional LGA also has a low unemployment rate of 3.6%.

The Warrumbungle CSP identifies that local employment opportunities in the LGA are a key challenge. The Warrumbungle CSP identifies various objectives to achieve economic diversity and growth, including establishing the Warrumbungle Shire LGA as a location to produce renewable energy will bring economic returns to those within the community, including employment opportunities (Warrumbungle Shire Council 2022).

In terms of Aboriginal unemployment rates, the regional study area demonstrates the highest rates of the study area with 10.1% largely attributed to high Aboriginal unemployment rates in Warrumbungle LGA. This is despite the regional study area not having the highest proportion of the study area (though still higher than the NSW rate) (see Section 4.4). As such, this can represent a vulnerability for people with Indigenous status and could demonstrate a need for requiring services to assist.

Warrumbungle Shire also has higher proportion of youth unemployment (12.9%) out of the study area, particularly compared to NSW (9.8%). The rest of the study area has youth unemployment rates below the NSW rate.

Table 7.1 Unemployment and labour force participation rates, 2021

Area	Labour force (no.)	Labour force participation rate (%)	Unemployment rate (%)	Unemployed persons (no.)	Youth unemployment rate (15 to 24 years) (%)	Aboriginal and/or Torres Strait Islander unemployment rate (%)
Birriwa SAL	23	62.2%	0.0%	0	-	-
Merotherie SAL	19	95.0%	0.0%	0	-	-
Dunedoo SAL	447	48.4%	4.9%	22	8.2%	9.7%
Local study area	489	49.8%	4.5%	22	8.2%	9.7%
Gulgong SAL	1,173	55.4%	4.5%	53	7.3%	0.0%
Mudgee SAL	5,598	62.0%	3.6%	202	6.4%	6.8%
Key townships	6,771	60.8%	3.8%	255	6.5%	5.5%
Mid-Western Regional LGA	11,895	57.8%	4.0%	470	7.0%	8.1%
Warrumbungle LGA	3,619	47.2%	6.1%	221	12.9%	14.2%
Regional study area	15,514	54.9%	4.5%	691	8.1%	10.1%
Dubbo Regional LGA	26,334	60.7%	3.6%	946	7.8%	9.4%
Area of reference	41,848	58.4%	3.9%	1637	7.9%	9.5%
NSW	3,874,012	58.7%	4.9%	189,852	9.8%	9.8%

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Note: Youth unemployment rate is calculated as a percentage of total labour force aged 15–24 years.

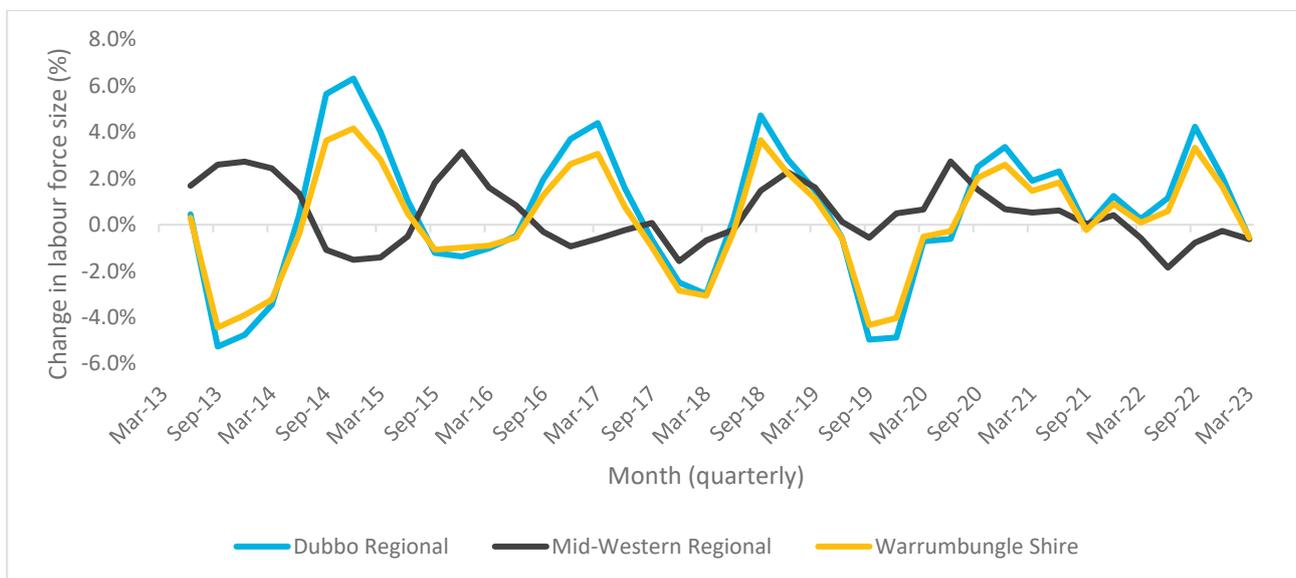
7.1 Labour force size

The 2022 Social Impact Assessment (EMM 2022a) found that a contraction in the labour force size was generally consistent with population declines experienced within the locality, for example, in Dunedoo. Furthermore, the report identified that Mudgee made up the largest share of the labour force for the Mid-Western Regional LGA and increased in this share up to 2016.

The report also highlighted that between 2006 and 2016 the regional area experienced a steady increase in labour force size. The labour force growth was entirely due to growth in the labour force of the Mid-Western Regional LGA, attributable to the significant expansion of the mining industry sector during this period and parallel resident population growth.

Figure 7.1 shows quarterly change in labour force size across the LGAs of the area of reference based on recent data from the NSC. There is a strong alignment of labour conditions across the LGAs of Warrumbungle and Dubbo Regional, with substantial fluctuation in labour force size across the reference period. In contrast the Mid-Western Regional LGA shows a different trend with a smaller fluctuation in labour force size. This suggests labour market conditions in the Mid-Western Regional LGA are influenced by a different set of factors to the Warrumbungle and Dubbo Regional LGAs.

All LGAs of interest experienced a contraction in labour force from September 2020. This labour force contraction can be attributed to the impact of the COVID-19 pandemic. The NSC (2022) notes that the labour market’s adjustment to the COVID-19 pandemic is not fully reflected in changes in the current level of unemployment and the unemployment rate. The December quarter 2021 SALM estimates capture the period following the end of the Delta lockdowns in large parts of the country but prior to the Omicron outbreak. Given both the large number of people who left the labour force at different times during the pandemic, and the lag from the smoothing process, care should be exercised when interpreting SALM data from the June quarter 2020 onwards (NSC 2022).



Source: National Skills Commission (2022) SALM Smoother LGA Datafiles (ASGS 2021) December Quarter 2021

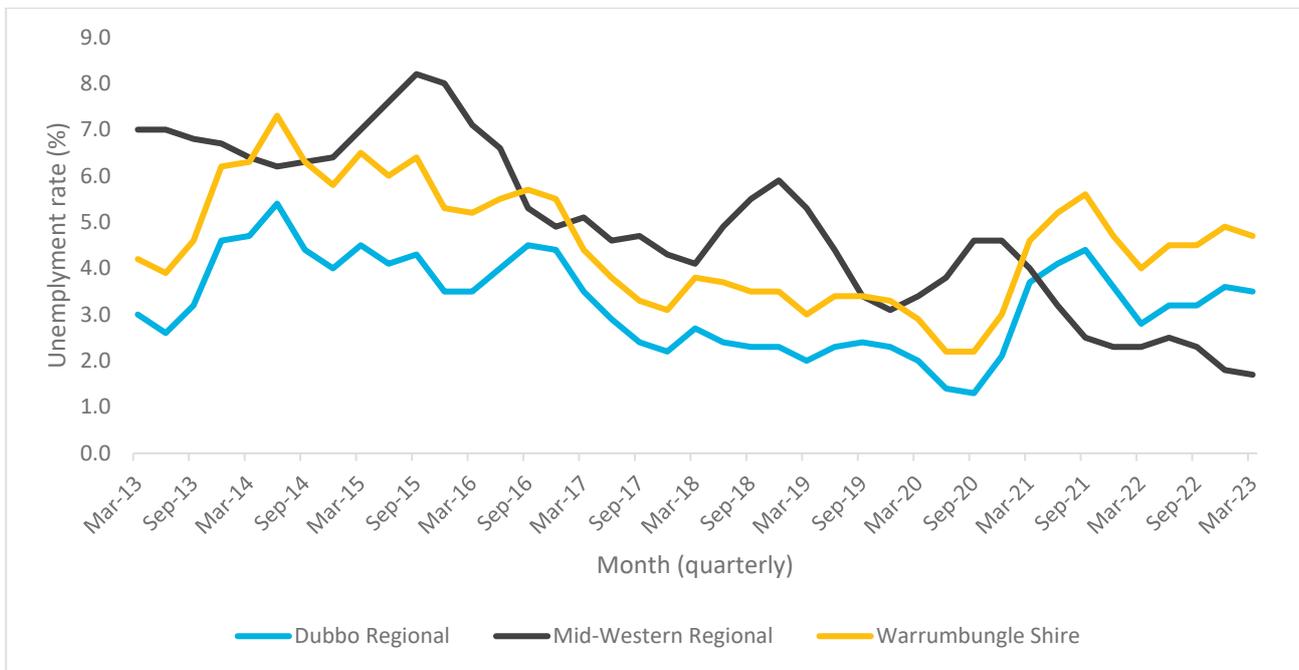
Figure 7.1 Change in labour force size, 2013–2023

7.2 Employment and unemployment

The 2022 Social Impact Assessment (EMM 2022a) found higher unemployment rates in the communities of Gulgong and Dunedoo SSC in comparison to NSW and Mudgee SSC. Mid-Western Regional LGA and Warrumbungle LGA also had higher unemployment rates compared to NSW, which differs from Dubbo Regional LGA’s low unemployment rates.

Figure 7.2 presents unemployment trends for the area of reference (component LGAs) and NSW for the period 2014–2021 based on NSC data. All areas of interest show a similar trend of decreasing unemployment rates across the reference period. The unemployment rates across all areas of interest have generally decreased over the decade, with the current unemployment rate being 4.7% for Warrumbungle Shire LGA, 3.5% for Dubbo Regional LGA, and 1.7% for Mid-Western Regional LGA.

The impact of the COVID-19 pandemic is evident in the increased unemployment rate in Mid-Western Regional LGA (4.6%) and NSW (8.0%) in September 2020 and in the Warrumbungle and Dubbo Regional LGAs in September 2021 (5.6% and 4.6% respectively). Unemployment rates across both the Warrumbungle and Dubbo Regional LGAs show similar trends.



Source: National Skills Commission (2022) SALM Smoother LGA Datafiles (ASGS 2021) December Quarter 2021

Figure 7.2 Unemployment rate 2014–2021

7.2.1 Jobactive caseload data

Current unemployment in the regional area can be further analysed with reference to Jobactive caseload data from the Australian Government (2022). Jobactive is the Australian Government’s employment service. Caseload data by Jobactive service provider is available for the LGAs of the local area (Table 7.2). There are three primary providers of Jobactive in these LGAs (i.e. Joblink Plus, Sureway Employment and Training Pty Ltd and Verto Ltd). In February 2022 there were 851 people registered with Jobactive providers in the local area. The majority (53.3%) of the caseload were females aged 15 years and older. Approximately 34.5% (293 people) of the caseload were mature aged people (i.e. people aged 50 years or older) and 15.4% were Indigenous people aged 15 years and older. Table 7.2 shows Jobactive caseload data by provider for the local area.

Table 7.2 Jobactive caseload data by provider and site – February 2022

Provider	Total jobactive caseload (15+)	Female (15+)	Youth (15–24)	Mature age (50+)	Indigenous (15+)	PWD (15+)	Refugee
Joblink Plus							
Gulgong	21	<10	<10	10	<10	<10	<10
Dunedoo	39	17	<10	15	<10	<10	<10
Mudgee	255	141	44	84	52	90	<10
Sureway Employment and Training Pty Ltd							
Mudgee	296	152	56	94	49	61	0

Table 7.2 Jobactive caseload data by provider and site – February 2022

Provider	Total jobactive caseload (15+)	Female (15+)	Youth (15–24)	Mature age (50+)	Indigenous (15+)	PWD (15+)	Refugee
Verto Ltd							
Gulgong	17	10	<10	<10	<10	<10	0
Mudgee	223	134	20	90	30	64	0

Source: Australian Government (2022)

Notes: PWD – People with Disability

A transition to work employment service (a program specific for participants aged between 15 and 24 years) is offered by OTEC limited in Mudgee. In February 2022 there were 58 people registered with the program including 25 females aged 15 years and a total of 25 people who identified as Indigenous. Table 7.3 shows caseload data for the transition to work program in the local area.

Table 7.3 Transition to work caseload by provider and site – February 2022

Provider	Total jobactive caseload (15+)	Female (15+)	Indigenous (15+)	PWD (15+)	Refugee
OTEC Limited					
Mudgee	58	23	25	<10	0
Job Link Plus					
Dubbo	261	119	192	22	0

Source: Australian Government (2022)

Notes: Transition to Work is an Employment Services program for participants aged between 15 and 24 years old.

7.2.2 Job vacancies

At the national, state (NSW) and Central West employment region (ER) level job vacancies are currently much higher than prior to the COVID-19 pandemic. The NCS compiles a monthly count of online job advertisements (the internet vacancy index [IVI¹]). Job advertisement levels at a national and state (NSW) scale peaked in June 2022 – the highest level since 2006 – but has been decreasing slowly to May 2023. The April 2022 IVI for NSW shows a 7.6% increase in the IVI since March 2022 and a 68.9% increase on the pre-covid IVI (NSC, 2022a). However, from April 2022 to May 2023, there was a 7.0% decrease. Nonetheless, the strongest growth in recruitment activity, compared to pre-COVID-19 levels, is occurring in regional areas (NCS 2022b). In the three-month moving average to April 2022, job advertisements continued to exceed pre-COVID-19 levels across all IVI regions of Australia. Data for the Central West ER to March 22 shows a -1.5% change over the month in the IVI and a 156.6% change in IVI compared to pre-COVID-19 levels (i.e. March 2020) (NSC 2022b).

¹ The monthly IVI is based on a count of online job advertisements newly lodged on SEEK, CareerOne and Australian JobSearch during the month. Duplicate advertisements are removed before the IVI job advertisements are coded by the National Skills Commission to occupations based on the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The data are seasonally adjusted, trended and then indexed (January 2006 = 100) (NSC 2022b).

7.2.3 Recruitment experience

The Recruitment Experience and Outlook Survey (REOS) (NSC 2023b) shows a steady, but fluctuating increase in the number of employers recruiting between September 2020 and March 2023 (i.e. 39% compared to 63%) in regions outside of the greater capital cities in Australia. In March 2023, 68% of employers recruiting outside of greater capital cities in Australia experienced recruitment difficulties. Trend data for the recruitment difficulty rate shows a fluctuating but steady increase in the proportion of employers experiencing recruitment difficulties. NCS national data for December 2021 shows high recruitment rates across all industries (i.e. 55% of employers were seeking to recruit in Australia) and in the construction industry 50% of employers were seeking to recruit.

REOS (NSC 2022) data for the Central West shows of the recruiting employers, 49% had difficulty recruiting. Employers in the Central West ER were most likely to report the following reasons for recruitment difficulty:

- lack of applicants
- lack of suitable applicants
- location, i.e. remote or regional
- COVID-19 (impacting recruitment).

Recruitment methods included online jobs boards and company websites (40%), social media (37%), newspapers (15%), recruitment agencies (15%) and word of mouth (40%) (NSC 2022).

7.3 Occupation

Table 7.4 presents occupations within the study area in 2021. In 2016 the top three occupations in the local area and key townships were technicians and trades workers (17.5%), professionals (13.7%) and machinery operators and drivers (12.9%). This is consistent with the dominant industry of employment in the local area which in 2016 was the mining industry sector (Section 9.1).

In 2021, when breaking down the local study area, managers were the main occupation followed by professionals in Birriwa and Merotherie SALs and labourers in Dunedoo SAL. The key townships demonstrate the more mining-oriented professions with the top occupation being technicians and trades workers (19.2% for Gulgong SAL and 18.4% for Mudgee SAL). This is followed by machinery operators and drivers in Gulgong SAL (18.0%) and professionals in Mudgee SAL (15.6%).

In the area of reference, there is a mix of top occupations between managers and professionals, and labourers and technicians and trades workers as well as community and personal service workers.

Table 7.4 Top three occupations, 2021

Area	First	%	Second	%	Third	%
Local study area						
Birriwa SAL	Managers	30.8%	Professionals	15.4%	Technicians and trades workers	11.5%
Merotherie SAL	Managers	47.4%	Professionals	15.8%	Sales workers	15.8%
Dunedoo SAL	Managers	28.1%	Labourers	15.8%	Professionals	10.5%

Table 7.4 Top three occupations, 2021

Area	First	%	Second	%	Third	%
Key townships						
Gulgong SAL	Technicians and trades workers	19.2%	Machinery operators and drivers	18.0%	Labourers	13.4%
Mudgee SAL	Technicians and trades workers	18.4%	Professionals	15.6%	Machinery operators and drivers	13.0%
Area of reference						
Mid-Western Regional LGA	Technicians and trades workers	17.5%	Professionals	14.1%	Managers	13.9%
Warrumbungle LGA	Managers	25.9%	Labourers	15.5%	Professionals	13.6%
Dubbo Regional LGA	Professionals	18.3%	Community and personal service workers	15.1%	Technicians and trades workers	14.0%

Source: ABS 2016, Census of Population and Housing: General Community Profiles.

7.4 Income

Median individual and median household weekly income distribution in the study area is presented in Table 7.5. There is significant variation in individual and household median weekly incomes across the local area, key townships and regional area. In 2016, with the exception of Merotherie, all areas of interest (i.e. communities and LGAs) recorded median income levels below NSW.

In 2021, with the exception of Dubbo LGA's individual income, all of the areas of interest (i.e. SALs and LGAs) recorded median income levels below NSW. Contrastingly, Merotherie SAL did not have the highest median weekly individual and household income. For individual income, Dubbo LGA had the highest income of the study area with \$837 whereas Warrumbungle LGA had the lowest income with \$559. For household income, Mudgee SAL had the highest income with \$1,678 and Dunedoo SAL had the lowest income with \$985.

Table 7.5 Median weekly income (\$), 2016 and 2021

	Individual income (\$)		Household income (\$)	
	2016	2021	2016	2021
Birriwa SAL	474	762	1,062	1,624
Merotherie SAL	849	612	2,125	1,375
Dunedoo SAL	520	585	871	985
Gulgong SAL	523	650	1,086	1,371
Mudgee SAL	623	775	1,256	1,678
Mid-Western LGA	547	703	1,131	1,486
Warrumbungle LGA	479	559	878	1,068
Dubbo Regional LGA	660	837	1,272	1,597
NSW	664	813	1,486	1,829

Source: ABS 2016, Census of Population and Housing: General Community Profiles.

Notes: Median income data for the local area, regional area and area of reference was not available.

8 Housing and accommodation

8.1 Occupied private dwellings

Table 8.1 shows the number of number and proportion of occupied private dwellings in the local area and regional area in 2016 and 2021 respectively. In 2016, the proportion of occupied dwellings in the local area (87.5%), regional area (83.5%) and area of reference (86.8%) is slightly lower compared with the NSW state-wide proportion of 90.1%. In 2021, the proportion of occupied dwellings decreased in the regional area to 82.6% compared to the increase in the NSW proportion to 90.6%. This may be associated with rural depopulation and farm amalgamations in the more rural areas, however in the more urban areas (e.g. Mudgee) it is likely attributable to the prevalence of second homes, holiday homes or Airbnb properties which were vacant at the time the ABS census was conducted. This was confirmed during SIA interviews with key service providers and local MWRC representatives who noted substantial growth in the number of holiday rentals in the local area.

Analysis of trend data for the Mid-Western Regional LGA shows a consistently high proportion of unoccupied private dwellings compared to NSW. The proportion of unoccupied private dwellings across the regional area is notably higher than NSW. In 2016, 17.8% and 15.9% of dwellings in the Warrumbungle LGA and the Mid-Western Regional LGA respectively were unoccupied compared to 9.9% across NSW). The regional area's proportions decreased slightly in 2021 to 17.5% in Warrumbungle LGA and 15.0% in Mid-Western Regional LGA. Within the Warrumbungle LGA the number of private unoccupied dwellings may reflect the existing trend of population decline and the impact of the property acquisitions for the Cobbora coal mine (Section 4.1).

8.2 Housing type and structure

Housing type and structure for 2021 is presented in Table 8.1. In 2016, the 2022 Social Impact Assessment (EMM 2022a), the local area has similar characteristics to the regional area and area of reference but shows less diversity than NSW. In 2016, the most common housing type and structure within the local area and regional area were separate houses (87.9%, and 92.0% respectively) and semi-detached, row or terrace houses and townhouses (6.2% and 3.2%).

In 2021, the most common housing type and structure within the local area, key townships and regional area continued to be separate houses. The local area had the highest proportion with 96.2% followed by the regional study area with 92.4%. Key townships had the lowest proportion of separate houses out of the study area with 88.2% due to a higher proportion of semi-detached, row or terrace house, townhouse with 10.6%. However, this proportion was still lower than the NSW proportion (11.7%).

Table 8.1 Housing type and structure, 2021

	Separate house	Semi-detached, row or terrace house, townhouse	Flat or apartment	Other dwelling	Total private dwellings	Total occupied dwellings
Birriwa	20	0	0	0	25	20
Merotherie	4	0	0	0	7	4
Dunedoo	433	12	0	3	551	451
Local area	96.2%	2.5%	0.0%	0.6%	583	81.5%
Gulgong	953	21	22	12	1,111	1,012
Mudgee	3,686	546	49	73	4,984	4,360
Key townships	86.4%	10.6%	1.3%	1.6%	6,095	88.1%

Table 8.1 Housing type and structure, 2021

	Separate house	Semi-detached, row or terrace house, townhouse	Flat or apartment	Other dwelling	Total private dwellings	Total occupied dwellings
Mid-Western LGA	8,811	609	84	110	11,339	9,638
Warrumbungle LGA	3,235	38	69	24	4,115	3,400
Regional area totals	92.4%	5.0%	1.2%	1.0%	15,454	84.4%
Dubbo Regional LGA	16,444	1,502	1,159	100	20,900	19,279
Area of reference total	88.2%	6.6%	4.1%	0.7%	36,354	88.9%
NSW	65.6%	11.7%	21.7%	0.7%	3,199,988	90.6%

Source: ABS 2021, Census of Population and Housing: General Community Profiles

8.3 Household composition

Household composition in the area of social influence is presented in Table 8.2. Household composition in the local area is similar to the regional area and the area of reference but slightly different to NSW. In 2016 most households were family households in the local area (67.4%), regional area (68.0%) area of reference (69.6%) and NSW (72.1%) (EMM 2022a) (ABS 2016). The proportion of family households across the local area, regional area and area of reference is lower than NSW. Within the local area, Dunedoo, Gulgong and Mudgee all had a much higher proportion of lone person households (31.1%) compared to NSW (23.7%).

In 2021, the proportion of family households continued to have the highest proportion in the local area (64.0%) and key townships (67.6%), the regional area (68.0%), the area of reference (68.8%) and NSW (71.2%). Further, Dunedoo, Gulgong, Mudgee with the added Birriwa also had higher proportions of lone person households in 2021. One reason for this may be the number of retired and single people in the local area and the very limited access to retirement home facilities. Increased longevity means people often outlive their partners. In rural areas in particular, connection to place is strong and people often seek to remain in their communities as they age rather than move away.

Table 8.2 Household composition, 2021

	Family households	Group households	Lone person households
Birriwa	70.0%	0.0%	40.0%
Merotherie	100.0%	0.0%	0.0%
Dunedoo	62.5%	1.6%	35.7%
Local area	64.0%	1.5%	36.0%
Gulgong	67.4%	2.1%	30.3%
Mudgee	67.7%	3.5%	28.8%
Key townships	67.6%	3.2%	29.0%
Mid-Western LGA	68.9%	2.8%	28.3%
Warrumbungle LGA	65.0%	2.3%	32.8%
Regional area totals	68.0%	2.7%	29.4%
Dubbo Regional LGA	69.3%	3.4%	27.3%
Area of reference total	68.8%	3.1%	28.1%
NSW	71.2%	3.8%	25.0%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

8.4 Tenure

Housing tenure within the area of social influence is presented in Table 8.3. Tenure in the local area reflects the demographics of the population (long term and ageing), population mobility and housing market conditions at the time of the census. The 2022 Social Impact Assessment (EMM 2022a) found in 2016 in the local area the majority of dwellings were either owned outright (31.5%) or owned with a mortgage (30.3%), which is generally consistent with NSW (i.e. 32.2% and 32.3% respectively) but inconsistent with the regional area (i.e. 40.4% and 28.4% respectively). In 2021, the regional area continued to have one of the highest proportion of dwellings owned outright in 2021 with 41.5%. When examining the localities of Birriwa SAL, Merotherie SAL, and Dunedoo SAL, there was also a high proportion of dwellings owned outright in 2021 with 48.0% for the area due to Merotherie’s high proportion of 75.0% of dwellings owned outright. This was a significant increase from Merotherie’s proportion of dwellings owned outright in 2016 with 37.5%. The higher proportion of home ownership (both outright and with a mortgage) in the regional area can be attributed to the presence of a stable (i.e. long term; Section 4.3) and ageing rural population.

In 2016, Mudgee (36.5%) and Gulgong (28.2%) have a higher proportion of rental tenure than the Mid-Western Regional LGA (27.4%). In 2021, Mudgee continued to have a higher proportion of rental tenure than the Mid-Western Regional LGA (35.4% compared to 24.4%) however, Gulgong had a slightly lower proportion of rental tenure (24.0%) than Mid-Western Regional LGA. The high rates of rental tenure may be attributable to a number of factors including: the presence of a sizeable health sector and education sector workforces, which cycle through on a contractual basis; the attractiveness of the locations as base locations for workforces associated with the construction of major projects (e.g. mining, renewable energy and infrastructure) in the regional area; and the overall residential rental costs and rental availability at the time of the 2021 census.

Table 8.3 Tenure (based on total private dwellings), 2021

	Owned outright	Owned with a mortgage	Rented	Other tenure
Birriwa	35.0%	30.0%	0.0%	20.0%
Merotherie	75.0%	0.0%	0.0%	75.0%
Dunedoo	48.3%	20.2%	25.1%	4.7%
Local area	48.0%	20.4%	23.8%	5.9%
Gulgong	38.6%	33.5%	24.0%	1.8%
Mudgee	30.0%	31.7%	35.4%	0.7%
Key townships	31.6%	32.0%	33.2%	0.9%
Mid-Western LGA	38.9%	32.2%	24.4%	2.2%
Warrumbungle LGA	48.9%	23.0%	20.9%	4.3%
Regional area totals	41.5%	29.8%	23.5%	2.7%
Dubbo Regional LGA	30.3%	33.9%	31.5%	2.3%
Area of reference total	34.8%	32.3%	28.3%	2.5%
NSW	31.5%	32.5%	32.6%	1.9%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

8.5 Mortgage repayment and rent

Mortgage and rent repayments are presented in Table 8.4. In 2016 in the local area, monthly median mortgage repayments and weekly median rent payments were consistently lower than the NSW average. Within the local area monthly mortgage repayments were highest in Mudgee (\$1,773) but still less than NSW (\$1,986). Within the local area and key townships, monthly mortgage repayments were lowest in Dunedoo (\$967). In 2021, Dunedoo continued to have the lowest monthly mortgage repayments out of the local study area and key townships but had increased since 2016 (\$1,083). Mudgee also continued to have the highest monthly mortgage repayment with \$1,733, which was analogous with Mid-Western LGA (\$1,733) but had not increased since 2016. Overall, monthly mortgage repayments in the study area continued to be lower than NSW (\$2,167).

In 2016 weekly rent payments in the local area were significantly lower than NSW. Within the local area the highest weekly rents were in Mudgee (\$300). In 2021, Mudgee continued to have the highest weekly rent payments with \$360 but was still significantly lower than NSW (\$420). Mortgage and rent repayments lower than the NSW average may suggest lower housing prices, which is indicative of regional areas. Mortgage and rent payments are important factors in considering housing stress.

Table 8.4 Median mortgage repayments and rental payments, 2016 and 2021

Locality	Monthly mortgage repayments (\$)¹		Weekly rent payments (\$)¹	
	2016	2021	2016	2021
Birriwa	0	0	0	270
Merotherie	0	1,500	0	0
Dunedoo	967	1,083	175	200
Gulgong	1,517	1,495	250	300
Mudgee	1,733	1,733	300	360
Mid-Western LGA	1,690	1,733	270	330
Warrumbungle LGA	923	922	160	200
Dubbo Regional LGA	1,500	1,517	250	300
NSW	1,986	2,167	380	420

Source: ABS 2016a; ABS 2021a, Census of Population and Housing: General Community Profiles.

Notes: 1. Data for the total local area median mortgage repayments and rent payments was not available.

Affordable housing is a key dimension of economic wellbeing. Housing costs, such as rent payments or mortgages, are often the largest regular expense in a household budget. Spending a high proportion of disposable income on housing costs reduces what households can afford to consume and save to support other aspects of their wellbeing (OECD 2020).

Housing stress is considered to occur when households in the lower 40.0% of income distribution spend more than 30.0% of their income in housing costs (rents or mortgage repayments) (AHURI 2019). This can mean that local people who are not employed in high-paying jobs may be unable to afford local rents which can be pushed up by higher salaries.

Analysis of rental stress in the local area (Table 8.5) shows that in 2016, a high proportion of households in Mudgee (14.2%) and Gulgong (12.4%) experience rental stress compared to other communities in the local area, the LGAs of the regional area and the area of reference. In comparison, a smaller proportion of households in the communities of the local area (i.e. 6.0% Mudgee, 3.0% Dunedoo, and 5.2% Gulgong) experience mortgage stress compared to NSW (7.4%). In 2021, Gulgong (37.0%), Mid-Western Regional LGA (33.4%), Mudgee (33.1%), had similar or greater proportions of households with rental stress than NSW (33.1%). Households in the study area with higher levels of mortgage stress include the same localities of Mudgee (6.0%), Mid-Western Regional LGA (5.9%), and Gulgong (5.2%). However, mortgage stress in the study area is lower than the NSW proportion of 7.4%.

Table 8.5 Housing affordability, c2016 and c2021

	Households where rent payments are greater than or equal to 30% of household income (%) ¹		Households where mortgage payments are greater than or equal to 30% of household income (%) ¹	
	c2016	c2021	c2016	c2021
Birriwa	NA	NA	NA	NA
Merotherie	NA	NA	NA	NA
Gulgong	12.4%	37.0%	5.2%	14.2%
Dunedoo	6.9%	30.1%	3.0%	11.0%
Mudgee	14.2%	33.1%	6.0%	9.7%
Mid-Western Regional LGA	10.0%	33.4%	5.9%	11.9%
Warrumbungle LGA	6.2%	23.2%	3.2%	11.8%
Dubbo Regional LGA	6.2%	26.2%	3.2%	9.5%
NSW	12.9%	33.1%	7.4%	17.3%

Source: ABS 2016, Quickstats, ABS 2021, QuickStats.

Notes: 1. Data for the total local area median mortgage repayments and rent payments was not available.

8.6 Housing and rental market trends

8.6.1 Mortgage repayment and rent trends

Median mortgage repayment and rental payment trend data for the area of social influence is presented in Table 8.6. Data for the smaller areas of Birriwa and Merotherie were unavailable. Combined data for the local area, regional area and area of reference was also not available.

The growth in mortgage repayments in Mid-Western Regional LGA as a whole is likely associated with the tightening of the housing market due to a parallel increase in population (the growth rate during this period was above NSW; Section 4.1) and expansion of the surrounding mining industry sector. Whilst Gulgong experienced a population decline during this period, the expanding mining industry sector in the Mid-Western Regional LGA between 2006 and 2021 would also have impacted housing market conditions in Gulgong.

Between 2011 and 2021, there was variation in median rent increases across the local area and regional area. Within the local area and key townships in the ten years to 2021, median rent increased by 100.0% in Dunedoo, 50.0% in Gulgong and 50.0% in Mudgee. The increases in Gulgong and Mudgee were lower than the median rent increase for the regional area (i.e. 65.0% Mid-Western Regional LGA and 66.7% Warrumbungle LGA) but lower than the NSW trend (40.0%) for the same period. The factors driving the increase in median rent payments in the local and regional area would be similar median mortgage repayments (i.e. a combination of population growth and housing demand fuelled by the expansion of the surrounding mining industry sector).

Table 8.6 Median mortgage repayment and rent growth rates, 2006–2021

	Mortgage repayments trends (change)				Rent payment trends			
	2006–2011	2011–2016	2016–2021	2011–2021	2006–2011	2011–2016	2016–2021	2011–2021
Birriwa	NA	NA	NA	NA	NA	NA	NA	NA
Merotherie	NA	NA	NA	NA	NA	NA	NA	NA
Gulgong	51.7%	0.0%	-1.5%	-1.5%	42.9%	25.0%	20.0%	50.0%
Dunedoo	50.4%	-7.2%	12.0%	3.9%	11.1%	75.0%	14.3%	100.0%
Mudgee	45.4%	0.0%	0.0%	0.0%	45.5%	25.0%	20.0%	50.0%
Local area total	N/A							
Mid-Western LGA	43.2%	9.0%	2.5%	11.7%	37.9%	35.0%	22.2%	65.0%
Warrumbungle LGA	25.5%	6.1%	-0.1%	6.0%	20.0%	33.3%	25.0%	66.7%
Regional area total	NA							
Dubbo Regional LGA	25.8%	0.0%	1.1%	1.1%	25.0%	25.0%	20.0%	50.0%
Area of reference	NA							
NSW	31.4%	-0.4%	9.1%	8.7%	42.9%	26.7%	10.5%	40.0%

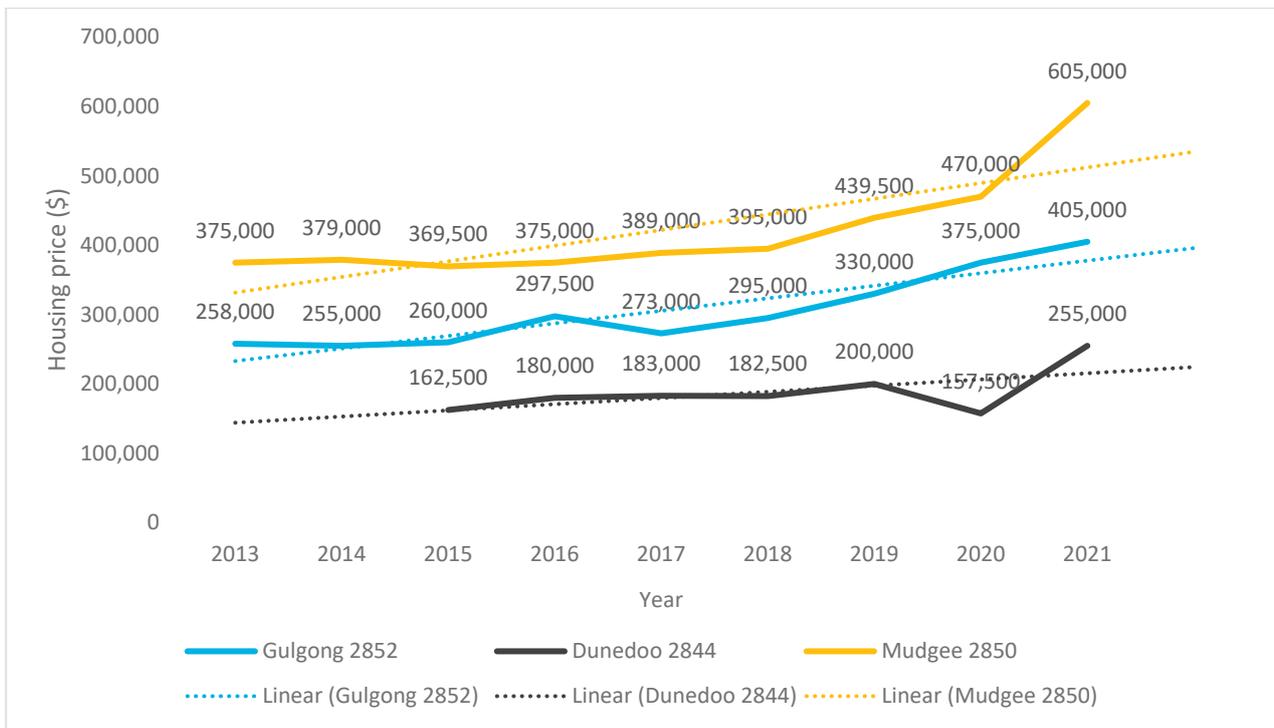
Source: ABS 2016, Census of Population and Housing: General Community Profiles.

Notes: NA – Not available

8.6.2 Median property price

Trends in median property prices for the selected suburbs in the local area are illustrated in Figure 8.1 and Figure 8.2. The data is derived from [realestate.com.au](https://www.realestate.com.au). Housing data is available only for Gulgong, Dunedoo and Mudgee and is based on postcode area. Rental data is only available for Mudgee. Caution should be applied to the interpretation of housing data as single property sales within a small property market (e.g. Dunedoo) can significantly skew the overall median property price.

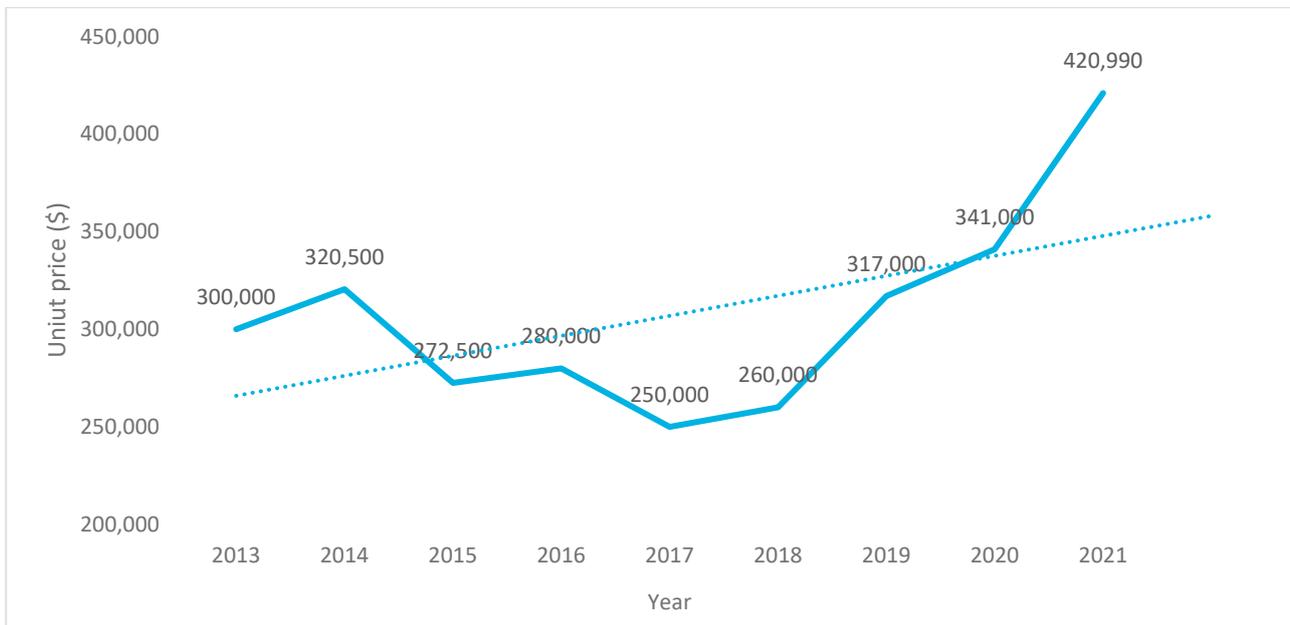
Analysis of trend data for the three communities shows a steady increase in housing prices across the three communities. Within the local area, the most significant increase in median house price occurred in Mudgee between 2017 and 2022 (79.9%), with 48.9% growth between 2020 and 2022. Analysis of trend data for Mudgee and Gulgong suggests the housing market in both communities is likely influenced by similar forces, although it is noted that the sharp increase in property prices in 2016 in Gulgong followed by the sharp decline in 2017 is not reflected in the Mudgee data. The sharp increase in median property price in Gulgong (and also Dunedoo) may be attributable to the sale of one or more high value properties in the location.



Source: realestate.com.au/neighbourhoods

Figure 8.1 Median property price trends for houses, 2013–2022

The median unit price in Mudgee (Figure 8.2) fluctuated between 2013 and 2022, likely in parallel with the release of new developments to the market and demand from the construction industry sector. The increase in median unit price in Mudgee between 2018 and 2022 follows a similar trend to median house price.



Source: realestate.com.au/neighbourhoods

Figure 8.2 Median property price trends for units, 2013–2022

A snapshot of property availability (purchase and rent) in the local area can be derived from analysis of data on [realestate.com](https://www.realestate.com.au). On 22 June 2022, there were 193 properties for sale and 51 properties for rent in the local area (REA Group 2022). Most of these properties were located within the suburb of Mudgee (149 properties for sale and 45 properties for rent), and Gulgong (26 properties for sale and 3 properties for rent). In June 2023, the number of properties for sale increased slightly in Gulgong and significantly in Mudgee. However, the number of properties decreased in Dunedoo. Properties available to rent in Mudgee also almost doubled from 2022 to 2023. Property availability in selected suburbs within the local area is presented in Table 8.7.

Table 8.7 Properties for sale and rent in the local area, 22 June 2022 and 20 June 2023

Suburb	Number of properties for sale		Number of properties for rent	
	2022	2023	2022	2023
Local area				
Birriwa	0	0	0	0
Merotherie	0	0	0	0
Gulgong	26	29	3	2
Dunedoo	18	8	3	1
Mudgee	149	230	45	96
Total	193	267	51	99

Source: REA Group 2022.

8.6.3 Residential vacancy rates

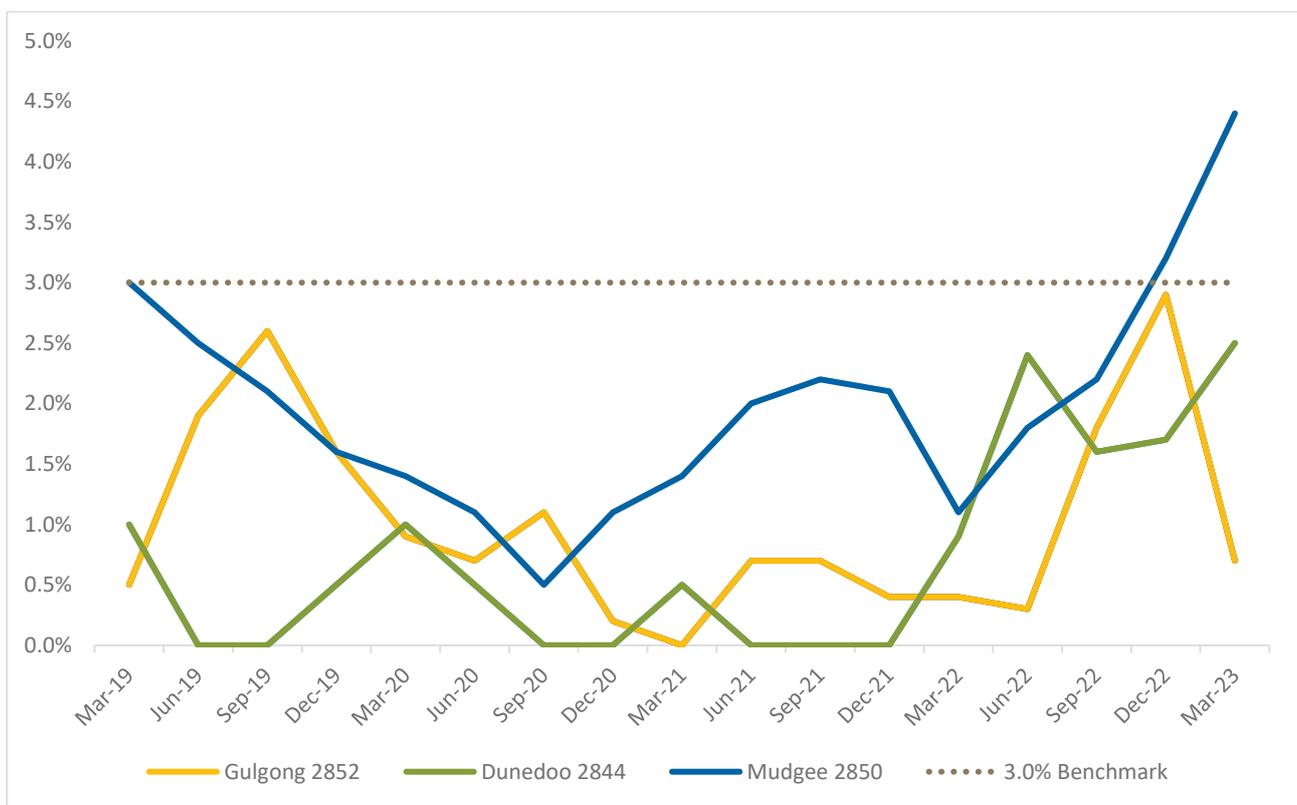
According to Real-estate institute of NSW (REINSW), rental vacancy rates are traditional market indicators that “measure the proportion of residential properties vacant and available for rent at any point in time” (REINSW 2019). A higher vacancy rate indicates that there are a higher proportion of vacant (unoccupied) units, based on the total number of units in an area. Vacancy rates under 3.0% are low and indicate a tight rental market with an undersupply rental option while vacancy rates above 3.0% indicate an oversupply of rental options. A rental market with a vacancy rate of 3.0% is considered at equilibrium (Brewsters Property Group (n.d.)).

The search engine on SQM Research (2020) only provides the option to search by postcode and as such results for the postcode of the two suburbs within the local area (2844) may be skewed by suburbs outside of the local area that share the same postcode.

The residential vacancy rate trends for postcode 2844 Dunedoo, 2852 Gulgong and 2850 Mudgee is presented in Figure 8.3 for the period March 2019 to March 2023. With the exception of Mudgee, from December 2022 to March 2023 the vacancy rate in the local area during was consistently below the 3.0% benchmark, indicating a tight rental market with an undersupply of rental housing during that time. Whilst the data shows considerable fluctuation in rental vacancy rates across the three communities, within Gulgong, rental vacancy rates spiked from June 2022 with 0.3% to December 2022 with 2.9% before decreasing again to 0.7% in March 2023 indicating an erratic market.

In June 2022 there were three rental vacancies in Dunedoo, three in Gulgong and 45 in Mudgee. The findings of SIA interviews conducted with real-estate agents in the local area confirmed the presence of a tight housing market and limited rental availability. These vacancies decreased slightly in June 2023 to two vacancies in Gulgong and one vacancy in Dunedoo however, there was a significant increase in vacancies in Mudgee from 45 to 96. SIA interview outcomes suggest the following factors are influencing current housing market conditions in Mudgee and Gulgong and to a lesser extent Dunedoo:

- reduction in available rental stock as properties are purchased as holiday homes or transferred into the short-term stay mark (e.g. Airbnb)
- demand generated by major projects occurring in or nearby the local area (e.g. the construction of Wellington Solar Farm and various inland rail projects)
- an increase in-migration due to the Covid-19 pandemic and the corresponding increase in the attractiveness of regional NSW communities as permanent resident locations.



Source: SQM Research 2021, Residential Vacancy Rates.

Figure 8.3 Residential vacancy rate trends, 2018–2021

8.7 New housing and rental supply

The NSW government releases household projections and corresponding dwelling projections for all LGAs in NSW. Household requirements and population growth forecasts in the LGAs of the regional area and area of reference are presented in Table 8.8.

Forecasts for the LGAs of Mid-Western Regional, and Dubbo Regional suggest an additional 1,949 dwellings and 4,814 dwellings respectively would be required between 2016 and 2041 to meet the projected population growth and shifting patterns in household structure and number (DPIE 2019). Forecasts for Warrumbungle LGA suggest a decrease in 870 dwellings from 2016–2041 in response to decrease in population growth and shifting patterns in household structures and number. Household forecasts for the area of reference suggest an increase of 5,893 required dwellings from 2016–2041.

Table 8.8 Household requirement and population growth forecasts for area of reference, 2016–2041

	2016	2021	2026	2031	2036	2041
Mid-Western Regional LGA						
Total households	10,219	10,649	11,017	11,358	11,664	11,887
Average household size	2.37	2.33	2.30	2.26	2.23	2.21
Required dwellings	11,943	12,446	12,877	13,274	13,633	13,892
Total dwelling change (required new dwellings)		503	431	397	359	259
Warrumbungle LGA						
Total households	4,181	4,102	3,996	3,853	3,667	3,450
Average household size	2.25	2.19	2.15	2.11	2.08	2.05
Required dwellings	4,979	4,886	4,759	4,589	4,367	4,109
Total dwelling change (required new dwellings)		-93	-127	-170	-222	-258
Dubbo Regional LGA						
Total households	19,953	21,073	22,001	22,904	23,691	24,284
Average household size	2.49	2.46	2.43	2.39	2.35	2.32
Required dwellings	22,180	23,425	24,457	25,460	26,335	26,994
Total dwelling change (required new dwellings)		1,245	1,032	1,003	875	659
Area of reference						
Total households	34,353	35,824	37,014	38,115	39,022	39,621
Average household size	NA					
Required dwellings	39,102	40,757	42,093	43,323	44,335	44,995

Table 8.8 Household requirement and population growth forecasts for area of reference, 2016–2041

	2016	2021	2026	2031	2036	2041
Total dwelling change (required new dwellings)		1,655	1,336	1,230	1,012	660

Source: DPIE 2019, NSW 2019 Population projections.

Notes: 1. The projected population has been determined by using the ABS ERP population count which takes Census counts of people where they usually live (accounting for interstate visitors and removing overseas visitors), adjusts for Census undercount and overcount using the Census Post Enumeration Survey (PES), adds in Australians who are temporarily overseas, and applies further demographic adjustments.

2. Average household size is taken from NSW DPIE 2019 but there is a mathematical discrepancy – average household size is not equal to the total population divided by the total number of households.

Recent growth in housing supply can be estimated from residential building approval figures for the regional area. In year-to-date June 2023, there were 130 approvals for new houses and 28 approvals for other residential buildings (equalling a total of 158 new residential building approvals for the year). This represents a decrease of 181 total approvals from the previous year, and 455 total approvals from 2020-2021. Total residential building approvals in the local area are presented in see Table 8.9.

Table 8.9 Total residential building approvals in LGA, 2012–2022

	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022	2022–2023 JUN FYTD
Mid-Western Regional LGA											
New houses	78	80	51	14	23	7	14	18	23	109	125
New other residential	10	44	0	0	0	2	4	4	18	56	26
Total	90	124	52	17	23	9	19	22	42	176	151
Warrumbungle LGA											
New houses	13	12	11	5	4	9	8	1	212	5	5
New other residential	4	0	0	0	0	0	0	0	197	0	2
Total	17	12	12	5	4	9	8	1	413	5	7
Regional area total											
New houses	91	92	62	19	27	16	22	19	235	114	130
New other residential	14	44	0	0	0	2	4	4	215	56	28
Total	105	136	62	19	27	18	26	23	455	181	158

Source: ABS 2022, 8731.0 – Building Approvals, Australia.

8.8 Short-term accommodation

The term short-term accommodation refers to accommodation options that are typically provided to visitors or tenants for a short period of time for example, motels, hotels, serviced apartments, bed and breakfast, self-contained homes, caravan and camping parks. The length of tenancy in these forms of accommodation can often extend to lengthy stays, depending on accommodation availability, price and personal circumstances.

Short-term accommodation providers in the local and regional area service a number of different industry sectors including tourism, mining, renewable energy and agricultural industry sectors. The MWRC estimates there are currently 3,200 rooms of short-stay accommodation in the Mid-Western Regional LGA, with an average occupancy rate of over 80% (2022 SIA interview program).

Within the local area short-term accommodation is concentrated in the larger communities of Dunedoo, Gulgong and Mudgee and consists of a combination of hotels, motels, bed and breakfast accommodation, farm-stay, holiday home rentals (Airbnb) and caravan parks (Table 8.10). The majority of short stay accommodation in the Mid-Western LGA is concentrated in and nearby the town of Mudgee.

The most abundant form of short-term accommodation in the local area, key townships and regional area is private holiday rentals through platforms such as Airbnb and [booking.com](https://www.booking.com). Analysis of short-term accommodation data suggests that in 2023 there are more than 600 active Airbnb rentals in the Mid-Western LGA including an estimated 270 properties in Mudgee and 11 properties in Gulgong. There are an estimated 50 Airbnb properties in the Warrumbungle LGA including 4 properties in Dunedoo. The findings of SIA interviews with service providers, real estate agents and the MWRC suggests that the number of Airbnb properties in the Mid-Western LGA has increased substantially in the past three to five years. There is a trend of properties being purchased and transferred out of the stock of private rental or owner-occupied housing and into the short-term accommodation or holiday rental market (2022 SIA interview program).

In 2022 ACEN undertook a survey of short-term accommodation providers in the local area, specifically in the communities of Dunedoo, Gulgong and Mudgee.

Short-term accommodation in the local area is summarised in Table 8.10.

Table 8.10 Tourist accommodation, 2022

Suburb	Hotel/motel	Caravan park	Bed & breakfast	Farm-stay/homestay	Holiday homes/Airbnb
Local area					
Birriwa	✘	✘	✘	✘	✓
Merotherie	✘	✘	✘	✘	✘
Gulgong	✓	✓	✓	✓	✓
Dunedoo	✓	✓	✓	✘	✓
Mudgee	✓	✓	✓	✓	✓
Area of reference					
Mid-Western LGA	✓	✓	✓	✓	✓
Warrumbungle LGA	✓	✓	✓	✓	✓
Dubbo Regional LGA	✓	✓	✓	✓	✓

Source: Google Travel 2022, Airbnb 2022

9 Local business and industry

9.1 Industry of employment

The top industries of employment within the local area and regional area are presented in Table 9.1. In 2016 the mining industry sector had the largest employment share in the local area (16.3%), followed by the retail trade industry sector (11.2%) and the health care and social assistance industry sector (10.3%). This is similar to the top 2021 industries for the local area which were mining (17.2%), health care and social assistance (11.5%), and retail trade (10.1%).

The industry sectors with the largest employment share in the regional area in 2016 were mining (11.4%) agriculture, forestry and fishing (13.7%) and other services (13.7%). The order of the top industries in 2021 in the regional area changed to be mining (12.7%), agriculture, forestry and fishing (11.8%), and health care and social assistance (11.5%).

Table 9.1 Industry of employment, 2016 to 2021

Locality	Local area and key townships		Regional area	
	2016	2021	2016	2021
Agriculture, forestry and fishing	5.2%	4.5%	13.7%	11.8%
Mining	16.3%	17.2%	11.4%	12.7%
Manufacturing	3.9%	3.8%	3.7%	3.8%
Electricity, gas, water and waste services	1.1%	0.9%	1.0%	1.0%
Construction	7.5%	7.5%	7.0%	7.6%
Wholesale trade	2.4%	2.0%	1.9%	1.8%
Retail trade	11.2%	10.1%	9.8%	8.7%
Accommodation and food services	8.8%	9.0%	7.2%	7.5%
Transport, postal and warehousing	2.7%	2.6%	2.9%	2.8%
Information media and telecommunications	1.0%	0.5%	0.8%	0.5%
Financial and insurance services	1.1%	0.9%	0.9%	0.9%
Rental, hiring and real estate services	1.2%	1.3%	1.0%	1.1%
Professional, scientific and technical services	3.0%	3.2%	3.3%	3.3%
Administrative and support services	2.9%	3.6%	2.6%	3.0%
Public administration and safety	4.4%	4.4%	5.3%	4.8%
Education and training	8.1%	8.2%	8.6%	8.8%
Health care and social assistance	10.3%	11.5%	10.5%	11.3%
Arts and recreation services	1.2%	1.1%	1.0%	1.0%
Other services	5.3%	4.4%	13.7%	3.7%

Source: ABS 2016a; ABS 2021a, Census of Population and Housing: General Community Profiles.

9.2 Registered businesses

The number of registered businesses by employment size and turnover range in the regional area is provided in Table 9.2 and Table 9.3. In 2022, there were a total of 4,104 registered businesses within the regional area consisting of 1,248 businesses in Warrumbungle LGA and 2,856 businesses in the Mid-Western Regional LGA. Of registered businesses within the Warrumbungle LGA, 99.5% were classed as small businesses (i.e. employing fewer than 20 people or non-employed) compared to 98.0% in the Mid-Western Regional LGA.

Business counts for each noted LGA were evenly spread across the referenced turnover ranges. The Mid-Western Regional LGA had a higher proportion of businesses in the \$2M or more turnover range (4.8%) compared to the Warrumbungle LGA (3.1%).

Table 9.2 Registered businesses by employment size in the regional area, 2022

Area	Non-employed	1–19 employees	20–199 employees	200+ employees	Total
Mid-Western Regional LGA	60.6%	37.4%	1.9%	0.1%	2,856
Warrumbungle LGA	67.3%	32.2%	0.5%	0.0%	1,248

Source: ABS 2022, 8165.0—Counts of Australian Businesses, including Entries and Exits, June 2020 to June 2022.

Table 9.3 Registered businesses by turnover range, regional area 2022

Area	\$0 to less than \$50k	\$50k to less than 200k	\$200k to less than \$2m	\$2m or more	Total number
Mid-Western Regional LGA	30.6%	30.8%	33.8%	4.8%	2,856
Warrumbungle LGA	26.0%	30.5%	40.4%	3.1%	1,248

Source: ABS 2022, 8165.0—Counts of Australian Businesses, including Entries and Exits, June 2020 to June 2022.

Registered businesses by industry sector in the regional area are presented in Table 9.4. In 2022, the industry sector in the Mid-Western Regional LGA and the Warrumbungle LGA with the largest share of registered businesses was the agriculture, forestry, and fishing industry (33.9% and 56.0% respectively). However, the proportion of registered businesses in this industry has slightly decreased from 2020 from 35.7% in Mid-Western Regional LGA and 57.2% in Warrumbungle LGA. The construction industry sector had the second largest share of registered businesses in the Mid-Western Regional LGA and the Warrumbungle LGA (15.2% and 8.2% respectively). It is notable that despite the strong employment share in the mining industry sector in the Mid-Western LGA, there are few registered businesses in the sector.

Table 9.4 Registered businesses by industry, regional area, 2020-2022

Industry sector	Mid-Western Regional LGA			Warrumbungle LGA		
	2020	2021	2022	2020	2021	2022
Agriculture, forestry and fishing	35.7%	35.3%	33.9%	57.2%	58.1%	56.0%
Mining	1.1%	1.1%	1.1%	0.0%	0.0%	0.0%
Manufacturing	4.3%	3.9%	4.1%	1.6%	1.8%	1.6%
Electricity, gas, water and waste services	0.1%	0.1%	0.2%	0.2%	0.3%	0.2%
Construction	14.1%	14.5%	15.2%	8.0%	7.7%	8.2%
Wholesale trade	1.9%	2.0%	1.8%	2.0%	1.8%	1.9%
Retail trade	5.6%	5.4%	5.4%	4.1%	4.2%	3.8%
Accommodation and food services	5.8%	5.6%	5.6%	5.2%	4.7%	5.1%
Transport, postal and warehousing	3.5%	3.5%	3.8%	5.4%	5.9%	6.0%
Information media and telecommunications	0.4%	0.4%	0.5%	0.3%	0.4%	0.3%
Financial and insurance services	1.8%	2.0%	1.8%	0.6%	0.4%	0.7%
Rental, hiring and real estate services	6.2%	6.3%	6.8%	3.9%	4.0%	3.7%
Professional, scientific and technical services	6.5%	6.6%	6.4%	3.3%	3.1%	3.8%
Administrative and support services	2.7%	2.9%	3.3%	1.6%	1.8%	1.8%
Public administration and safety	0.2%	0.2%	0.1%	0.2%	0.0%	0.0%
Education and training	1.1%	1.0%	0.9%	0.6%	0.4%	0.6%
Health Care and Social Assistance	3.3%	3.2%	3.0%	2.3%	1.9%	2.2%
Arts and recreation services	0.9%	1.2%	1.1%	0.4%	0.4%	0.6%
Other services	4.7%	4.8%	5.0%	3.2%	3.2%	3.3%
Total number	2,553	2,684	2,856	1,201	1,188	1,248

Source: ABS 2022, 8165.0—Counts of Australian Businesses, including Entries and Exits, June 2020 to June 2022.

Notes: Excludes businesses with industry 'not stated'.

10 Health and community well-being

10.1 Community health

Social determinants of health, described as “the circumstances in which people grow, live, work, age, and the systems put in place to deal with illness...which are shaped by political, social, and economic forces” (AIHW 2020), are measures of the health and wellbeing of a population. These measures include factors such as conditions of employment, provision of social services and support, and socioeconomic position.

Although the local area and regional area have a slightly lower level of unemployment compared to greater NSW, there are greater rates of youth unemployment, relatively more households with low income and fewer people in high-skill occupations compared to the rest of NSW, suggesting higher rates of socio-economic disadvantage. Furthermore, the provision of social infrastructure and services particularly health related services is less comprehensive in comparison to more urban regions of NSW, necessitating travel outside of the regional area to access specialist health and community services e.g. at a referral hospital in Dubbo.

10.1.1 Physical health

The 2022 Social Impact Assessment analysed three major health risk factors can be used as indicators of population health: alcohol consumption, smoking, and obesity (EMM 2022a). Trend data is not available at the LGA level, rather at the LHD level. Health trends through the Western NSW LHD are assumed to reflect trends within the local and regional areas. The 2022 Social Impact Assessment demonstrated that trends in relation to the number of people who consume alcohol at levels posing a long-term health risk in the Western NSW LHD show greater fluctuation and affect a consistently higher proportion of the population than in NSW.

Trend data for daily smoking habits in adults in the Western NSW LHD and NSW illustrates that between 2002 and 2020 the proportion of daily smokers in the Western NSW LHD was relatively consistent with NSW (EMM 2022a). Trend data shows a gradual decrease in the prevalence of smoking in both the Western NSW LHD and NSW and is not considered a significant vulnerability for the study area.

Between 2002 and 2020 the proportion of persons aged 16 and over in Western NSW LHD that reported being overweight or obese has been consistently higher than NSW and trending high (EMM 2022a). This trend is consistent with the NSW trend and can indicate a significant vulnerability for the study area as it is a risk factor for many chronic conditions (AIHW 2023).

10.1.2 Mental health

Information concerning mental health within the local and regional area is available within the Western NSW LHD and Primary Health Network (PHN) levels. The local and regional area are located within the Western NSW PHN, with data concerning patients of mental health services collected by Australian Institute of Health and Welfare (AIHW).

i Access to mental health services

The local and regional study area fall within Western NSW Primary Health Network (PHN) where data collected on consumers of mental health services is collected by AIHW. Figure 10.1 demonstrates the number of patients residing within the Western NSW PHN who have claimed non-hospital Medicare-subsided services, specifically mental health related Allied Health services, GP mental health and specialist mental health services (AIHW 2021).

When comparing the number of patients accessing mental health services between Western NSW PHN and the national average, Western NSW sees lower rates of those accessing GP Mental Health Services and Allied mental health services. However, there are very similar rates across Western NSW PHN and the national average of those accessing specialist mental health services.

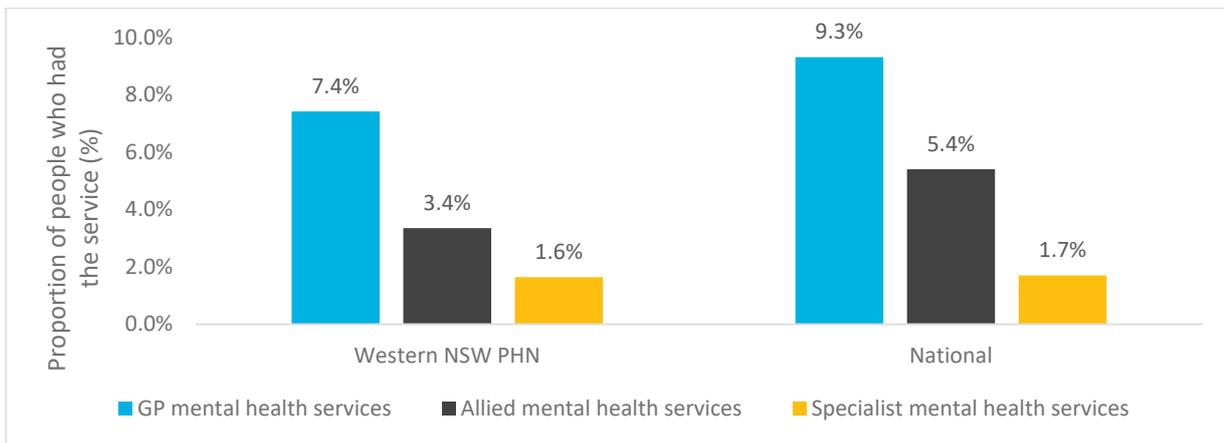


Figure 10.1 Proportion of people who have claimed non-hospital Medicare-subsidised mental health services, 2020 – 2021

10.2 Voluntary work

Volunteering rates can give an indication of social cohesion in a community, and willingness of people to help each other out. In 2016, the volunteering rate in the local area (21.1%) was less than the regional area (23.6%) and the area of reference (21.4%), but well above the NSW (18.1%) average. This suggests above average social cohesion and/or willingness to help others. The high volunteering rates continued in 2021 with 17.6% for the regional area, and 25.3% cumulatively for Birriwa, Merotherie and Dunedoo. However, the key townships of Gulgong and Mudgee have lower proportions of volunteerism that the rest of the study area with 14.5% but is still higher than the NSW rate of 13.0%. The proportion of persons who volunteered in the area of social influence is presented in Table 10.1.

Table 10.1 Volunteering rates, 2021

Location	Did voluntary work through an organisation or group (last 12 months)
Birriwa	37.8%
Merotherie	30.0%
Dunedoo	24.7%
Local area	25.3%
Gulgong	15.0%
Mudgee	14.3%
Key townships	14.5%
Mid-Western LGA	16.1%
Warrumbungle LGA	21.7%
Regional area	17.6%
Dubbo Regional LGA	14.2%
Area of reference	15.5%
NSW	13.0%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

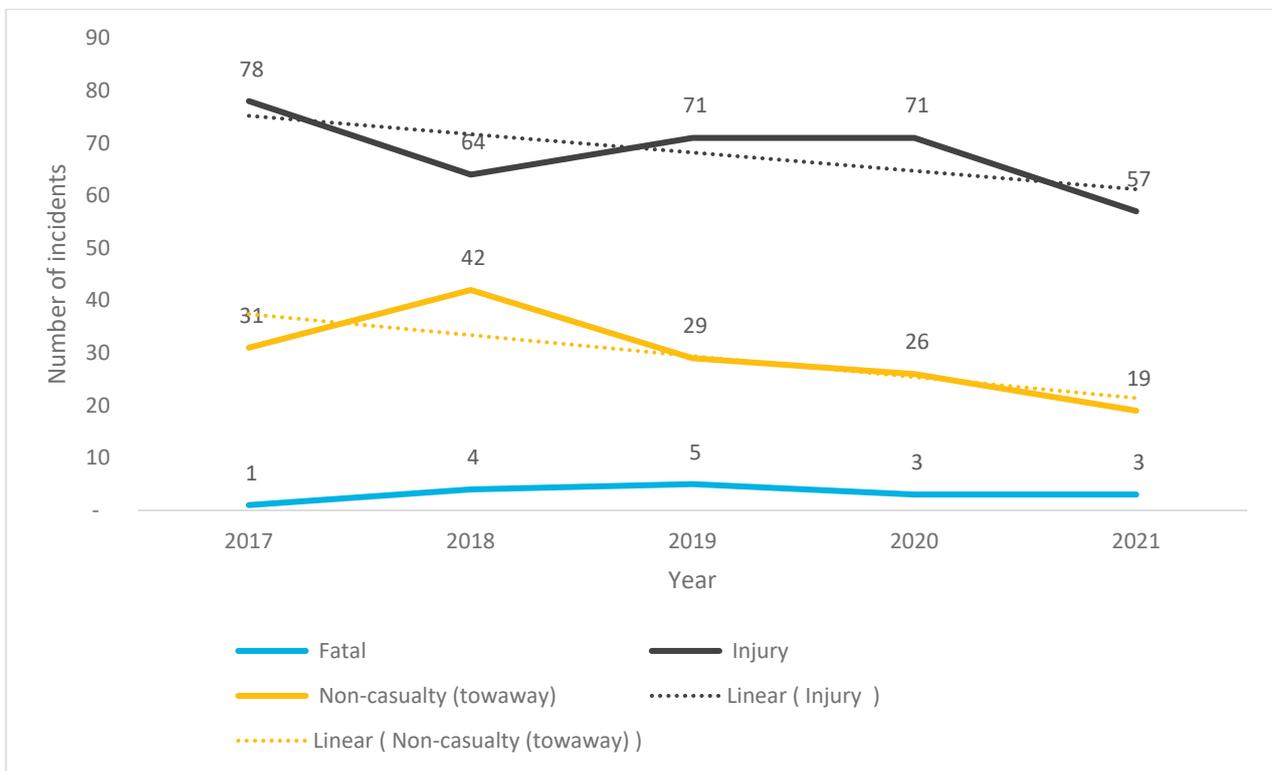
10.3 Road incidents

Road incident (crash) trend data is available at the LGA level and presented for the LGAs of Mid-Western Regional, Warrumbungle and Dubbo Regional for the following indicators:

- fatal incidents
- incidents causing injury
- incidents requiring a tow-away and no casualties.

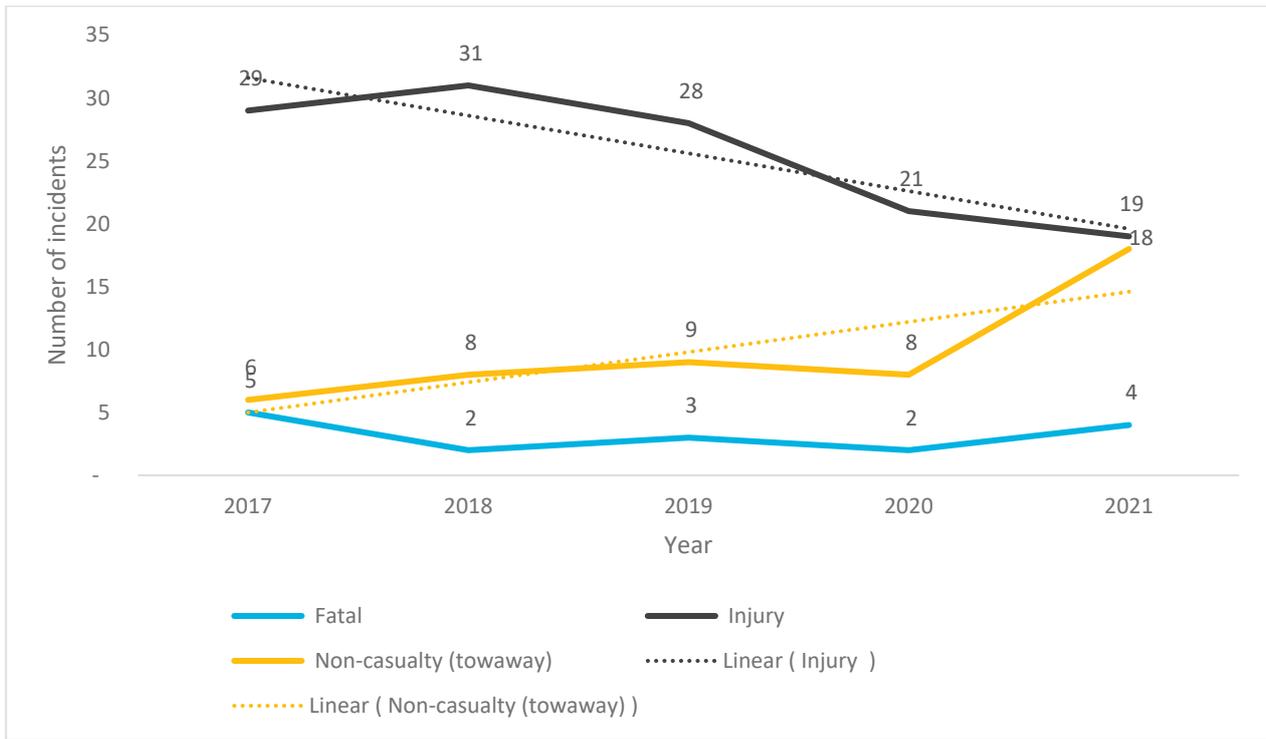
Between 2017 and 2021 the number of injury and non-casualty (towaway) road incidents in the Mid-Western Regional LGA declined. Alternatively, the number of non-casualty (towaway) road incidents increased over the same period in Warrumbungle LGA and Dubbo Regional LGA. In Warrumbungle LGA there was an increase from 6 incidents in 2017 to 18 incidents in 2021, and in Dubbo Regional LGA there was an increase from 33 incidents in 2016 to 48 incidents in 2021. The number of fatal road incidents also increased in Mid-Western Regional LGA during this period from 1 incident in 2017 to 3 incidents in 2021.

Crash trends for the LGAs of Mid-Western Regional, Warrumbungle and Dubbo are presented in Figure 10.2, Figure 10.3, and Figure 10.4.



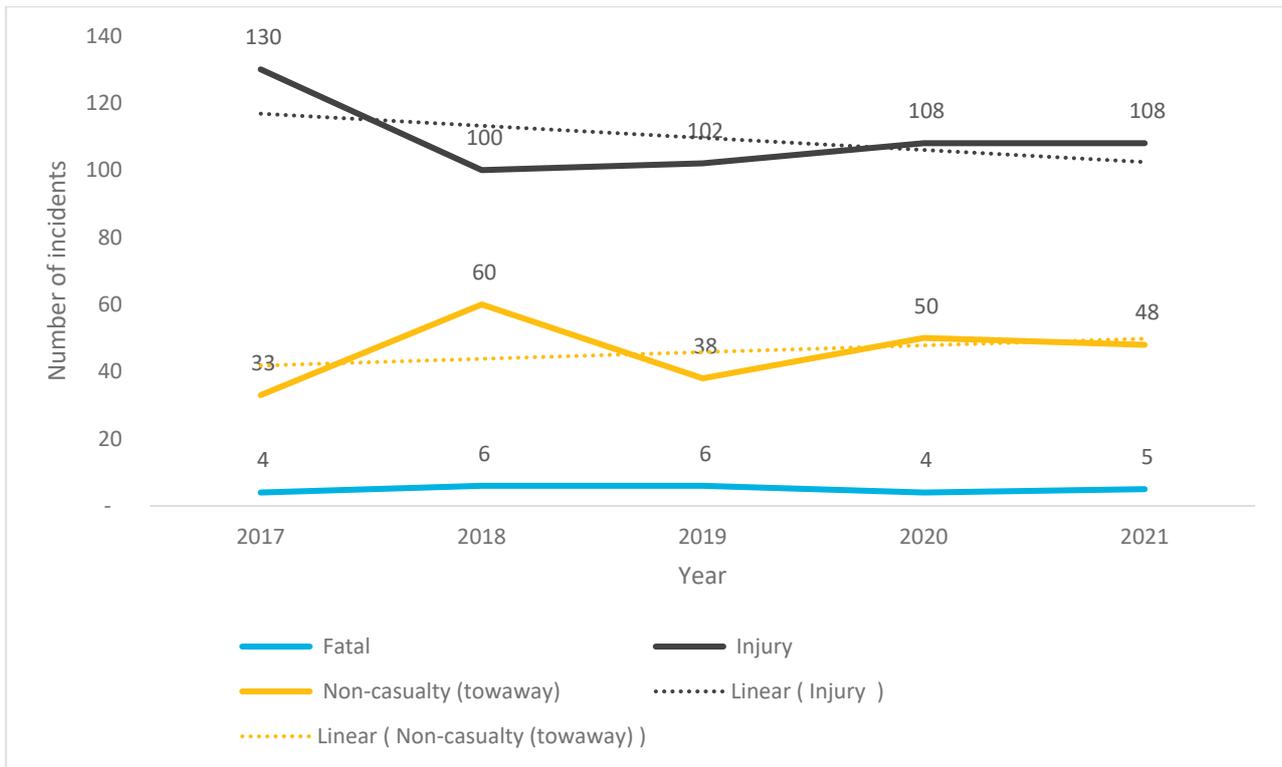
Source: TfNSW 2022, *Interactive Crash Statistics*.

Figure 10.2 Crash trends in Mid-Western Regional LGA, 2017–2021



Source: TfNSW 2022, *Interactive Crash Statistics*.

Figure 10.3 Crash trends in Warrumbungle LGA, 2017–2021



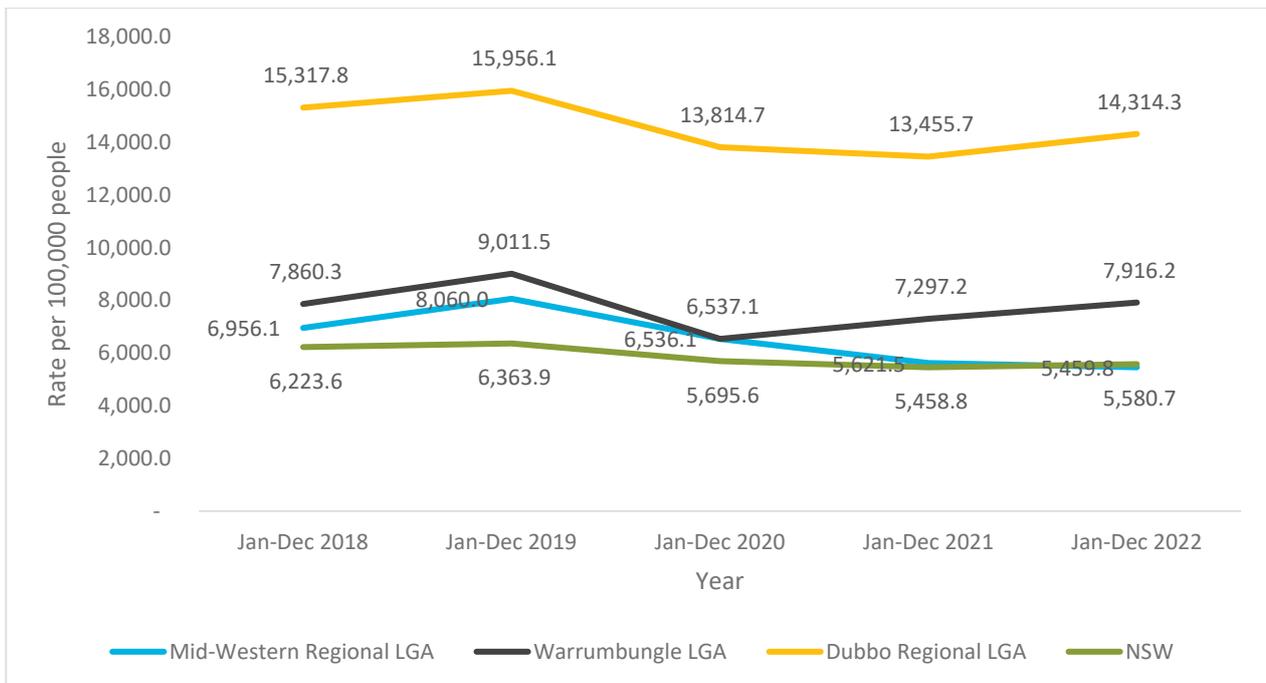
Source: TfNSW 2022, *Interactive Crash Statistics*.

Figure 10.4 Crash trends in Dubbo Regional LGA, 2017–2021

10.4 Community safety and crime

Data describing the incidence of crime in the regional area and NSW is presented in Figure 10.5 and sourced from the NSW Bureau of Crime Statistics and Research (BOCSAR). BOCSAR is a statistical and research agency within the Department of Communities and Justice. Data is only available at the LGA level.

Since 2018, the rate of total offences (per 100,000 people) in each of the LGAs of interest has generally been higher than the NSW average. In 2022, the rate of total offences (per 100,000 people) in Mid-Western Regional LGA was 5,459.8 compared to 7916.2 in the Warrumbungle LGA, 14,314.3 in Dubbo Regional LGA and 5,580.7 in NSW.



Source: BOCSAR 2022 — NSW Local Government Area excel crime tables.

Notes: Total excludes transport regulatory offences.

Figure 10.5 Total offences rates per 100,000 population, 2018–2022

Table 10.2 shows recorded offences (rate per 100,000 population) in the regional area and NSW. Recorded offence categories that have consistently had the highest rates in the Mid-Western Regional LGA and Warrumbungle LGA include theft, malicious damage to property, against Justice procedures and assault. Overall, offence rates in the regional area are generally higher than NSW, with the exception of Mid-Western Regional LGA in 2022, and Warrumbungle LGA generally experiencing the highest recorded offence rates per 100,000 population.

Table 10.2 Offences in the regional study area and NSW, 2020-2022, rates per 100,000 population

Offence group	January– December 2020			January– December 2021			January– December 2022		
	Mid-Western Regional	Warrumbungle	NSW	Mid-Western Regional	Warrumbungle	NSW	Mid-Western Regional	Warrumbungle	NSW
Assault	1,048.6	923.0	787.5	1,119.6	1,075.0	771.6	1,092.0	1,455.1	818.1
Homicide	0.0	0.0	1.2	0.0	10.9	0.9	3.9	0.0	1.0
Robbery	7.9	10.9	25.9	3.9	10.9	21.6	11.8	0.0	22.4
Sexual offences	374.5	380.1	183.5	417.9	228.0	182.2	291.7	358.3	185.9
Theft	2,057.8	2,323.8	2,195.2	1,502.0	2,714.7	2,088.0	1,482.2	3,474.9	2,167.7
Malicious damage to property	839.7	955.6	652.8	745.1	977.3	603.5	823.9	771.0	592.5
Against justice procedures	1,293.0	999.0	980.2	946.1	988.2	991.9	926.4	890.4	1,035.2
Disorderly conduct	394.2	390.9	227.5	291.7	749.3	213.8	264.1	542.9	221.5
Drug offences	520.4	553.8	641.6	595.3	542.9	585.2	563.7	423.5	536.4
Other offences	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	6,536.1	6,537.1	5,695.6	5,621.5	7,297.2	5,458.8	5,459.8	7,916.2	5,580.7

Source: BOCSAR 2022 — NSW Local Government Area excel crime tables.

Notes: Total excludes transport regulatory offences.

11 Community strengths and vulnerabilities

A summary of the key strengths and vulnerabilities within the community based on the existing social conditions is provided in Table 11.1.

Table 11.1 Community strengths and vulnerabilities

Vulnerabilities	Themes	Strengths
<p>Tight labour market with low unemployment and youth unemployment rates.</p> <p>Ageing population.</p> <p>Retention of young people in local population.</p>	 <p>WORKFORCE</p>	<p>Access to education and training opportunities.</p> <p>Growing labour force.</p> <p>Sizeable indigenous population.</p> <p>Proximity to larger regional centres i.e. Dubbo.</p>
<p>Limited capacity in short-term accommodation options.</p> <p>Competing industry sector demands for short-term accommodation.</p> <p>Cumulative accommodation demands from multiple project developments.</p>	 <p>ACCOMMODATION</p>	<p>Diversity in short-term accommodation options.</p>
<p>Limited capacity in the current private rental market.</p> <p>Limited access to emergency accommodation for vulnerable groups.</p> <p>Size of private rental market and loss of private rental properties to short-term accommodation and holiday rental market.</p> <p>Presence of low-income households seeking access to affordable housing.</p>	 <p>HOUSING</p>	<p>Approval and delivery of housing developments.</p>
<p>Existing agricultural industry is at risk from significant land use change due to mining and renewable energy projects.</p>	 <p>BUSINESS</p>	<p>Industry diversity (i.e. rapidly growing tourism industry sector and renewable energy sector together with existing mining and agricultural sectors).</p>
<p>None identified</p>	 <p>PROCUREMENT</p>	<p>Capacity and capability of business sector to participate in small and large scale procurement.</p>
<p>Small size of communities increases vulnerability to structural changes and changes in cohesion due to influx of temporary workforces associated with major projects in the region.</p> <p>Sizeable indigenous population.</p> <p>Ageing population.</p>	 <p>COMMUNITY</p>	<p>Safe.</p> <p>Strong and supportive community network.</p> <p>Declining population in smaller regional communities i.e. Gulgong and Dunedoo.</p>
<p>Rural character and amenity contributes considerably to community lifestyle.</p> <p>Limited regional public transport connections.</p> <p>Regional road conditions.</p>	 <p>LIFESTYLE</p>	<p>Access to education and training opportunities.</p> <p>Access to the three rural supplies store and cattle sale yards in Dunedoo.</p>

Acronyms

Acronym	Full
ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
AHRC	Australian Human Rights Commission
AIHW	Australian Institute of Health and Welfare
BOCSAR	Bureau of Crime Statistics and Research
DAWE	Commonwealth Department of Agriculture, Water and the Environment
DPIE	Former NSW Department of Planning, Industry and Environment
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
FYTD	Fiscal year-to-date
GP	General practitioner
IEO	Index of Education and Occupation
IER	Index of Economic Resources
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
IRSD	Index of Relative Socio-Economic Disadvantage
LEP	Local Environmental Plan
LGA	Local Government Area
LHD	Local Health District
MP	Member of Parliament
NDIS	National Disability Insurance Scheme
NSW	New South Wales
PES	Post Enumeration Survey
PHN	Primary Health Network
REINSW	Real Estate Institute of New South Wales
SEIFA	Socio-Economic Indexes for Areas
SES	State Emergency Service
SIA	Social impact assessment
SIA Guideline	Social impact assessment guideline 2021
SSC	State Suburb Classification
the project	Birriwa Solar Farm and Battery Project
WHO	World Health Organisation

References

- ABC 2017, What happened to coolah-dunedoos Aboriginal people, viewed 25 March, <https://www.abc.net.au/news/2017-11-09/what-happened-to-coolah-dunedoos-aboriginal-people/90926>
- ABS 2006, Census of Population and Housing: General Community Profiles, Australian Bureau of Statistics.
- ABS 2011, Census of Population and Housing: General Community Profiles, Australian Bureau of Statistics.
- ABS 2011, Australian social trends March 2011: Year 12 Attainment. ABS cat no. 4102.0 Canberra: ABS, Australian Bureau of Statistics.
- ABS 2016a, Census of Population and Housing: General Community Profiles, Australian Bureau of Statistics.
- ABS 2016b, Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016, Australian Bureau of Statistics.
- ABS 2016c, Census of Population and Housing: Estimating homelessness, 2016, Australian Bureau of Statistics.
- ABS 2012, 4922.0 - Information Paper - A Statistical Definition of Homelessness, 2012, Australian Bureau of Statistics.
- ABS 2020, 3218.0 – Regional Population Growth, Australia 2019-20, Australian Bureau of Statistics.
- ABS 2020, 8165.0—Counts of Australian Businesses, including Entries and Exits, June 2016 to June 2020, Australian Bureau of Statistics.
- ABS 2022, Regional population 2020-21 financial year, Australian Bureau of Statistics
- ACARA 2021, My school, find a school, Australian Curriculum, Assessment and Reporting Authority, <https://myschool.edu.au/>.
- AgShowsNSW 2020, Shows, viewed 29 April 2022, <https://www.agshowsnsw.org.au/shows/all-shows?view=shows>
- Aboriginal Housing Office 2022, Dubbo, viewed 25 March 2022, <https://www.aho.nsw.gov.au/applicants/era/about/chapters/locations/dubbo>
- AHRC 2021, Homelessness is a human rights issue, Australian Human Rights Commission, <https://humanrights.gov.au/our-work/rights-and-freedoms/publications/homelessness-human-rights-issue#:~:text=These%20include%20depression%2C%20poor%20nutrition,illness%20than%20the%20general%20population.>
- AHRC n.d., Homelessness, Australian Human Rights Commission, <https://humanrights.gov.au/our-work/education/homelessness>
- AHURI 2019, Understanding the 30:40 indicator of housing affordability stress, Australian Housing and Urban Research Institute, <https://www.ahuri.edu.au/policy/ahuri-briefs/3040-indicator>
- AirBnB 2022, Places to stay, viewed 25 March 2022, <https://www.airbnb.com.au/>
- AIHW 2020, Social Determinants of Health, Australian Institute of Health and Welfare, <https://www.aihw.gov.au/reports/australias-health/social-determinants-of-health.>
- AIHW 2021, Healthy Community Indicators, Australian Institute of Health and Welfare, from <https://www.aihw.gov.au/reports-data/indicators/healthy-community-indicators>
- AIHW 2021, Medicare-subsidised GP, allied health and specialist health care across local areas, Australian Institute of Health and Welfare, from <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-health-local-areas-2020-21/contents/about/>

AIHW 2022, Hospitals, Australian Institute of Health and Welfare, <https://www.aihw.gov.au/reports-data/myhospitals>

Anglicare Australia 2021, Rental Affordability Snapshot, <https://www.anglicare.asn.au/wp-content/uploads/2021/05/rental-affordability-snapshot-national-report.pdf>

Ask Izzy 2021, Ask Izzy, <https://askizzy.org.au/>

Australian Chamber of Commerce and Industry 2019, Migration in Regional Australia, https://www.australianchamber.com.au/wp-content/uploads/2019/10/AustralianChamber_Submission-for-Regional-Migration_Final.pdf.

Australian Government (2022) Jobactive caseload cohorts by Employment Region, Provider and Site 28 February 2022 Commonwealth of Australia, viewed 27 April 2022 <https://lmip.gov.au/default.aspx?LMIP/Downloads/EmploymentRegion>

Australian Government (2022) Jobactive caseload Selected Cohorts Time Series 31 December 2021 Commonwealth of Australia, viewed 25 March 2022, <https://lmip.gov.au/default.aspx?LMIP/Downloads/EmploymentRegion>

Australian Institute of Health and Welfare 2021 'Indigenous housing' Australian Government, from <https://www.aihw.gov.au/reports/australias-welfare/indigenous-housing>.

Australians Together 2022, 'The Stolen Generations' from <https://australiantogether.org.au/discover/australian-history/stolen-generations>.

BOCSAR 2021, Local government area excel tables 2021, NSW Bureau of Crime Statistics and Research, https://www.bocsar.nsw.gov.au/Pages/bocsar_datasets/Local-area.aspx

Brewsters Property Group n.d., The value of vacancy rates, <https://brewsters.com.au/vacancy-rates/>.

Charles Sturt University 2022, 'Our University', <https://about.csu.edu.au/our-university>

DPIE 2019, NSW 2019 Population Projections: ASGS 2019 LGA projections, Department of Planning, Industry and Environment, NSW Government, <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>.

DPIE 2021a, Undertaking Engagement Guidelines for State Significant Projects, NSW Department of Planning, Industry and Environment.

DPIE 2021b, Draft Central West and Orana Regional Plan 2041, viewed 25 March 2022, <https://www.planning.nsw.gov.au/Plans-for-your-area/Regional-Plans/Central-West-and-Orana>

DPIE 2023a, Social Impact Assessment Guideline for State Significant Projects, Department of Planning, Industry and Environment, NSW Government.

DPIE 2023b, Technical Supplement: Social Impact Assessment Guideline for State Significant Projects, NSW Department of Planning, Industry and Environment.

DUAP 1996 NSW Heritage Office and the Department of Urban Affairs and Planning. 1996. Regional Histories of NSW. NSW Government Press.

Dubbo Regional Airport, 2021, 'About the airport', from <https://www.dubboairport.com.au/Home/About-the-Airport/about>

Dubbo Regional Council 2022, Councillors, viewed 25 March 2022, <https://www.dubbo.nsw.gov.au/About-Council/Who-We-Are/councillors>

Dubbo Regional Council 2022, Dubbo Regional, viewed 25 March 2022, <https://www.yourcouncil.nsw.gov.au/council-data/dubbo-regional-1632188804/>

Eastend Bus Service 2022, School Services, viewed 25 March, <https://eastendbusservice.com.au/school-services/>

Google Travel 2022, Travel, viewed 25 March 2022, <https://www.google.com/travel/>

Healing Foundation n.d, 'Intergenerational Trauma', from <https://healingfoundation.org.au/intergenerational-trauma/>

Healthdirect Australia 2021, National Health Services Directory, <https://about.healthdirect.gov.au/nhsd>.

Haglund 1985, Assessment of the Prehistoric Heritage in the Mudgee Shire.

Innis Michelle 2015, Coal mining's promise falls through for Dunedoo, Sydney Morning Herald October 16, 2015 <https://www.smh.com.au/business/companies/coal-minings-promise-falls-through-for-dunedoo-20151016-gkb0zz.html>

Informed decisions, 2016, 'Forecasting the future of NSW: How will regional population growth play out in the future?' id consulting, from <https://blog.id.com.au/2016/population-forecasting/forecasting-the-future-nsw-regional-growth/>

Infrastructure NSW 2018 Building Momentum: State Infrastructure Strategy 2018-2038, Infrastructure NSW, from https://insw-sis.visualise.today/documents/INSW_2018SIS_BuildingMomentum.pdf

Infrastructure NSW 2018 Building Momentum: State Infrastructure Strategy 2018-2038, Infrastructure NSW, from https://insw-sis.visualise.today/documents/INSW_2018SIS_BuildingMomentum.pdf

James, A., Rowley, S., Davies, A., Ong ViforJ, R. and Singh, R (2021) Population growth and mobility in Australia: implications for housing and urban development policies AHURI Final report No 365, Australian Housing and Urban Research Institute Limited. Melbourne Population growth and mobility in Australia: implications for housing and urban development policies (ahuri.edu.au) doi:10.18408/ahuri8122101.

National Skills Commission 2021, Australian Jobs Report, from <https://www.nationalskillscommission.gov.au/australian-jobs-report>

National Skills Commission 2022, National Skills Commission (2022) SALM Smoother LGA Datafiles (ASGS 2021) December Quarter 2021, from <https://www.nationalskillscommission.gov.au/topics/small-area-labour-markets%20accessed%2027%20April%202022>

NSW ALC 2021, Land Councils, NSW Aboriginal Land Council, https://alc.org.au/land_council/

NSW Ambulance 2021, List of all stations, NSW Ambulance, https://www.ambulance.nsw.gov.au/_data/assets/pdf_file/0008/509264/NSWAmbulanceStationList-2019.pdf

NSW Country and Picnic racing, About Us, viewed 28 April 2022, <https://www.nswcountryandpicnicracing.com.au/sample-page/>

NSW Fire and Rescue 2021, Find a fire station, NSW Fire and Rescue, from <https://www.fire.nsw.gov.au/page.php?id=9205>

NSW Government Communities & Justice (ud) Central West and Orana Region - What's the Housing Demand? Department of Families

NSW Government 2013, Warrumbungle Local Environmental Plan 2013, viewed 25 April 2022, <https://legislation.nsw.gov.au/view/html/inforce/current/epi-2013-0670>

NSW Government 2018, A 20-Year Economic Vision for Regional NSW' NSW Government, from <https://static1.squarespace.com/static/59ae4a2a6f4ca38d47990cd8/t/5d63391c30af730001d228a3/1566783815503/20-Year-Vision-for-RNSW-accessible.pdf>

NSW Government 2021, A 20-Year Economic Vision for Regional NSW' NSW Government, from <https://www.nsw.gov.au/a-20-year-economic-vision-for-regional-nsw-refresh>.

NSW Government 2022, Central-West Orana Renewable Energy Zone Project Overview. Available at: <https://www.energy.nsw.gov.au/sites/default/files/2022-02/february-2022-cwo-rez-project-overview.pdf>
Accessed on 11 April 2022.

NSW Health 2021, Healthstats NSW, NSW Ministry of Health, <http://www.healthstats.nsw.gov.au/>.

NSW Police Force 2021, Police station search, NSW Police Force, from https://www.police.nsw.gov.au/about_us/regions_commands_districts/police_station_search

NSW SES 2021, Our zones, NSW SES, from <https://www.ses.nsw.gov.au/about-us/our-zones/>

Mid-Western Regional Council 2017, Mid-Western Regional Towards 2030 Community Plan, viewed 20 March 2022, <https://www.midwestern.nsw.gov.au/files/assets/public/council/plans-and-strategies/plan-community-plan-towards-2030.pdf>

Mid-Western Regional Council 2022, Councillors, viewed 25 March 2022, <https://www.midwestern.nsw.gov.au/Council/Councillors>

Mid-Western Regional Council 2022, Delivery Program 2017/18 – 2021/22 Operational Plan 2021/22, viewed 25 April 2022 <https://www.midwestern.nsw.gov.au/files/assets/public/council/plans-and-strategies/plan-operational-and-delivery-program-2021-22.pdf>

Mid-Western Regional Council 2021, Asset Management Strategy 2017/2021, viewed 25 April 2022, <https://www.midwestern.nsw.gov.au/files/assets/public/council/plans-and-strategies/strategy-asset-management-2017-2022.pdf>

Mid-Western Regional Council 2020, Our Place 2040, Mid-Western Regional Local Strategic Planning Statement viewed 25 April 2022, https://shared-drupal-s3fs.s3-ap-southeast-2.amazonaws.com/master-test/fapub_pdf/Local+Strategic+Planning+Statements/LSPS+2020/LSPS+Regional%3B/Mid+Western+Regional+Council+Local+Strategic+Planning+Statement+2020.pdf

Mid-Western Regional Council 2005, Cultural plan, from <https://www.midwestern.nsw.gov.au/files/assets/public/council/plans-and-strategies/cultural-plan-current.pdf>

Mid-Western Regional Council 2022, Mudgee Airport, viewed 25 March, <https://www.midwestern.nsw.gov.au/Services/Commercial-facilities/Mudgee-Airport>

NSC 2022a, Vacancy Report, April 2022 Released date 25 May 2022 from Vacancy Report April 2022.pdf (nationalskillscommission.gov.au)

NSC 2022b, Labour Market Dashboard Central West, April 2022 from New South Wales | Labour Market Insights

NSC 2022c, Recruitment Experiences and Outlook Survey, April 2022 from Recruitment Experiences and Outlook Survey | National Skills Commission

Ogdenscoaches 2022, Ogden's History and Experience, viewed 25 March, <https://www.ogdenscoaches.com.au/about/>

OzArk Environment & Heritage 2022, Aboriginal Cultural Heritage Assessment Report Birriwa Solar Farm and Battery Project, prepared for ACEN Australia Pty Ltd

OzArk Environment & Heritage 2022, Historic Heritage Assessment Report Birriwa Solar Farm and Battery Project, prepared for ACEN Australia Pty Ltd

Perkins R & Langton M 2010, First Australians, Miegunyah Press, Victoria.

REA Group 2021, Explore Australia's suburbs, <https://www.realestate.com.au/neighbourhoods/>.

REINSW 2021, Vacancy Rates Survey Results January 2021, Real Estate Institute of New South Wales, https://www.reinsw.com.au/Web/News/Media_Releases/2021/02_February/Small_fluctuations_in_rental_vacancies.aspx.

2022 SIA Interview Program to inform the Birriwa Solar Farm and Battery Project Social Impact Assessment, EMM Consulting

Siegel J, Lynch J, & Eades D 2007, Language description, history and development: Linguistic indulgence in memory of Terry Crowley, ProQuest Ebook Central, <https://ebookcentral-proquest-com.ezproxy.library.uq.edu.au>

SQM Research 2021, Residential Vacancy Rates, https://sqmresearch.com.au/graph_vacancy.php.

TAFE NSW 2022, TAFE NSW Dunedoo, TAFE NSW, from <https://www.tafensw.edu.au/locations/western-nsw/dunedoo>

TAFE NSW 2022, TAFE NSW Mudgee, TAFE NSW, from <https://www.tafensw.edu.au/locations/western-nsw/mudgee>

TAFE NSW 2022, TAFE NSW Dubbo, TAFE NSW, from <https://www.tafensw.edu.au/locations/western-nsw/dubbo>

Transport for NSW (TfNSW) 2022, Crash and casualty statistics – LGA view, Transport for NSW, https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tblga=4.

Tindale N B 1974, Aboriginal Tribes of Australia: Their terrain, environmental controls, distribution, limits and proper names, Australian National University Press, Canberra.

Western College 2019, 'About Western College', <https://www.westerncollege.nsw.edu.au/about/>, <https://www.sydney.edu.au/medicine-health/schools/clinical-schools/rural-health-dubbo-orange.html>

Warrumbungle Shire Council 2016, About Warrumbungle Shire, viewed 28 April 2022, <https://www.warrumbungle.nsw.gov.au/our-council/community-and-economic-profile/about-the-shire/about-warrumbungle-shire>

Warrumbungle Shire Council 2021, Operational Plan and Delivery Program 2013/14 to 2016/17, viewed 25 April 2022, <https://www.warrumbungle.nsw.gov.au/our-council/publications-and-reporting/publications/documents/management-plan-and-budget/operational-plan-and-delivery-program>

Warrumbungle Shire Council 2022, Councillors, viewed 25 March 2022, <https://www.warrumbungle.nsw.gov.au/our-council/about-us/councillors/councillors>

Warrumbungle Shire Council 2022, Community Strategic Plan 2022-2037, from <https://www.warrumbungle.nsw.gov.au/our-council/have-your-say/have-your-say-articles/community-strategic-plan-2022-2037>

University of Sydney 2022, School of Rural Health (Dubbo/Orange), viewed 25 March <https://www.sydney.edu.au/medicine-health/schools/clinical-schools/rural-health-dubbo-orange.html>

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