



Tilbuster 2 Solar Farm

Social Impact Assessment

Enerparc Australia

12 November 2024

→ The Power of Commitment



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Acknowledgement of Country

GHD acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land, water and sky throughout Australia on which we do business. We recognise their strength, diversity, resilience and deep connections to Country. We pay our respects to Elders of the past, present and future, as they hold the memories, knowledges and spirit of Australia. GHD is committed to learning from Aboriginal and Torres Strait Islander peoples in the work we do.



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Glossary

Term	Definition
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
Amenity and character	The noise, air quality, and visual amenity of the area provide for the enjoyment of residents and create a recognizable and distinctive character (Wood, 2008).
ARC	Armidale Regional Council
CCS	Community Consultation Strategy
Community values	Community values, or a sense of community, are the social ties established within a community, in part based around the features and qualities of the built environment that encourage these social ties and contribute to quality of life and wellbeing. A project may impact on these aspects of a community for example through changes in noise and air quality, visual amenity, traffic and access, barriers to movement across the community, and use of enjoyable community spaces (Maller & Nicholls, 2014).
DPE	The former Department of Planning and Environment, now Department of Planning, Infrastructure and Housing (DPHI).
EIS	Environmental impact statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
GDP	Gross domestic product
GRP	Gross regional product
GST	Goods and services
.id	.id community – Demographic Resources (also known as profile i.d. or Forecast i.d.)
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage
km	Kilometre
km ²	Square kilometres
kV	Kilovolt
LALC	Local Aboriginal Land Councils
LGA	Local Government Area – LGAs are an approximation of gazetted local government boundaries as defined by each State and Territory. LGAs cover incorporated area of Australia (ABS, 2022).
LSPS	Local Strategic Planning Statement
MW	Megawatt
MWh	Megawatt per hour
NSW	New South Wales
Proposal	The construction, operation and decommissioning of a ground-mounted photovoltaic (PV) solar array, which would generate approximately 140 MW.
Proposal site	The site within which the proposal is located, namely Lot 4 DP800611, 11915 New England Highway, Black Mountain NSW 2365.
PV	Photovoltaic
RAPs	Registered Aboriginal Parties
REZ	Renewable Energy Zone
SAL	Suburb and Locality
SA4	Statistical Areas Level 4 (SA4) are geographical areas are the largest sub-State regions used in the Census, and reflect regional-level data. These areas also represent labour markets or groups of labour markets within each State and Territory (ABS, 2016).

Term	Definition
SEARs	Secretary's environmental assessment requirements
SEIFA	Socio-Economic Indexes for Areas includes a range of indexes developed by the Australian Bureau of Statistics to rank areas in Australia according to relative socio-economic advantage and disadvantage.
SIA	Social impact assessment
SSD	State significant development
Social cohesion	Social or community cohesion can be understood as "the bonds and relationships people have with their family, friends and the wider community. Day to day interactions between people in a community build trust and reciprocity and contribute to cohesion" (ABS, 2010).
Socio-economic Indexes for Areas (SEIFA)	The ABS produces four socio-economic indices for areas (SEIFA) based on Census data, which identify areas of relative advantage and disadvantage. Socio-economic advantage and disadvantage are defined broadly by the IRSAD in terms of people's access to material and social resources and their ability to participate in society (ABS, 2016b). To capture this broad definition, the IRSAD includes a range of data points, including income, education, employment, occupation, and housing. IRSAD scores are presented in deciles and state rankings, with 1 being the lowest socioeconomic decile and the most disadvantaged and 10 being least disadvantaged.
SSC	State Suburbs (SSC) – an approximation of localities divided by their Geographical Place Name for each State and Territory, that align to urban suburbs and rural localities.
Stakeholder	Person or group affected by or concerned with an issue.
UNE	University of New England
Vulnerable group	The inability of people to withstand or adapt to change due to characteristics of the group they are a part of. This report considers the following groups: socio-economically disadvantaged persons as identified by the Index of Relative Socio-Economic Advantage and Disadvantage, the elderly and very young, culturally and linguistically diverse people, people who need assistance with core activities such as self-care, movement and communication due to a severe or profound disability.

1. Introduction

1.1 Background

Enerparc Australia Pty Ltd (Enerparc) is developing the Tilbuster Solar Farm (State Significant Development (SSD) 9619), which was approved under Section 2.22 and Clause 20 of Schedule 1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 3 March 2022. The Tilbuster Solar Farm (the project) is located approximately 15 kilometres (km) north of Armidale in the Armidale Regional local government area (LGA), see Figure 1.1.

The project involves the construction, operation and decommissioning of a new solar farm with a generating capacity of 150 megawatts (MW) and 15 MW/30 MW per hour (MWh) of battery energy storage. The solar farm will connect to the existing Transgrid 330 kilovolt (kV) transmission line, which traverses the site and connects Dumaresq substation to Armidale substation.

Due to design refinements made in response to ecological and heritage constraints identified during the preparation of the Environmental Impact Statement (EIS), the project was approved with a lower MW capacity than originally anticipated. As a result, Enerparc have acquired adjacent land and propose developing Stage 2 of the project to maximise the generation potential of the site (the proposal).

The proposal is located on land adjoining the project and would make use of transmission, storage and construction facilities on that site.

1.2 Proposal overview

The proposal involves the construction, operation and decommissioning of a ground-mounted photovoltaic (PV) solar array, which would generate approximately 140 MW, in addition to the 150 MW generated by the project.

The proposal site is located at Lot 4 DP800611, 11915 New England Highway, Black Mountain NSW 2365. The proposal site has an area of approximately 250 hectares (ha), with the proposed development to be constructed on approximately 140 ha of this land.

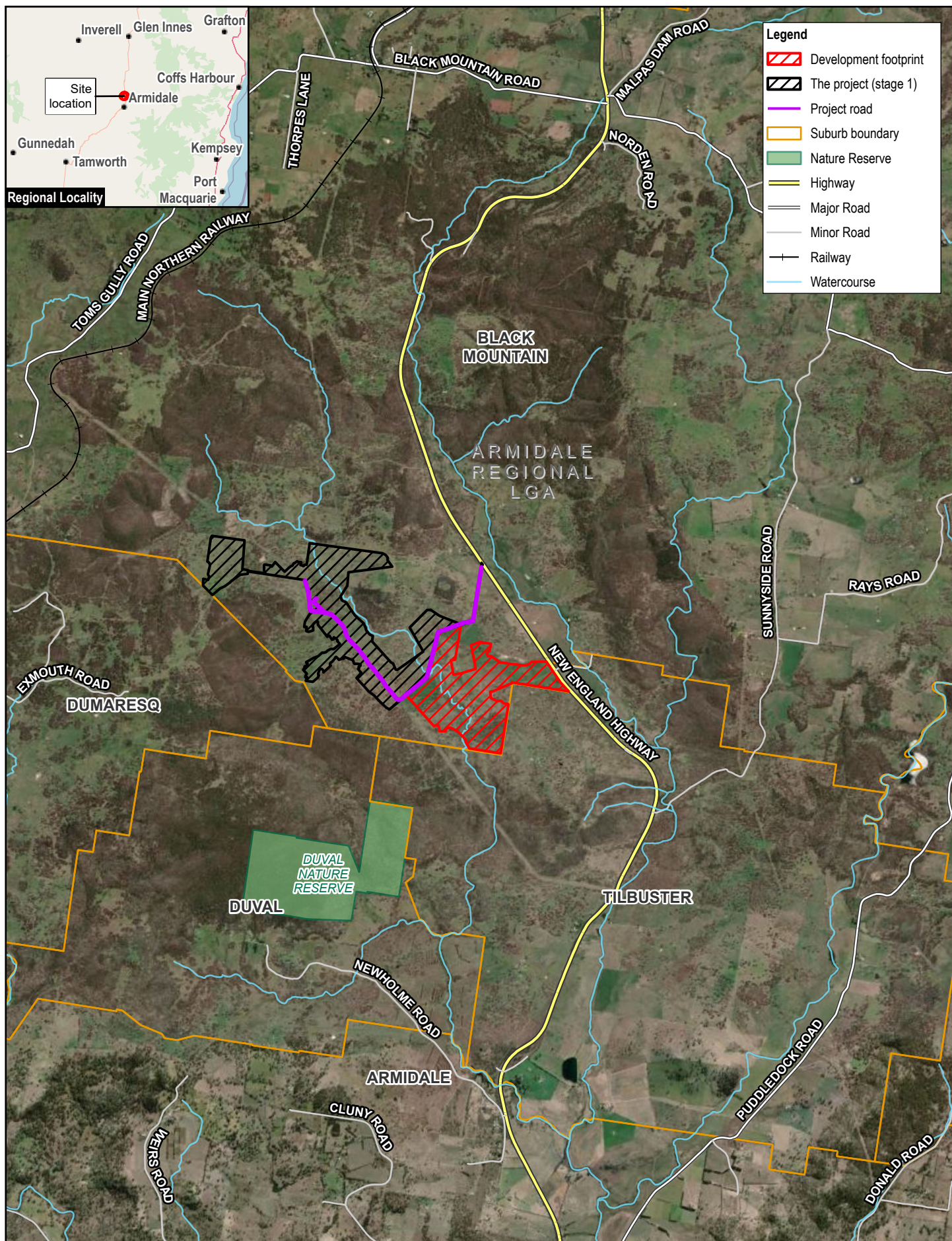
In total, the construction phase of the proposal is expected to take nine months, and the facility is expected to operate for around 30 years or extended pending further approvals. The proposal would be constructed as part of the overall construction of the approved project. This would reduce the construction period for the proposal and minimise impacts on the community.

The primary access point for light and heavy vehicles during construction and operation would be via an existing access off the New England Highway, currently under construction for the project. Temporary construction compounds and laydowns areas would also be located on the project site.

Construction of the proposal is anticipated to take nine months, with work commencing, pending approval, in early 2025. Up to 100 construction workers would be required.

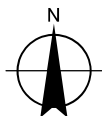
Up to five full time equivalent operations and maintenance staff and service contractors would operate the proposal, as part of the operation of the approved project. Existing transmission and storage infrastructure within the approved project footprint would be used to connect the proposal to the national electricity grid.

Figure 1.2 shows the indicative layout for the proposal, including the location of solar PV panels, associated infrastructure and internal access roads.



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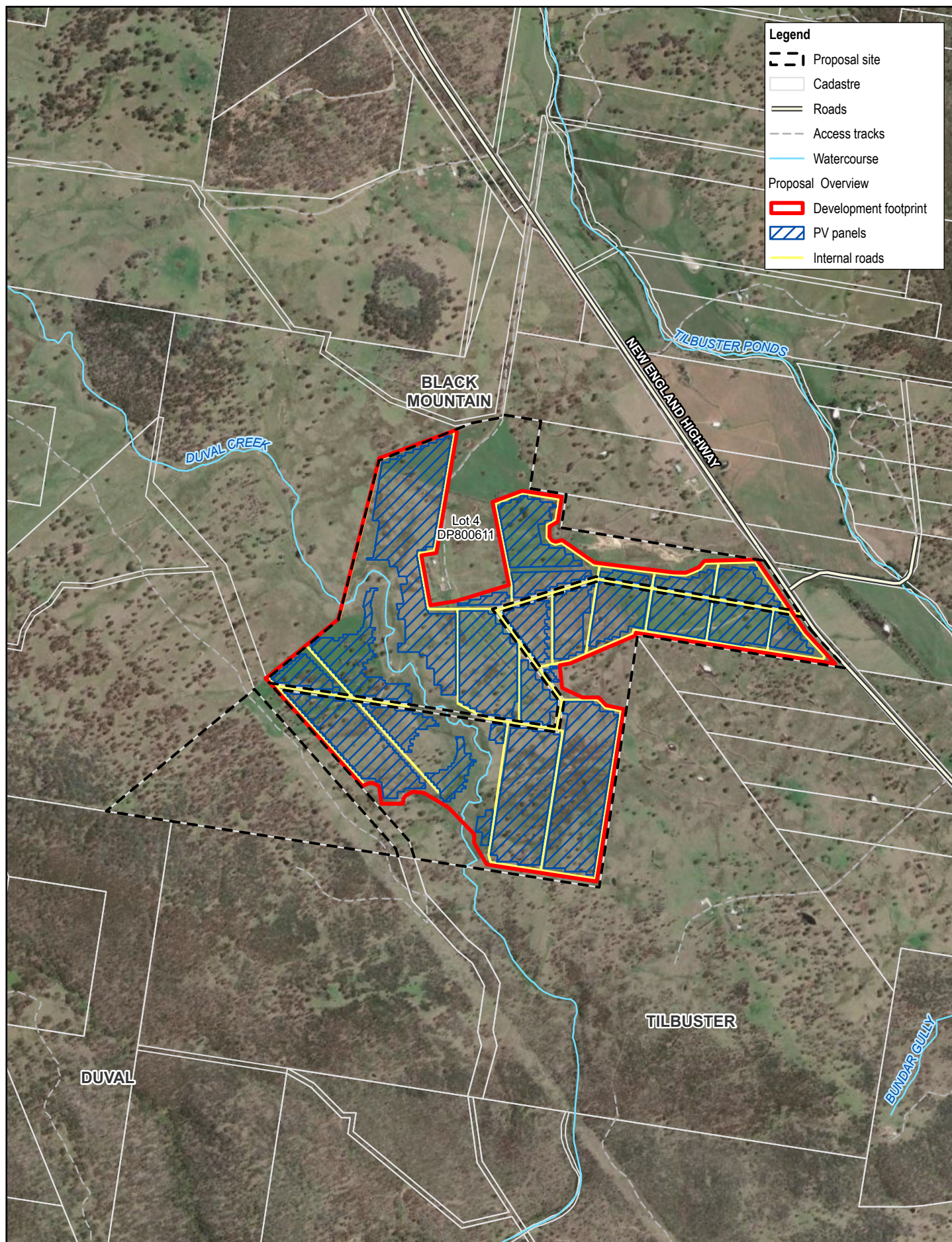


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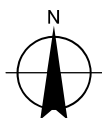
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Local context

FIGURE 1.1



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Overview of the proposal

FIGURE 1.2

1.3 Purpose of this report

GHD Pty Ltd (GHD) has prepared this Social Impact Assessment (SIA) to support the Environmental Impact Statement (EIS) for the proposal. This report addresses the Secretary's Environmental Assessment Requirements (SEARs) issued on 18 April 2024 and assesses the social impacts associated with the construction and operation of the proposal.

Specifically, this report:

- Has been prepared in line with the NSW Department of Planning, Industry and Environment's (DPE) *Social Impact Assessment Guideline* (2023) (hereafter referred to as 'the SIA Guideline') (DPE, 2021).
- Addresses the SEARs as listed in Table 1.1.
- Describes the existing social environment.
- Assesses the potential impacts of constructing and operating the proposal on communities.
- Recommends measures to mitigate and manage the impacts identified.

Table 1.1 SEARs relevant to this social impact assessment

Requirements	Where addressed in this report
Social – including a social impact assessment prepared in accordance with the Department's Social Impact Assessment Guidelines for State Significant Projects.	This report presents a social impact assessment in line with the requirements of the NSW SIA Guideline (DPE, 2023). The assessment of social impacts is presented in Section 6.

1.4 Structure of this report

The structure of this SIA is outlined below:

- Section 1 – introduces the report and includes a description of the proposal.
- Section 2 – describes the methodology for the assessment.
- Section 3 – describes the legislative and policy context relevant to this SIA for the proposal.
- Section 4 – describes the stakeholder consultation undertaken for the proposal.
- Section 5 – describes the existing social environment for the proposal area.
- Section 6 – identifies the potential social impacts arising from the construction and operation of the proposal, including potential cumulative impacts.
- Section 7 – outlines recommended impact management and mitigation measures.
- Section 8 – provides a conclusion for the report.
- Section 9 – provides a list of references used for this report.

1.5 Authors of this report

The SIA Guideline requires a suitably qualified and experienced practitioner/s to be involved in the preparation of the SIA report (DPE, 2023). The personnel involved in the preparation of this SIA and their respective qualifications area provided in Table 1.2.

Table 1.2 Authors and qualifications

Name	Position	Project role	Qualifications	Professional memberships	Years experience
Lauren Harding	Technical Director – Social Sustainability and Engagement	Technical reviewer	– M. Social Science (Social Planning) – B Arts (Anthropology)	Environment Institute of Australia and New Zealand International Association for Public Participation	15+
Charlotte Barker	Social Sustainability and Engagement Graduate	Author	– Master of Planning, 2022 – B. Science (Environmental Studies), 2020 – B. Arts (Anthropology), 2020	International Association for Public Participation	1
Matilda Wiggins	Social Sustainability and Engagement Graduate	Support Author	– B. Commerce (Economics and IR)	International Association for Public Participation	1

I, Lauren Harding declare that the *Tilbuster 2 Solar Farm Social Impact Assessment* contains all information relevant to the SIA for the proposal and that the information is not false or misleading. The assessment was completed on 12 November 2024:



Lauren Harding

1.6 Scope and limitations

This report has been prepared by GHD for Enerparc Australia for the purpose agreed between GHD and Enerparc Australia as set out in Section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Enerparc Australia arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

2. Methodology

This section describes the methodology followed to prepare this SIA. Overall, the methodology has been prepared to respond to the SEARs, with the SIA process guided by the following guidelines:

- SIA Guideline (DPE, 2023).
- *Technical Supplement – Social Impact Assessment Guideline for State Significant Projects* – hereafter referred to as the ‘SIA Technical Supplement’ (DPE, 2021).
- International Association for Impact Assessment *International Principles for Social Impact Assessment* (Vanclay et al., 2003) and *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay et al., 2015).

The SIA Guideline has a set of review questions to confirm that the requirements of the guideline have been met when considering the social impacts of a project. A response to the review questions is provided in Appendix A.

In the context of this SIA, social impacts are understood as the consequences that people and communities experience as a result of project-induced changes that affect the way they ‘live, work, play, relate to one another, organise to meet their needs and generally cope as members of society’ (Burdge & Vanclay, 1996).

As outlined in the SIA Guideline, social impacts can involve changes to one or more of the following social values:

- **Way of life**, including how people live, how they get around, how they work, how they play, and how they interact each day.
- **Community**, including composition, cohesion, character, how the community functions, resilience, and people’s sense of place.
- **Accessibility**, including how people access and use infrastructure, services and facilities, whether provided by a public, private or not-for-profit organisation.
- **Culture**, both Aboriginal and non-Aboriginal, including shared beliefs, customs, practices, obligations, values and stories, and connections to Country, land, waterways, places and buildings.
- **Health and wellbeing**, including physical and mental health especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, access to open space and effects on public health.
- **Surroundings**, including ecosystem services such as shade, pollution control, erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity.
- **Livelihoods**, including people’s capacity to sustain themselves through employment or business.
- **Decision-making systems**, including the extent to which people can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms.

A social impact can be direct, indirect or cumulative, and negative or positive. It can also vary according to the individual, community, or segment of a community by whom it is experienced.

The term ‘community’ refers to a network of people and/or organisations who are linked together by a web of personal relationships; cultural and political connections, shared identities and traditions, similar socioeconomic conditions, or common understandings and interests (Vanclay et al., 2015). In the context of this SIA, the term ‘community’ is used to refer to people residing in a shared discrete geographic location - for example, a rural town or regional centre. However, in select cases, it may also be used to describe a ‘community of identity’ or a ‘community of interest’.

The following sections describe the steps undertaken to prepare the SIA.

2.1 Scoping potential impacts

Scoping was undertaken to identify social indicators to be considered in the social baseline, approach to stakeholder consultation, and inform the issues to be explored in the impact assessment. The scoping exercise was informed by:

- A review of background information provided by Enerparc, including a description of the proposal, details of proposed use of the area, and other studies undertaken for the proposal.
- Outcomes from key stakeholder consultation activities.
- Understanding of the social baseline for the study area (further described in Section 2.1).
- The findings of other technical studies prepared for the EIS (listed in Section 2.5).

The key themes and socio-economic impacts (positive and negative) considered through the scoping exercise are detailed in Table 2.1.

Table 2.1 Scoping themes

Social impact theme	Description
Land use and property	Impacts on land use and property associated with the proposal.
Amenity	Impacts on visual, noise and vibration, dust and air quality due to the construction and operation of the proposal.
Community and cultural values	Impacts associated with actual or perceived changes to social, environmental, or cultural features that people in the local and regional study area value. This also includes actual or perceived changes to cultural values for local Aboriginal communities.
Economy, business and employment	Impacts associated with the local and regional economy, including employment opportunities and opportunities for businesses during construction and operation of the proposal.
Accommodation and housing	Impacts associated with short-term accommodation and housing within the local study area.
Community health and wellbeing	Actual and perceived impacts on social cohesion and safety, community concerns about the construction and operation of the proposal, impacts on services and infrastructure, and impacts on recreational activities.
Access and connectivity	Impacts on the ability and way that people move between places and interact either within the local study area, or when moving between the local study area and elsewhere.

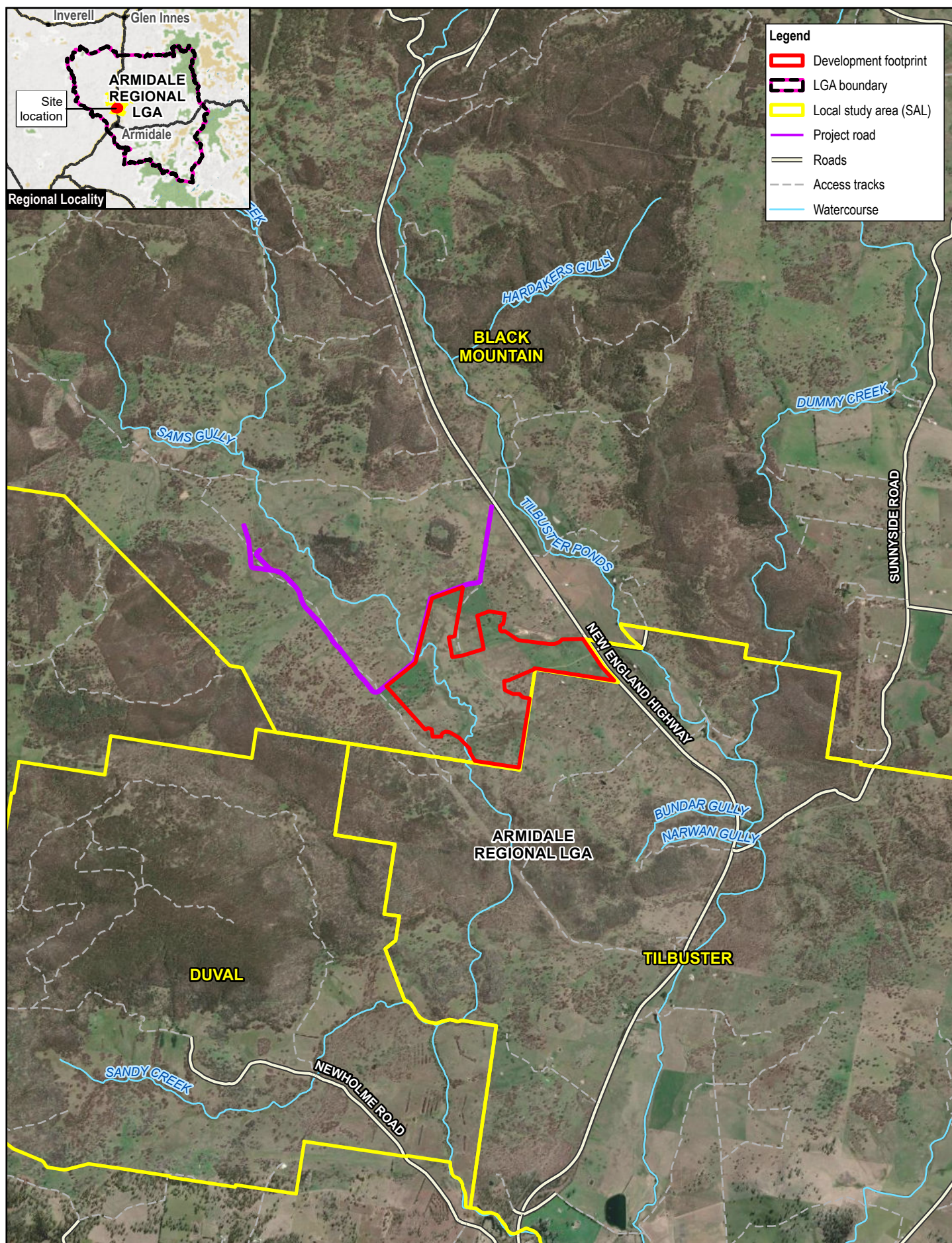
2.2 Defining the social locality

The social locality is the geographical area of social influence of an existing operation or a proposed development. For the purpose of this study, the social locality includes the people and communities most likely to experience changes to existing socio-economic conditions resulting from the proposal. The social locality includes a local and regional study area, as outlined in Table 2.2 and shown in Figure 2.1.

Table 2.2 Social locality

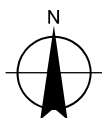
Social locality study area	Description	Relevant statistical area
Proposal site	The proposal site encompasses Lot 4 DP800611, 11915 New England Highway, which has an area of approximately 250 ha. The proposal site is wholly located in the suburb of Black Mountain, on the western side of the New England Highway, directly southeast of the approved Tilbuster Stage 1 Solar Farm. The site is primarily used for agricultural purposes as the primary surrounding land use is cropping and grazing.	N/A

Social locality study area	Description	Relevant statistical area
Development footprint	The development footprint is the area within the proposal site (140 ha) on which the solar farm would be constructed and operated, including the solar array, weather stations, power conversion units, electrical cabling, internal access roads, perimeter security fencing, construction laydown, parking, site offices and staff facilities.	N/A
Local study area	The local study area includes: – The suburb of Black Mountain, which contains the development footprint. The closest residence to the proposal site is located approximately 400 metres (m) northeast. – The suburb of Tilbuster, which is located directly to the south-east of the development footprint. Tilbuster has a small residential population, with the closest residential property located approximately 1 km southeast of the proposal site. – The suburb of Duval, located south-west of the proposal site. The suburb of Duval does not have a residential population and therefore a demographic summary has not been provided. The suburb contains the Duval Nature Reserve. Residents within the local study area may potentially experience direct and indirect social impacts and benefits due to construction and operation of the proposal.	Black Mountain suburb and locality (SAL) Tilbuster (SAL) Duval (SAL)
Regional study area	The regional study area includes: – Armidale local government area (LGA), which contains the local study area suburbs (Black Mountain and Tilbuster), and the closest regional city of Armidale, located approximately 15 km south of the proposal site. – The New England and North West Region and NSW have also been used as a regional benchmark, where relevant.	Armidale (LGA) New England and North West (SA4) NSW (State)



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Social locality

FIGURE 2.1

2.3 Establishing the social baseline

The social baseline establishes the current social characteristics within the social locality for the SIA. The social baseline is used to inform the prediction of the potential social benefits and impacts of the proposal. A social baseline has been prepared for the development footprint, local study area and regional study area, as shown in Table 2.3.

Table 2.3 Social baseline topics and indicators

Area	Description of topics and indicators
Development footprint	– Existing land use. – Key natural features, including waterways.
Local study area	– Local amenity and character of the area. – Select demographic and economic indicators for the suburbs of Black Mountain, Tilbuster and Duval compared to Armidale LGA. – Key features, including any roads.
Regional study area	– Location, history and character of the area. – Community values and priorities. – Values and interest of Traditional Owners and local Aboriginal communities. – Economic overview. – Community facilities and services. – Accommodation and housing.

Data to inform the social baseline has been gathered from the following sources:

- Australian Bureau of Statistics (ABS) Census, 2021 and 2016.
- NSW Department of Planning and Environment (DPHI) population projections.
- Economic data (e.g., economy.id).
- Local, State and Australian Government websites and publications.
- Various research reports.
- Various online sources (detailed in Section 9).
- Information from stakeholder consultation.

A list of sources used to inform this SIA is provided in Section 9.

2.4 Stakeholder consultation

The SIA has been informed by various community and stakeholder engagement activities. These include consultation activities undertaken to inform the EIS for both the project and the proposal, and stakeholder interviews undertaken by the SIA team.

Stakeholder consultation for the SIA was undertaken between 23 July 2024 and 2 August 2024 via video teleconference. The purpose of this consultation was to:

- Confirm and build on findings from desktop research on the social baseline.
- Understand the values, aspirations and challenges experienced by residents in the local and regional study area.
- Identify potential social impacts and benefits from the proposal, and any groups that may be more vulnerable to these impacts.
- Identify potential measures to mitigate impacts and maximise benefits.

Stakeholder consultation activities included interviews with key local and regional stakeholders. Participation in the consultation process was voluntary and confidential. Section 4 provides an overview of the consultation activities and relevant issues that have been considered in the assessment of potential social impacts.

2.5 Description and assessment of social impacts and benefits

Following the scoping of social issues described in Section 2.1, social impacts were confirmed using a data triangulation method, whereby multiple sources of information were assessed to confirm social impacts. These data sources are summarised below:

- The proposal description for the EIS to understand the proposed activities that would influence social aspects.
- Baseline conditions against which the social changes/impacts were measured.
- Outcomes of the stakeholder consultation undertaken for the SIA and the proposal as a whole to understand the existing environment and stakeholder views on potential social changes brought about by the proposal.
- Relevant literature and studies as referenced throughout the report.
- Relevant chapters of the *Tilbuster 2 Solar Farm Environmental Impact Statement* (GHD, 2024).
- Relevant draft and final technical studies prepared for the EIS to gather technically sound evidence to identify and assess the social changes resulting from the Proposal:
 - *Noise and Vibration Assessment* (GHD, 2024a).
 - *Landscape and Visual Assessment* (GHD, 2024b).
 - *Agricultural Impact Assessment* (GHD, 2024c).
 - *Traffic Impact Assessment* (GHD, 2024d).
 - *Aboriginal Cultural Heritage Assessment Report (ACHAR)* (OzArk, 2024).

The evaluation of the identified social impacts was undertaken using a likelihood and magnitude significance rating, based on the significance criteria outlined in the *SIA Guideline and Technical Supplement*, and shown in Table 2.4, Table 2.5, Table 2.6 and Table 2.7.

Table 2.4 Defining likelihood levels of social impacts

Likelihood level	Meaning
Almost certain	Definite or almost definitely expected (e.g., has happened on similar projects)
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

Table 2.5 Dimensions of social impact magnitude

Dimensions		Details needed to enable assessment
Magnitude	Extent	Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any vulnerable people? Which location(s) and people are affected? (e.g. near neighbours, local, regional, future generations).
	Duration	When is the social impact expected to occur? Will it be time-limited (e.g. over particular project phases) or permanent?
	Severity or scale	What is the likely scale or degree of change? (e.g. mild, moderate, severe).
	Intensity or importance	How sensitive/vulnerable (or how adaptable/resilient) are affected people to the impact, or (for positive impacts) how important is it to them? This might depend on the value they attach to the matter; whether it is rare/unique or replaceable; the extent to which it is tied to their identity; and their capacity to cope with or adapt to change.
	Level of concern / interest	How concerned/interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/or intensity.

Table 2.6 Defining magnitude levels for social impact

Magnitude level	Meaning
Transformational	Substantial change experienced in community wellbeing, livelihood, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20 percent of a community.
Major	Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time, or affecting many people in a widespread area.
Moderate	Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Minor	Mild deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Minimal	Little noticeable change experienced by people in the locality.

Table 2.7 Social impact significance matrix

		Magnitude level				
		Minimal	Minor	Moderate	Major	Transformational
Likelihood Level	Almost certain	Low	Medium	High	Very high	Very high
	Likely	Low	Medium	High	High	Very high
	Possible	Low	Medium	Medium	High	High
	Unlikely	Low	Low	Medium	Medium	High
	Very unlikely	Low	Low	Low	Medium	Medium

The risk rating then determines if mitigation or management actions are required to address the social impact. Negative social impacts with a risk rating of medium, high or very high require mitigation or management actions.

2.6 Recommended social impact mitigation measures

Social impact mitigation and enhancement measures are provided in Section 7 to enhance the potential social benefits of the proposal for stakeholders and communities, and avoid, manage or mitigate the potential social impacts. These measures are in addition to those recommended by other technical reports and EIS chapters, which would also help to manage the potential for social impacts.

The recommended mitigation and management strategies were developed using adaptive management principles, recognising that impacts may change over time, and that ongoing monitoring of impacts would provide the flexibility to accommodate such changes.

It should be noted that the degree to which community members would experience social impacts would vary based on factors such as perceptions and individual values, sensitivity to change, distance from the proposal, and duration people experience the impacts over. While the assessment of residual risks takes this into consideration, a risk rating for the majority of stakeholders affected by the identified potential impact has been applied. The risk rating would however be higher or lower for some stakeholders given the subjective nature of social impacts which varies based on a stakeholder's ability to adapt to impacts.

3. Legislation and policy context

This section provides an overview of the legislation and policies relevant to this SIA, as described in Table 3.1.

Table 3.1 Review of policies and plans

Title	Description and relevance to this SIA	Relevance to this SIA
State Government		
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	Enerparc is seeking approval as State significant development under Part 4, Division 4.7 of the EP&A Act. The objectives of the EP&A Act relevant to this SIA include that the NSW Government aims (clause 1.3): (a) <i>to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,</i> (b) <i>to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,</i> (c) <i>to promote the orderly and economic use and development of land,</i> (g) <i>to promote good design and amenity of the built environment,</i> (h) <i>to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,</i> (i) <i>to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,</i> (j) <i>to provide the opportunity for community participation in environmental planning and assessment.</i>	The SIA will assist the consent authority when making a decision about the proposal.
<i>New England and North West Regional Plan 2041</i>	The <i>New England North West Regional Plan 2041</i> (DPE, 2022) establishes a 20-year strategic land use planning framework for the region, aiming to protect and enhance the region's assets and plan for a sustainable future. This plan applies to the LGAs of Armidale Regional, Inverell, Glen Innes Severn, Gunnedah, Gwydir, Moree, Liverpool Plains, Narrabri, Tamworth Regional, Tenterfield, Uralla and Walcha. The aim of the Plan is to create new economic development and employment pathways to diversify and strengthen local economies. The project would contribute to these economic development goals.	This SIA considers how the proposal contributes to the regional plan objectives regarding economic development and employment opportunities.
<i>Social Impact Assessment Guideline for State Significant Projects</i> (DPE, 2023)	The SIA Guideline was developed to provide a clear and consistent approach to assessing the social impacts of State significant projects. The SIA Guideline provides a framework to identify, predict and evaluate likely social impacts of major projects. It defines the required approach to social impact assessment for major projects. It establishes eight assessment categories to be used in the identification of social impacts. The aim of the categories is to ensure that projects are assessed from the perspective of people and that they deliver socially sustainable outcomes. The guideline is supported by the <i>Technical Supplement - Social Impact Assessment Guideline for State Significant Projects</i> (DPE, 2021) (Technical Supplement).	This SIA has been prepared in accordance with the requirements of the SIA Guideline and the Technical Supplement. Further information about the methodology for the SIA is provided in Section 2.

Title	Description and relevance to this SIA	Relevance to this SIA
Local Government		
<i>Armidale Regional Local Strategic Planning Statement</i>	The <i>Advancing our region: Toward 50,000 Local Strategic Planning Statement (LSPS)</i> (Armidale Regional Council, 2024) aims to meet the community's future social, economic and environmental needs by addressing important strategic land use planning and development issues. The LSPS identifies planning priorities, actions, monitoring and reporting to achieve its strategic vision and key objectives. Renewable energy is identified in the LSPS as a key area of potential growth for the LGA. A renewable energy industry precinct in the vicinity of Armidale Regional Airport is identified as a catalyst project in the LSPS.	The opportunities and areas for growth identified in the LSPS have informed the social baseline and have been considered in the impact assessment.
<i>Armidale Plan 2040</i>	The <i>Armidale Plan 2040</i> (Conybeare Morrison International, 2020) outlines the planning principles and urban design framework for the region. The plan provides a review of relevant background studies and State and Local level policies, strategies and masterplans, and recommends planning strategies and priorities for the region. In particular, it highlights the growth of the renewable energy sector, conducts a sustainability review and reveals a focus on renewable energy production opportunities. The goals for the area included: – Sustainability – A developing economy – Culture and belonging – Health and wellbeing	The goals for the area have been factored into the social baseline and considered in the assessment of impacts relating to land use change and the economy.
<i>Armidale Region Economic Development Strategy, 2017-2025</i>	The <i>Armidale Region Economic Development Strategy 2017-2025</i> (ARC, 2017) is a blueprint for enhancing the vibrancy, diversity and sustainability of the Armidale Region's economy and its influence on the liveability of the local government area as whole. This strategy focuses on the three pillars of Armidale's regional economy, being agri-business, tourism and education. Other key and emerging industries include construction, health care, transport, and professional, scientific and technical services, which are closely integrated with the three pillars through local and regional supply chain links and act as important employers in the region. The key themes of the strategy include: 1. A region of Choice for Smart and Sustainable Agri-business. 2. A Globally connected 'Knowledge Region'. 3. A skilled workforce and dynamic business sector. 4. A premium regional visitor destination for Tourism and Events.	These themes have been considered in the identification of opportunities to enhance social benefits for the proposal.

4. Community and stakeholder engagement

This section presents a summary of issues relevant to this SIA raised by stakeholders and community members during consultation activities.

4.1 EIS Consultation

This section presents a summary of consultation undertaken by Enerparc for the EIS.

Enerparc has conducted a comprehensive engagement program with stakeholders, landholders, agencies and communities from 2018 for the approved project to the proposal planning and approval process in 2024. A Community Consultation Strategy (CCS) was developed for the project that identified ways to inform the community about the project and facilitate engagement within the community. In accordance with the CCS, a range of community and stakeholder activities have been undertaken since 2018, including a community session and open house event in 2020, and several ongoing landholder discussions.

Community and stakeholder groups that have been consulted for the project and as part of the proposal EIS include:

- NSW Government departments and agencies
- Associated landowners
- Adjacent neighbours
- New England North West community
- Local contractors and labourers
- University of New England (UNE)
- Transgrid
- Local Government - Armidale Regional Council (ARC)
- Traditional Owners and other Aboriginal groups

Chapter 5.2 of the EIS describes the engagement activities that have been conducted for the EIS and provides a summary of the issues raised. Table 4.1 presents a summary of issues relevant to this SIA, and where they have been addressed.

Table 4.1 EIS consultation outcomes relevant to this SIA

Key issues and themes	Relevance to this SIA	Where addressed in SIA
Health and lifestyle impacts	Potential impacts to community wellbeing are assessed in the Social Impact Assessment for the proposal. The assessment found a low risk of impact with mitigation of proposed measures.	Section 6.1.7 and 6.2.6
Negative impact on property values and increased insurance costs	It is not expected that the proposal would have a negative impact on property values. There are few offsite impacts once the proposal is constructed.	Section 6.1.4 and 6.2.3
Increased crime	The potential for increased crime is investigated in the Social Impact Assessment for the proposal. The risk was assigned a low residual rating and measures to mitigate this risk are proposed.	Section 6.1.7 and 6.2.6

4.2 SIA consultation

This section presents a summary of the key social issues and opportunities identified by stakeholders consulted by the SIA team in July and August 2024. An overview of consultation activities is provided in Table 4.2.

Table 4.2 Summary of SIA consultation activities

Stakeholders	Consultation details	Purpose of consultation activity
Department of Primary Industries and Regional Development – Hunter New England	Tuesday 23 July 2024 via MS Teams	– Confirmation of social baseline, including regional opportunities and challenges, and community values. – Identification of potential social impacts and benefits. – Discussion of mitigation and enhancement measures.
Regional Development Australia – Northern Inland	Thursday 25 July 2024 via MS Teams	
Business NSW – New England Region	Thursday 1 August 2024 via MS Teams	
Armidale Regional Council	Friday 2 August 2024 via MS Teams	

A summary of the key issues raised by stakeholders, and where they have been addressed in the SIA, is provided in Table 4.3.

Table 4.3 SIA consultation outcomes

Key theme	Consultation outcomes	Where addressed in this SIA
Community characteristics and values	– The environment is highly valued in Armidale, often referred to as ‘God’s country’ due to its high altitude and pristineness of the area. – There has been stagnant population growth, low unemployment rate and high labour force participation rate. – Armidale is historically a university town, with the University of New England being Australia’s first regional university. This brings both challenges and opportunities as education is a significant industry in the region. – The region is diverse, due to its university student community, migrant workforce, and significant First Nations population and Ezidi refugee population. – The region is experiencing a transition away from agriculture due to the New England REZ. While there is a general understanding and support for renewable energy within the community, there has been a recent shift in mindset. – Armidale community’s sentiment about renewable energy projects was felt to be more neutral compared to nearby Walcha, which was felt to be strongly anti-REZ. However, with an increase in the projects in Armidale, the sentiment has started to shift towards negative sentiment. – The diverse population of Armidale LGA is generally supportive of renewable energy and respond to meaningful engagement in collaboration with local stakeholders and businesses. – Farming, particularly vertical agriculture like tomato farming, is crucial to the region. There is a large presence of agricultural workforce that live in the region. – There is a very strong sense of community within the farming industry, however it was felt that agreements between renewables developers and residents have caused tensions among neighbours due to some projects.	Sections 5.3.2 and 6.1.7
Economy and employment	– There are skills shortages in the region amongst hospitality workers, doctors and nurses. – There is a large migrant workforce population, with up to 400 migrants a year moving to the region. – Many Armidale business owners struggle to find workers. – Concerns about the construction industry drawing unskilled or semi-skilled workers to their projects despite the temporary nature of employment opportunities due to its higher pay, leading to a shortage in other local sectors like agriculture. – Despite the numerous projects in the REZ, there is a lack of information about the pipeline of projects, and when construction workforces are required. This presents challenges for training local residents to meet the needs of projects.	Sections 5.3.5 and 6.1.4

Key theme	Consultation outcomes	Where addressed in this SIA
	– There are tier 2 and tier 3 contractors in the region who have the capability to supply the local workforce for renewable projects, however they may not have the capacity due to existing workforce constraints. – Concern that proponents might rely on previously used contractors and only consider local contractors as secondary options due to the tight labour market. – Concern that non-resident employees may spend their earnings elsewhere, which would not contribute to the local economy. – The transition to renewable energy and growth in the manufacturing and health industries present new opportunities for Armidale LGA. – Stakeholders mentioned some farmers reported higher productivity due to reduced water and maintenance costs from the joint use of land for renewables.	
Housing and accommodation	– The region lacks housing diversity, and the high turnover of university students and transient workforce also presents a challenge for housing. – Much of the housing rental market is accustomed to university students' trimester periods, influencing availability of rental housing. – There is a need for diverse housing options including social and affordable housing. – There is low housing vacancy across the region, with the vacancy rate believed to be less than 1%. – Local council approvals for new houses have decreased in recent years. – There is significant competition for housing between local families and project workforces, leading to higher prices and affordability issues. In some cases, local families are pushed out as they can no longer afford to live in the region.	Sections 5.3.7 and 6.1.5
Other impacts	– Concerns about lack of communication and education about how renewable projects will benefit the community. – Concerns raised included potential visual impacts and cumulative loss of rural landscape and amenity. – Concerns that there are minimal direct benefits from renewables projects for affected communities, but there are negative impacts such as increased rent and electricity costs.	Sections 6.1 and 6.2
Mitigation and enhancement opportunities	– Stakeholders highlighted the importance of communication and transparency with the local community about projects, which is critical in training local residents to be prepared to gain employment during construction. – To help local residents gain employment on the of multiple projects in the New England REZ, it was suggested all potential jobs associated with the projects should be advertised through a portal or app, which would provide a timeframe and job pipeline for local workers, and allow them to lodge interest in skilled or semi-skilled roles ahead of time. – Suggestion to use existing university student accommodation facilities and residential colleges (e.g. Smith House) for construction worker accommodation during study holidays when they are underutilised, which would reduce pressure on the housing market. – Suggestion to offer part-time shift work roles on construction projects to university students which would reduce impact on housing market. – Explore ways to use community benefit funds to meet local housing and accommodation needs e.g. Banana Shire Council in QLD have a policy where a percentage of renewable energy and investment project costs are allocated to a housing fund to benefit the community. – Consult regularly with Council to discuss and manage accommodation and other issues that may result from the project. – A regional planning panel could help ensure that information is adequately communicated to local stakeholders.	Section 7

4.3 Stakeholder input to proposal and design refinements

All input provided by the community and stakeholders during preparation of the EIS is addressed in that assessment. Detailed responses are provided in Section 5 of the EIS.

If development consent is granted for the proposal, Enerparc will continue to engage with stakeholders, including community members throughout the construction and operation of the project.

Key consultation activities will include:

- Ongoing regular local stakeholder briefings and meetings, including Armidale Regional Council and adjoining neighbours and landowners.
- Regularly updates on the project website.
- Regular community notifications as the project progresses through construction and into operation.
- Ongoing operation of the community telephone line, email address, mailbox and website, with set response times for project queries and complaints.

The complaints management process for the proposal during construction and operation will allow anyone in the community to submit complaints if they believe any action is having a detrimental impact on the community, the environment, or their quality of life. The complaints management process will be made publicly available and include a feedback process through which the complainant is provided with information in relation to how their concern has been assessed, considered and, where feasible, addressed. An escalation process will also be outlined for complaints that are unable to be resolved satisfactorily.

5. Social baseline

The following sections outline the existing social and economic characteristics of the social locality described in Section 2.3 as they relate to the issues identified in the scoping of potential social impacts (Section 2.1).

5.1 Development footprint

The proposal site is located in the suburb of Black Mountain, on the traditional lands of the Nganyaywana, or the Anaiwan people (OzArk, 2024).

The proposal site is located within the New England REZ on land currently zoned as RU1 – Primary Production. The development footprint encompasses an area of 140 ha within the proposal site, which is wholly used for grazing modified pastures and is located on private property (Lot 4 DP800611, 11915 New England Highway). The land would be secured under a lease agreement with the single landowner for the life of the proposal.

The land within the development footprint has been predominantly cleared for agricultural use and is currently used for cropping and grazing. The site is characterised by high points to the west, south and north towards the highway to the east, partly screening project infrastructure from some viewpoints (GHD, 2024).

The development footprint would be accessed via the access road off the New England Highway for the approved project. The New England Highway is considered a major transport corridor and runs north to south along the eastern border of the site.

5.2 Local study area

The local study area consists of three suburbs: Black Mountain (Section 5.2.1), Tilbuster (Section 5.2.2) and Duval (Section 5.2.3), located in the Armidale LGA, NSW. The area is characterised by its rural amenity, primarily sheep and cattle farming on large lot rural properties. At the time of the 2021 Census, there was a total of 340 residents living in the local study area (ABS, 2021). Residents in the local study area would likely travel to Armidale (15 km south) or Guyra (22 km north) to access goods and services.

An overview of each suburb within the local study area is provided below, with a detailed demographic profile provided in Appendix B.

5.2.1 Black Mountain

The proposal site is located directly southeast of the Stage 1 project site, in the suburb of Black Mountain. The proposal would adjoin land that is already developed for the purposes of the Stage 1 project, including the construction of a new access road from the New England Highway, and construction is expected to commence in 2025. Black Mountain is a small rural suburb located approximately 27 km north of Armidale. Black Mountain takes its name from a volcanic peak and is derived from its heritage-listed railway station (Heritage NSW, n.d.).

At the time of the 2021 Census, Black Mountain had a population of 291 people, with a median age of 47 years, which was higher than the Armidale LGA (37 years) (ABS, 2021). Agriculture, forestry and fishing were the top industries of employment, employing 28 percent of the labour force. There was a slightly higher rate of unemployment in Black Mountain (6.9 per cent) in 2021, compared to Armidale LGA (5.3 percent), despite having a higher labour force participation rate (61.4 per cent compared to 56.4 per cent) (ABS, 2021).

The suburb features a small park with tennis courts, a primary school, a Baptist Church, a cemetery and a former railway station complex, including the station and platform and the former gatekeeper's cottage. The former railway sites are heritage listed and represent the history of development in Black Mountain (Armidale Regional Council, 2023).

5.2.2 Tilbuster

The proposal site is adjacent to the suburb of Tilbuster in the southeast, which is located approximately 14 km northeast of Armidale. Tilbuster is a rural suburb, without a town centre, accessed via the New England Highway and Puddledock Road. As of 2021, there were 49 people living in 14 private dwellings, with a median age of 50 years.

The population of Tilbuster declined by 83.1 per cent between 2011 and 2021, and by 21 per cent between 2016 and 2021, likely due to the lack of job opportunities and a higher proportion of elderly residents (ABS, 2021). The largest industry of employment in Tilbuster was agriculture, forestry and fishing (42.9 per cent) (ABS, 2021).

Pathfinders provides advocacy, support and services for disadvantaged communities, and uses its Tilbuster Station rural property as a multi-functional youth and family centre. Pathfinders has plans for further renovations at the property, aiming to eventually become a regional centre for youth and family development (Pathfinders, 2024).

5.2.3 Duval

Duval is located southwest of the proposal site approximately 15 km from Armidale. There is no residential population in Duval, which is mostly zoned as nature reserve. Mount Duval is a prominent landscape feature in the area (NSW Government, 2003), primarily located in Duval Nature Reserve, which is approximately 2.4 square kilometres (km²) in size. There are several hiking and camping areas in the reserve.

The University of New England's Newholme Field Laboratory is located within Duval Nature Reserve (UNE, 2024). The university manages the land for regeneration of native vegetation, wildlife conservation and research purposes, with the ongoing research directly contributing to informed management practices for the reserve (NSW Government, 2003).

5.3 Regional study area

5.3.1 Overview

The Armidale LGA is characterised by a predominantly rural landscape, with concentrated urban land in dispersed towns and villages. The population is concentrated in the regional city and administrative centre of Armidale, with smaller townships at Guyra and Tingha, and villages at Ben Lomond, Black Mountain, Ebor, Hillgrove and Wollomombi.

The LGA encompasses a total land area of 8,621 km², including a significant proportion of national park, state forest and nature reserves. The remainder of the LGA is predominantly rural land, used largely for sheep and cattle grazing, supported by fruit growing, viticulture and tourism (Economy.id, 2023).

The Armidale LGA is also well known for its natural areas including world heritage Gondwana rainforests (Armidale Regional Council, 2024). The natural areas provide for a range of recreational activities, including mountain biking, fishing, and hiking (Armidale Regional Council, 2023).

The majority of the LGA is located within the New England REZ, currently the largest REZ in Australia and the backbone to Australia's low carbon future. The New England REZ was formally declared by the Minister for Energy under section 19(1) of the *Electricity Infrastructure Investment Act 2020* and published in the NSW Gazette on 17 December 2021 (NSW Government, 2024). The New England REZ encompasses a large rural area including the regional cities of Glen Innes, Guyra, Armidale, Uralla and Walcha, and follows the contours of surrounding national parks as a natural boundary (NSW Government, 2021). Most of the renewable energy facilities developed as part of the New England REZ are expected to be located proximate to the major transmission corridors, which intersect the LGA (Armidale Regional Council, 2023). The New England REZ also aligns with other regional planning instruments including the *New England North West Regional Plan 2041*, which identifies the area as an emerging leader in renewable energy generation.

The Armidale LGA has a median age of 37 years, which is consistent with the NSW average (39 years) (ABS, 2021). The LGA has a large education and training industry, employing 21.6 per cent of the labour force of the Armidale Regional LGA, largely due to the presence of the University of New England (UNE) (ABS, 2021). It was noted during SIA consultation that Armidale is historically known as a university town, with UNE being Australia's first regional university (Section 4.2).

The Armidale LGA area is serviced by the New England Highway, Waterfall Way, the north western railway line and Armidale Regional Airport, providing around 60 flights a week. NSW TrainLink runs a daily train service between Sydney and Armidale, via Tamworth. The service takes approximately 8 hours (Armidale Regional, 2024). The two main industrial precincts are Acacia Park Industrial Estate and West Armidale.

5.3.2 Community values and priorities

Based on a review of relevant policies (Section 3), and the outcomes of community and stakeholder engagement (Section 4), the values and priorities of the Armidale LGA community can be summarised as:

- Protecting and conserving valuable, rural, lifestyles and biodiversity qualities.
- Supporting ageing in place.
- A focus on community prosperity, specifically economic diversity and high quality of life.
- Support for Australia's future green energy requirements and low carbon future.

The establishment of the New England REZ will support new, green energy related industries and investment for the LGA, however it will also place pressure on farms and will need to co-exist with prime agricultural land (Armidale Regional Council, 2023). During SIA consultation, some stakeholders noted that while renewable energy projects are generally supported in the Armidale region, it was felt that relationships between neighbours have suffered due to lack of transparency from developers (Section 4.2). However, it was also noted that some farmers have benefited financially from hosting project infrastructure on their properties, which also allows for joint use of land.

Construction of projects in the LGA is increasing pressure on housing and accommodation. This has been already observed with numerous projects placing increased demand on rental housing stock and on hotels and motels which have hosted workers at the detriment of their ability to host tourists for large-scale events (Armidale Regional Council, 2023).

5.3.3 Indigenous values and interests

As discussed in Section 5.1, the proposal site is located on the traditional lands of the Nganyaywana, or the Anaiwan people. It is noted that the location of the Anaiwan is within the 'New England tableland from Guyra and Ben Lomond south to Uralla and Moombie Range; northwest to Tingha; at Bendemeer and Armidale' (Tindale, 1974 as cited by (OzArk, 2024)). However, it is likely that mapped boundaries are in fact fluid, and cultural and linguistic interactivity across boundaries was a regular occurrence.

The echidna serves as the totem for the Anaiwan people. In the Nganyaywana language of the Anaiwan, it is called "iwata" (Uralla Historical Society, 2024). In the Banbai language of the neighbouring Banbai people from the Guyra region, the echidna is known as "kukra" (Uralla Historical Society, 2024).

Across the regional study area, there are several Aboriginal corporations including Newara, Watta and Nunnawunna. The aim of these organisations is to reclaim and revive, language, culture, history and traditional practice through research and education (Newara Aboriginal Corporation, n.d.). The Anaiwan Language Revival Program, established in 2016 by members of the Armidale Aboriginal community, aims to reclaim and revitalise the local language (Clayton-Dixon, 2019). The program began running classes in 2018, including at the local Aboriginal preschool, and is working to produce a comprehensive language knowledge book (Clayton-Dixon, 2019).

There are several alternative local Aboriginal community groups in the region that maintain strong connections within the community, providing opportunities through recreation, advocacy and support (Section 4.2).

5.3.4 Demographic profile

The key socio-economic characteristics of the Armidale LGA are shown in Table 5.1. Additional demographic data from the regional study area is presented in Appendix B.

Table 5.1 Demographic summary of Armidale LGA, 2021

Data Type	Key statistics
Total population	The resident population of Armidale LGA was 29,124 in 2021, which represents a 1.1 per cent decrease between 2016 and 2021.
Population projection	From 2021 to 2041, the population is expected to remain relatively stable, with a projected growth of only 0.3 per cent ((NSW Planning, 2024). This is supported by SIA consultation findings, with the population being relatively stagnant.

Data Type	Key statistics
Indigenous population	At the time of the 2021 Census, 7.6 per cent of the total population identified as Aboriginal or Torres Strait Islander, which was lower than the New England and North West region (11.9 per cent) but significantly higher than NSW (3.4 per cent).
Gender	There are relatively similar proportion of males and females living in the LGA (48.1 per cent and 51.9 per cent). This is similar to New England and North West (where males are 49.2 per cent, and 50.8 per cent are females).
Age profile	The median age of the population in the LGA is 37 years, which is younger than the median age of the New England and North West region (41 years) and NSW (39 years).
Cultural diversity	At the time of the 2021 Census, there was a higher proportion of the population born in non-English speaking countries (10.4 per cent), compared to the New England and North West region (5.1 per cent). This indicates a high level of cultural diversity in the area. This is also indicated by the high proportion of residents who speak a language other than English at home in the LGA (10.3 per cent) compared to the New England and North West region (5 per cent). This is supported by SIA consultation findings with a high population of Ezidi refugee and migrant workforce relocating to the area.
Education	A large proportion of the population in Armidale LGA achieved a 'certificate' level qualification as their highest level of education (34.5 per cent), however this is a smaller proportion of the New England and North West region overall (49.8 per cent). In the Armidale LGA, Bachelor's degree was the second most common highest level of education at 28.9 per cent. This is likely due to the presence of the University of New England (UNE) providing accessible tertiary education. Additionally, a higher percentage of people in Armidale have obtained a postgraduate degree (16.6 per cent) compared to the New England and North West region.
Income	In 2021, the median total household income was \$1,404 per week in Armidale LGA which was higher than the New England and North West region at \$1,328, but lower than NSW (\$1,829 per week).
Advantage / disadvantage	Armidale LGA has an Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) decile of 7. This indicates the residents in the LGA experience a moderate level of advantage.
Health and wellbeing	A consistent proportion of the population of the LGA experience long-term health conditions (54.2 per cent) compared to the New England and North West region (52.4 per cent). The most common long-term health condition reported in the LGA was mental health (9.6 per cent).
Need for assistance	At the time of the 2021 Census, 2.5 per cent of the population in the LGA reported that they need assistance with daily activities. While in the New England and North West region it was 3.1 per cent and NSW it was 2.7 per cent.

Source: (ABS, 2021)

5.3.5 Economic profile

5.3.5.1 Gross regional product

The gross regional product (GRP) of the Armidale LGA was approximately \$1.99 billion in 2023, which was an increase of 3.1% from the GRP in 2022. The GRP of the Armidale LGA made up 0.27 per cent of the total gross domestic product (GDP) of NSW (.id, 2024). Education and training was the largest industry by economic output, generating \$546 million in 2022/2023 (17.2 per cent of total output) (.id, 2024). The second most productive industry for the LGA was agriculture, forestry and fishing (\$463 million and 14.6 per cent of total output), followed by construction (\$353 million and 11.1 per cent of total output) (.id, 2024).

The *Armidale Region Economic Development Strategy* identifies several industry growth opportunities for the LGA such as education, health and wellbeing, horticulture, industry, agribusiness and tourism (Armidale Regional Council, 2017). In particular, the horticultural sector is a rapidly evolving industry with a growing trend towards the construction of large-scale and resource-efficient greenhouses, using renewable energy such as wind and solar generation (Armidale Regional Council, 2017). During consultation for the SIA, stakeholders confirmed that vertical agriculture is an important local industry, with the largest tomato farming glasshouse in the southern hemisphere located in Armidale (Section 4.2). The growth of this industry presents new opportunities for renewable energy production in the Armidale LGA as well as the expansion of glasshouse-based horticulture through 'knowledge based' industries (Armidale Regional Council, 2017).

A key priority for the region is concentrated around developing the LGA's agri-technology sector. In particular, using Armidale's industry and research strengths and capabilities to attract private sector investment in renewable energy projects to provide cost-effective power generation for the expanding horticulture sector (Armidale Regional Council, 2017).

5.3.5.2 Industry profile

Armidale's longstanding primary industry speciality involves education and training, fostering entrepreneurial growth, research development, and continuous innovation, all supported by UNE. At the time of the 2021 Census, the top industries of employment in the Armidale LGA were education and training (21.6 per cent), health care and social assistance (16.2 per cent) and retail trade (9.4 per cent). The top industries of employment in Armidale LGA were similar in 2021 to the New England and North West region (Figure 5.1). This was supported during consultation, with stakeholders noting the importance of the education sector in the region, due to Armidale's strong university presence (Section 4.2).

It is noteworthy that despite having the third largest economic output for the region, the construction industry only employs 6.1 per cent of the Armidale labour force. This may indicate the construction workforce does not live in the region, and instead travel to work from other areas. Despite this, SIA consultation outcomes indicate that construction is regarded as a key source of employment by local stakeholders (Section 4.2).

Industry	Armidale LGA	New England and North West	NSW
Education and Training	19.5%	10.9%	8.7%
Health Care and Social Assistance	15.0%	14.2%	14.4%
Agriculture, Forestry and Fishing	10.7%	13.1%	2.0%
Retail Trade	8.8%	8.9%	6.2%
Accommodation and Food Services	7.2%	6.2%	8.6%

Figure 5.1 Industry profile, 2021 (ABS, 2021)

5.3.5.3 Labour force

As shown in Table 5.2, 56.4 per cent of people over 15 years old in Armidale LGA were actively employed or seeking employment in 2021. This is consistent with the labour force participation rate in the New England and North West region (56.1 per cent), though it is lower than NSW overall (58.7 per cent). The presence of a large student population, due to institutions like UNE, may contribute to the lower labour force participation rate due to students engaging in full-time studies. Of those who are in the labour force in Armidale LGA, 5.7 per cent are unemployed, which is higher than the New England and North West region (4.8 per cent) and NSW (4.9 per cent). This is supported by findings from SIA consultation, with stakeholders observing employment challenges in the region potentially due to a skills shortage (Section 4.2).

During consultation, some stakeholders observed Armidale business owners struggling to find workers in the local and regional area due to workforce constraints. Despite this, it was also noted during consultation that there was a large migrant workforce, with up to 400 migrants relocating to Tamworth and Armidale every year (Section 4.2). Some stakeholders observed there may be skilled workforce working below their skill level in Tamworth that may benefit from temporary construction work.

Table 5.2 Labour force participation, 2021

Labour force participation	Armidale	New England and North West	NSW
Total labour force	13,482	84,212	3,874,012
Employed	94.7%	95.2%	95.1%
Unemployed	5.3%	4.8%	4.9%
Labour force participation	56.4%	56.1%	58.7%

Source: (ABS, 2021)

5.3.5.4 Unemployment

According to quarterly unemployment rates, over the last decade the Armidale Regional LGA and New England and North West region have had higher levels of unemployment compared to NSW. As shown in Figure 5.2, there was a peak in unemployment in 2015-2016, which can be attributed to low rates in youth and Indigenous employment and disengagement, as identified in the *Armidale Region Economic Development Strategy* (Armidale Regional Council, 2017). However, since 2022 there has been a steep downward trend, with unemployment levels reaching its lowest in both Armidale LGA (2.3 per cent), the New England North West region (2.1 per cent) and NSW (3.5 per cent) in March 2024. This may potentially be attributed to the declaration of the New England REZ in December 2021.

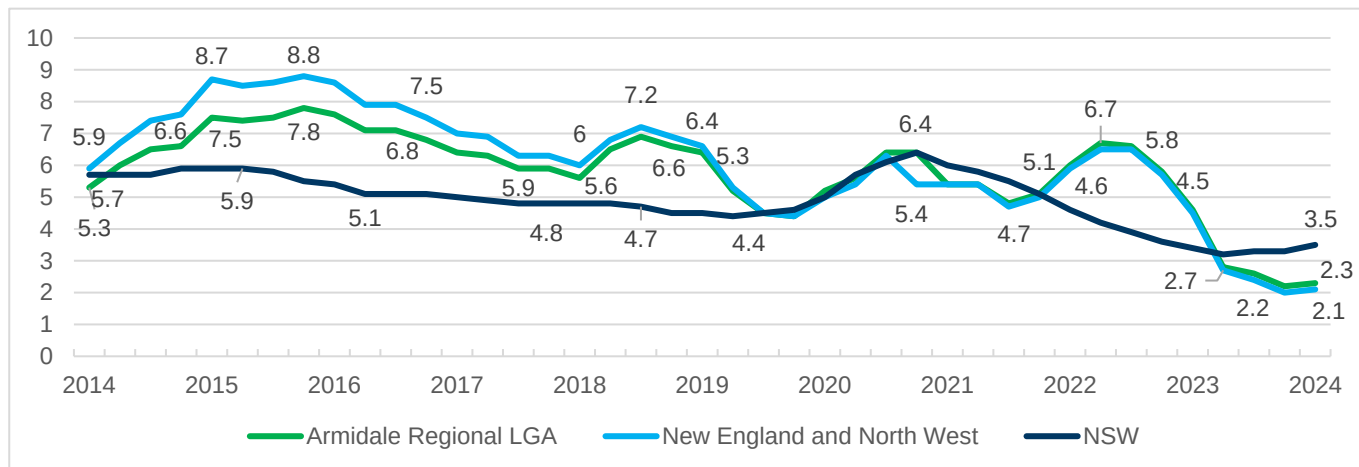


Figure 5.2 Quarterly unemployment rate, Armidale Regional LGA, New England North West and NSW, 2014-2024

5.3.6 Community facilities and services

Community facilities and services in the LGA are concentrated in the towns of Armidale and Guyra. Most residents within the LGA are likely to travel to these towns to access facilities and services, including those living in the local study area (see Section 5.2). Armidale is the closest regional city centre to the proposal site (located 15 km south) and hosts the majority of community facilities and services for the LGA. Key infrastructure in Armidale includes a number of community and recreation facilities, primary and secondary education facilities, emergency services, health centres, three major shopping centres as well as two tertiary education facilities, being UNE and TAFE NSW Armidale.

Key community facilities and services located in Armidale and Guyra are provided in Appendix B.

5.3.7 Housing and accommodation

5.3.7.1 Housing availability and affordability

At the time of the 2021 Census, there were 12,055 private dwellings in Armidale LGA, of which 88.2 per cent were occupied. Residents in the Armidale LGA have a lower rate of home ownership (61.2 per cent) compared to the New England and North West region (65.6 per cent) and NSW overall (64.0 per cent). As of August 2024, the median house price in Armidale was \$500,000 and the median rent price was \$450 per week. There were 110 properties available to rent, with 876 leased in the past 12 months (REA, 2024). Rental prices in Armidale have experienced an 18.4 per cent increase between 2021 and 2024 (REA, 2024).

Vacancy rates between two and three per cent are broadly considered balanced, where a rate below two per cent indicates a higher demand than supply within a market (SQM Research, 2024). As shown in Figure 5.3, vacancy rates in Armidale (postcode 2350) have been decreasing over the past decade, with a significant spike between 2016 and 2017. Since November 2023, vacancy rates have been decreasing from 3.3 per cent, and have reached 1.5 per cent in July 2024 (SQM Research, 2024). These rates indicate a higher demand than supply of rental properties in this postcode.

The *Draft Local Strategic Planning Statement, "Advancing our Region: Toward 50,000,"* charts a 20-year course for the Armidale region's land use (Armidale Regional Council, 2023). The plan identifies the critical need for 4,400 new homes by 2043, ensuring they align with community needs, foster job growth, and mitigate the housing pressures created by large-scale projects (Armidale Regional Council, 2023).

This reflects the findings of SIA consultation, where it was broadly agreed that rental availability was an ongoing issue in the Armidale LGA. It was generally felt that the rental market was impacted by the construction workforce who rent housing in Armidale LGA and contribute to rising costs in the area, which has caused local families to move elsewhere due to unaffordable rental costs (Section 4.2). In addition, access to housing for university students was noted as a concern during consultation, in particular, much of the housing rental market is accustomed to university students' trimester and holiday periods, which influences availability of rental housing. SIA consultation found that this was linked to concerns around rental affordability and that this issue is expected to increase with planned major projects in the region over the next decade.

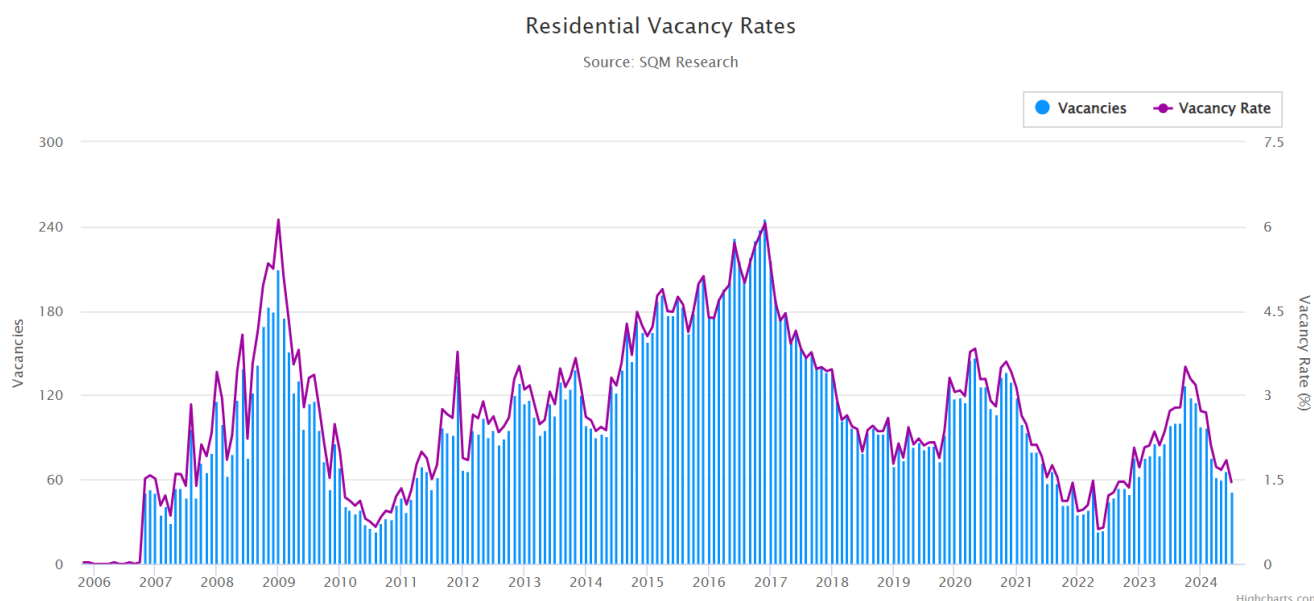


Figure 5.3 *Rental vacancy rate, 2024*

5.3.7.2 Short term accommodation

There are a number of short-term accommodation facilities in the Armidale LGA to support the local tourism industry. These are largely concentrated in Armidale town centre, as well as some facilities located in Guyra and along the New England Highway. As of July 2024, there were around 18 short-term accommodation facilities in Armidale which range from hotels, motels and caravan parks, as well as over 100 properties available as short-term rental accommodation as listed on Airbnb and Stayz. There were four short-term accommodation facilities in Guyra, including two hotels, a motel, and a caravan park, as well as six properties available as short-term rental accommodation as listed on Airbnb.

During SIA consultation, some stakeholders indicated that UNE has short term accommodation facilities available for students, that are underutilised for three months of the year. In addition, it was noted that Smith House, previously a long-term student accommodation facility, accommodates horticultural workers and some migrant workers in Armidale (Section 4.2).

5.4 Key findings

The findings of the analysis of the social baseline of the local and regional study most relevant to this SIA including the following:

- The proposal site is located in Black Mountain, accessed via an unnamed Crown road being constructed as part of the Stage 1 project, to the west of the New England Highway.
- The proposal is located on an area of cleared land currently used for agricultural purposes, including cropping and grazing.

- The local and regional community has a rich history centred around agriculture, with farming being a major source of employment and a key part of the area's identity.
- Residents of the local study area would regularly travel along the New England Highway to access goods and services in either Armidale or Guyra.
- The local study area was characterised by rural, agricultural areas, with the population concentrated in the regional city of Armidale, located approximately 14 km south of the proposal site.
- Economic diversification is a key priority for the region, particularly to attract and retain younger families with more diverse skills.
- Armidale LGA had a lower median age (37 years) compared to the New England and North West region (41 years) and NSW (39 years).
- There was a high level of cultural diversity in the area, which was supported by SIA consultation findings which confirmed a high population of Ezidi refugees and migrant workforce relocating to the area.
- The establishment of the New England REZ highlights the community's commitment to advancing renewable energy projects, with most of the Armidale LGA included in this zone.
- Household incomes in Armidale are generally higher than those in the broader New England and North West region.
- Armidale LGA's largest employer industry was education and training (19.5 per cent) in 2021, followed by health care and social assistance (15.0 per cent) and agriculture, forestry and fishing (10.7 per cent).
- The construction industry employs 6.1 per cent of Armidale LGA's labour force. Despite this, construction was the third largest industry by economic output.
- A higher proportion of the population in Armidale LGA have completed certificate and tertiary level education compared to the New England North West region and NSW.
- Armidale has a long-standing focus on education and training as its primary industry, promoting entrepreneurial growth, research development, and continuous innovation, all underpinned by the support of UNE.
- Overall, quarterly unemployment rates for Armidale LGA show that the region has had a higher unemployment rate compared to NSW. As of March 2024, unemployment was lower in the LGA than the state.
- Labour force participation in the LGA was lower than the state, which was supported during SIA consultation, with some stakeholders noting employment challenges in the region potentially due to a skills shortage.
- There is an extensive variety of community facilities and services in the regional study area from education to early childhood services.
- There are identified housing challenges in the region, with a low vacancy rate and high occupancy rates.
- The Armidale region is culturally diverse, with a large population of Ezidi refugees, Aboriginal and Torres Strait Islander peoples, construction workforces and younger student population.

6. Social impact assessment

This section presents an assessment of the potential social impacts that may result during construction and operation of the proposal, as well as potential cumulative impacts. Decommissioning impacts are assumed to be the same or similar to the construction phase. Impact identification and description has been informed by various sources of information and have been assessed in accordance with the impact assessment methodology outlined in Section 2.5.

6.1 Construction and decommissioning

6.1.1 Properties and landholders

The proposal would involve permanent and temporary land use requirements and changes, which may result in social impacts that would occur in the pre-construction phase and continue through to operation and decommissioning. Permanent land uses (for the period of 30 years) would include the operation and maintenance of the solar infrastructure and ancillary features. Temporary land uses would include the adjacent construction compound and laydown areas.

The proposal site is located on an area of predominantly cleared agricultural land within the New England REZ currently zoned as RU1 – Primary Production. All land use requirements for the proposal would be located on private property. The proposal site is cleared land currently used for grazing purposes. The land would be secured under a lease agreement with the single landowner for the life of the proposal.

The *Agricultural Impact Assessment* (GHD, 2024c) identifies that the proposal would impact on an area of 162.5 ha, which is wholly used for grazing modified pastures. Land requirements for the proposal would result in a change of land use from agricultural to power generation use, which would result in a reduction of the availability of land for grazing purposes during the construction phase. This may be a temporary disruption to their grazing activities which could result in a temporary reduction in productivity for the leaseholder. However according to the *Agricultural Impact Assessment* (GHD, 2024c), once the solar infrastructure is installed, the land would be compatible with the grazing of some livestock and after decommissioning the land would be restored to prior agricultural use.

6.1.2 Changes to local amenity

6.1.2.1 Construction noise, vibration and dust

Construction and decommissioning activities may generate noise, vibration and dust, which could lead to reduced amenity for residents in close proximity to the proposal site and along haulage routes. Chapter 3.3 of the EIS (GHD, 2024) reports that the machinery and equipment required for the construction of the proposal would include earthmoving machinery and equipment, assisted material handling equipment (forklifts and cranes), trenching equipment, machinery and equipment for connection infrastructure establishment, and water trucks for dust suppression.

The *Noise and Vibration Impact Assessment* (GHD, 2024a) reports that some activities may generate more noise, such as digging and excavation works, and site establishment. Construction and decommissioning activities may exceed noise management levels for two nearby residences located within 400 m of the proposal boundary during standard hours. One property is located northeast in the suburb of Black Mountain, with the second property located southeast in the suburb of Tilbuster. Depending on the location of the works relevant to the day-to-day activities of neighbouring landholders, increased noise may be noticeable and perceived as intrusive and annoying at times for some as it may momentarily disrupt activities such as conversations, watching television, resting or relaxation. No construction or decommissioning activities are expected outside of standard work hours, therefore nearby residents are not expected to experience disturbance of night-time peacefulness or sleep.

Construction vehicles, particularly heavy vehicles, may also result in increased noise for residents along construction routes. All heavy and light vehicles are expected to travel along New England Highway to access the site. The *Noise and Vibration Assessment* (GHD, 2024a) identified that due to the existing high volume of traffic on the New England Highway, the increase in noise level is not expected to be noticeable by most residents.

Some construction activities, such as piling, the operation of vibratory rollers, excavators, hydraulic hammers and jack hammering could lead to an increase in vibration. There is one neighbouring resident located approximately 200 m northeast of the site boundary in Black Mountain, which is outside the recommended vibration safe working distances and as such, no increase in vibration impacts is predicted to affect neighbouring properties.

Chapter 6.13 of the EIS (GHD, 2024) identifies that construction activities may result in a minimal increase in dust at properties adjacent to the proposal site and along haulage routes. The New England Highway will serve as the main haulage route from the Port of Newcastle or the Pacific Motorway and Hunter Expressway from the Port of Botany. As identified in the *Traffic Impact Assessment* (GHD, 2024d), the New England Highway serves as a vital freight transport route linking inland mining areas in the Hunter to the Port of Newcastle. Given the existing level of traffic on the major arterial road, the temporary nature of construction and decommissioning activities and the distance between the closest property and site, most residents are not expected to be affected by increased dust from construction activities.

Increases in construction noise, vibration and dust may disturb daily activities for residents in close proximity to the proposal area, and along haulage routes. As discussed in Section 5.3.2, the rural amenity of the local area is highly valued by residents, and EIS consultation found some local residents have raised concerns about potential construction noise and dust. Reduced amenity would be temporary during construction and decommissioning, and affect a small number of residents in the local area. However vulnerable residents, such as people with a disability, elderly residents, residents with underlying health conditions, and young children may have a higher level of sensitivity to increases in noise, vibration and dust.

6.1.2.2 Visual changes

The *Landscape Character and Visual Impact Assessment* (GHD, 2024b) found that the location of the proposal on an expanse of flat, open agricultural terrain and the existing rural landscape, would likely make construction activities more visible to residents on neighbouring properties as well as motorists using the adjacent New England Highway.

The *Landscape Character and Visual Impact Assessment* (GHD, 2024b) identifies 12 properties within 2 km of the proposal site requiring detailed visual assessment. These properties were identified as having open views toward the proposal site over a cleared rural landscape from property boundaries or access roads. Views would likely not be visible from the dwellings themselves due to associated vegetation and scattered trees. The *Landscape Character and Visual Impact Assessment* (GHD, 2024b) found:

- Visual impacts range from very low to moderate, with the two receivers with an overall visual impact of moderate requiring mitigation.
- Four receivers are predicted to have a low impact due to glare from the proposal – the timings of which align with sunset. Two of these are predicted to receive only green glare, which is considered to have low potential for an after-image. Glare from the New England Highway is also assessed as having a low impact.

Visual changes would include the presence of construction machinery and infrastructure, and construction workers. Construction vehicles would also be visible from properties along New England Highway. Views of construction and decommissioning activities would have the potential to affect residents in a number of properties along New England Highway. This may alter the views from some windows, yards, or other outdoor areas of some properties. Changes to visual surroundings may affect some residents' sense of pride in their local area, and reduce enjoyment of some views, particularly due to the values and importance placed on rural amenity (discussed in Section 5.3.2). SIA consultation indicated that local community members have raised concerns about the cumulative visual impacts of other solar farms in the area (see Section 6.3), and visual impacts were raised as concerns by local landholders during EIS consultation for the Stage 1 project (NGH, 2020; NGH, 2021; NSW DPE, 2022). Local residents are therefore likely to be sensitive about visual impacts and changes to views. Although views of construction activities would be temporary during the construction period, visual impacts would continue into operation for some community members (discussed in Section 6.2.1).

6.1.3 Access and connectivity

An increase in heavy vehicles and construction traffic has the potential to lead to temporary access and connectivity changes for residents in the local study area. Construction traffic would be generated from staff movements, haulage of materials and delivery of machinery and equipment. This would include additional heavy and light vehicle movements in the local and regional road network. The *Traffic Impact Assessment* (GHD, 2024d) reports that access to the proposal site would be via an upgraded road off the New England Highway, which would be constructed as part of the approved Stage 1 project to the north-west of the proposal site. The Stage 1 project will also upgrade the intersection of the unnamed road with the New England Highway, including the provision of basic right and left turn lanes on the New England Highway. This site access would be used during construction and operation of the proposal.

Major solar components would be delivered from the Port of Newcastle or Port of Botany and transported to the proposal site by truck via the New England Highway through the main centres of Muswellbrook, Tamworth and Armidale, or from Botany via the Pacific Motorway and Hunter Expressway. Light vehicles would also access the proposal site from this direction or from the north via the New England Highway through Glen Innes, Tenterfield, Stanthorpe, Warwick and Brisbane.

The *Traffic Impact Assessment* (GHD, 2024d) identifies that construction activities would generate up approximately 124 vehicle movements per day and 57 vehicle movements per hour during peak periods of construction. It is anticipated that 75 percent of light vehicle trips would originate from the south (from Armidale), and the remaining 25 percent of staff will travel from the north (from Guyra). Shuttle buses (with a capacity of 25 persons) will be used to transfer approximately 80 percent of workers to and from the construction site. It is assumed that all shuttle buses will travel to/from the south. It is anticipated that 75 percent of heavy vehicles will access the site from the south and the remaining 25 percent will travel from the north. Traffic movements are likely to be similar or less for decommissioning.

Construction and decommissioning activities would require approximately 100 workers during the peak activity period. As discussed in Section 6.1.4, it is expected that most workers will be sourced locally from regional towns such as Armidale and Guyra. Workers that are not local are expected to use existing accommodation within the local area such as Armidale, Uralla and Guyra (discussed in Section 6.1.5). Construction workers would access the site in the morning and exit in the afternoon, to travel to their homes or accommodation in the evening. Workers from outside the regional study area may also travel back to their homes on weekends.

Due to street parking not being permitted on New England Highway, there is not expected to be any impact to on street parking. All construction vehicles would utilise construction parking within the proposal site. There is therefore no impact to parking availability expected during the construction period.

The *Traffic Impact Assessment* (GHD, 2024d) found that traffic impacts of the proposal are expected to be negligible and would be within the daily fluctuations of the adjoining arterial road network. Local residents may notice increased traffic during construction, and may experience minor disruptions due to construction traffic, which may cause frustration for some.

6.1.4 Economy, business and employment

Construction and decommissioning of the proposal is expected to contribute to the regional economy through capital expenditure. There would be opportunities for local businesses to supply goods and services to the primary contractor during construction and decommissioning of the proposal. Enerparc entered into a Voluntary Planning Agreement (VPA) with Armidale Regional Council for the Stage 1 project, which commits Enerparc to maximise employment opportunities for local residents, by sourcing at least half of the construction workforce from the local and regional study area where possible.

Consultation for the SIA (see Section 4.2) indicated that some local businesses would have interest and capacity to participate in proposal procurement opportunities. However, some stakeholders identified a number of existing barriers to local business participation on large projects (discussed in Section 4.2), including:

- Workforce constraints for mid-size and small contractors.
- Concerns that proponents rely on the same businesses used on previous projects rather than local contractors.

- Concern that non-resident employees may spend their earnings elsewhere, which would not contribute to the local economy.
- Lack of communication and information about various projects in the region.

Suggestions made by stakeholders to address some of these barriers and maximise opportunities for local business participation on the proposal included:

- Enerparc to engage Business NSW to gain a greater understanding of North West region.
- Enerpac hosts an information night for businesses procurement opportunities, and provides a capability statement on potential job requirements or needs.

Construction of the proposal would require a peak workforce of up to 100 people during the peak construction period of approximately four months (with similar required for decommissioning). This may provide increased employment opportunities for some residents in the local and regional study area, particularly those skilled in construction, engineering, project management and administration. While a local workforce would be prioritised for employment opportunities during construction and decommissioning, some roles would likely require specialised skills, and may need to be sourced from outside the local and regional study areas. Further, competition for labour and skills shortages were reported to be existing challenges across the region, and challenges in retaining and attracting staff associated with the higher salaries often associated with the construction industry. Some stakeholders raised concerns that the proposal may contribute to these challenges if local workers are drawn from other local jobs, potentially creating short-term competition for labour with particular skills in the region (Section 4.2).

As discussed in Section 5.3.5, in 2024 there were low rates of unemployment in the local and regional study area, with a small proportion of the local labour force currently employed in the construction industry. It was noted during consultation for the SIA that there are significant ongoing labour needs for construction in the region (Section 4.2). In particular, a large skilled and unskilled migrant workforce moved to Tamworth and Armidale for work, which may present an opportunity for migrants who may be working below their skill level in Tamworth for skilled workforce opportunities in Armidale. While Enerparc is committed to maximising opportunities for local employment and upskilling in the regional communities in which they work, it is recognised that this needs to be balanced with timeliness of training opportunities, capacity and capability in the local workforce.

While the SIA is not able to identify the extent of potential labour draw, the attraction of workers from existing businesses in the region may cause temporary inconvenience to business owners. This may be compounded by the concurrent construction of other projects in the region, such as the Oxley Solar Farm and Metz Solar Farm (refer to Section 6.3). Stakeholders consulted for the SIA suggested that training opportunities should be provided as part of the construction workforce strategy to provide an incentive for employment of young people, which was felt would assist with recruitment challenges in the context of the current regional labour shortage (Section 4.2).

Non-resident construction workers would be required to stay at local short-term accommodation in the regional study area (refer to Section 6.1.5), which would benefit the accommodation providers. Non-resident workers may also increase patronage at local businesses, in particular during lunch or dinner breaks. This may lead to a small increase in revenue for some businesses in the regional area, particularly retail and food and beverage businesses in locations where the non-resident workforce would be accommodated.

6.1.5 Housing and accommodation

As discussed in Section 6.1.4, Enerparc has committed to maximising employment opportunities for local residents, by sourcing at least half of the construction workforce from the local and regional study area. Therefore, there would be local workers who continue living in their usual place of residence, as well as workers who stay in short-term accommodation facilities if they live further than one hour's drive from the construction site. Given the challenges discussed in the baseline regarding existing skills shortages in the region and the dynamic nature of the regional workforce (Section 5.3.5.3, it is not possible at this stage to estimate the proportion of workforce that would be local residents compared to non-residents. Non-resident workers would be required to stay in accommodation facilities in the regional area within one hour's drive of the proposal site, such as Armidale or Guyra.

Under a worst-case scenario due to the existing skills shortages in the region, and at peak times, a maximum of 100 people would require accommodation in the regional study area. The social baseline (Section 5.3.7) indicates that there are around 18 accommodation facilities in Armidale, as well as over 100 places listed on Airbnb. Additional short term accommodation facilities are also available one hour drive from the project site in Tamworth, located 110 km southwest, or Glen Innes, located approximately 98 km north. As identified in Section 5.3.7, there were low vacancy rates in the Armidale region, coupled with rising rental costs. During SIA consultation (see Section 4.2), stakeholders observed local families relocating to other areas potentially due to high rental costs and reduced availability of rental housing. Some stakeholders noted this could be due to the increase in construction workforce due to other projects occurring in the REZ. The use of short-term accommodation facilities by non-resident workers has the potential to impact availability for tourists to the area.

Some stakeholders indicated that university accommodation facilities are underutilised when students are between semesters, and these facilities could potentially accommodate construction workers. For example, UNE's Smith House is underutilised by university students and currently houses a number of horticultural workers who work in the region (Section 4.2). Stakeholders identified other university accommodation facilities located in Armidale, however this would have to align with off-peak periods in the university trimester study periods to reduce competition in the rental market. In addition, construction workers from other projects in the region (discussed in Section 6.3) may also need accommodation in Armidale, which could further reduce availability for the proposal workforce and other residents.

Some non-resident construction workers may choose to rent a house in the regional study area for the duration of their contracts. As shown in Section 5.3.7, there is high occupancy rates across the region, as well as limited availability in the rental housing market, and the houses that are available are considered unaffordable. There is potential for non-resident construction workers to further reduce the availability of rental properties for residents in the local and regional study area. However, as a consequence of the temporary and short-term nature of peak construction work roles, it is unlikely that large numbers of construction workers would choose to relocate with their families to live in the region.

6.1.6 Aboriginal cultural values

The *Aboriginal Cultural Heritage Assessment* (ACHAR) (OzArk, 2024) reports that there are many intangible heritage values associated with the spiritual connections and wellbeing of communities and individuals. However, during consultation by OzArk with Registered Aboriginal Parties (RAPs) to inform the ACHAR (OzArk, 2024), there were no specific cultural values discussed in relation to the proposal site. However stakeholders did mention there are women's sites located to the west of the proposal site, as well as an Aboriginal and dreaming site on Mount Duval approximately 2.4 km southwest of the proposal site.

According to the ACHAR (OzArk, 2024), there are three recorded Aboriginal sites within the proposal site. These sites have been mostly identified along lower elevation landforms on gentle slopes adjacent to Duval Creek and associated drainage lines. The proposal's conceptual design has demonstrated its ability to ensure ground disturbing works will avoid the locations of all Aboriginal sites identified across the proposal site, as such, the proposal will not result in harm to Aboriginal cultural heritage sites. The ACHAR (OzArk, 2024) recommends ongoing consultation with RAPs to develop an Aboriginal Cultural Heritage Management Plan to ensure the protection of the recorded Aboriginal sites. Other recommendations include ensuring the proponent has undertaken measures to avoid harm to all recorded Aboriginal sites, including erosion control measures and marking recorded sites.

The proposal also has the potential to enhance economic and employment outcomes for local Aboriginal communities. As reported during SIA consultation, local community groups have strong connections to the local Aboriginal community through recreation, advocacy and support (see Section 4.2). Some stakeholders identified training for local Aboriginal residents during construction would not only benefit local Aboriginal communities, but also help alleviate concerns regarding skills shortages in the region.

6.1.7 Community wellbeing and cohesion

6.1.7.1 Temporary population increase

As identified in Section 5.2.1, in 2021 the combined population of Black Mountain and Tilbuster was 340 people. The presence of non-resident construction workers could temporarily increase the population temporarily by up to 100 additional people at the peak of construction. This could be a noticeable change for some residents living in the local study area, and the presence of the construction workforce may reduce feelings of community cohesion and safety for some residents. Research indicates that this can be a common concern for planned projects that involve a non-residential population (Ruddell and Ortiz, 2015).

However, given the non-resident construction workforce would be accommodated in Armidale or Guyra, and there are limited community facilities or retail shops in Black Mountain and surrounding rural suburbs, there would be limited opportunities for interaction between residents and the non-resident construction workforce in the local study area. Interactions are most likely to occur where the workforce is accommodated in Armidale or Guyra, or on the local road network when additional vehicle movement from non-residential construction workforce arriving or leaving site would lead to higher traffic volumes (see Section 6.1.3).

The presence of non-resident construction workforce in Armidale is expected to be negligible given Armidale is a large regional centre. There is potential for workers to be more noticeable in Guyra, which is a smaller town.

6.1.7.2 Wellbeing and cohesion

It is understood from SIA consultations (see Section 4.2) that while the community have been generally supportive of renewable energy projects, recently there has been a mindset shift due to the amount of projects occurring in the New England REZ. While initial views may be supportive of the project, the long planning, design and approval timeframes of projects as well as unclear communication from proponents may lead to unsupportive views.

During SIA consultation (Section 4.2), some stakeholders observed reduced community cohesion due to perceived inequitable distribution of project benefits among neighbours. This can contribute to feelings of distrust within the community, affecting community cohesion. To assist with managing potential community concerns, it is recommended the community and stakeholder engagement strategy has a focus on sharing information with communities and stakeholders about proposal timeframes and benefits. This should include targeted consultation with residents in Black Mountain and Tilbuster.

6.1.7.3 Demand for community services and facilities

The temporary non-resident construction workforce has the potential to increase demand for community services and recreational facilities, particularly in Armidale where the construction workforce would likely be accommodated. Non-resident workers are likely to continue accessing services and facilities in their home locations, however may use some services during the week for health and wellbeing needs such as medical centres and recreation facilities (e.g. gyms, parks and sports fields). This increase in demand is expected to be minimal.

The proposal may also increase demand for emergency services in the region should an emergency arise as a result of construction activities. Consultation for the Stage 1 project with emergency services and this SIA indicated that services are well resourced in the local and regional study area, and that the presence of construction activities in the area is not likely to affect the demand on these services. Overall, the potential increase in demand resulting from an increase in population is expected to be negligible.

6.1.8 Summary of construction and decommissioning impacts

Table 6.1 presents a summary of the social impacts described in Section 6.1. The magnitude and likelihood of each impact have been determined in accordance with the methodology outlined in Section 2. The significance rating shown in Table 2.4 has been applied to each social impact based on the outcome of this assessment.

Table 6.1 Social impact summary – construction and decommissioning

Summary of social impact	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Properties and landholders									
Construction of the proposal would temporarily disrupt usual agricultural activities such as grazing for the landholder of the proposal site, which may be a temporary reduction in productivity for the affected landholder, however there would be potential to continue grazing on the land following installation of the solar infrastructure.	Host landholder	Surroundings	Minor	Likely	Medium Negative	Community Engagement Plan	Minimal	Unlikely	Low Negative
Changes to local amenity									
Increased noise, vibration and dust as a result of construction activities may disturb residents located in close proximity to the proposal site and along haulage routes. This may disturb daily activities and affect overall quality of life.	Residents in close proximity to proposal site and along haulage routes	Surroundings	Minor	Possible	Medium Negative	Community Engagement Plan. Construction Environment Management Plan.	Minor	Unlikely	Low Negative
Temporary views of construction activities for residents in close proximity to the proposal site, which may reduce enjoyment of some views.	Residents in close proximity to proposal site Road users and residents on haulage routes	Surroundings	Minor	Likely	Medium Negative	Community Engagement Plan. Construction Environment Management Plan.	Moderate	Possible	Medium Negative

Summary of social impact	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Access and connectivity									
Light and heavy vehicle movements along New England Highway may temporarily increase traffic volumes for local residents and road users at peak times. Although increased traffic would be within daily fluctuations of the arterial road network, local residents may be frustrated by potential disruptions and delays.	Community members in the local study area	Accessibility	Minor	Possible	Medium Negative	Community Engagement Plan. Construction Traffic Management Plan.	Minimal	Unlikely	Low Negative
Economy, business and employment									
Direct procurement opportunities for a small number of local and regional businesses, particularly those in the construction industry, which would contribute to the local and regional economy.	Businesses in the local and regional study area	Livelihoods	Minor	Unlikely	Positive Low	Accommodation and employment strategy	Minor	Possible	Positive Medium
Direct and indirect procurement and employment opportunities for up to 100 workers during construction and decommissioning could lead to employment opportunities for skilled and semi-skilled workers in the local and regional area.	Local and regional workforce	Livelihoods	Minor	Unlikely	Low Positive	Accommodation and employment strategy	Minor	Possible	Medium Positive
Potential for workforce to draw from existing jobs in the regional study area, contributing to existing competition for labour challenges.	Businesses in the regional study area	Livelihoods	Minor	Possible	Medium Negative	Accommodation and employment strategy	Minor	Unlikely	Low Negative
Some food and beverage businesses located in close proximity to construction activities such as in Armidale or Guyra may benefit from increased revenue due to construction workers spending wages	Local businesses in Armidale or Guyra	Livelihoods	Minimal	Possible	Low Positive	No additional mitigation measures	Minimal	Possible	Low Positive

Summary of social impact	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Housing and accommodation									
Reduced availability of short term accommodation for tourists due to non-resident workforce accommodation requirements.	Accommodation providers and tourism industry	Livelihoods	Moderate	Possible	Medium Positive	Accommodation and employment strategy. Community Engagement Plan.	Minimal	Possible	Low Positive
Reduced availability of private rental housing due to non-resident workers renting properties for the duration for their contract.	Local and regional communities. Accommodation providers in the regional study area.	Livelihoods	Minimal	Unlikely	Low Negative	Accommodation and employment strategy. Community Engagement Plan.	Minimal	Possible	Low Negative
Aboriginal cultural values									
If inadequately managed by the recommended mitigation measures provided in the ACHAR, there is potential for construction activities to impact identified Aboriginal heritage sites. Disturbance to objects or sites has the potential to result in intangible harm through cultural or spiritual loss.	Anaiwan Traditional Custodians and local Aboriginal communities	Culture	Major	Unlikely	Medium Negative	Aboriginal Cultural Heritage Management Plan (ACHMP).	Minor	Unlikely	Low Negative
Community wellbeing and cohesion									
Potential impacts to community cohesion and perceived impacts to community safety due to the presence of non-residential workers and interactions with the community.	Local and regional communities	Community	Minimal	Unlikely	Low Negative	Workforce management plan.	Minimal	Unlikely	Low Negative

Summary of social impact	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Potential impacts to community wellbeing and cohesion due to diverse views about renewables projects, and perceived inequitable distribution of benefits.	Local and regional communities	Health and wellbeing Community	Moderate	Possible	Medium Negative	Voluntary Planning Agreement. Community Engagement Plan.	Moderate	Possible	Medium Negative
Potential increase in demand for health, emergency and recreational services to the proposal.	Regional social infrastructure providers	Health and wellbeing Surroundings	Minimal	Unlikely	Low Negative	Workforce management plan.	Minimal	Unlikely	Low Negative

6.2 Operation

6.2.1 Changes to local amenity

During operation, there would be permanent visual changes from some viewpoints of the solar infrastructure, which would alter landscape of the area, and lead to changed views from some properties and roads near the proposal site. The *Landscape Character and Visual Impact Assessment* (GHD, 2024b) found that views of the solar infrastructure would permanently alter the visual landscape at properties surrounding the proposal site, and from properties along New England Highway, due to the relatively flat terrain of the area. The assessment found that views would change for a number of properties located on New England Highway. Visual changes would also be noticeable for road users on the New England Highway as they travel between Armidale and Guyra and beyond.

As discussed in Section 5.3.1, the Armidale region has a strong farming identity, and a large portion of the local study area labour force are employed in the agriculture, forestry and fishing sector (Section 5.2). As discussed in Section 6.1.2.2, SIA consultation and consultation for the Stage 1 project found there are existing concerns amongst some local residents and the broader community about the potential visual impacts of the proposal due to views of solar panels, which may be compounded by negative community sentiment about the volume of renewable energy projects in the region as a result of the New England REZ (see Section 4.2).

Some residents are likely to be sensitive to views of solar infrastructure from their properties, particularly as they are likely to value the rural character and amenity of the area (discussed in Section 5.2). The potential for continued grazing on the property may help to retain some of the rural character, and address concerns about loss of productive agricultural land. However visual impacts would occur over the long term, and may reduce enjoyment of views from landholder's properties, and impact the rural character of the area. While some people are expected to adapt to these changes over time, there are likely to be ongoing concerns about the cumulative loss of rural character across the New England REZ, discussed in Section 6.3.

The *Noise and Vibration Assessment* (GHD, 2024a) found that noise resulting from operational activities would be minimal, and noise levels at all properties surrounding the site are expected to comply with the proposal noise trigger levels at all time periods and weather conditions. Chapter 6.13 of the EIS (GHD, 2024) found that maintenance activities during operation may result in some minor, localised dust generation from vehicles travelling on unsealed access roads. Adequate vegetation cover would be retained beneath the panels to reduce dust production and erosion risks from bare areas. The impacts on local and regional air quality are expected to be negligible during operation. As a result, local community members are not expected to be affected by noise or dust impacts during operation.

6.2.2 Access and connectivity

Operation of the proposal would result in some increased traffic in the local study area when staff visit the site for operation and maintenance. The *Traffic Impact Assessment* (GHD, 2024d) found that daily peak travel demand during operation would be approximately six light vehicle movements a day. The following activities would be undertaken during operation:

- Routine visual inspections, general maintenance and cleaning of the solar array as required.
- Vegetation management in accordance with the landscaping, fire management and biodiversity management plans, as relevant.
- Site security response (24 hour), if required.
- Site operational response (24 hour), if required.
- Pest plant and animal control, as required.

Trips could occur at any time during the hours of operation between 7:00 am and 6:00 pm from Monday to Friday and if required, and between 8:00 am and 1:00 pm on Saturday. Work would only be undertaken outside of these hours in an emergency and would be kept to a minimum.

Vehicles would travel along New England Highway and the existing unnamed Crown road to access the proposal site. While some residents along these roads may notice these vehicles, such a minor increase is not expected to disturb nearby residents, and residents in the broader local study area are not expected to notice the increase. Overall, the potential increase in traffic is expected to be negligible and is not expected to affect access and connectivity.

Additionally, road upgrades, including turning lanes have been proposed for the intersection of the New England Highway and the access road to the proposal site. These upgrades will enhance the quality of the road network directly outside the proposal site and contribute to safe driving measures.

6.2.3 Economy, business and employment

Overall, the proposal is expected to support the region's economy and contribute to the transition into the renewable energy sector as part of the New England REZ (see Section 3). The proposal would be part of the overall catalyst for change to a future energy platform. With a growing renewables sector in the Armidale and New England Region and NSW, particularly due to the REZ, this will present new opportunities in green manufacturing, with the associated opportunities for revenue generation, employment and goods and services tax (GST) to boost funds for broader services within the state. Operation of the proposal has the potential to unlock new and emerging industries in the Armidale region, as well as strengthening the rapidly growing horticultural industry. As identified in the *Armidale Economic Development Strategy*, renewable energy generation will aid in expanding and diversifying growing systems in the region allowing for a greater diversity of crops and markets (Armidale Regional Council, 2017).

In addition, the intent of the proposal will be to enable the landholder to continue to graze sheep in and around the proposal during operation, enabling continued contribution to the agricultural economy. During consultation for the SIA, some stakeholders noted farmers had reported higher productivity due to the joint use of land for renewables (Section 4.2). Particularly through reduced water and maintenance costs for cattle grazing land, as well as an additional income stream from solar energy benefits.

Operation of the proposal would require up to five full time equivalent employees to manage the onsite operations at the solar farm, which would include the following:

- Routine visual inspections, general maintenance and cleaning of the solar array as required.
- Vegetation management in accordance with the landscaping, fire management and biodiversity management plans, as relevant.
- Site security response (24 hour), if required.
- Site operational response (24 hour), if required.
- Pest plant and animal control, as required.

This would provide a small number of long-term employment opportunities for those individuals, which could be filled by residents in the local and regional study area with the required skills. Although there are existing skills shortages in the region, there are also opportunities to upskill local residents to maximise opportunities for local employment.

6.2.4 Accommodation and housing

There is potential for operational roles to attract workers to relocate to the local or regional study area. Although there are existing challenges with housing affordability and availability in the region, the small number of roles is not expected to impact housing availability or affordability in the local or regional study area.

6.2.5 Aboriginal cultural values

As discussed in Section 6.1.6, the ACHAR (OzArk, 2024) recognises the strong cultural values of Aboriginal communities towards landscapes, however no cultural values regarding the proposal site were identified during OzArk's consultation with the RAPs. Despite this, there is potential for changes to the landscape resulting from the solar infrastructure to affect intangible values associated with the cultural landscape for local Aboriginal stakeholders. While this impact may not be able to be mitigated, it is recommended that opportunities are explored to maximise potential benefits for the local Aboriginal community through the proposal, such as employment and training opportunities.

Development of an Aboriginal Cultural Heritage Management Plan (ACHMP) in consultation with the RAPs and Heritage NSW is proposed in the ACHAR. The ACHMP will include management measures to ensure the protection of the recorded Aboriginal sites, an unanticipated finds protocol, unanticipated skeletal remains protocol, and procedures for cultural awareness training.

6.2.6 Community wellbeing and cohesion

It was identified during SIA consultation that there is an increasing negative sentiment in the Armidale region regarding the energy transition due to the volume of renewable energy projects in the New England REZ. Some stakeholders also provided examples where renewable projects were felt to create 'rifts' between neighbours (Section 4.2). This has the potential to negatively impact community cohesion and wellbeing, which is discussed further in Section 6.3.

In an effort to distribute benefits from the proposal to the broader community, Enerparc would engage with Armidale Regional Council to reach an appropriate agreement.

6.2.7 Summary of operation impacts

Table 6.2 presents a summary of the social impacts described in Section 6.2. The magnitude and likelihood of each impact have been determined in accordance with the methodology outlined in Section 2. The significance rating shown in Table 2.4 has been applied to each social impact based on the outcome of this assessment.

Table 6.2 Social impact summary - operation

Summary of social impact	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Changes to local amenity									
Permanent visual changes due to views of solar infrastructure for nearby properties and for road users on the New England Highway. This would change the rural character of the area, and may reduce enjoyment of some residents' properties.	Residents in close proximity to proposal site Road users	Surroundings	Moderate	Possible	High Negative	Ongoing consultation with residents. Community Engagement Plan.	Moderate	Likely	Medium Negative
Most community members are not expected to experience reduced local amenity due to noise or dust impacts during operation.	Residents in close proximity to proposal site	Surroundings	Minimal	Very unlikely	Low Negative	No additional mitigation.	Minimal	Very unlikely	Low Negative
Access and connectivity									
Road upgrades, including turning lanes, have been proposed for the intersection of the New England Highway and the access road to the proposal site. Upgrades will enhance the quality of the road network directly outside the proposal site and contribute to safe driving measures.	Community members in the local study area and road users	Surroundings	Minimal	Possible	Low Positive	Communication Plan. Construction Traffic Management Plan.	Minimal	Possible	Low Negative

Summary of social impact	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Economy, business and employment									
Contribution to the regional economy, and the region's transition to renewable energy, which may support new and emerging industries in the Armidale region.	Local and regional communities	Livelihoods	Minor	Possible	Medium Positive	No additional mitigation.	Minor	Possible	Medium Positive
Operation would provide employment opportunities for up to five skilled workers.	Local and regional workforce	Livelihoods	Minimal	Unlikely	Low Positive	Accommodation and employment strategy. Community Engagement Plan.	Minor	Possible	Low Positive
Accommodation and housing									
Operation of the project is not expected to impact housing and accommodation in the social locality.	Local and regional communities	Way of life	Minimal	Very unlikely	Low Negative	No additional mitigation.	Minimal	Very unlikely	Low Negative
Aboriginal cultural values									
Potential for changes to the landscape resulting from the solar infrastructure to affect intangible values associated with the cultural landscape for local Aboriginal stakeholders.	Anaiwan Traditional Custodians and local Aboriginal communities	Culture	Moderate	Possible	Medium Negative	Accommodation and employment strategy.	Minor	Very unlikely	Low Negative
Community wellbeing and cohesion									
Potential for impacts to community cohesion and wellbeing due to increasing negative sentiment towards renewables projects.	Local and regional communities.	Community	Minor	Possible	Medium Negative	Voluntary Planning Agreement. Community Engagement Plan.	Minimal	Likely	Low Negative

6.3 Cumulative

Other planned proposals and projects in the region may be constructed concurrently with this proposal. This may lead to cumulative social impacts in the local and regional study area during construction, operation and decommissioning of the proposal. As outlined in Chapter 6.17 of the EIS, on 23 May 2024, a search of the DPE major projects register identified key projects within the study area (50 km from the proposal site). These are summarised in Table 6.3.

Table 6.3 Major projects in the vicinity of the proposal for consideration of cumulative visual impacts

Project name	Project description	Location	Project Stage
SSD-9619 - Tilbuster Solar Farm (the approved Stage 1 Project)	The development of a 150 MW solar farm, energy storage facility and associated infrastructure.	Immediately adjacent to the north-west of the proposal site	Determination - Construction expected to commence 2025
Metz Solar Farm (SSD-7931)	Development of a 100 MW solar farm and associated infrastructure.	Approximately 24 km southeast of the proposal site	Determination - Complete and operational
Oxley Solar Farm (SSD-10346)	Development of a 215 MW solar farm with up to 50 MW of battery energy storage and associated infrastructure.	Approximately 25 km southeast of the proposal site	Determination - Construction expected between 2023 and 2025
New England Solar Farm (SSD-9255)	Development of a 720 MW solar farm with energy storage and associated infrastructure.	Approximately 29 km south southwest of the proposal site	Determination - Stage 1 completed in 2023. Stage 2 (320MW) and a 200MW/two hour battery will start construction in 2024
Deegee Solar (SSD-70753725)	320 MW Solar Farm, ancillary infrastructure, and a battery energy storage system (BESS) with a capacity of either 1400 MW/2800 MWh OR 700 MW/2800MWh.	Approximately 35 km south of the proposal site	Prepare EIS - Yet to commence
Armidale East BESS (SSD-65058714)	Development of a 500 MW/1000 MWh battery energy storage facility with associated infrastructure.	Approximately 16 km southeast of the proposal site	Prepare EIS - Yet to commence
Eathorpe BESS (SSD-49505734)	Development of a 100 MW/200 MWh battery energy storage system with associated infrastructure and connection works.	Approximately 16 km southeast of the proposal site	Prepare EIS - Yet to commence
Rangoon Wind Farm (SSD-10476)	Development of a 130 MW wind farm with energy storage and associated infrastructure	Approximately 45 km north of the proposal site	Prepare EIS - Yet to commence
Oven Mountain Pumped Hydro Energy Storage (SSI-12422997)	Development of a 900 MW pumped hydro energy storage and generation project, grid connection and ancillary infrastructure.	Approximately 60 km southeast of the proposal site	Review submissions - Yet to commence

As shown above and highlighted in SIA consultation (Section 4.2), there are many projects being constructed or proposed in the region due to the New England REZ. Overall, there is potential for the following cumulative social impacts to occur in the local and regional area:

- Cumulative loss of productive land and loss of rural character and amenity.
- Cumulative industry and economic growth and diversification, and job creation.
- Competition for local skilled and unskilled labour.
- Reduced availability of short-term accommodation and overall housing availability and affordability.
- Increase in temporary populations and resulting impacts on community composition, cohesion and safety.

- Increased demand on social infrastructure facilities and services including emergency services, health care and recreation facilities.
- Impacts to community values associated with environmental protection, rural character, and cultural values.
- Impacts to community wellbeing and cohesion due to diverse views about projects and changes to community character.

Enerparc will have the ability to manage many of the potential cumulative social impacts that result from construction, operation and decommissioning of the proposal and Stage 1 through implementation of the respective mitigation measures and management plans required for each project (refer to Section 8).

Addressing the potential cumulative social impacts due to other projects would be a shared responsibility with other project proponents, and stakeholders such as EnergyCo and Armidale Regional Council. Sharing information about the project's construction and operation timeframes and activities, workforce and accommodation requirements and potential impacts with these and other regional stakeholders is expected to assist with managing several social impacts on local and regional communities, such labour force impacts, demand for accommodation, and impacts to social infrastructure provision.

Other cumulative social impacts that are intangible in nature, such as impacts to community values, are expected to be difficult to manage for any proponent and stakeholder. The continued presence of Enerparc in the local community and implementing a transparent and meaningful engagement program, may assist with responding to community concerns and cumulative social impacts as they arise.

7. Mitigation and management of social impacts

The social impacts and opportunities identified and assessed in this report will be managed and mitigated through a range of measures recommended in this report, and by other relevant mitigation measures recommended in other EIS specialist studies (such as the noise and vibration assessment, landscape and visual assessment, and traffic impact assessment).

Comprehensive and appropriate communication and engagement with the community and other key stakeholders would play a key role in managing potential social and economic impacts during construction, operation and decommissioning. Effective communication and engagement are fundamental to reducing risk and minimising potential impacts. Identifying, engaging and effectively communicating with stakeholders is critical to the successful delivery of the project.

Enerparc will continue to engage with stakeholders and the community in the lead up to, and during, construction. A Community Engagement Plan would be prepared for the proposal, which would include approaches and protocols to:

- Communicate with potentially affected residents, other community members, businesses and other key stakeholders to provide information about the proposal, and the likely nature, extent and duration of changes during construction.
- Identify and engage with vulnerable persons that might be affected by the proposal.
- Communicate information about potential access changes.
- Share information about the proposal with other regional stakeholders about the project to assist with managing cumulative impacts on local and regional communities.

Other key mitigation measures include an Accommodation and Employment Strategy, which would be developed prior to construction commencing to manage the accommodation requirements for non-resident workforce, and maximise opportunities for local residents and businesses to participate in the project. A workforce management plan would be developed and implemented during construction to manage the potential impacts of the non-resident workforce, and workforce health and wellbeing requirements.

Recommended social impact mitigation and management measures are summarised in Table 7.1.

Table 7.1 Recommended mitigation measures

Social impact / benefit	Mitigation measure	Responsibility	Timing
Social impacts, communication and engagement	Enerparc will prepare an overarching Community Engagement Plan to guide the management and delivery of community and stakeholder engagement in the lead up to and during construction, and as required during operation and decommissioning, to ensure that: – Accurate and accessible information about the proposal is provided. – Feedback from the community is encouraged. – Opportunities for input are provided. – Community members and stakeholders with the potential to be affected by construction activities are notified in a timely manner about the timing of activities and potential for impacts. – Enquiries and complaints are managed, and a timely response is provided for concerns raised. The plan will include approaches and protocols to: – Communicate with potentially affected residents, other community members, businesses and other key stakeholders to provide information about the proposal, and the likely nature, extent and duration of changes.	Enerparc	Pre-construction, construction, operation, decommissioning

Social impact / benefit	Mitigation measure	Responsibility	Timing
	- Identify and engage with vulnerable persons that might be affected by the proposal. - Communicate information about potential access changes. - Share information about the proposal with other regional stakeholders to assist with managing cumulative impacts on local and regional communities.		
	An enquiries and complaints management systems will be developed, outlined in the Community Engagement Plan, and implemented during all phases of the proposal. The complaints management systems will be maintained throughout the construction period and for a minimum of 12-months after construction finishes.	Enerparc	Pre-construction, construction, operation, decommissioning
Workforce management and impacts of non-resident workforce on local communities	A Workforce Management Plan will be developed and implemented during all phases of the proposal to manage: - Potential impacts of the non-resident construction workforce. - Health and wellbeing service needs of the temporary construction workforce, including medical, allied health and wellbeing services. The plan will be developed in consultation with local councils and service providers, including local and regional health and emergency services providers. The plan will include measures to manage potential impacts of the non-resident construction workforce on local and regional communities, including: - A code of conduct for workers, including a zero-tolerance policy relating to antisocial behaviour. - Strategies to promote wellbeing of the workforce.	Construction contractor	Pre-construction, construction, operation, decommissioning
Accommodation and housing impacts	Enerparc will prepare an Accommodation and Employment Strategy, which will propose measures to ensure there is sufficient accommodation for the workforce associated with the development. The strategy will: - Consider the cumulative impacts associated with other State significant development projects in the area. - Include a program to monitor and review the effectiveness of the strategy over the life of the development, including regular monitoring and review.	Enerparc	Pre-construction, construction, operation, decommissioning
Local employment and training opportunities	The Accommodation and Employment Strategy will investigate options for prioritising the employment of local workers for the construction, operation and decommissioning of the development, where feasible. The strategy will include measures to manage local employment and procurement requirements, including but not limited to: - Recruitment, skills and training measures, including identification of skills and qualifications required, and training targets. - How the contractor will work with regional stakeholders to upskill local residents, including Indigenous and culturally diverse communities.	Enerparc	Pre-construction, construction, operation, decommissioning
Renewable Energy Community Benefit Framework (RECBF)	The existing Voluntary Planning Agreement with Armidale Regional Council for the Tilbuster Solar Farm will be amended to include a commensurate additional contribution for the proposal. The payment would be allocated to the RECBF to promote benefit sharing with the local community as agreed with council.	Enerparc	Pre-construction

7.1 Social impact monitoring

Social impacts will be monitored on an ongoing basis through the implementation of a complaints mechanism and continued stakeholder and community engagement. The management strategies are largely focussed on the construction period, but are adaptive, and would be reviewed and updated as required in response to community and stakeholder feedback.

While the overall responsibility for the development, implementation and monitoring of the social impact management strategies will remain with Enerparc, some responsibilities will be devolved to the primary construction contractor and will become part of the contractor's terms and conditions of engagement.

Table 7.2 presents the social impact monitoring framework to track the effectiveness of management measures in achieving the performance outcomes, and support identification of corrective actions if targets are not achieved.

Table 7.2 Monitoring framework

Desired outcome	Mitigation/enhancement	Indicator	Target	Method	Monitoring frequency	Monitoring and reporting responsibility
Local communities are well informed about the project	Community Engagement Strategy	Number of project updates shared with local community and stakeholders	At least monthly updates during lead up to and during construction	Enerparc and contractor engagement records	Six monthly	Enerparc Contractor
	Community Engagement Strategy	Time taken to resolve complaints in accordance with complaints handling procedure	80 per cent of complaints are responded to within 24 hours and resolved to a satisfactory level for the complainant	Enerparc and contractor engagement records	Six monthly	Enerparc Contractor
Local business procurement opportunities are maximised	Accommodation and employment strategy	Number of local businesses procured on project	At least two services from local suppliers during construction (outside of accommodation suppliers)	Enerparc and contractor procurement data	Quarterly during pre-construction and construction	Enerparc Contractor
Local employment and training opportunities are maximised	Accommodation and employment strategy	Number of workers who are local residents	Minimum of 5% of construction workforce to be local residents	Construction employment register	Quarterly during pre-construction and construction	Enerparc Contractor
	Accommodation and employment strategy	Number of apprentices and trainees who are local residents	At least one local apprentice or trainee employed on construction program	Construction employment register	Quarterly during pre-construction and construction	Enerparc Contractor
	Accommodation and employment strategy	Number of workers who are local and Indigenous	At least one local Indigenous resident employed on construction program	Construction employment register	Quarterly during pre-construction and construction	Enerparc Contractor
Impacts on local accommodation availability are minimised	Accommodation and employment strategy	Availability of short term accommodation within one hour of project site	% of non-local workers in available short term accommodation	Accommodation register	Quarterly during pre-construction and construction	Enerparc Contractor
Enerparc contributes positively to the local community	VPA	\$ contributed to community projects through VPA	Amount determined by VPA	Reporting to Council through VPA requirements	Annually	Enerparc Armidale Regional Council
Cumulative social impacts are understood and communicated with regional stakeholders	Community Engagement Strategy	Number of project updates shared with regional stakeholders (e.g. EnergyCo, Armidale Regional Council)	At least quarterly updates during lead up to and during construction	Regional coordination forums	Six monthly	Enerparc EnergyCo Armidale Regional Council

8. Conclusion

This SIA has provided an assessment of the social impacts of the construction, operation and decommissioning of the proposal and provides a set of proposed mitigation and enhancement measures. The report satisfies the social impact assessment requirements as identified in the SEARs for the proposal and has been prepared in accordance with the requirements of *Social Impact Assessment Guideline for State Significant Projects* (DPE, 2023).

The key social benefits of the proposal with the potential to occur during construction, operation and decommissioning are related to employment and procurement opportunities for local and regional businesses.

The key social impacts of the proposal with the potential to occur during construction, operation and decommissioning are summarised as follows:

- Temporary disruptions to landholder activities due to construction and decommissioning activities.
- Increased traffic volumes during construction and decommissioning, which may lead to disruptions for local communities.
- Reduced amenity due to increased noise and dust, and views of construction and decommissioning activities, which has the potential to affect wellbeing for some residents in close proximity to the proposal site.
- Views of solar infrastructure at nearby properties and along the New England Highway, which may contribute to loss of rural character and visual amenity.
- Increased demand for local accommodation due to non-resident workers, which may reduce availability for tourists and contribute to existing accommodation challenges.

The positive and negative social impacts identified and assessed in this report would be managed and mitigated through a range of measures, including mitigation and management measures recommended in other EIS technical reports.

The mitigation measures identified in response to potential social impacts, and to enhance positive impacts are summarised below:

- Community Engagement Plan - this will guide community and stakeholder engagement during all phases of the proposal, supporting consultation with local communities and stakeholders about the proposal and potential impacts.
- Accommodation and Employment Strategy – this will aim to maximise participation of local businesses and residents in the proposal and manage potential impacts on local accommodation.
- Workforce Management Plan – this will manage potential impacts of non-resident workers on local communities, and support workforce wellbeing.

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Appendix A

SIA review questions

These review questions confirm that the requirements of the SIA Guideline (DPE, 2023) have been fulfilled when considering the scale of social impacts of the proposal.

General	
1. Does the lead author meet the qualification and experience requirements?	Yes – refer to Section 1.5
2. Has the lead author provided a signed declaration?	Yes – refer to Section 1.5
3. Would a reasonable person judge the SIA report to be impartial, transparent and suitably rigorous given the nature of the project?	Yes – The SIA has been prepared by social research and SIA specialists with proven experience in SIA. The SIA has been prepared using proven social science research methods relevant to the nature of the project.
Projects 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 – Section 5 provides a description of the social locality, including the different social groups who may be affected by the proposal.
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 – Section 5 provides a description of built or natural features that have value for people in the social locality, as relevant to the scope of the assessment.
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 – Section 5 describes historical, current and expected social trends or social changes for people in the social locality, as relevant to the scope of the assessment. Section 4 reports findings from consultation which includes local stakeholders' concerns about this proposal and other major development projects in the region.
7. Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the diversity of views and likely experiences?	Yes – the elements and indicators discussed in Section 5 (the social baseline) are justified in the SIA scoping exercise (see Section 2.1). Section 5 has been informed by relevant literature and data as referenced throughout. The EIS and SIA consultation activities reported in section 4 and throughout Sections 5 to 7 sought to understand the views of a diverse range of local stakeholders, and how they expect to be affected by the proposal.
8. Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Yes – Section 2 describes the SIA methodology including the social science research methods implemented, and the data limitations and explained in Section 1.6.
Identification and description of social impacts	
9. Does the SIA report adequately describe likely social impacts from the perspectives of how people may experience them, and explain the research used to identify them? When undertaken as a part of SIA scoping and initial assessment, has the plan for the SIA report been detailed?	Yes – Sections 6, 7 and 8 describes the potential social impacts of the proposal, including the concerns of local communities based on outcomes of consultation activities described in section 4. Section 2.1 presents the SIA scoping exercise, which justifies the focus areas for the social baseline (Section 5) and assessment of impacts (Sections 6 and 7).
10. Does the SIA report apply the precautionary principle to identifying social impacts, and consider how they may be experienced differently by different people and groups?	Yes – Sections 6 to 7 describe the potential social impacts of the project on local communities and stakeholders, and considers how different groups in the community, particularly vulnerable community members, may experience the impacts differently.
11. Does the SIA report describe how the preliminary analysis influenced project design and EIS engagement strategy?	Outcomes from the SIA consultation activities (Section 4) informed the approach to EIS consultation. Section 4.3 describes how consultation findings influenced proposal design.

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 – the SIA consultation activities (Section 4.2) were planned to target stakeholders relevant to the scope of the assessment and key social issues. The EIS consultation activities (Section 4.1) sought inputs from a broader range of stakeholders.
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?	Consultation findings have informed the social baseline (Section 5), impact identification and assessment (Section 6) and identification of mitigation measures (Section 7). Section 4.3 describes how consultation findings influenced proposal design.
Predicting and analysing social impacts	
14. Does the SIA report impartially focus on the most important social impacts to people at all stages of the project, without any omissions or misrepresentations?	In line with the principles for SIA of being 'impartial' and 'inclusive' the SIA focuses on the concerns expressed by stakeholders and communities during SIA and EIS consultation activities (reported in Section 4).
15. Does the SIA report analyse the distribution of both positive and negative social impacts, and identify who will benefit and who will lose from the project?	Yes – Table 6.1 and Table 7.1 identify positive and negative impacts and who is affected.
16. Does the SIA report identify its assumptions, and include sensitivity analysis and alternative scenarios? (including 'worst-case' and 'no project' scenarios where relevant)	Yes – sensitivity analysis is presented as relevant throughout Sections 6 and 7.
Evaluating significance	
17. 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 – Sections 6 and 7 recognise that different groups in the community may experience impacts differently as relevant. Cumulative impacts are discussed in Section 7.
18. Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	Yes – the evaluations of significance in Sections 6 and 7 consider the different experiences of different groups, including vulnerable groups, as relevant to each impact.
Responses, monitoring and management	
19. Does the SIA report propose responses that are tangible, deliverable, likely to be durably effective, directly related to the respective impact(s) and adequately delegated and resourced?	Yes – Table 7.1 demonstrates how the recommended social impact mitigation and enhancement measures directly respond to the impacts and benefits identified in the SIA, along with the residual impact rating based on their effective implementation. Section 7 provides more detail about the recommended social impact mitigation measures, who is responsible, and how they will be monitored and measured over time.
20. Does the SIA report demonstrate how people can be confident that social impacts will be monitored and reported in ways that are reliable, effective and trustworthy?	Yes – Section 7 describes the approach to monitoring and reporting of social impact management.
21. Does the SIA report demonstrate how the proponent will adaptively manage social impacts and respond to unanticipated events, breaches, grievances and non-compliance?	Yes – Section 7 describes the approach to adaptive management in response to complaints.

Appendix B

Demographic data

Key demographic characteristics for local and regional study area (ABS, 2021)

Key indicator	Local Study Area		Regional Study Area
	Black Mountain	Tilbuster	Armidale LGA
Population	– 291 people	– 49 people	– 23,967 people
Age profile	– 47 years	– 50 years	– 36 years
Cultural diversity	– 2.4% Indigenous persons – 80.4% persons born in Australia – 89.3% speak English only	– 0% Indigenous persons – 93.9% persons born in Australia – 100% speak English only	– 7.9% Indigenous persons – 74.0% persons born in Australia – 78.6% speak English only
Family and household composition	– 82 total families – 43.9% couple families with children – 9.8% one parent families	– 14 total families – 57.1% couple families with children – 0% one parent families	– 5,594 total families – 36.4% couple families with children – 18.4% one parent families
Dwellings	– 75.0% family households, 22.1% lone person households – 0% group households – 110 total private dwellings, 94.5% occupied dwellings – 80/8% owned, 14.4% rented	– 100% family households, 0% lone person households – 0% group households – 14 total private dwellings, 100% occupied dwellings – 100% owned	– 62.8% family households, 32.8% lone person households – 4.4% group households – 9,828 total private dwellings, 89.4% occupied dwellings – 59.1% owned, 37.7% rented
Labour force	– 61.4% labour force participation – 94.3% employment rate, 6.9% unemployment rate	– 63.6% labour force participation – 100% employment rate, 0% unemployment rate	– 56% labour force participation – 94.3% employment rate, 5.7% unemployment rate
Industry of employment	– Largest Industry proportion is Agriculture, Forestry and Fishing at 28.0% – The second largest industry Education and Training at 12.7%	– Largest Industry proportion is Agriculture, Forestry and Fishing at 42.9% – The second largest industry is Retail Trade at 35.7%	– Largest Industry proportion is Education and Training 21.6% – The second largest industry is Health Care and Social Assistance at 16.2%
Primary occupation	– The primary occupation is Manager at 27.6%	– The primary occupation is Manager at 41.9%	– The primary occupation is Professionals at 26.8%
Income	– \$766 median individual weekly income	– \$637 median individual weekly income	– \$730 median individual weekly income
Need for assistance	– 51.9% people with a long-term health condition	– 36.7% people with a long-term health condition	– 52.5% people with a long-term health condition
Mobility	– 79.4% lived at a different address 1 year ago – 62.5% lived at a different address 5 years ago	– 93.8% lived at a different address 1 year ago – 93.6% lived at a different address 5 years ago	– 70.6% lived at a different address 1 year ago – 43.7% lived at a different address 5 years ago
Socio-Economic Indexes for Areas (SEIFA)	– Index of Relative Socio-economic Advantage and Disadvantage Decile of 9 – Index of Economic Resources Decile of 9 – Index of Education and Occupation Decile of 9	– Index of Relative Socio-economic Advantage and Disadvantage Decile of 9 – Index of Economic Resources Decile of 9 – Index of Education and Occupation Decile of 9	– Index of Relative Socio-economic Advantage and Disadvantage Decile of 7 – Index of Economic Resources Decile of 3 – Index of Education and Occupation Decile of 9
Education	– 63.1% completed year 12 or equivalent – Highest proportion of non-school qualifications is Certificate level at 35%	– 62.2% completed year 12 or equivalent – Highest proportion of non-school qualifications is Certificate level at 71.4%	– 57.2% completed year 12 or equivalent – Highest proportion of non-school qualifications is Certificate level at 32.4%

Source: (ABS, 2021)

Key community facilities and services – Armidale and Guyra

Theme	Armidale	Guyra
Health	– Armidale Community Health Service – Armidale Hospital – Australian Hearing Armidale – Armidale Medical Centre – UNE Medical Centre	– Guyra Community Health Service – Guyra Multi-Purpose Service
Emergency Services	– NSW Ambulance – Armidale Police Station – Armidale Fire Station	– NSW Ambulance
Education	– University of New England – TAFE NSW Armidale – O'Connor Catholic College, Armidale – Armidale Secondary College – Minimbah Primary School – The Armidale School (TAS) – Ben Venue Public School – Armidale Waldorf School Ltd – PLC Armidale – Sandon Public School – Milestones Early Learning Armidale – Wholechild Early Learning Armidale – TG's Child Care Armidale – Galloway Children's Centre – New England Girls School	– Guyra Central School – St Mary of the angels Primary, Guyra
Early childhood services	– Milestones Early Learning Armidale – Hobbit Preschool & Childcare Centre – Armidale Montessori Preschool – Drummond Park Preschool – Big Childcare OSHC – Tiny Town Childcare Centre	– Guyra Community Hall – Guyra Swimming Pool – Guyra Showground – Guyra Recreation Grounds – Guyra Bowling Club
Community services	– Kent & Hughes House Community Centre – Armidale Neighbourhood Centre – Aboriginal Cultural Centre & Keeping Place – Armidale Tennis Club – Monckton Aquatic Centre	



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