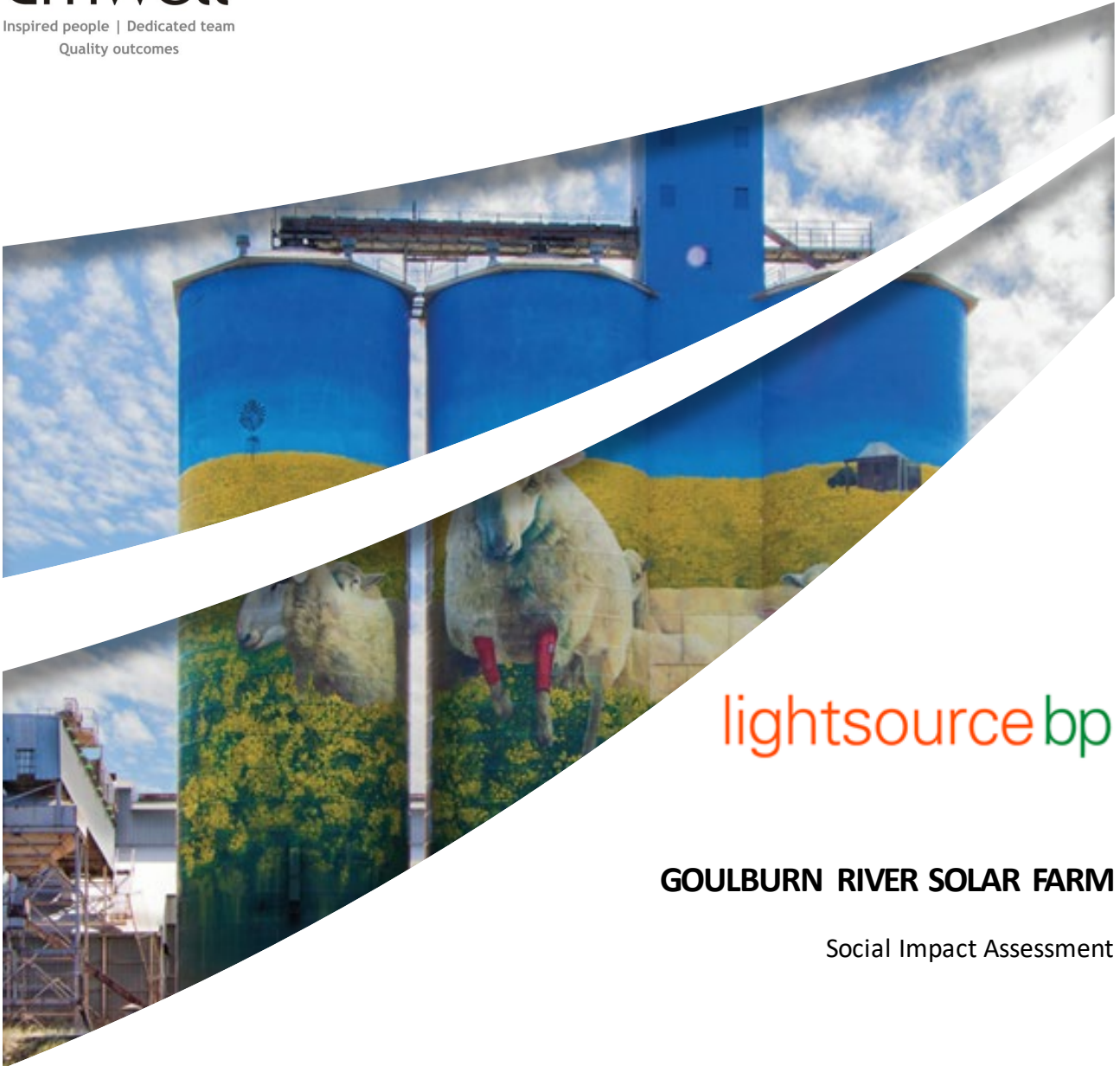




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Quality outcomes



lightsource bp

## GOULBURN RIVER SOLAR FARM

Social Impact Assessment

**FINAL**

May 2023



## GOULBURN RIVER SOLAR FARM

Social Impact Assessment

### FINAL

Prepared by  
Umwelt (Australia) Pty Limited  
on behalf of  
Lightsource bp

Project Director: Malinda Facey  
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Report No. 21507/R18  
Date: May 2023



QMS Certification Services

This report was prepared using  
Umwelt's ISO 9001 certified  
Quality Management System.

### **Acknowledgement of Country**

*Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.*

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#### **Document Status**

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
Draft	Jessica Anagnostaras	15 November 2022	Malinda Facey	15 November 2022
Final V1	Malinda Facey	1 May 2023	Malinda Facey	1 May 2023

# Authors Declaration

As outlined in Appendix B of the SIA Guideline, (DPE, 2023), suitably qualified and experienced practitioner/s should be involved in the preparation of the SIA scoping report and the SIA report. A suitably qualified person must have:

- Suitable qualifications in a relevant social science discipline.
- Proven experience over multiple years and substantial competence in social science research methods and SIA practices.

This SIA has been prepared by Paula Saad (the SIA Project Manager) under the guidance and review of Jessica Anagnostaras (the SIA Project Director). We declare that this SIA, completed on 04 May 2023:

- was prepared by a team that has suitable qualifications, proven experience and competence in SIA practice, and relevant professional memberships as outlined in **Table 1**
- that the authors understand their legal and ethical obligations in the preparation of the SIA
- that none of the information included in the SIA is false or misleading
- that the SIA contains all relevant information.

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A handwritten signature in black ink, appearing to read 'Paula Saad', written in a cursive style.

**Paula Saad**

**Project Director**

A handwritten signature in black ink, appearing to read 'Jessica Anagnostaras', written in a bold, stylized cursive font.

**Jessica Anagnostaras**

**Table 1 Author Qualifications**

<b>Requirement</b>	<b>SIA Project Manager – Paula Saad</b>	<b>SIA Project Director – Jessica Anagnostaras</b>
<b>Suitable qualifications</b>	<p>Bachelor of Architecture and Urban Planning, Mackenzie University, Brazil</p> <p>Graduate Certificate, The Architecture Design in the Contemporary City, Mackenzie University, Brazil</p> <p>Certificate, Urban Planning and Policy, Mackenzie University, Brazil</p> <p>Sociology and Anthropology course, University of Barcelona, Spain</p>	<p>Graduate Certificate in Applied Anthropology and Participatory Development (current)</p> <p>Master of Human Rights</p> <p>Bachelor of Arts (International Relations and Social Policy)</p> <p>Certificate of Achievement in Indigenous Studies: Australia and New Zealand</p> <p>Certificate in Social Impact Assessment</p> <p>Certificate in Social Risk and Resettlement Management</p>
<b>Proven experience in SIA practice</b>	6 years	10 years
<b>Professional memberships</b>	Not applicable.	International Association of Impact Assessment - Member

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Appendix B	Community and Stakeholder Engagement Plan
Appendix C	Survey Instrument
Appendix D	Other Major Projects in the Social Locality
Appendix E	Local and Regional Strategic Plans

# 1.0 Introduction

This Report documents the process and outcomes of the Social Impact Assessment (SIA) undertaken by Umwelt (Australia) Pty Limited (Umwelt) for the proposed Goulburn River Solar Farm (the Project) located in the locality of Merriwa, in the Upper Hunter region of New South Wales (NSW). This SIA forms part of the Project's Environmental Impact Statement (EIS) required under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Project is a State Significant Development (SSD) under State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP), of which a development application (DA) for the Project is required to be submitted under Part 4 of the EP&A Act.

The Project's 27-month construction period would be followed by an expected operational life of 40 years. Following its expected operations period, the solar farm would either be decommissioned, removing all infrastructure, returning the site to its existing land capability, or repurposed with new solar equipment subject to technical feasibility and planning consents at that time.

## 1.1 Project Overview

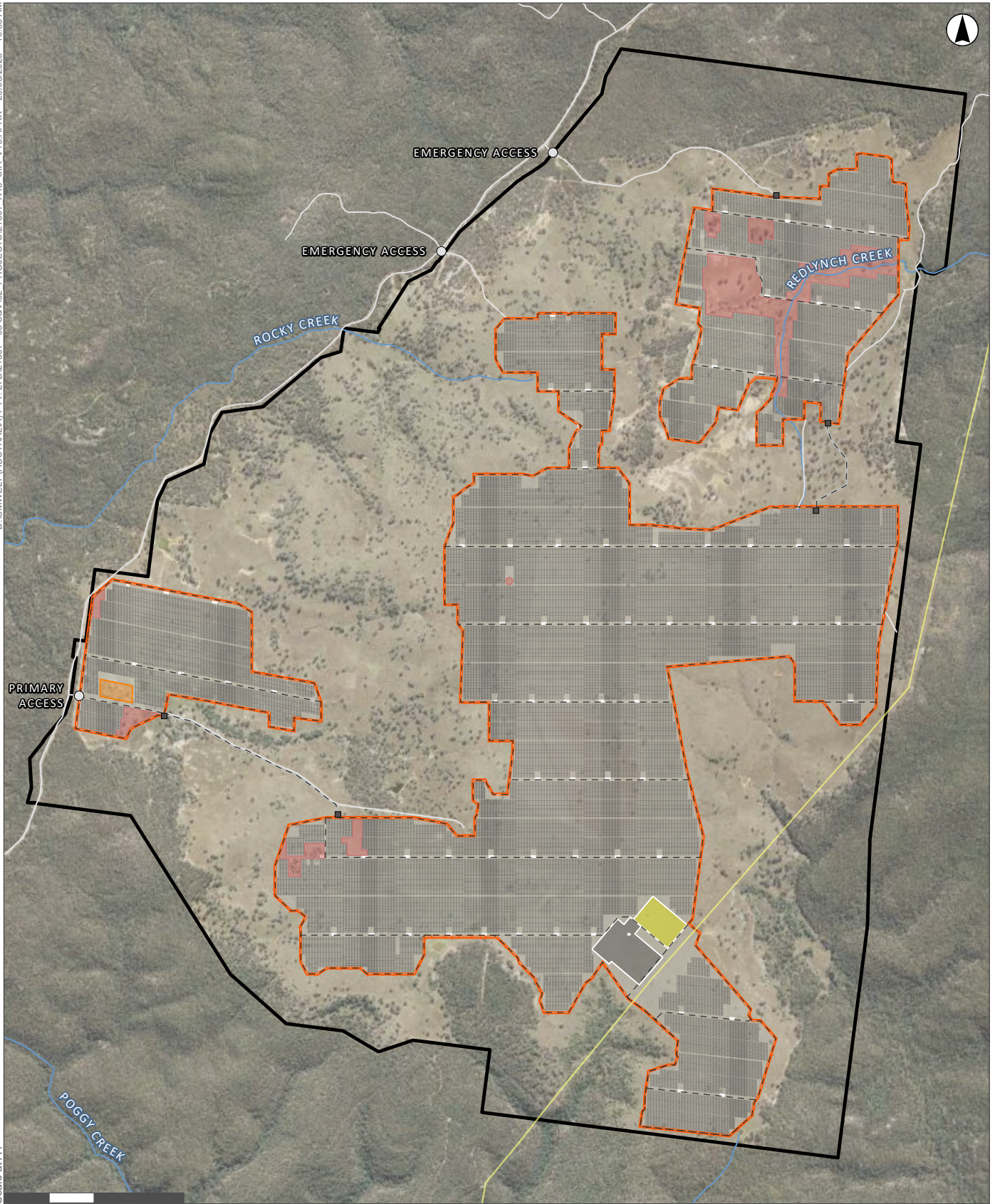
Lightsource bp propose the development of the Goulburn River Solar Farm, located approximately 28 kilometres (km) southwest of the township of Merriwa, and approximately 200 kilometres to the northwest of the closest capital city of Sydney. The Project sits within the Upper Hunter Shire Local Government Area (LGA), in the state of New South Wales (NSW). Other regional population centres nearby include Muswellbrook (75 km east of the Project), Scone (76 km northeast of the Project), and Mudgee (60 km southwest of the Project).

The proposed Project Area is on partially cleared freehold land with two private owners and is surrounded by the Goulburn River National Park. Parts of Wollara Road, which provides access to the site, are located on Crown Land. The Project will involve the construction, operation, maintenance and decommissioning of the solar farm, with construction proposed over 27-months and operations for 40 years.

The Project will involve the construction, operation and decommissioning of approximately 550 megawatt peak (MWp) of solar photovoltaic (PV) generation as well as a Battery Energy Storage System (BESS) with 280 MWp / 570 megawatt hour (MWh) capacity. The Project will also include a substation and connection to an existing 500 kilovolt (kV) transmission line. The Project will include various associated infrastructure, including road repairs and upgrades to Ringwood Road, temporary construction facilities, operation and maintenance buildings, internal access roads, civil works and electrical infrastructure to connect the Project to the existing transmission line which passes through the Project Area.

Subject to development approval, construction would commence by early 2024, with a construction phase of approximately 27 months. It is anticipated that 350 peak direct construction jobs, with an average of 250 direct jobs would be generated during the construction period, and an ongoing workforce of up to 10 during operations. Lightsource bp will drive local employment opportunities where possible to provide opportunities for local job seekers and contractors, increasing the local content and directing the project benefits to the local community.

The Project layout is outlined in **Figure 1.1**.



GDA 1994 MGA Zone 56

- Legend**
- Gate
  - Access Points
  - Electricity Transmission Line
  - - - Proposed Access Tracks
  - Watercourse
  - Roads and Tracks
  - Security Fence
  - ▭ Project Area
  - ▨ Fire Break
  - ▭ Battery Energy Storage System
  - ▭ Battery Substation
  - ▭ Inverters
  - ▭ Compound Area
  - ▭ Exclusion Zones - Environmentally Sensitive Areas
  - ▭ Development Footprint
  - ▭ Solar Panel Footprint

**FIGURE 1.1**  
**Project Overview**

## 1.2 The Proponent

The Project proponent is Lightsource Development Services Australia Pty Ltd (Lightsource bp), a partnership formed in 2017 between solar farm developer Lightsource and global energy company, bp. Today, Lightsource bp is a global developer and manager of utility scale solar projects, with a track record of progressing projects from early-stage development through to operation.

Lightsource bp has developed over 300 solar projects across the globe to date, equating to over 8.4 gigawatts (GW), and currently has a 25+ GW development pipeline across 19 countries. Lightsource bp entered the Australian market in 2018 and currently has over 1 GW of projects in construction or operation. Several more solar projects are currently under development and construction across Australia including, but not limited to, those listed in **Table 1.1**.

**Table 1.1 Lightsource bp Solar Project Pipeline**

Site Name	Region	MWdc	Stage
Wellington	NSW	200	Operation
Wellington North	NSW	425	Construction
West Wyalong	NSW	107	Operation
Woolooga	QLD	210	Commissioning
Wunghnu	VIC	90	Construction
Sandy Creek	NSW	840	Development
Mokoan	VIC	51	Approved
Gundry	NSW	400	Development

To achieve positive local and regional community outcomes, Lightsource bp is committed to building strong relationships with key stakeholders and local communities. At the early development stage, emphasis is put on encouraging local participation and community input into project planning and assessment processes.

## 1.3 Report Overview

This Report is structured as follows:

**Section 1.0 and Section 2.0:** Introduction, including a Project Overview, Assessment Requirements and Methodology.

**Section 3.0:** Social Baseline, consisting of the community profile and identification of development challenges and opportunities.

**Section 4.0:** Perceived Social Impacts, containing a thematic overview of community and stakeholder consultation outcomes.

**Section 5.0:** Social Impact Evaluation, presenting a technical assessment of the Project's social impacts (positive and negative).

**Section 6.0:** Social Impact Management Plan, providing a framework and overview of the approach to social impact management for the Project moving forward.

**Section 7.0:** Conclusion and References.

## 2.0 Methodology

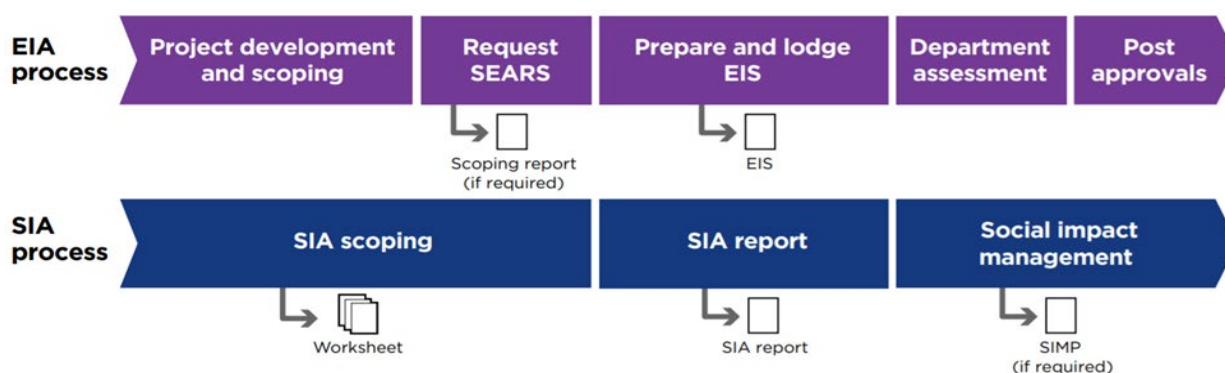
SIA comprises a number of key phases that relates to:

- developing an understanding of the social context and area of influence of a project
- the scoping of issues of importance and interest to key stakeholders and local communities
- an assessment and evaluation of social impacts that may occur as a result of a proposed project
- the identification of strategies to address negative impacts and enhance positive impacts.

Further, SIA, when informed by local communities and stakeholders, affords opportunities to effectively identify, integrate and address social impacts of projects within planning, design, and development processes. This section outlines the key activities undertaken within each of these phases.

### 2.1 Assessment Requirements

This SIA has been prepared in alignment with the NSW Department of Planning and Environment’s (DPE) *Social Impact Assessment Guideline for State Significant Projects (2023)* (‘the Guideline’), alongside the Project’s EIS process, as per **Figure 2.1**.



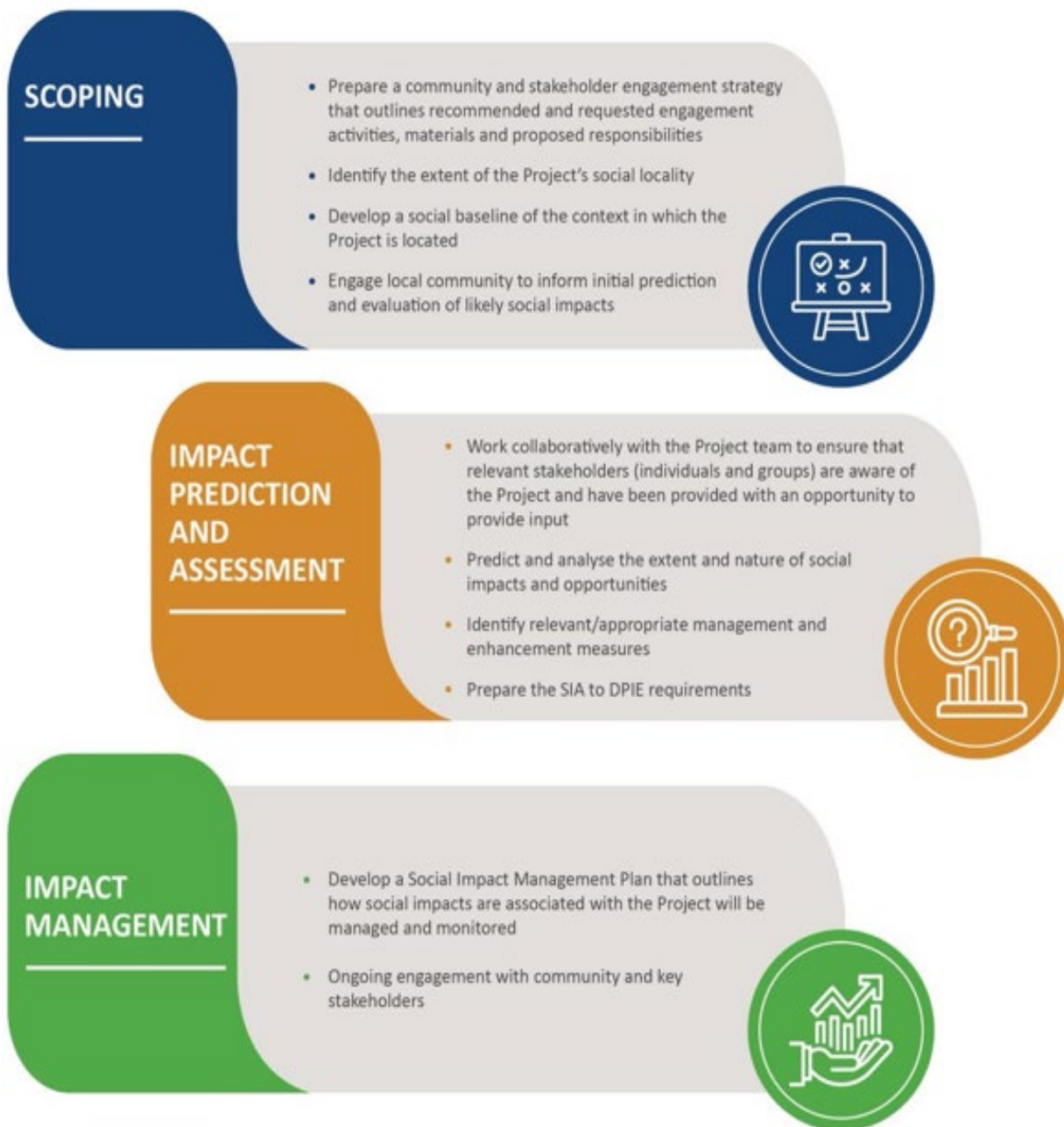
**Figure 2.1 SIA and EIA Process Alignment**

Source: (DPIE, 2021).

Furthermore, this SIA has been prepared to address the Secretary’s Environmental Assessment Requirements (SEARs) issued on 1 February 2022 and Supplementary SEARs issued in February 2022, that included an assessment of social impacts in accordance with the SIA Guidelines (DPE, 2023), by NSW Department of Planning & Environment (DPE), which outlines:

*As is the case with any type of social change, some individuals or groups within the community may benefit, while others may experience negative consequence or effect. If negative impacts are predicted, it is the role of the SIA to determine how such impacts may be addressed effectively to reduce the degree of social disruption to those affected. If positive impacts are predicted, the aim of the SIA is to maximise these opportunities and identify how they might be further enhanced. Monitoring and evaluation is also a key component of the SIA process, to identify any unanticipated impacts that may arise as a result of the project in the future, and to monitor social impacts, should the project proceed.*

Figure 2.2 provides an overview of the SIA process undertaken for the Project.



**Figure 2.2 SIA Process**

According to the SIA Guideline, and as outlined in **Figure 2.3**, social impacts can be grouped, and may involve changes to people's way of life, community, accessibility, culture, health and wellbeing, surroundings, livelihoods, and decision-making systems.



**Figure 2.3 Social Impact Categories**

Source: Umwelt.

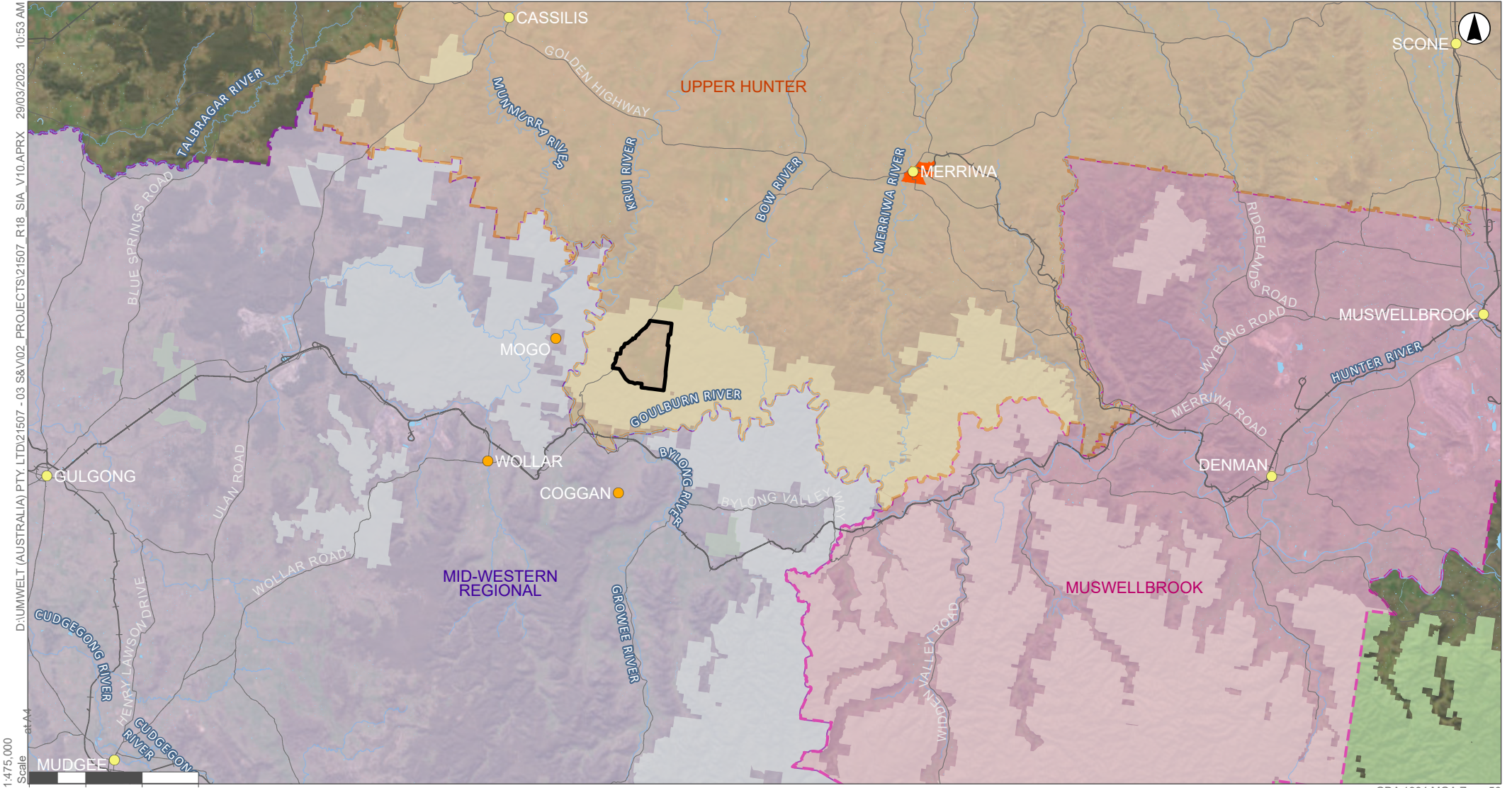


## 2.2 Social Locality

Statistical areas defined by the Australian Bureau of Statistics (ABS), as well as the land tenure composition of properties in or nearby the Project Area have been used to determine the social locality (or 'area of social influence'), as represented in **Figure 2.4**. The primary communities of interest that comprise the social locality for the purpose of this assessment are outlined in **Table 2.1**.

**Table 2.1 Communities of Interest in the Social Locality**

Community of Interest and Purpose	Statistical Area
Localities proximate to the Project	Coggan Wollar Mogo
Key townships proximate to the Project	Merriwa Cassilis Mudgee Gulgong Rylstone Denman Muswellbrook Scone
Local Government Areas (LGAs)	Upper Hunter Shire LGA Mid-Western Regional LGA Muswellbrook LGA
Region	Hunter Mid-Western
State averages have been used for comparative purposes	NSW



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 GDA 1994 MGA Zone 56

- Legend**
- Proximate Localities
  - Townships
  - Road
  - Railway
  - Watercourse
  - Project Area
  - Mid-Western Regional Local Government Area
  - Muswellbrook Local Government Area
  - Upper Hunter Local Government Area
  - Merriwa UCL Statistical Area
  - NSW State Forests
  - NSW National Parks
  - Waterbodies

**FIGURE 2.4**  
Social Locality

Image Source: ESRI Basemap (2021) Data source: NSW LPI (2021), NSW DSFI (2021); NPWS Estate (2019); Lightsource BP (2022)

## 2.3 Social Baseline Profile

A social baseline profile gathers knowledge from both primary and secondary data sources to inform an understanding of the existing social environment in which a project is proposed and of potentially affected communities. The social baseline profile is a foundational component of SIA as it provides the basis for which social impacts associated with the Project may be predicted, assessed, monitored, and managed over time.

The SIA Guideline (DPE, 2023) outlines the key components of a social baseline profile, including:

- The scale and nature of the project.
- Who may be affected, including identification of any vulnerable or marginalised groups.
- Any built or natural features on or near the project.
- Relevant social, cultural, and demographic trends and other change processes.
- The history of the proposed project and/or development in the area, including community response to previous change.

### 2.3.1 Data Sources

To gain an understanding of the demographic characteristics and composition of communities within the social locality and to ascertain how the Project may change or affect people, socio-economic and demographic data has been gathered and summarised from key publicly available datasets, including the ABS Census (2021) and the Social Health Atlas of Australia (PHIDU, 2020), as well as through a literature review of local and State government strategic plans and local media.

**Appendix A** contains the community profile dataset that has been used to inform the social baseline. **Table 2.2** below outlines the indicators and data sources utilised in each capital.

**Table 2.2 Social Baseline Profile Indicators and Data Sources**

Capital	Indicator	Data Source
Natural	<ul style="list-style-type: none"> <li>Measures of access to and level of dependency on natural assets (e.g., agricultural production, water supply, mineral resources).</li> <li>Land use profile.</li> <li>Protected conservation areas of land.</li> <li>Changing land uses in region.</li> <li>Vulnerability to natural disaster or severe climate events.</li> <li>Rate of tourism and recreation based on natural resources.</li> <li>Community values associated with natural or built environment.</li> </ul>	<p>Agricultural Mapping (Department of Primary Industries, 2022)</p> <p>Agricultural land profile (DPIE, 2013)</p> <p>Upper Hunter Shire Council Local Strategic Planning Statement 2020</p> <p>Our Place 2040: Mid-Western Regional Local Strategic Planning Statement (Mid-Western Regional Council, 2020)</p> <p>Natural disasters rates (BOM, 2021),</p> <p>Goulburn River National Park and Munghorn Gap Nature Reserve Plan of Management (NSW NPWS, 2003),</p> <p>Tourism Research Australia Local Government Area Profiles (2016) (BOM, 2021)</p> <p>Climate science (Ekström, 2015).</p>
Political	<ul style="list-style-type: none"> <li>Existing political and governance structures at local, state, and federal levels.</li> <li>Representation and governance of Aboriginal and Torres Strait Islander people.</li> <li>Existing public participation systems.</li> </ul>	<p>State representative and electoral information (Parliament of New South Wales, n.d.; Electoral Commission NSW, 2020)</p> <p>Traditional owners and Aboriginal Governance (National Native Title Tribunal, 2022).</p>
Human	<ul style="list-style-type: none"> <li>Population size.</li> <li>Population trends and projections.</li> <li>Median age.</li> <li>Aboriginal population size and proportion.</li> <li>Education institution/level attendance.</li> <li>SEIFA Index of Education and Occupation.</li> <li>Health outcomes.</li> <li>Risk of poor health.</li> </ul>	<p>ABS Community Profiles (2011, 2016, 2021)</p> <p>DPE population projections (2021)</p> <p>MySchools (ACARA, 2020)</p> <p>Social Health Atlas of Australia (PHIDU, 2021)</p> <p>MyHospitals (AIHW, 2021)</p> <p>Index of Education and Occupation (SEIFA, 2016).</p>

Capital	Indicator	Data Source
Cultural	<ul style="list-style-type: none"> <li>• Native Title claims and/or determinations.</li> <li>• Aboriginal ethnography and histories.</li> <li>• Aboriginal heritage places.</li> <li>• European heritage places.</li> <li>• Cultural values.</li> </ul>	ABS Community Profiles (2006, 2011, 2016) Register of Native Title Claims (National Native Title Tribunal, 2021) Local Government Areas Council Strategic Planning Documents Heritage Management Systems (Heritage NSW, 2021) Community survey (Umwelt, 2022).
Social	<ul style="list-style-type: none"> <li>• Household size and composition.</li> <li>• Volunteering rates.</li> <li>• Quality of life.</li> <li>• Level of transient population.</li> <li>• Community and cultural diversity.</li> <li>• Incidents and rates of selected crimes and top crimes committed.</li> <li>• Population mobility/stability (proportion of population with a different address 1 and 5 years ago).</li> <li>• Index of Relative Advantage and Disadvantage (SEIFA).</li> </ul>	SEIFA Indexes for Australia (ABS, 2018) NSW Bureau of Crime (2021) ABS census (ABS, 2021).
Economic	<ul style="list-style-type: none"> <li>• Proportion (%) of the labour force that are: employed full-time, part-time, unemployed, and trends.</li> <li>• Key industries of employment.</li> <li>• Median household income.</li> <li>• Median mortgage repayment.</li> <li>• Median weekly rent.</li> <li>• Level of housing stress (median housing costs as a proportion of median household income).</li> <li>• Indices of economic resources (SEIFA).</li> </ul>	ABS Community Profiles (ABS, 2021) Rental vacancy rates (REINSW, 2021) SEIFA Indexes for Australia (ABS, 2018) Herfindahl Index (ABS Tablebuilder Pro, 2016).

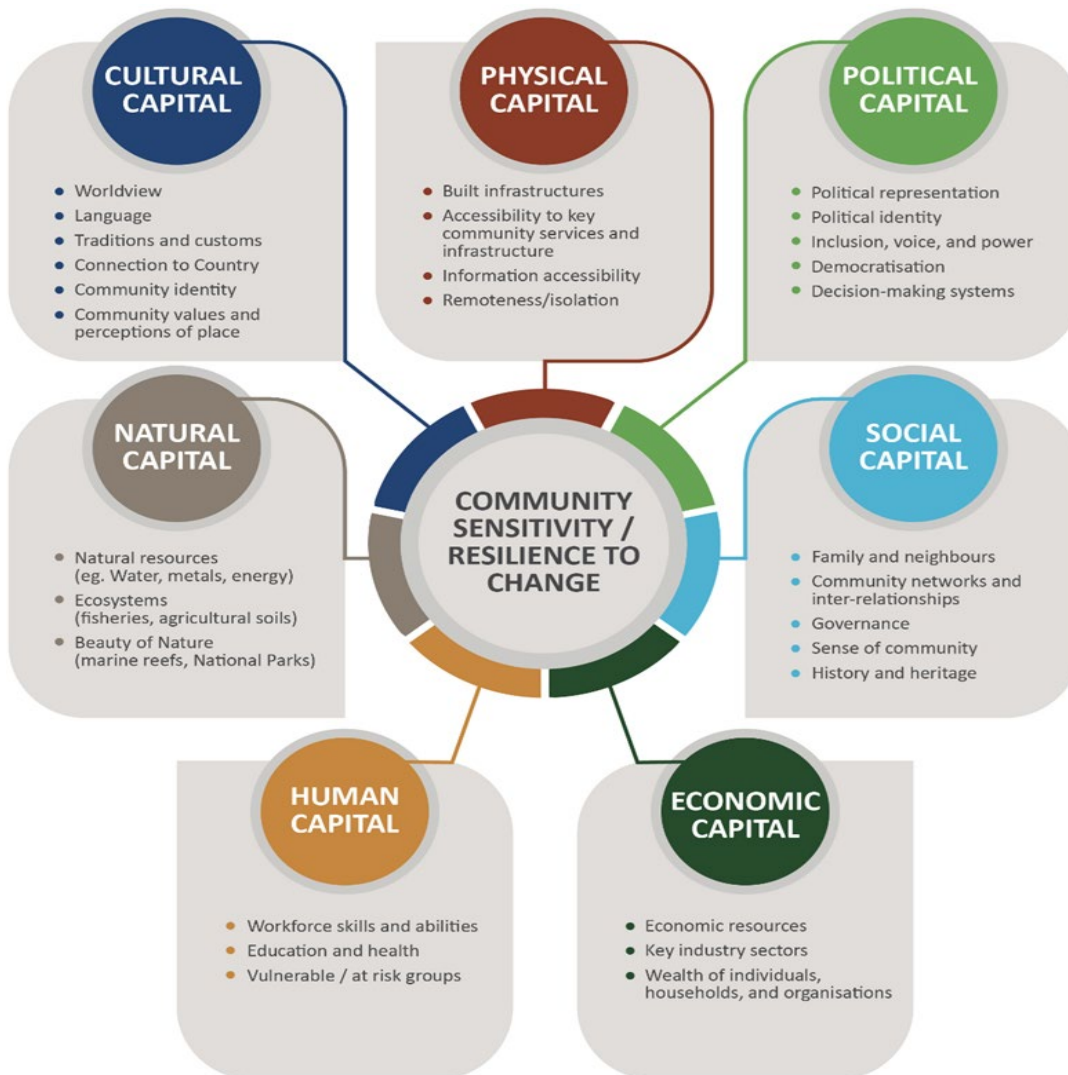
Capital	Indicator	Data Source
Physical	<ul style="list-style-type: none"> <li>• Housing typology – proportion of occupied private dwellings that are: owned with/without a mortgage, rented, public housing.</li> <li>• Number of dwellings by type (housing stock).</li> <li>• Commuting distances to work.</li> <li>• Private-car dependency (car ownership by household).</li> <li>• Availability of public transport.</li> <li>• Availability of health and educational facilities.</li> <li>• Availability of short-term accommodation.</li> <li>• Health services and infrastructure (proximity of health services, resident to GP ratio, availability of specialist services).</li> <li>• Access to Internet from dwelling.</li> </ul>	<p>ABS Community Profiles (2011, 2016, 2021)</p> <p>SEIFA Indexes for Australia (ABS, 2018)</p> <p>Central West and Orana Regional Plan 2036 (NSW Government, 2016)</p> <p>Local Government Areas Council Strategic Planning Documents</p> <p>MyHospitals (AIHW, 2021)</p> <p>NSW State Tourism Statistics (Destination NSW, 2016, 2020)</p> <p>Census of Population and Housing: Commuting to Work (ABS, 2016)</p> <p>Short term accommodation occupancy rates (AirDNA, 2022).</p>

### 2.3.2 Sustainable Livelihoods Approach

To understand the communities of interest to the Project and to evaluate their resilience and adaptive capacity to change, the social baseline has utilised the Sustainable Livelihoods Approach or ‘community capitals’ analysis (U.K. Department for International Development [DFID] 1999).

According to this framework, people seek to maintain their livelihood within a context of vulnerability. Specifically, threats to their livelihood include shocks (such as sudden onsets of natural disasters, problems, conflicts, and economic crises), trends (for instance, those relating to the economy, health, resources, and governance) and seasonality (such as cyclical fluctuations in prices or employment). People draw upon these assets to build and maintain their livelihood. A livelihood is considered sustainable ‘...when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base’.

The DFID (1999) approach draws on broad categories of community capitals as a fundamental basis to identifying and further enhancing community capacity and resilience. This methodology has been further developed by Coakes and Sadler (2011) to reflect the capitals approach – human, social, natural, physical, economic, and political. The vulnerability of each capital area can be assessed through the selection of a suite of indicators specific to each capital area to assess a community’s vulnerability to change, or conversely, their adaptive capacity. Elements of each capital area are further outlined in **Figure 2.5**.



**Figure 2.5 Community Capitals Framework**

Source: (Coakes, 2011).

## 2.4 Stakeholder Identification and Consultation

Social impact assessment involves the participation and collaboration of people who have an interest in or those that are affected by a project. Consultation in this project has been undertaken in accordance with the requirements of *Undertaking Engagement Guidelines for State Significant Developments* (NSW DPE, 2021) alongside the community involvement needs of SIA practice.

As Burdge (2004) outlines, stakeholders may be affected groups or individuals that:

- live, work, or recreate near the Project
- have an interest in the proposed action or change
- use or value a resource associated with the Project
- are affected by the Project e.g., may be required to relocate because of the project.



A stakeholder identification process was undertaken for the Project to support the planning and delivery of community and stakeholder consultation to inform the SIA. This process involved identifying stakeholders with an interest in the Project, or those directly and indirectly affected. This included identifying any potentially vulnerable or marginalised groups within the community.

**Table 2.3 Engagement Mechanisms**

Mechanisms	Description
<b>Information Provision</b>	
Website, community information line and email	Platforms and tools were established in September 2021 to provide opportunity for the broader community and members of the public to receive information on the Project and to have the opportunity to contact the Project team.
Local media release	A holding statement outlining key messages of the Project and the plans for community consultation was distributed to local media in October 2021. To target information provision for the broader community and advertise the upcoming Community Consultation event, local media adverts were published in August 2022.
Project information sheets	Project information sheets have been distributed via mail drop and email distribution to provide updates on the projects to proximal residents and community members. No. 1 – Project introduction and overview was distributed in October 2021. No. 2 – Project update and outcomes of the scoping phase was distributed in July 2022. A Project update is proposed to be distributed to coincide with the submission of the EIS.
<b>Consultation</b>	
Project briefings	Project briefing meetings with key stakeholders were held in October 2021, July and September 2022, including with community, industry, and environmental groups or organisations, as well as with Local Government agencies and traditional owners.
Personal meetings or interviews	One-on-one meetings with host landholders and neighbouring landholders took place in September and October 2021 and again between July and September 2022. These meetings were semi-structured discussions to listen to individual concerns, interests, issues, provide responses to queries, and to gather feedback on the Project, as well as to understand future engagement preferences.
Surveys	An online and telephone survey was conducted with local businesses and service providers between September and October 2022 to identify and assess potential social issues, impacts and opportunities relating to the Project.
Community information sessions	Two online information sessions were held on 28 and 30 October 2021, in which community members and proximal neighbours attended.  One in-person Community Information Session was hosted in July 2022 following the issuance of SEARs to provide Project information and preliminary results of technical studies, and an opportunity for members of the community to pose questions to the Project team and provide feedback.  A face-to-face session to provide an update on the Project and the final results of the technical studies as part of the EIS was conducted on 5 and 6 December 2022. This provided feedback regarding the technical assessments of the Project, as well as articulate the proposed mitigation and enhancement measures under consideration to minimise negative and enhance positive impacts of the Project.

**Table 2.4** provides a breakdown of the stakeholder groups that have participated in the Project’s planning and assessment process to date through the engagement mechanisms outlined above, and whose feedback and input has informed this SIA. For the purposes of analysis of the perceived social impacts discussed in **Section 4.0**, the number of participants has been recorded, rather than the number of stakeholder groups engaged.

Further definition of the stakeholder identification process is outlined in the Community and Stakeholder Engagement Plan in **Appendix B**. Engagement mechanisms and details of stakeholders engaged within the EIS-preparation period is outlined in **Table 2.4** below.

**Table 2.4 Summary of EIS Phase Consultation Mechanisms**

Engagement Mechanism	Stakeholder Category	Number of events/meetings	Total number of people engaged
Online Survey	Host landholders	54	54
	Proximal landholders		
	Community groups		
	Local businesses		
Community Information Session (July 2022)	Host landholders	1	25
	Proximal landholders		
	Community group members		
In-person meeting	Local Government & Community groups	5	29
Community Information Drop-In Sessions (December 2022)	Host Landholders	2	19
	Proximal landholders		
	Community group members		
	Local businesses		
Email correspondence with invitation to community information session	Host Landholders	-	121
	Proximal landholders		
	Community group members		
	Local businesses		
Radio Advertisement inviting listeners to the July Community Information Session	Broader community	-	-
Newspaper advert including invitation to Community Information Session	Broader community	-	-
Project information sheet printed and posted	Local and broader community	-	1,895
Website traffic (Phase 2 from 26 August to 14 October 2022)	Local and broader community	-	258
<b>Total</b>		<b>62</b>	<b>2,401</b>

Source: (Umwelt, 2022).

**Table 2.5** presents the numbers of stakeholders engaged, based on the type of engagement mechanism utilised and **Table 2.3** provides a summary of the number of stakeholders engaged by stakeholder group for the SIA within the EIS-preparation period. Numbers are presented in this way to provide transparency, acknowledging there is overlap across mechanisms for a number of stakeholders, especially neighbours that immediately adjoin the Project area. Similarly, not all stakeholders in a single stakeholder group were engaged in the same way.

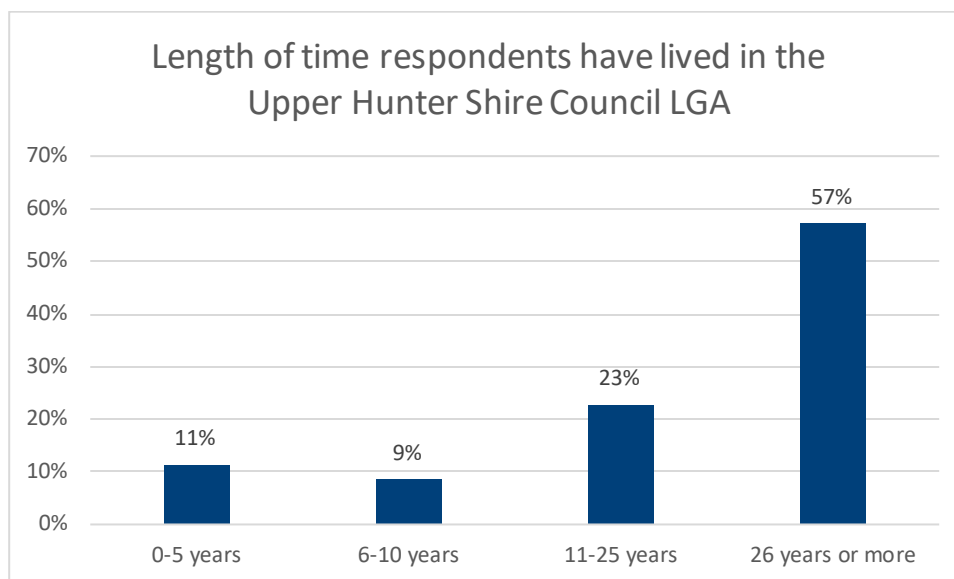
**Table 2.5 Stakeholders Consulted During EIS Phase**

Stakeholder Group	Number of Stakeholders Contacted	Number of Participants
Accommodation Provider	16	4
Broader Community Member (those living within the social locality)	9	3
Community Group/Association	34	16
Education Service Provider	2	-
Health and Emergency Service Provider	15	8
Host/Proximal Landholders (includes all residences along Wollara Road & Ringwood Road)	17	17
Local Aboriginal Land Council &/or Registered Aboriginal Parties	5	3
Local Business	14	5
<b>Total</b>	<b>112</b>	<b>56</b>

Source: (Umwelt, 2022).

Of the above engaged stakeholders, and of those who indicated their gender, there was a higher rate of males (n= 27, 67%) than females (n=13, 33%) who participated or provided responses through the engagement mechanisms. The majority of respondents were between the ages of 55–64 (n= 13, 39%) with an equal number of those between the ages of 35–54 and over 65 years old (n=9, 27%). When respondents were asked if they identify as Aboriginal and/or Torres Strait Islander most indicated neither (n=32, 89%) with a few people identifying as Aboriginal (n=4, 11%). Most of those engaged lived within the Upper Hunter Shire Local Government Area (LGA) (n=33, 87%), and most indicated they had lived there for 26 years or more (n=20, 57%), as outlined in **Figure 2.6** below.

The survey instrument used to undertake consultation is contained in **Appendix C**.



**Figure 2.6 Length of Time Respondents have Lived in the Upper Hunter Shire LGA**

Source: Umwelt, 2022.

Total sample; Unweighted; base n = 35; total n = 53; 18 missing.

Both quantitative and qualitative information collected through engagement activities has been analysed to inform the identification and analysis of social impacts associated with the Project, as outlined in **Section 4.0**. Similarly, outcomes of engagement have been utilised to inform the Project design to minimise social impacts as described in **Section 6.11** of the EIS.

## 2.5 Social Impact Evaluation

The SIA has utilised data from a range of sources to identify and develop a layered picture of the potential social impacts arising from the Project. Social impacts associated with the Project have been evaluated by providing a ranking of impacts according to impact characteristics, as defined in the SIA Guideline (DPIE 2021). Dimensions of social magnitude used to conduct the impact evaluation are outlined in **Table 2.6**.

**Table 2.6 Dimensions of Social Magnitude**

Dimensions		Details needed to enable assessment
<b>Magnitude</b>	<b>Extent</b>	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).
	<b>Duration</b>	When is the social impact expected to occur? Will it be time-limited (e.g. over particular project phases) or permanent?
	<b>Severity or scale</b>	What is the likely scale or degree of change? (e.g. mild, moderate, severe)
	<b>Intensity or importance</b>	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.
	<b>Level of concern/interest</b>	How concerned/interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/or intensity.

Source: SIA Guideline (DPIE 2021).

To prioritise the identified social impacts, a risk-based framework has been adopted. Traditionally, the technical risk assessment process has not been greatly amenable to the inclusion of social impacts. One key adaptation of the approach is that both technical ratings and stakeholder perceptions of impacts are assessed. This approach is consistent with Sandman’s risk equation (Risk = Hazard + Outrage) (Sandman, 1993), which acknowledges often low correlations between a risk’s technical ‘hazard’ (how much harm it’s likely to do) and its ‘outrage’ (how upset it’s likely to make people).

Stakeholder perception of impact is considered an independent and no less valid component of risk; with stakeholder perceptions often varying between individuals and groups, with no single perception more important than another. However, for the purpose of assessment the most common, or what is judged to be the general perception/sentiment of a stakeholder group has been used as a measure of perceived stakeholder risk or impact.

The integration of the outcomes of technical ranking (severity/scale) with stakeholder perceived ranking of impacts (intensity or importance), thus affords a true integration of expert and local knowledge in SIA and enables both types of risk to be addressed in the development of impact mitigation, amelioration, and enhancement strategies. Such an approach is acknowledged in the SIA Guideline (DPIE, 2021) in relation to estimating material effects.

Prioritising impacts in this integrated manner ensures that appropriate assessment and mitigation strategies can be developed that not only address impacts that may require more technical management, but also those impacts that are perceived by stakeholders as of high importance/concern. These perceived concerns are just as important to manage as they have the potential to result in elevated levels of community concerns, complaints and grievances if not addressed appropriately.

As outlined in **Section 4.0**, a range of social impacts have been identified in relation to the Project, that require prioritisation for assessment and appropriate management and/or enhancement. These impacts relate to several social impact categories and have been informed through community engagement and consultation. It should also be noted that social impacts are often not mutually exclusive, with higher order impacts such as population change, resulting in second order impacts such as impacts on sense of community and service provision.

**Section 4.0** provides an evaluation of the significance of each potential negative and positive social impact. The assessment is undertaken using the impact characteristics noted above and through the application of a consequence and likelihood framework, as identified in the SIA Guideline (DPIE 2021). The social significance matrix (refer to **Figure 2.7**), that considers both the magnitude of the potential social impact (minimal, minor, moderate, major and transformational) and the likelihood of the impact occurring (very unlikely, unlikely, possible, likely and almost certain) is then used to determine an overall evaluation of the social impact as ‘low’, ‘medium’, ‘high’ or ‘very high’. **Table 2.7** and **Table 2.8** contain further detail regarding magnitude and likelihood classifications.

Both positive and negative impacts are considered in this regard, with slight adjustments made to the approach to reflect positive impacts, for example, the level of concern becomes level of interest, severity becomes scale of improvement or benefit, sensitivity becomes importance of the improvement or benefit and the equity of its distribution, and so forth.

As noted in the Guideline (DPIE, 2021), the definitions and scale assigned to each of the likelihood and magnitude categories need to be relevant to the impact that is being evaluated, explained, and justified in the SIA; and where possible the consequence scale should be based on established measures and standards.

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

**Figure 2.7 Social Impact Significance Matrix**

Source: SIA Guideline (DPIE 2021).

**Table 2.7 Defining Magnitude Levels for Social Impacts**

Magnitude level	Meaning
<b>Transformational</b>	Substantial change experienced in community wellbeing, livelihood, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20% of a community.
<b>Major</b>	Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time, or affecting many people in a widespread area.
<b>Moderate</b>	Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
<b>Minor</b>	Mild deterioration/improvement, for a reasonably short time, for a small number of people who are generally adaptable and not vulnerable.
<b>Minimal</b>	Little noticeable change experienced by people in the locality.

Source: SIA Guideline (DPIE 2021).

**Table 2.8 Defining Likelihood Levels for Social Impacts**

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

Source: SIA Guideline (DPIE 2021).

## 3.0 Social Baseline

This section describes the social baseline profile of the communities within the social locality. The following components have been considered:

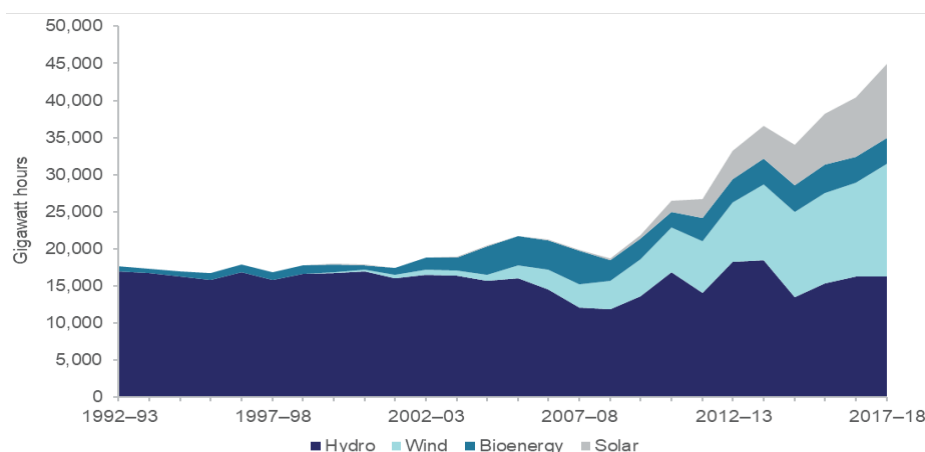
- Geographic and spatial – identification of communities of interest and relevant stakeholders.
- Governance – an understanding of the relevant governance structures including those of the Traditional Owners and local, State and Federal government jurisdictions.
- Development context – a review of the recent history of local communities and the policy setting of the proposed project, including cultural characteristics and community values, as well as previous experiences with renewable energy development projects and other development issues to ascertain the response of local communities to these changes.
- Community capital/assets – an assessment of levels of vulnerability or resilience across the communities of interest and their capacity to cope with change.
- Key community values, issues, and concerns – documentation of current community issues, as identified in key strategic planning documents, regional plans, or studies as well as within local or regional media.
- The following section explores the policy setting of renewable energy development in the region, as well as the broader public perceptions of the sector.

### 3.1 Policy Setting

Australia’s commitment at the international level to the 2015 Paris Climate Accord has influenced the growth of and investment in the renewable energy sector across the country in recent years, with further commitments to reduce national greenhouse gas emissions by 26–28% below 2005 levels by 2030 and achieve net zero emissions by 2050 committed to as part of the 2021 UN Climate Change Conference. The latest Climate Change (Consequential Amendments) Bill 2022 outlines Australia's greenhouse gas emissions reduction targets of a 43% reduction from 2005 levels by 2030 and net zero by 2050 (Parliament of Australia, 2022)(Parliament of Australia, 2022).

In 2013, the NSW Government released the *NSW Renewable Energy Action Plan* outlining the Government’s intention to work with communities and the renewable energy industry to increase renewable energy generation across the State. The Plan was implemented alongside the *Energy Efficiency Action Plan*, and the successful implementation of the Plan was completed in December 2018. More broadly, as shown in **Figure 3.1**, production of wind and solar energy has increased significantly over the past two decades across Australia.





**Figure 3.1 Energy Produced by Renewable Source**

Source: Department of the Environment and Energy (2020) Australian Energy Statistics, Table O.

In NSW, the State Government’s 2019 *Electricity Strategy* announced three Renewable Energy Zones (REZ) in the Central-West Orana, New England and South-West regions to encourage investment in projects that generate, store and transmit renewable energy. The REZs support the planned diversification of the energy sector as existing power stations near the end of their operational life and will also support the coordination of new grid infrastructure to connect multiple generators (such as wind and solar farms) to the same location. Also, the identified locations for situating the REZs have been deemed suitable based on availability of infrastructure to concentrate projects.

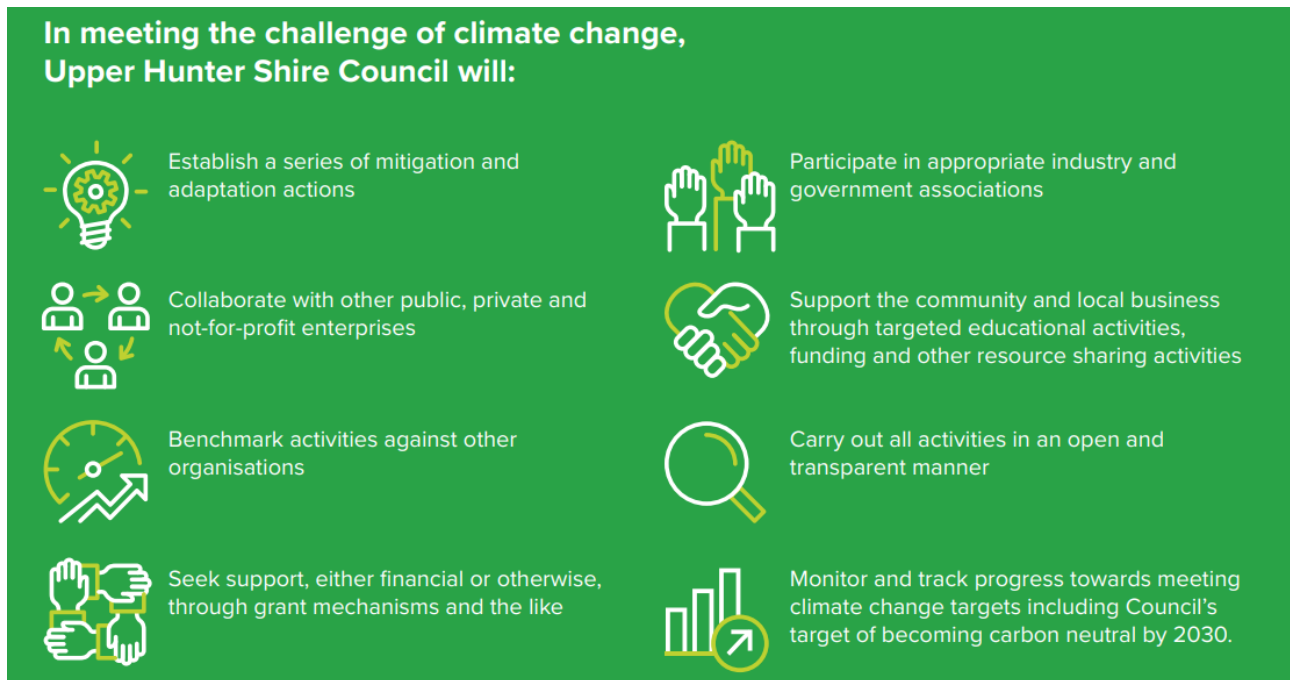
In November 2020, the NSW Government announced its plans to invest \$32 billion into renewable energy over the next decade as part of its *NSW Electricity Infrastructure Roadmap*. The Central-West Orana Renewable Energy Zone (REZ) is the State’s first pilot REZ and is one of five REZs planned by the NSW Government, with the Central-West Orana REZ already attracting significant interest from renewable energy and storage developers (Energy NSW, 2020). While the Project is not within the Central West Orana REZ (is approximately 15 km from the boundary), there are many renewable energy projects in varying stages of their development processes within the REZ, and within 100 km of the Project Area (outlined in **Section 3.3**). The proposed Central West Orana REZ Transmission Project is necessary in supporting infrastructure to enable the REZ to connect to the grid and to transport the generated energy to other parts of NSW. At its closest point to the Project, the proposed transmission corridor is approximately 7 km away. The Goulburn River Solar Project does not rely on this Transmission line. Based on this, the regional development context of the proximal Central-West Orana REZ is critical in understanding potential cumulative effects across the region and in understanding the alignment of the Project with current policy priorities of both the Federal and State Governments.

### 3.1.1 Strategic Planning Context

The Hunter region, in which the Project is situated, contains critical transmission networks connecting key energy suppliers to consumers across the State. Approximately 30% of NSW’s current energy supply is sourced within the Hunter region, from the Bayswater and Liddell Power stations (NSW Government, 2018). It is noted that Liddell Power Station will close in April 2023. The Hunter Regional Plan 2041 identifies a goal of ‘Transition to net zero emissions’ in order to ensure the Hunter makes a sustainable transition to a net zero emissions future and remains the leading regional economy in NSW. The plan outlines goals for greater diversification of the land used for mining and energy generation to open new opportunities for jobs in renewables and green industries.

As part of efforts in protecting the local environment, the Upper Hunter Shire Councils’ strategic objective is to advocate for, facilitate and support programs that protect and sustain the diverse environment for future generations, as described within the Council’s Climate Change Strategy & Action Plan (Upper Hunter Shire Council, 2020). Further, in 2019, Council declared themselves in a state of climate emergency, of which the identified key risks facing the Shire as a result of climate change include water security, weather impacts on livestock, crops and residents, increased fire activity, increasing periods of drought, flood frequency and heatwaves (Upper Hunter Shire Council, 2020).

In response, **Figure 3.2** outlines the commitments Council has made in addressing these risks.



**Figure 3.2 Upper Hunter Shire Council Commitments to Climate Change**

Source: (Upper Hunter Shire Council, 2020).

**Appendix E** contains an overview of local and regional strategic plans relevant to the social locality to inform an understanding of the development priorities and interests for the region, which includes the three LGAs identified in **Section 2.2**.

### 3.2 Public Perceptions of Renewable Energy

A review of literature to ascertain public attitudes and perceptions of renewable energy at the state, region and local level has informed the social baseline by placing community feedback within this broader development context. This summary draws on state-wide community consultation commissioned in 2014 by the Office of Environment and Heritage (now DPE) to understand community awareness, knowledge, and attitudes to renewable energy (OEH, 2015).

The public perception of renewable energy is broadly positive, as outlined in the community survey results in **Section 4.3** below, however, the potential disturbance of renewable energy projects to people's rural lifestyles and valued farmland contributes to broader perceptions of the sector. This matter is also of relevance in the Project's social locality, as it has been identified by the Upper Hunter Shire Council in the Community Strategic Plan (Upper Hunter Shire Council, 2017), as a priority to protect rural lifestyles and the country feel of the Shire as key community values. This Plan also identifies the support for renewable energy projects (Upper Hunter Shire Council, 2017).

Related, in recent years, the local community to Merriwa and Cassilis have mobilised to advocate for the re-alignment of the Central-West Orana Transmission Project as described in **Section 3.1** above, due to the original proposal for the line to traverse the Merriwa plateau, a productive agricultural area which is highly valued by the community (ABC NEWS, 2022). As a result, this alignment of the transmission corridor has been adjusted to reduce impact on farming land and fewer landholders (ABC NEWS, 2022).

A brief review of local and regional media has highlighted that community sentiment toward nearby proposed solar farms has included:

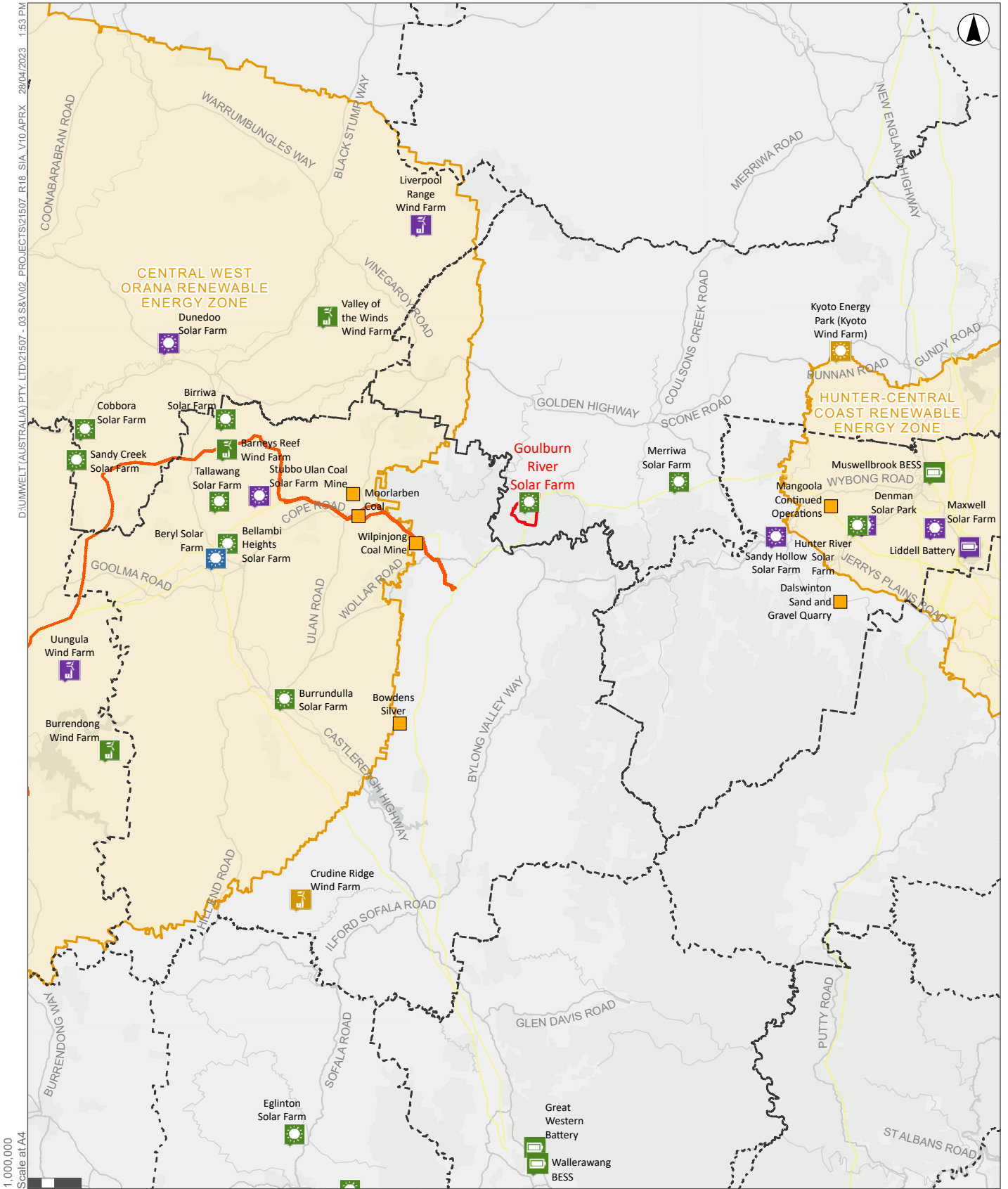
- Support for renewable energy projects but the view that these should not be sited on productive agricultural land. Alternative suggestions include placement of solar farms on rehabilitated mining land.

These sentiments are consistent with feedback provided by members of the community consulted for this Project as well as concerns relating to the potential cumulative effects of multiple developments, with these findings discussed in subsequent sections of this Report.

### 3.3 Regional Development

As described, there are several other large-scale projects which have been recently approved for development, or currently in their planning phase across the social locality. Such developments may further intensify impacts experienced by local communities across the region or could result in cumulative impacts to the community when considered in conjunction with the Project; particularly in relation to impacts associated with concurrent construction periods.

**Figure 3.3** below provides an overview of the other large-scale projects that are proximal to the Project and at comparable stages of development, with details for each project and the potential social impact considerations contained in **Appendix D**.



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GDA 1994 MGA Zone 56

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|---|---|---|
| <ul style="list-style-type: none"> <li>— Major Road</li> <li>▭ Site Boundary</li> <li>- - - Local Government Boundary</li> <li>— Electricity Transmission Line</li> <li>— Central-West Orana REZ Transmission Corridor</li> <li>— Renewable Energy Zones</li> </ul> | <ul style="list-style-type: none"> <li>☀ Solar - Approved</li> <li>☀ Solar - In planning</li> <li>☀ Solar - Operational</li> <li>☀ Solar - Under construction</li> <li>☀ Wind - Approved</li> <li>☀ Wind - In planning</li> </ul> | <ul style="list-style-type: none"> <li>☀ Wind - Under construction</li> </ul> |
|---|---|---|
- Nearby Developments**
- ☀ Mining and Extractives - Operational
  - 🔋 Battery Storage - Approved
  - 🔋 Battery Storage - In planning

**FIGURE 3.3**

**Other Major Projects in the Social Locality**

## 3.4 Community Capitals Analysis

The social baseline profile has been structured according to the community capitals framework as outlined in **Section 2.3.2** with **Appendix A** containing the complete social baseline profile dataset. The following sections outline each community capital in further detail.

### 3.4.1 Natural Capital

Natural capital refers to the natural assets and resources that contribute to community sustainability. Natural capital can include resources such as minerals, land, forests, and waterways, which provide benefit to the community, as well as environmental assets that provide social, cultural, or recreational value. A summary of the natural capital in the social locality is provided below.

**Table 3.1 Natural Capital Key Aspects and Description**

Key Aspects	Description
Water catchment of Goulburn River	A waterway of importance to the Project Area and the social locality is the Goulburn River, which flows through the Goulburn River National Park, from twenty-one tributaries north and northwest of the Project Area, to downstream into the Hunter Valley. The Project Area itself is located in the catchment of the Goulburn River.
History of agriculture and grazing	<p>The Upper Hunter and Mid-Western regions have temperate climates with hot summers and cool winters, which is favourable for rural industry. Within the Upper Hunter Shire, rural industries represent the predominant land use, with key economic and employment sectors including the equine industry, agricultural production (predominately beef, viticulture, and dairying), coal and other mineral mining, and tourism.</p> <p>Farm holdings comprise around 80% of the Upper Hunter Shire land area, with large extents classified as prime agricultural land. Consequently, the Upper Hunter LGA contains 50% of the agricultural area, 25% of the farms, and over 30% of the agricultural production value of the Hunter Region as a whole (DPIE, 2013). Most of the land in the Upper Hunter is used for agriculture, specifically for grazing and growing crops.</p>
Region includes conservation areas, national parks, and reserves	<p>The Project Area is surrounded by the 723 km<sup>2</sup> (72,300 ha) Goulburn River National Park, which was gazetted in 1983, and is managed by the NSW National Parks &amp; Wildlife Service.</p> <p>Approximately 8.4% of land in the Upper Hunter Shire is protected for conservation, which is slightly lower than in the neighbouring Mid-Western Regional LGA (11.5%), and the broader NSW (9%).</p>
Challenges of competing and changing land uses in region	Challenges associated with the Hunter Region revolve around maintaining and developing agricultural productivity whilst also supporting the development of competing industries. Key challenges will continue to emerge in relation to balancing the benefits and risks associated with mining, coal seam gas, and continued urban expansion (NSW Government, 2012). The regions' agriculture, tourism, and mining industries are also highly sensitive to climate change, with a greater risk of hazards expected into the future for these key land uses.

Key Aspects	Description
<b>Proximal recreational assets and values</b>	<p>The Goulburn River National Park attracts relatively few visitors compared to other national parks that are located closer to major metropolitan centres. In 2018 the Goulburn River National Park saw 131,751 visitors, less than half the amount of visitors to Wollemi National Park in the same year seeing 319,679 visitors (Roy Morgan, 2019). The main recreational feature of the park is the Goulburn River, with facilities including the Spring Gully camping and picnic area and the Big River campground. Milan Dhiyaan, a local Aboriginal company, also provides guided Aboriginal cultural tours.</p> <p>In terms of recreational and leisure facilities, the Upper Hunter Shire Council manages more than 119 hectares of public parks, reserves and ovals which provide for activities such as walking, bike riding, picnics and barbecues, playgrounds, and organised sport. The most popular parks in the Merriwa and surrounding areas include the Merriwa Apex Oval and Merriwa Tennis Court with other recreation facilities in the Upper Hunter Shire including Bill Rose Sports Complex, Jefferson Park, and Scone Park (Ross Planning, 2014).</p>
<b>Area vulnerable to natural disasters such as drought, flooding, and bush fires</b>	<p>Above-average rainfall in March 2021 has eased long-term rainfall deficiencies and encouraged optimism in agricultural communities in the region, where extended drought conditions and large-scale bushfires have negatively affected agricultural communities in recent years, the most recent of which was from 2017 to 2020 (BOM, 2021). The rate of warming in the region has accelerated since 1960, and in the mid- to long-term, the Bureau of Meteorology have projected decreases in winter rainfall and harsher fire weather with high confidence (Ekström, 2015).</p> <p>The implications of climate change on agricultural viability are also particularly relevant to the social locality. Changes to agricultural growing seasons, impact of water availability, and higher temperatures may place significant demand on water and land resources in the area (Upper Hunter Shire Council, 2017).</p>

Sources: (Water NSW, 2020) (Ag Econ Plus Consulting, 2018) (NSW Landuse 2017 (DPIE, 2020); Upper Hunter Shire, 2017).

### 3.4.2 Political Capital

Political capital refers to the governing and organisational structures of the population, including formal and informal systems, and the existing means for public participation in various aspects of civil life. The following sections outline the governance arrangements of relevance to the Project.

**Table 3.2 Political Capital Key Aspects and Description**

Key Aspects	Description
<b>Traditional Owners and Aboriginal Governance</b>	<p>The land of the Project Area was traditionally occupied by the Wonnarua Nation (AIATSIS, 1996), with the Wonnarua Nation being the traditional owners of what is today the Upper Hunter region. The Project Area is subsequently located on land represented by the Wanaruah Local Aboriginal Land Council (LALC) and is proximate to land represented by the Mudgee LALC.</p> <p>Wonnarua people in the Hunter Valley are also represented by the Wonnarua Nation Aboriginal Corporation (WNAC). The Corporation, established in 1999, is committed to the ongoing advancement of Aboriginal interests in the region and supports a number of projects on behalf of the Wonnarua community, mostly relating to education and health, as well as including purchasing culturally important properties to develop tourism and agriculture, and to preserve cultural artefacts (Wannarua Nation Aboriginal Corporation, 2021). Further, the WNAC is currently developing a map to define the traditional boundaries of Wonnarua country, based on written and oral historical records.</p> <p>Also of importance, the Wiradjuri Nation are the traditional landowners of the adjacent land comprising the Central West region to the south and south-west of the Project Area. The Wiradjuri Nation covers approximately one fifth of NSW and represents the largest Aboriginal nation in NSW.</p>
<b>Local Government</b>	<p>At a local government level, the Project sits within the Upper Hunter Shire LGA. At the State and Federal level, the Project falls in the Upper Hunter Region, and the New England division respectively.</p> <p>The town of Merriwa, and the Upper Hunter LGA, is represented by the Upper Hunter Shire Council and consists of nine councillors.</p>
<b>State Government</b>	<p>The Project is located within the boundaries of the Upper Hunter State Electorate, which covers seven local government areas: Dungog Shire, Muswellbrook Shire, Upper Hunter Shire, Liverpool Plains Shires, Singleton Shire (partially covered), the north-east of the Mid-Western Regional Council, and the Mid-Coast Council (partially covered).</p>
<b>Federal Government</b>	<p>The Upper Hunter Shire is within the Australian electoral division of New England in NSW. Barnaby Joyce of the Nationals Party was elected to the House of Representatives for New England in 2017 and re-elected to the position in 2019 and 2022.</p>

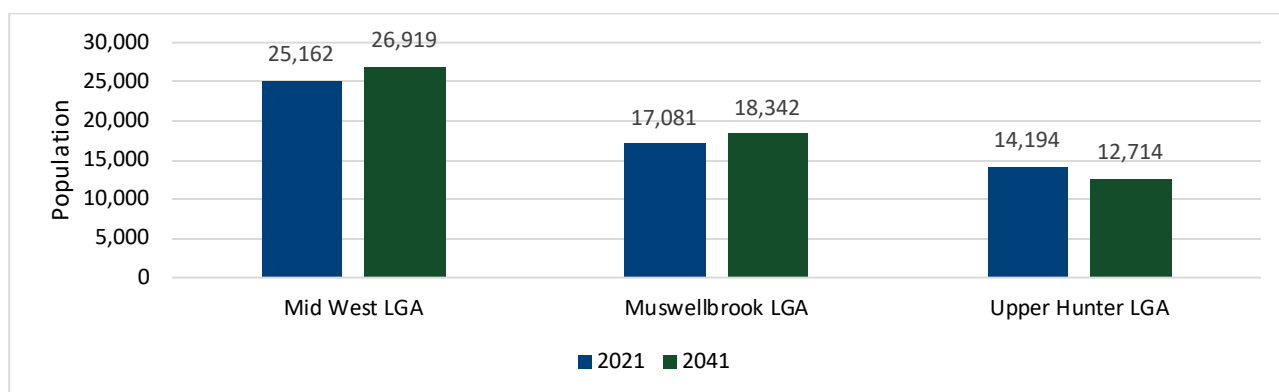
Sources: (Parliament of Australia, 2022), (NSW Electoral Commission, 2022), (Upper Hunter Shire Council, 2022), (AIATSIS, 1996), (Wannarua Nation Aboriginal Corporation, 2021).

Community elected people are part of the three Councils within the social locality. There are currently seven elected local government councillors within the Upper Hunter Shire Council, one Mayor and one Deputy Mayor. The Mid-Western Regional Council and Muswellbrook Shire Council are structured similarly.

### 3.4.3 Human Capital

The level of human capital within a community is assessed by considering population size, age distribution, education and skills, general population health and the prevalence of at-risk groups within the community. Understanding the elements of existing human capital within a community assists in understanding the potential impacts a proposed change could have on a population, its way of life, and the composition or character of a community. The following characterises the human capital of the social locality.

The Upper Hunter Shire LGA is home to 14,229 people, compared to 14,110 recorded in 2016 (ABS, 2021) (ABS, 2016). Merriwa, being the closest township to the Project, has a total population of 1,825 (ABS, 2021). The largest population centres/towns within the social locality, of which would likely provide infrastructure and services needed by the Project, include Muswellbrook (75 km east of the Project), located within the Muswellbrook Shire Council, Mudgee (60 km southwest of the Project), located in the Mid-Western Regional Council, and Scone (76 km northeast of the Project), located in the Upper Hunter Shire Council. Projected population change over the coming decades across the social locality are summarised in **Figure 3.4**.



**Figure 3.4 Population Change Projections (2021–2041) by Selected LGAs**

Source: NSW Government ASGS 2021 LGA Population Projects.

**Table 3.3** outlines the key human capital characteristics within the social locality.

**Table 3.3 Human Capital Key Aspects and Description**

Key Aspects	Description
Higher proportion of Aboriginal population compared to NSW	There is a proportionally higher Aboriginal population within Merriwa (7.5%) and in the Upper Hunter LGA (7%) when compared to wider NSW (3.4%). Merriwa and the Muswellbrook LGA have the highest proportion of Aboriginal residents across the social locality with 7.5% and 11.7% of their populations identifying as Aboriginal in 2021. Around 7% of the Mid-Western Regional LGA and Upper Hunter LGAs' populations reported that they had Aboriginal and/or Torres Strait Islander origins.



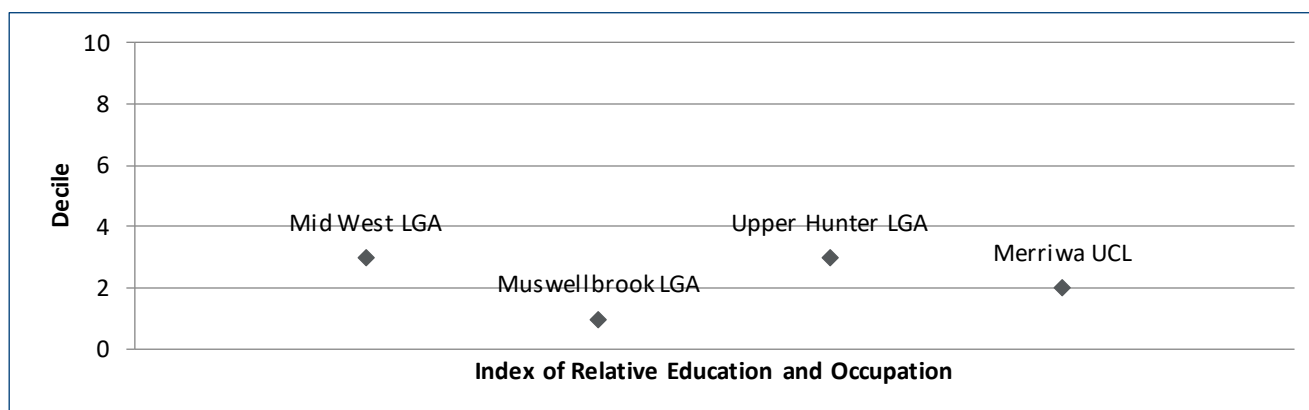
Key Aspects	Description
Population is decreasing over time	<p>Merriwa has seen a small population increase of 3.6% from 1,761 in 2016 to 1,825 in 2021 (ABS, 2021) (ABS, 2016). The population increase within the LGA was smaller, with an increase of just 0.8% between 2016 and 2021, compared to a 9.25% increase across NSW.</p> <p><b>Figure 3.4</b> shows that the population in the Upper Hunter LGA will decrease by approximately 10% to 2041, while the population in the Muswellbrook and Mid-Western LGAs is due to increase by 7% in the same period.</p>
An older and ageing population	<p>The Upper Hunter Shire LGA has a median population age of 42 years old, which is higher than the NSW and Australian average of 39 and 38 years old (ABS, 2021) respectively.</p> <p>Across the LGA, the largest proportional increase in population among age groups to 2041 will occur among the 80–84 years age bracket (2.3%), and the 85+ years age bracket (3.1%). At the same time, small proportional decreases in the number of younger people living in the social locality is anticipated. This finding suggests that the populations in the study communities are ageing, with younger age populations declining across all LGAs.</p> <p>In the Ageing and Disability Strategy, the Upper Hunter Shire Council identified their goal to become known as an age-friendly community, with dementia friendly towns, one in which older people are included, respected, and recognised (Upper Hunter Shire Council, 2018).</p>
Relative low education and occupation levels	<p>The Socio-Economic Indexes for Areas (SEIFA) Index of Education and Occupation (ABS, 2018) reflects the relative educational and occupational level of communities, whereby a low score indicates relatively lower education and occupation status of people in the area in general. Levels of school educational attainment are lower, if not significantly lower, than State average (score 6) across all study communities as displayed in <b>Figure 3.5</b>.</p>
Lower university-level education attainment but higher levels of trade skills	<p>The population of the Upper Hunter Shire has lower levels of tertiary educational attainment on average than the broader population of NSW. For example, a much lower percentage of the population indicated that they attended a university or other higher education in the LGA (5.2%) in comparison to NSW (15.3%). Those within the LGA attending vocational education (including TAFE and private training providers) was 8.7% of the population, similar to the 8.5% of the NSW population, however a larger number than the 7.8% of Australians, indicating there is a higher proportion of people in the LGA enrolled in vocational training than in NSW and Australia.</p>
Vulnerable groups in population	<p>The following population groups within the social locality have been identified as having existing vulnerabilities, potentially being more sensitive to changes to their environment, surroundings, or circumstances, or more broadly may have lower levels of adaptive capacity to cope with change.</p> <ul style="list-style-type: none"> <li>• People living with a disability, with the LGAs across the social locality having similar number of residents living with a profound or severe disability (5.8% in the Mid-Western LGA, and 5.1% across the Muswellbrook and Upper Hunter LGAs, compared with the State at 5.6%).</li> <li>• An ageing and elderly population, as mentioned above.</li> <li>• Higher proportion of Aboriginal and Torres Strait Islander population within the social locality compared to NSW, as mentioned above.</li> </ul>

Key Aspects	Description
People in social locality experience higher burden of disease	<p>Rates of avoidable deaths are higher in the Mid-Western and Upper Hunter LGAs (147.9 and 139.9 per 100,000 people) compared to the State average (118.1 per 100,000 people) and regional and rural NSW (146.6 per 100,000 people). Rates of death from all avoidable causes were significantly higher in Muswellbrook LGA at 191.5 avoidable deaths per year per 100,000 residents.</p> <p>Avoidable deaths from respiratory systems disease were 21.7 and 20.3 deaths per year per 100,000 people in the Mid-Western Region, and in the Muswellbrook LGA respectively, over double the state average (10.8 deaths per year per 100,000 population).</p> <p>The identified health risk factors in <b>Table 3.4</b> outline the key differences between the LGA's and NSW with the Upper Hunter Shire LGA having the highest rate of harmful use of alcohol (23.2%) in comparison to NSW (15.5%), and proportion of current smokers (20.6% and 14.4%).</p>
Health outcomes for Aboriginal people in the social locality differ when compared to non-Aboriginal population	<p>Closing the Gap data published by the Hunter New England Health District (HNE Local Health District, 2019), outlines important measures of disaggregation between the health outcomes of Aboriginal and Non-Aboriginal people. A number of indicators are provided which track the performance of health outcomes, with a summary of key findings by indicator provided in <b>Figure 3.6</b> showing that health outcomes for Aboriginal people in the social locality are substantially different, and in most cases worse-off, as compared to the non-Aboriginal population.</p>

Sources: (ABS, 2021) (ABS, 2016) (ABS, 2018) (ABS, 2018) (Australian Early Development Census, 2021) (SEIFA, 2016). (Profile ID Community, 2022) (Australian Early Development Census, 2021).

The SEIFA Index of Education and Occupation (IEO) for each of the State Suburbs (SSCs) reflects the general level of education and occupation-related skills of people within an area, indicative of relative disadvantage compared to other areas in NSW. The highest IEO index across the communities is within the 5<sup>th</sup> decile, indicating that approximately half of the other SSCs and LGAs in NSW have a higher level of education and occupation-related skills in comparison.

**Figure 3.5** presents the differences in education and occupation scores across the study communities.



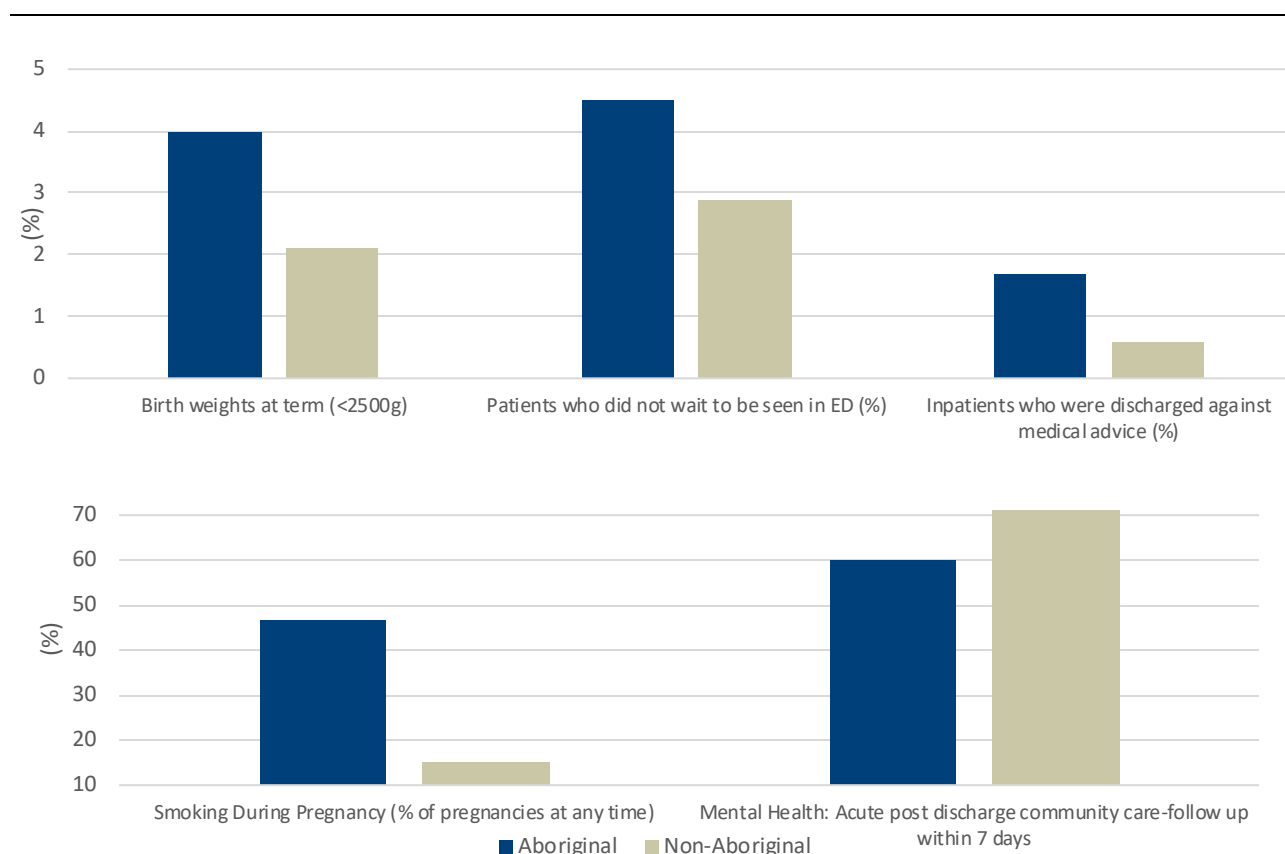
**Figure 3.5 SEIFA Index of Education and Occupation**

Source: SEIFA (ABS, 2018).

**Table 3.4 Prevalence of Selected Health Risk Factors by LGA**

Indicators	Mid-Western Regional LGA	Muswellbrook LGA	Upper Hunter Shire LGA	NSW
Harmful use of alcohol (% of population) <sup>1</sup>	21.9	18.0	23.2	15.5
Current smokers (% of population) <sup>2</sup>	21.0	22.1	20.6	14.4
High or very high psychological distress (% of population) <sup>3</sup>	12.6	14.4	11.3	12.4
Obesity rates (% of population)	41.0	46.1	40	30.9
Low or no exercise (% of population) <sup>4</sup>	69.2	73.6	64.4	65.3
Fair or poor self-assessed health (% of population) <sup>5</sup>	16.8	17.7	15.5	14.1

Source: PHIDU, 2021, Social Health Atlas of Australia, Data by LGA.



**Figure 3.6 Selected Closing the Gap Data Indicators; Aboriginal and Non-Aboriginal Persons**

Source: PHIDU, 2021, Social Health Atlas of Australia, Data by LGA.

- <sup>1</sup> Estimated number of males aged 18 years and over who consumed more than two standard alcoholic drinks per day on average (modelled estimates).
- <sup>2</sup> Estimated number of people aged 18 years and over who were current smokers (modelled estimates).
- <sup>3</sup> Estimated number of people aged 18 years and over with high or very high psychological distress, based on the Kessler 10 Scale (K10) (modelled estimates).
- <sup>4</sup> Estimated population, aged 18 years and over, who undertook low, very low or no exercise in the previous week (modelled estimates).
- <sup>5</sup> Estimated number of people aged 15 years and over with fair or poor self-assessed health (modelled estimates).

### 3.4.4 Cultural Capital

Cultural capital refers to underlying factors that provide human societies with the means and adaptations to maintain themselves in their environment (Cochrane, 2006). It includes the way people know and understand their place within the world. It may also refer to the extent to which the local culture, traditions, or language, may promote or hinder wellbeing, social inclusion, and development (IAIA, 2015).

**Table 3.5** outlines the key aspects of cultural capital within the social locality.

**Table 3.5 Cultural Capital Key Aspects and Description**

Key Aspects	Description
Native title claims	<p>At the time of writing, two Native Title claimant applications have been registered for the Upper Hunter LGA. They are registered as NC2011/006 – Gomeroi People (20 January 2012), and NC2018/002 – Warrabinga-Wiradjuri #7 (31 August 2018). Determinations for the subject claimant applications have not been made. Claim NC2011/006 – Gomeroi People, comprises land on which the proposed Project is located.</p>
Aboriginal cultural heritage values and history	<p>Aboriginal cultural heritage sites and places represent a direct link to Aboriginal traditional and cultural life. These sites are important in themselves as well as the landscape in which they are situated given Aboriginal people’s relationship and connections to Country. As identified in the Goulburn River National Park Plan of Management, 347 Aboriginal sites have been recorded in the National Park which surrounds the Project Area. The recorded sites provide a wide range of evidence about different types of living places, locations where tools were made and used, and sites of artistic expression. There are shelters with evidence of habitation, art, open campsites, grinding grooves, scarred trees, a quarry source for particular stone artefact production (axes), and ground areas used for food processing.</p> <p>The Project Area contains remains of a historical homestead relating to the story of Jimmy Governor, a ‘bushranger’ from the Hunter Valley who was born in 1875 and identified as an Aboriginal man of mixed race. After several unfortunate events, further outlined in the Aboriginal Cultural Heritage Assessment Report (ACHAR) and the Historical Heritage Assessment (HHA), Jimmy killed members of the family in their homestead in 1900 (Britton, 2013) and was later hung in 1901 for their murder (Umwelt, 2023). The ruins of the homestead represent a rare tangible remain related to shared Aboriginal and European histories of the Merriwa area during the contact period, and therefore has cultural significance for both Aboriginal and non-Aboriginal members of the community (OzArk, 2023). Further, in the present-day, the story of Jimmy Governor has become more widely known and referred to across the community (Britton, 2013). This was confirmed during community consultation undertaken for this SIA, as when asked to describe the cultural values or community connections the local community has to the Project Area, some community members (n=5, 31%) mentioned the significant Aboriginal history of the site and the proximal area.</p> <p>Further, according to the ACHAR, the Project Area holds cultural significance to the local Aboriginal community. The assessment illustrates that the elevated plateau, which comprises the Project Area, was used and visited by Aboriginal groups in the past but that the Project Area did not afford good camping locations. However, it is noted that the Project Area was formerly managed by Aboriginal people through the use of fire, and while camping was not frequent, it may be that the Project Area was used more for hunting. Additional findings from the ACHAR as they relate to identified impacts on culture are identified in <b>Section 4.2.2</b>.</p>

Key Aspects	Description
European heritage values	The State Heritage Register lists one heritage item of State significance in Merriwa and twenty-three items of local significance within the Merriwa township (Upper Hunter Local Environmental Plan). The Bow Palaeontological site, located on the Golden Highway (Merriwa-Cassilis) 12 km west of Merriwa, is also located within the social locality. Located beside a road, this site is particularly open to destruction by road works or amateur fossickers. In addition, the Redwell Cemetery, located along Ringwood Road (toward the Project Area) from Merriwa, is a site of significance registered on the State Heritage Register.
Growth of the tourism industry through festivals related to cultural heritage	The Festival of the Fleeces is held on the June long weekend each year which showcases “life on the land”, including the famous Running of the Sheep parade (Merriwa Festival of the Fleeces, 2022).
Strong history of agricultural lifestyle	In community consultation undertaken for this SIA, local community members were asked to describe their community, with the second most common response being ‘agricultural farmers’ (n=4, 20%), indicating a strong level of community identity associated with farming lifestyles.

Sources: (Umwelt, 2022), (National Native Title Tribunal, 2022), (NSW National Parks and Wildlife Service, 2003), (Britton, 2013).

Responses received from the community when asked to describe the cultural values associated with the site and surrounds, have been categorised and summarised in **Table 3.6** below.

**Table 3.6 Cultural Values and Community Connections to the Site and Surrounding Area**

Cultural Values or Community Connections to the Site and Area Around the Site	%	n
Generations of family living in area	44%	7
Family / friend connection to owner/s of land	38%	6
Aboriginal history on site	31%	5
Agricultural grazing land	13%	2
Connection to the historical significance of the site	6%	1

*Total sample; Unweighted; base n = 16; total n = 53; 37 missing.*

*Source: Umwelt, 2022.*

### 3.4.5 Social Capital

Social capital refers to community character, the state of wellbeing, social connections or networks, and levels of cohesion within a community. Various indicators can be used to examine and assess social capital, including the level of volunteering, population mobility, crime rates, and the demographic composition of the community, such as the percentage of people born overseas and language proficiency. The following provides a summary of the key characteristics of the social locality from a social capital perspective.

**Table 3.7** outlines the key aspects of social capital across the social locality.

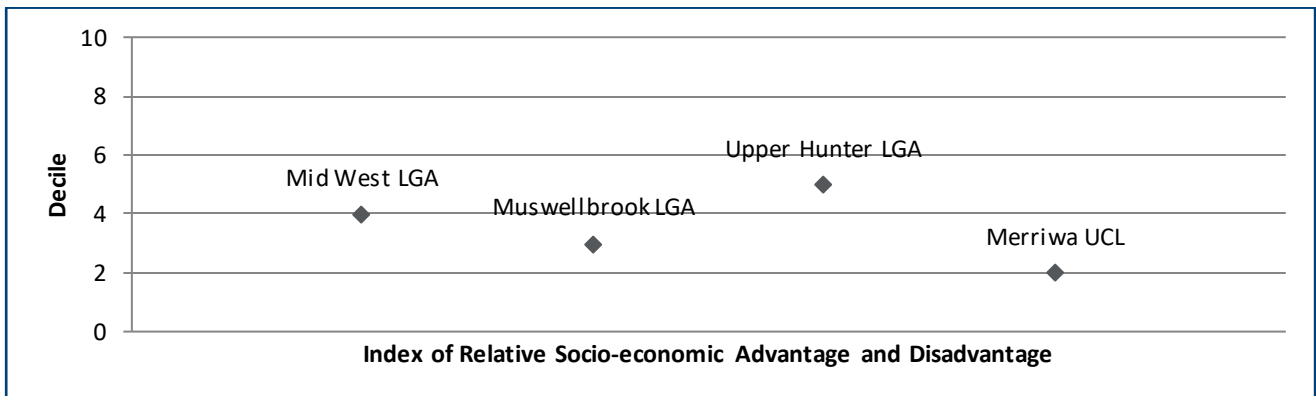
**Table 3.7 Social Capital Key Aspects and Description**

Key Aspects	Description
Strong social connections and volunteerism	<p>The proportion of the LGA's population who participated in voluntary work through an organisation or group in the last 12 months was above the State proportion at 16% and 13% respectively.</p> <p>As outlined in <b>Table 3.6</b> the generations of families living in the area (44%), and the family and friend connections to the owner/s of the Project site (36%) were the top values, indicate strong social connections and ties with neighbours and families in the area.</p> <p>In addition, when respondents were asked to describe their community in a survey undertaken for this SIA, the most common response was 'connected' (n=7, 35%).</p>
Perceived high quality of life	<p>Residents (92%) in the Upper Hunter LGA rated their quality of life as 'good' to 'excellent', with residents aged 65+ and those located in rural areas significantly more likely to rate their quality of life higher (Upper Hunter Shire Council, 2018).</p>
A relative high proportion of lone person households and fewer couples with children	<p>Household sizes in the community are smaller than the State average (2.6 people), with the average number of people per household in Merriwa at 2.2 people. Notably, one parent families in Merriwa are considerably high. Lone person households in Merriwa also comprise a higher proportion of the community's total household composition, when compared to the broader community and the State.</p>
A stable population	<p>There is less mobility in the LGA, as the proportion living at a different address 5 years ago in the LGA (33.2%) is lower than NSW (37.5%). Of those living in Merriwa, 31.7% lived at a different address 5 years ago, indicating a level of mobility lower than both the LGA and NSW.</p> <p>When stakeholders consulted for this SIA were asked for how long they have lived in the Upper Hunter Shire LGA, the most common response was 26 years or more (n=20, 57%), with the second most common response being 11–25 years (n=8, 23%), indicating strong social ties within the community and a stable population.</p>
Limited cultural diversity in the community	<p>There are significantly less people born overseas (16%) in the LGA than the NSW average (34.6%). The top four ancestry backgrounds in the LGA are Australian (45.3%), English (42.7%), Irish (11.7%) and Scottish (10.5%). The language used at home, top responses (other than English) for the LGA included Mandarin (0.7%, NSW 3.4%), Filipino (0.3%, NSW 0.4%) and Portuguese (0.2%, NSW 0.4%).</p>
Relative socio-economic disadvantage	<p>The SEIFA Index of Relative Socio-economic Advantage and Disadvantage shows inequalities in access to resources across the study communities, with all areas within the social locality experiencing higher levels of disadvantage relative to other areas across the State (<b>Figure 3.7</b>) (ABS, 2018).<sup>6</sup> With Merriwa scoring lowest at 2, Muswellbrook with 3, the Mid Western LGA at 4 and the Upper Hunter LGA with the highest score of 5.</p>

<sup>6</sup> The SEIFA Index of Relative Socio-economic Advantage and Disadvantage provides a rank of geographic areas across Australia (or a State of Territory) based on Census information to provide an indication of people's access to material and social resources, and their ability to participate in society, relative to all other SSC (or LGA) ranked scores in NSW. In this report, rankings within the State of NSW are used. As a ranked index for the State, the New South Wales median score is the 5th (median) decile. Therefore, half of all LGAs are ranked either below or above the 5th decile. The SEIFA index is a useful tool for comparing LGAs (or localities) by comparative advantage or disadvantage relative with the other localities in the State.

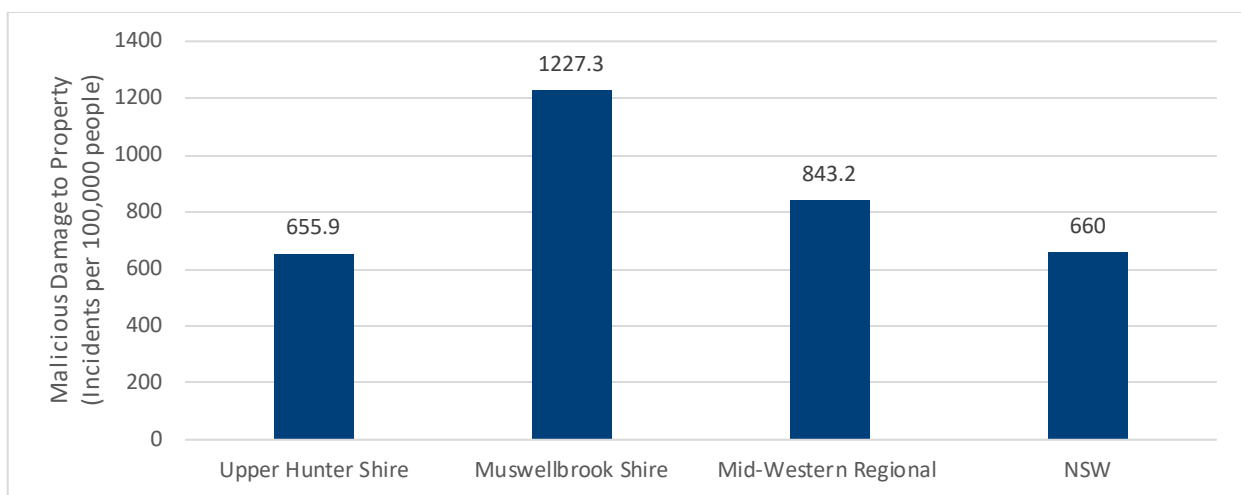
Key Aspects	Description
High levels of crime, in particular in the Muswellbrook Shire	Malicious damage to property is the most reported crime in the LGAs as recorded in <b>Figure 3.8</b> ; with Muswellbrook LGA having significantly higher rates than the Mid-Western or the Upper Hunter Shire LGAs. Excluding rates of malicious damage to property, the top three offence types are summarised in <b>Table 3.8</b> , with statistics indicating proportionately high level of antisocial behaviour across the social locality.

Sources: BOSCAR; 2020 NSW LGA excel crime tables, NSW Recorded Crime Statistics July 2016–June 2021.



**Figure 3.7 SEIFA Index of Socio-Economic Advantage and Disadvantage**

Source: SEIFA (ABS, 2018).



**Figure 3.8 Malicious Damage to Property Incidents by Study Areas (BOSCAR, 2020)**

Source: SEIFA (ABS, 2018).

**Table 3.8 Top Offence Types by LGAs and Highest Ranked Offence Type**

#1 Offence Type	#2 Offence Type	#3 Offence Type	Highest Ranked Offence Type by NSW LGAs
<b>Upper Hunter Shire LGA</b>			
Domestic violence related assault (528.9 incidents per 100,000 people)	Intimidation, stalking and harassment (528.9 incidents per 100,000 people)	Breach apprehended violence order (345.6 incidents per 100,000 people)	Break and enter non-dwelling (37 <sup>th</sup> out of NSW LGAs)
<b>Muswellbrook Shire LGA</b>			
Intimidation, stalking and harassment (1,184.6 incidents per 100,000 people)	Breach bail conditions (958.7 incidents per 100,000 people)	Domestic violence related assault (799.9 incidents per 100,000 people)	Stealing from dwelling (5 <sup>th</sup> out of NSW LGAs)
<b>Mid-Western LGA</b>			
Intimidation, stalking and harassment (962.3 incidents per 100,000 people)	Domestic violence related assault (558.3 incidents per 100,000 people)	Breach bail conditions (554.4 incidents per 100,000 people)	Sexual assault (10 <sup>th</sup> out of NSW LGAs)
<b>NSW Averages</b>			
Breach bail conditions (624.5 incidents per 100,000 people)	Fraud (552.3 incidents per 100,000 people)	Intimidation, stalking and harassment (506.8 incidents per 100,000 people)	NA

Source: BOCSAR; 2020 NSW LGA excel crime tables, NSW Recorded Crime Statistics July 2016–June 2021.

The data outlined above indicates a potential higher prevalence of antisocial behaviour and potentially low levels of cohesion across the community.

### 3.4.6 Economic Capital

Examining a community's economic capital involves consideration of several indicators, including industry and employment, workforce participation and unemployment, income levels and cost of living pressures, such as weekly rent or mortgage repayments. The following provides a summary of the key characteristics of the communities within the social locality from an economic capital perspective, with the complete dataset in **Appendix A**).

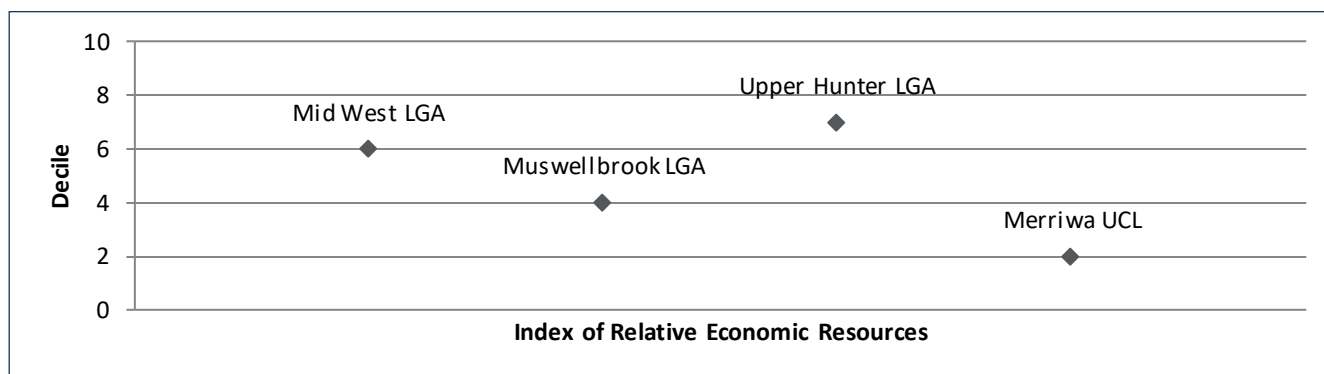
**Table 3.9 Economic Capital Key Aspects and Description**

Key Aspects	Description
Majority of people are involved in land and natural resource-based livelihoods	The agriculture, forestry, and fishing sectors are central to livelihoods across the social locality, is the top industry of employment in the Upper Hunter LGA, and a significant industry of employment in Merriwa, and the Mid-Western LGA. Mining was also a significant contributor to the share of industries by employment, particularly in the Mid-Western and Muswellbrook LGAs, where it is a top industry of employment.



Key Aspects	Description
Supportive economic and business groups	The Upper Hunter region is well supported with a chamber of commerce in Scone, Mudgee and Gulgong. Together with village-based progress associations, these institutions provide ideas and support for economic development.
Increasing demand for housing yet historical housing affordability	<p>The Upper Hunter LGA has experienced a growth in demand for housing, as in Q4 2021, Upper Hunter recorded a median house price of \$425,000, and a median unit price of \$237,500. This represents annual (Q4 2020–Q4 2021) median price growth of 21.3% for houses and 7.0% for units (PRD Research, 2022).</p> <p>The median weekly rent as a proportion of median household income (weekly) for the LGA is 18.8%, compared to 20.2% for Merriwa and 22.9% for broader NSW. Both rental and mortgage payments are lower in the Upper Hunter LGA (\$270 a week, and \$1,560 a month) than NSW (\$420 a week and \$2,167 a month). A higher proportion of residents in the LGA owned their house outright (42.5%) in comparison to NSW (31.5%), and a lower proportion of residents in the LGA rented (23.6%) compared to NSW (32.6%). Similarly, the proportion of renters and mortgage holders paying more than 30% of household income on housing costs is lower in the LGA than the State, indicating minimal levels of housing stress.</p>
Larger proportion of full-time working population	Within the LGA, a higher proportion of the population worked full time (62.6%) than NSW (55.2%), and a slightly lower proportion of the Upper Hunter LGA worked part time (27.9%) in comparison to NSW (29.7%). There is also a slightly higher proportion of the Upper Hunter Shire LGA population participating in unpaid domestic work (67.5%) compared to NSW (66.5%).
Low unemployment	At the time of the 2021 Census, the unemployment rate in the LGA (3.2%) is lower than that of the State (4.9%).
Strong levels of business visitation	Despite lower relative tourist visitation compared to other areas in NSW, the Upper Hunter Country Destination Management Plan (Upper Hunter Country Tourism, 2013) notes that the region is unique for its strong business visitation. 113,000 domestic overnight visitors per year travelled to the Upper Hunter Shire, compared to just 3,000 international visitors. The top 3 reasons for domestic travel were to holiday, visit friends/family and for business (Upper Hunter Country Tourism, 2013).
Merriwa residents experience considerably higher levels of economic disadvantage as compared to their surrounding communities and the State's population	The SEIFA Index of Economic Resources summarises variables directly related to income and wealth, whereby a low score indicates a relative lack of access to economic resources in general, and vice versa for a high score (ABS, 2018). Access to economic resources and economic disadvantage varied widely across the social locality ( <b>Figure 3.9</b> ). Upper Hunter LGA residents have greater economic advantage (score 7) relative to Muswellbrook and Mid-Western LGA residents (score 4 & 6 respectively). Interestingly, residents in Merriwa experience considerably higher levels of economic disadvantage, ranking in the lowest 20% of all locations across the State (score 2).

Sources: (ABS, 2021) (ABS, 2021).



**Figure 3.9 SEIFA Index of Relative Economic Resources**

Source: SEIFA (ABS, 2018).

### 3.4.7 Physical Capital

Physical or built capital includes the provision of infrastructure and services to the community and what is currently available or accessible to people. Within this, it is important to consider the type, quality, and degree of access to public, built and community infrastructure (including amenities, facilities, services, and utilities) as well as the provision of, and diversity of, housing.

Table 3.10 displays the physical capital characteristics of the social locality.

**Table 3.10 Physical Capital Key Aspects and Description**

Key Aspects	Description
Higher proportion of separate houses	Almost the entire population of Merriwa reside in separate houses (95.3%) in comparison to NSW (65.6%), which is in alignment with the rural character of the town.
Higher proportion of private dwelling owned outright	Merriwa has a higher proportion of occupied private dwellings that are fully owned (42.5%) in comparison to the LGA (36.7%) and NSW (31.5%), indicating again that the community is relatively stable. Related, the LGA consists of a higher proportion of unoccupied private dwellings (13.4%) in comparison to NSW (9.4%).
Limited access to health services	<p>Improvements in health care has been identified as a key focus area for Councils of the Upper Hunter and Mid-Western Regional (Upper Hunter Shire Council, 2017; Mid-Western Regional Council, 2017). In 2018, the availability of general medical practitioners was lower in the social locality than the State average (91.8 GPs per 100,000 people), with 83.7, 70.3, and 79.4 GPs per 100,000 people in the Mid-Western Regional, Upper Hunter, and Muswellbrook LGAs respectively. Further, approximately 2% of adults within the social locality experience a barrier to accessing healthcare when needed, with the main reason being cost – a figure slightly lower than the State average (2.5%).</p> <p>The Merriwa town is broadly serviced by one private medical practice (located in Merriwa Town), and the Merriwa Multi-Purpose Service (MPS) operated by Hunter New England Health. Provision is available for visiting specialists; however, low rates of specialist provision have occurred due to the provision of larger hospitals across the Hunter Region and Mid-Western Region.</p> <p>The closest large hospital is Muswellbrook Hospital, which is 104 km and a 1 hour and 20-minute drive from the Project Area.</p>

Key Aspects	Description
<b>Availability of specialised Aboriginal health services</b>	<p>All LGAs in the social locality have specialised Aboriginal health services; the Upper Hunter Community Services centre supports a number of Aboriginal health services including outreach services to Merriwa and a medical outreach Aboriginal chronic diseases program. Ungooroo Aboriginal Corporation also operates a dedicated Aboriginal health service from Singleton and Muswellbrook.</p>
<b>Variety of education facilities across towns</b>	<p>Merriwa has one early learning centre, one primary school, and one combined (central) school. A wider variety of early learning centres, and primary and secondary schools are provided in the larger service towns of Muswellbrook, Scone, and Mudgee. For instance, Muswellbrook contains eight early learning centres, and five primary and combined (central) schools, including a mix of public and non-government providers. There were four preschools identified in Scone, two primary schools, one secondary school, and one combined school. There are also branches of TAFE NSW located in Muswellbrook, Scone, and Mudgee.</p> <p>TAFE NSW Hunter Institute, Scone Campus, is within a 60 km radius of the Project site, which offers courses in Business (Administration), (Medical Administration), Individual support (aging), Horse breeding, Farriery, and School Based Education Support.</p> <p>The Index of Community Socio-Educational Advantage (ICSEA) places the two schools in Merriwa in the lower 20<sup>th</sup> and 6<sup>th</sup> percentile, meaning that most schools in the State have a comparatively higher level of socio-educational advantage when compared to those in the local community (MySchool, 2020).</p> <p>There were a small amount of Merriwa residents attending tertiary education, with just 4.8% in vocational education (including TAFE and private training providers) and 4.5% university or other higher education, a small amount in comparison to broader NSW with 8.5% and 15.3% in 2021.</p>
<b>Community services and facilities</b>	<p>The geographic scale of the social locality is broad and therefore consists of several parks, community recreation facilities, gardens, historic villages, nature reserves and national parks. There are a range of community halls, clubs, pubs, sports and show grounds in the Upper Hunter Shire that are used for art, teaching, live music, exhibitions, festivals and events. Particular emphasis is placed within the Upper Hunter Shire Community Strategic Plan 2027 to increase, enhance and maintain civil infrastructure, community assets and open spaces to meet the needs of current and future generations (Upper Hunter Shire Council, 2017).</p> <p>Further, there is a local skate park and BMX track in Merriwa, as well as a multi-purpose sports club and service clubs such as the RSL, Merriwa Country Women’s Association, Men’s Shed, Women’s Social Club, Merriwa District Progress Association, Can Assist, Children’s playgroup, and Health Environment Group Inc. Major events in Merriwa include the Festival of Fleeces, Morgans Cup Races, and the Springtime Show. There are numerous places of worship, including a Catholic, Anglican Parish and Uniting Church.</p>
<b>Transport infrastructure and usage</b>	<p>The Upper Hunter LGA is located at the convergence of key transport routes from Newcastle and Sydney. Scone, the administrative centre of the Upper Hunter LGA, has its own airport and is located on the New England Highway, a major inland road and freight route connecting the Central West and North West regions to the Hunter region. Scone is also located on the Main North railway line, an important freight link connecting the region to the wider NSW railway network.</p>

Key Aspects	Description
Car usage	Similar rates of car ownership were recorded across the social localities, with at least 90% of households in the Upper Hunter LGA and Merriwa owning one or more cars. The number of motor vehicles per household is slightly higher than the State average of 1.7, with all the LGA community owning 2 motor vehicles per household, indicating that the population is highly reliant on private car use.
Public transport and school bus	The nearest railway stations are at Muswellbrook and Scone. Merriwa has a daily return Community Bus Service to Muswellbrook and Scone on weekdays and a Coach Service to Dubbo and Newcastle three times a week (Merriwa Community Portal, 2020). Both bus services require bookings and are approximately \$10 for a one-way trip. The school bus service in Merriwa services the Merriwa Central School and St Joseph's Primary School Merriwa.
Availability of short-stay accommodation in towns most proximal to the Project is limited yet a range of options exist in nearby regional centres	<p>According to the Economic Impact Assessment undertaken for this Project, the townships within 60-minute drive of the Project Area have a good supply and mix of accommodation including motels, hotels, guest houses, caravan/holiday parks (including cabins). Most accommodation options within a 60 min drive of the Project are located in the towns of Mudgee and Scone, however, there are also options in smaller townships located closer to the Project Area, including Gulgong, Rylstone, Denman and nearby Merriwa, albeit with more limited capacity (Ethos Urban, 2023).</p> <p>The following commercial accommodation was available in the surrounding townships, mentioned above, as of June 2022:</p> <ul style="list-style-type: none"> <li>• 790 hotel, motel, and serviced apartment rooms</li> <li>• 116 cabins (caravan/holiday parks).</li> </ul> <p>Merriwa, being the closest town to the Project, has a generally limited provision of short-term accommodation with three facilities in total: a bed and breakfast, a motel, and a motor inn. Data from AirDNA that indicates that accommodation listed on Airbnb and Stayz.com in the Upper Hunter has had an average occupancy rate of 57% between September 2021 and June 2022, with maximum occupancy rates of 79% in September 2021. While this does not capture hotel accommodation, Airbnb and commercial accommodation usually present similar occupancy rates, suggesting there is remaining capacity in the short-term accommodation system (AirDNA, 2022).</p>
Limited access to the internet	A lower percentage of the population have internet access in the Upper Hunter LGA (76.5%) than NSW (85%).

Sources: (AirDNA, 2022).

### 3.5 Challenges and Opportunities for Local Development

**Table 3.11** identifies development challenges and opportunities currently being experienced across the social locality as gathered from the social baseline profile and through community consultation.

In summary, the key challenges faced by the Upper Hunter Shire include the need to provide for an ageing population with limited health services and addressing the existing strain on short-stay accommodation provision. The Aging and Disability Strategy is a response to address health service provision, and healthy community for those populations (Upper Hunter Shire Council, 2018). The abundant natural resources and strong agricultural sector, combined with the growth in renewable energy projects (**Section 3.3**), place the LGA in a good position to further diversify the local and regional economy.

The increasing number of transient workforces, due to the development of multiple major projects either proposed, or in construction, in the social locality, results in some flow-on challenges for the region in maintaining an existing strong sense of community and managing the potential rise in anti-social behaviour. However, the low mobility of the community is suggestive of a sustained sense of community, and the relatively high rate of volunteerism indicates that the community is willing to participate in community initiatives. This will likely result in positive social development for the community more broadly.

To further support regional development, issues such as the emerging strain on local service provision need to be addressed, as well as upgrades to road infrastructure and telecommunications networks. Some of these identified constraints are already being considered by the Upper Hunter Shire Council.

**Table 3.11 Challenges and Opportunities for Local Development**

Challenges	Capital	Opportunities
<ul style="list-style-type: none"> <li>Impacts of mining and other industrial projects on natural environment requires management and regulation.</li> <li>Area vulnerable to natural disasters such as drought, flooding, and bushfires.</li> </ul>	<b>Natural</b>	<ul style="list-style-type: none"> <li>Area has quality farming land and a highly valued agricultural sector.</li> <li>Strong community values associated with the natural environment and rural landscape.</li> <li>Region hosts nature conservation areas.</li> </ul>
<ul style="list-style-type: none"> <li>Limited experience in large-scale renewable energy development across region.</li> <li>Shifting levels of community acceptance for new projects.</li> </ul>	<b>Political</b>	<ul style="list-style-type: none"> <li>Strong government support for growth in renewable energy sector.</li> <li>Strong and active representation of Aboriginal community.</li> </ul>
<ul style="list-style-type: none"> <li>Ageing population.</li> <li>Low SEIFA Index for education of occupation.</li> <li>Shortage of skilled local workforce.</li> </ul>	<b>Human</b>	<ul style="list-style-type: none"> <li>Proportion of residents undertaking tertiary education is increasing.</li> <li>High proportion of trade-level qualifications within local population.</li> <li>Higher proportion of Aboriginal population compared to NSW.</li> </ul>
<ul style="list-style-type: none"> <li>Local land council shortage on workers available for Cultural heritage site surveys (Registered Aboriginal Parties).</li> </ul>	<b>Cultural</b>	<ul style="list-style-type: none"> <li>Level of organisation around Aboriginal cultural heritage protection and Aboriginal community services is strong.</li> <li>Thriving arts and cultural sectors.</li> <li>Access to National Park for recreational uses.</li> </ul>
<ul style="list-style-type: none"> <li>Increasing number of large-scale projects could cause division in community.</li> <li>Relatively high levels of socio-economic disadvantage, particularly in smaller rural towns.</li> </ul>	<b>Social</b>	<ul style="list-style-type: none"> <li>Tight-knit community with high levels of volunteerism.</li> <li>Low mobility of residents resulting in sustained sense of community.</li> <li>Strong ties to local festivals and community groups.</li> </ul>
<ul style="list-style-type: none"> <li>Potential for labour force competition due to mining activity and high number of other renewable energy projects nearby.</li> </ul>	<b>Economic</b>	<ul style="list-style-type: none"> <li>Region has strong industries including agriculture and mining.</li> </ul>

Challenges	Capital	Opportunities
<ul style="list-style-type: none"> <li>Increasing retirement-age population leading to decrease in skilled employee base.</li> <li>Low median weekly household income resulting in less spending in the local economy.</li> <li>Increasing housing prices.</li> </ul>		<ul style="list-style-type: none"> <li>Council in support of development projects that create new local jobs and help to build a diverse and multi-skilled workforce.</li> <li>Council facilitating the expansion of essential infrastructure and services to match business and industry needs.</li> <li>Low cost of living.</li> </ul>
<ul style="list-style-type: none"> <li>Limited health services and difficulty attracting and retaining doctors.</li> <li>Limited tertiary education options.</li> <li>Shortage of commercial accommodation and housing market constraints.</li> <li>Road infrastructure requiring repairs.</li> <li>Limited public transport.</li> <li>Broadband and mobile coverages in need of upgrades.</li> <li>Potential strain on public infrastructure and services due to rate of change across sectors.</li> </ul>	Physical	<ul style="list-style-type: none"> <li>Highly valued historic character of region.</li> <li>Investment into public recreational infrastructure targeting young people.</li> <li>Education facilities in the area.</li> </ul>

Source: Compiled from the following: (ABS, 2021) (ABS, 2016) (ABS, 2018) (ABS, 2021) (AirDNA, 2022) (Upper Hunter Shire Council, 2018) (Upper Hunter Shire Council, 2020) (Upper Hunter Shire Council, 2017).

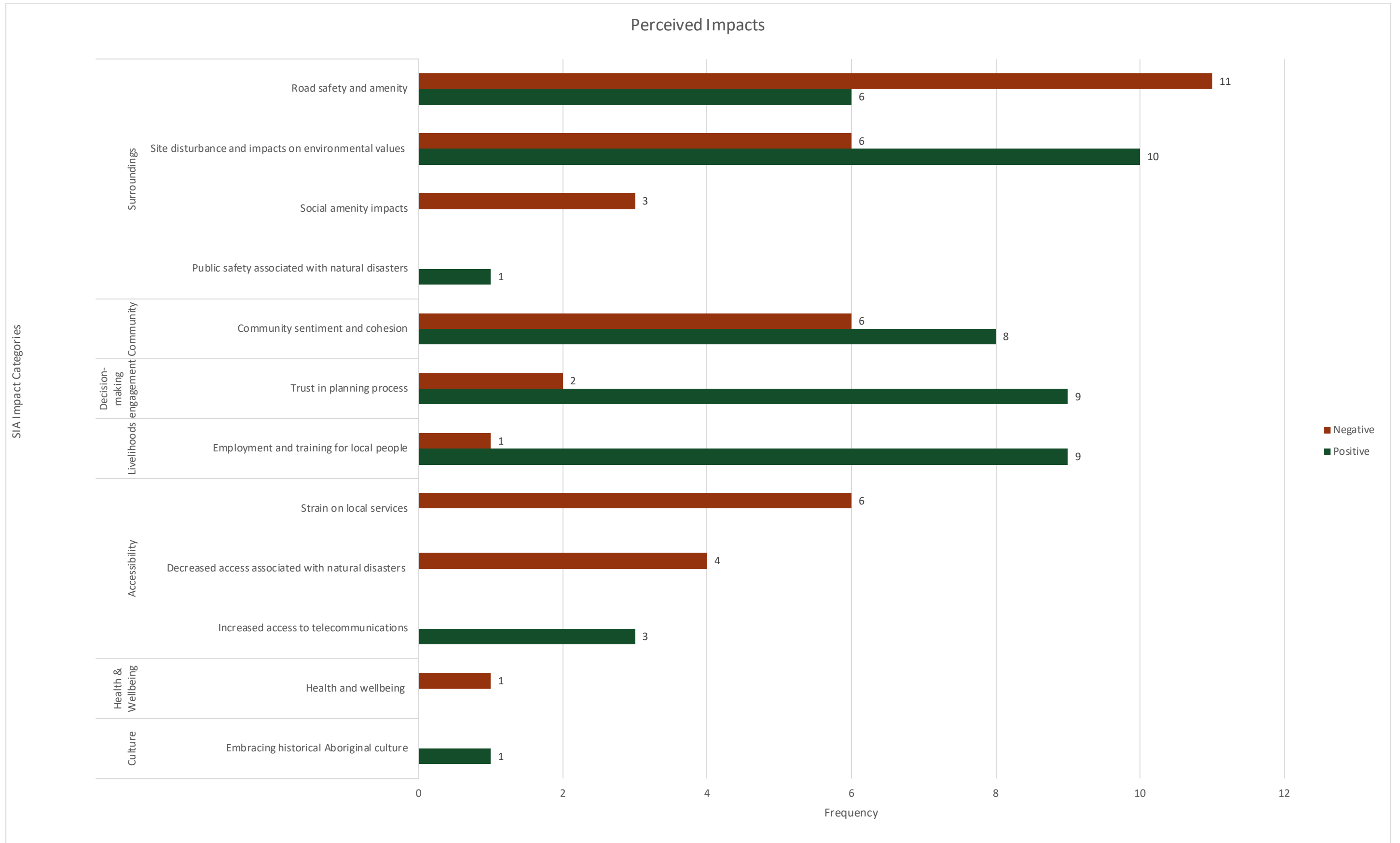
## 4.0 Perceived Social Impacts

This section discusses and analyses the issues and impacts (both positive and negative) in relation to the Project as gathered through stakeholder and community consultation, with analysis framed in accordance with the social impact categories outlined in **Section 2.0** and the SIA Guideline (DPIE 2021). Measures and/or strategies to mitigate, respond to and address the social impacts are also outlined as identified from the community.

In summary, community-identified impacts associated with the Project were most frequently associated with the perceived road safety and amenity impacts that the Project may bring (n=11 of negative sentiment and n=6 of positive sentiment), particularly relating to the low existing quality of Wollara and Ringwood Road, of which the Project would use to access the site. Residents alongside the road raised that road repairs and upgrades that could occur as a result of the Project would improve personal use of the road and accessibility around the local area, which would lead to broader improvements to their way of life.

Social impacts relating to the site itself were also raised with regard to how the Project may affect local community values associated with the natural environment and agriculture (n=6 of negative sentiment and n=10 of positive sentiment), with many stakeholders noting that the continued management of wild dogs in the immediate Project Area may become challenging due to the Project's establishment, if it were to include sheep grazing, as well as the changes in land-use from agricultural to solar electricity generation that the Project would cause, resulting in a reduction in land-based livelihoods in the community.

**Figure 4.1** outlines the unprompted social impacts identified by stakeholders and their alignment with social impact categories. Impacts raised by the community are notably similar, if not the same, as previously identified impacts in the scoping phase of the Project, which reinforces these as important to the local community and other Project stakeholders.

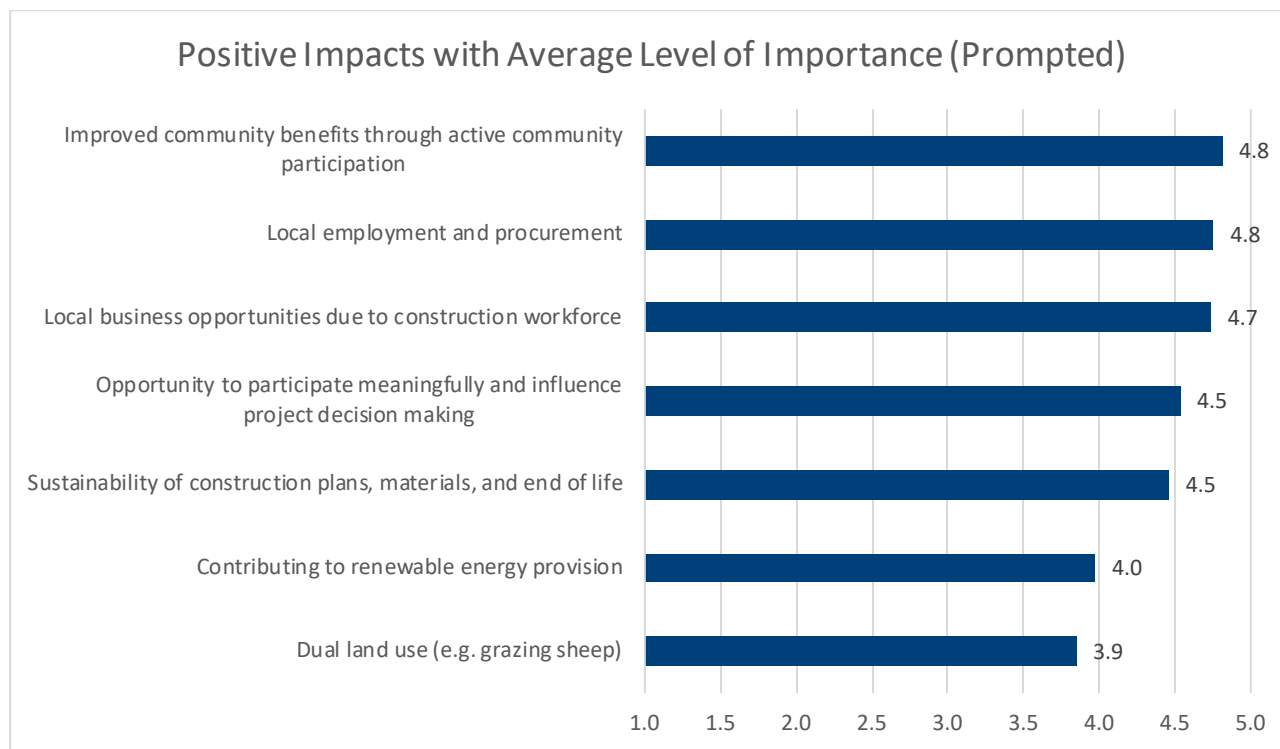


**Figure 4.1 Perceived Social Impacts**

Source: (Umwelt, 2022).



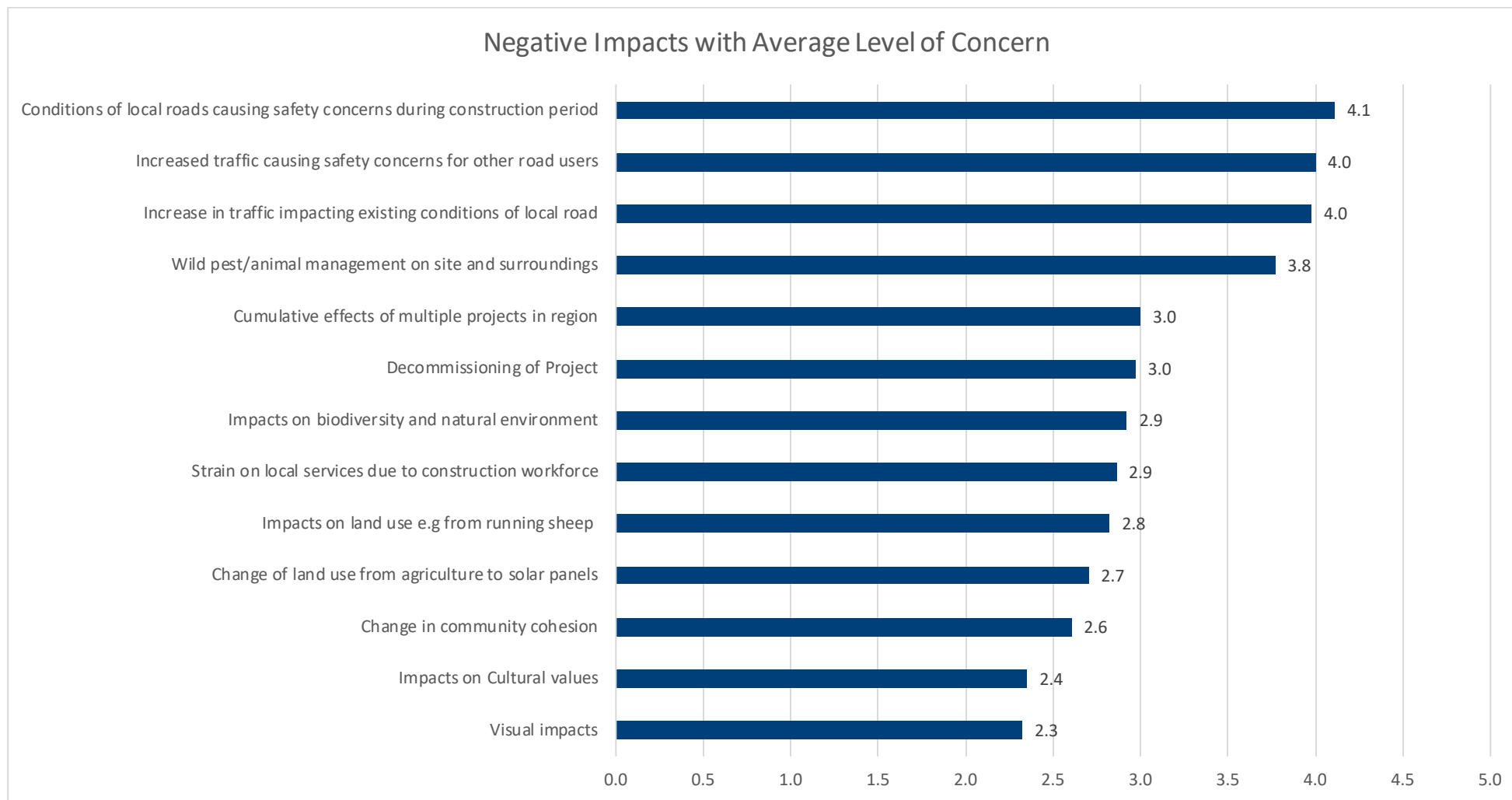
Through community engagement, participants were asked to reflect on the identified impacts and score them by level of importance (positive impacts) or level of concern (negative impacts), with the average scores outlined in **Figure 4.2** and **Figure 4.3**. Positive impacts are displayed with their perceived average level of importance, from one being not at all important to five being extremely important. The negative impacts are displayed with their average level of concern, from one being not at all concerned and five being extremely concerned.



**Figure 4.2 Average Level of Importance for Each Potential Positive Impact**

*Total sample; Unweighted; base n = from 39 to 45; total n = 53; 14 missing.*

*Source: Umwelt, 2022.*



**Figure 4.3 Average Level of Concern for Each Potential Negative Impact**

*Total sample; Unweighted; base n = from 34 to 45; total n = 53; 19 missing.  
Source: Umwelt, 2022.*

The following matrix illustrates the linkages and interconnections that exist between the identified social impacts of the Project by the community and the categories they are organised within for the purposes of this assessment (refer to **Table 4.1**) <sup>7</sup>.

**Table 4.1 Interconnectivity of Social Impacts**

Impact description	Surroundings	Way of Life	Community	Culture	Engagement & Decision making	Livelihoods	Accessibility	Health & Wellbeing	Cumulative
Decreased road safety due to further deterioration and speeding along the already low-quality Wollara and Ringwood Road due to heavy vehicles traffic to and from Golden Highway through Merriwa Town	X		X						X
Decreased road safety for cars and the local traffic due to the combination of fast-growing grass along Wollara and Ringwood Road, affecting the level of visibility, in combination with the addition traffic of heavy vehicles	X								
Fears of increased presence of wild dogs in and around the Project site due to proposed sheep grazing on site, placing danger to the local community and other animals (pets and livestock)	X							X	
Loss of community sense of place due to change in the land-use from agricultural to solar energy	X	X	X	X					
Concerns regarding the relatively short lifespan of the Project relating to waste creation and future land use, which could decrease community support for the project	X		X						
Increased noise and dust due to heavy vehicle traffic at Wollara and Ringwood Road causing disturbance of nearby residences	X	X						X	X
Loss of the sense of place due to changes in the visual landscape due to the Project development	X	X							X
Decreased accessibility to and around the Project site due to existing conditions of Wollara and Ringwood Road, that may not be able to cope with additional traffic volumes	X						X		X

<sup>7</sup> Social impacts are not mutually exclusive, with interrelationships existing between impacts and how people experience them. For example, an increase in the population of a rural town due to an incoming construction workforce may cause increased local spending, generating economic activity and growth for small businesses, yet at the same time the change could cause a strain on the local housing market which in turn, could affect the accessibility for residents and other users.

Impact description	Surroundings	Way of Life	Community	Culture	Engagement & Decision making	Livelihoods	Accessibility	Health & Wellbeing	Cumulative
Increased levels of community anxiety due to delayed emergency response time in case of a bushfire event due to the lack of public accessibility to the site and community risk of bushfire	X						X	X	
Decreased level of acceptance of the Project from the local community in case Wollara and Ringwood Road repairs are not completed	X				X		X		
Loss of local community sense of place or anxiety due to uncertainty about changes to social surrounds	X	X	X	X				X	
Decreased community cohesion due to an influx of construction workforce in town and changes to community composition and potential rise in anti-social behaviour		X	X	X				X	X
Increased social capital through opportunities for workers to get involved with the local community organisations		X	X	X					
Population changes due to construction and operation workforce causing changes to community composition		X	X	X					
Increased optimism for contributing to a more sustainable region by reducing reliance on carbon intensive industries		X	X	X				X	X
Project being built in proximity of significant Aboriginal and European Heritage and cultural values causing concern over personal history and heritage		X	X	X				X	
Opportunity for the local community to participate meaningfully and influence project decision making due to existing high-level awareness					X				
Opportunity to stimulate a growing industry and to upskill local workers in the renewable energy industry						X			
Increased opportunity for local and regional procurement						X			
Increased opportunity for economic benefits to local businesses from workforce spending in the local town						X			

Impact description	Surroundings	Way of Life	Community	Culture	Engagement & Decision making	Livelihoods	Accessibility	Health & Wellbeing	Cumulative
Increased strain on local accommodation availability/affordability due to the influx of workforce						X	X		X
Increased strain on local emergency services and health care due to the influx of the new population combined with the existent issue of lack of emergency and health care services							X		X
Opportunity for accommodation providers to consider an expansion of their services due to the influx of new population						X	X		X
Increased access to telecommunications networks/services for the local population							X		

The following sections document the range of perceived social impacts that have emerged within each social impact category. The order of the following sections has generally been organised by most frequently mentioned impacts as gathered through stakeholder and community engagement. Where relevant, similarities and/or differences in the impact and perceived level of concern or importance of it across stakeholder groups have been identified, indicating the breadth and depth of the impact, with the following key observations noted:

- Concerns for road safety and amenity, due to the already low quality of the local network, were raised most frequently by neighbouring landholders and emergency service providers.
- Local businesses and community groups raised that the Project offers local business opportunities due to the incoming construction workforce, where Project benefits would be expected to be experienced locally, with some also mentioning the potential strain on local services due to the increase in the population, indicating a need to ensure that local communities realise benefit from the Project in ways that promote continued social and economic stability for the community.

Community identified strategies to mitigate or respond to social issues and impacts, as well as opportunities for the Project and the proponent to positively contribute to the local community have been included. These form a basis to further consider and to explore community benefit sharing opportunities. Project-led community development strategies often lead to improved social outcomes when an identification process of local needs and opportunities is undertaken in collaboration with local stakeholders. Local benefit sharing schemes and targeted support can over time generate improvements in a community's sense of place, social cohesion, and capacity of local organisations.

## 4.1 Surroundings

As outlined in the SIA Guideline (DPIE 2021), impacts in this category often include changes in services or functions provided by ecosystems 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. Potential impacts on surroundings identified in relation to the Project include:

- Road safety and amenity due to the increase in heavy vehicle traffic during construction.
- Impacts on environmental values and agricultural land use caused by site disturbance.
- Public safety associated with natural disasters.
- Social amenity impacts, during construction.

### 4.1.1 Road Safety and Amenity

The impact on road safety and amenity was the most cited concern amongst stakeholders consulted for the Project (n=11), as detailed in **Figure 4.1**. Local residents and community members raised the existing road conditions and road safety in the area as a common concern and questioned whether the Project would result in further deterioration of local roads, particularly during construction. When asked what the local community needs are, the most frequent response was 'improved local roads' (n=13, 52%), as outlined in **Table 4.3**.

#### 4.1.1.1 Road Safety and Usability

Based on outcomes of community consultation, the most prevalent perceived issue of the Project relates to the heightened safety risks for road users due to the increase of heavy vehicle traffic during construction, where the existing low quality and narrow roads would be relied upon for site access. This matter was amplified when stakeholders considered the existent low visibility along the road, the potential for speeding around certain dangerous bends, and the general suitability of Ringwood Road and Wollara Road for an increase in traffic.

Similarly, there has been a common concern regarding the potential increase in road accidents on Ringwood Road, when turning in and out from the Golden Highway. Given the existing issue of low visibility due to the fast-growing grass along Ringwood Road, members of the community, including residents and local emergency service providers, raised fears that if measures are not in place for grass maintenance ahead of the Project's construction, the increased truck movements would exacerbate the safety issue. Responses from proximal residents and local emergency services on the issue of road safety and amenity have been captured as follows:

*You will guaranteed see traffic crashes during construction – and we will be the ones to deal with it.*

*Livestock walking up and down the road sometimes and crossing at certain sections. This is a major concern for trucking coming along the narrow road and what that means for passing drivers.*

*Safety concerns of multiple traffic movements for crossing livestock.*

*Grass gets high and doesn't get slashed once a year – council need another slasher – visibility impacted.*

*Accident waiting to happen with trucks. The trucks pulling out to (Golden) highway will have low visibility due to the corner.*

*Putting signs on freeway will not be good enough.*

According to the Traffic and Transport Impact Assessment (TTIA), sight distance at the intersection of Ringwood Road and the Golden Highway from Ringwood Road is slightly deficient for existing vehicles. However, given that adequate warning signage notifying motorists on the Golden Highway that trucks are turning into and out of Ringwood Road is already installed near the intersection, no additional repairs would be required, however, to further improve safety, temporary warning signage could be installed during the construction period, indicating that trucks would be turning at the intersection. Additionally, the TTIA also states that in the five-year period from 2016 to 2020, crashes along the Golden Highway were generally dispersed with occurrences in and around the Merriwa town centre, and no crashes were recorded at the intersection of Ringwood Road and the Golden Highway (Turnbull, 2022).

The existing condition of the roads also led proximal residents to share their concerns of large rain events, that occurred in the past and could occur again due to the heavy rainfall season in NSW, which decreases safety and affects the usability of the road. In a recent event, flooded Ringwood Road led residents to evacuate their properties for several days.

*The road floods in several locations at various times. When the road floods the crossings no one can go through. In the past people have hit the water and slipped down into the river, crashing their car, and needing emergency services to pull their car out.*

Another key concern for driver safety along Ringwood Road raised by proximal residents and local emergency service providers was regarding the speed at which most traffic already travel, where the speed limit on the road is 90 km/h, however, multiple residents indicated that locals already tend to drive faster and were concerned for an increased amount of traffic also above the speed limit, associated with construction activities.

*Speed on road is too fast – 90 km – who knows what happens with trucks turning corners.*

*The speed limit is 90 but we (people who live on the road) all know that we drive a bit faster than that sometimes.*

Local residents also expressed that local roads would not be suitable for construction vehicles and large trucks to drive on due to the low quality, minimal maintenance and narrow width of Ringwood and Wollara Road. Similarly, several concerns were raised regarding the proposed access routes to the site, as local roads would not be able to cope with additional traffic volumes.

*Crossing at Bow River – concrete breaking up – washed away and never been fixed.*

*Roads are terrible all around it – Council aren't doing anything.*

*Narrow roads, safety of passing vehicles is concerning.*

*Skinny sections of road, even if it was tarred it wouldn't be wide enough.*

There were suggestions by some proximal residents and community group members throughout engagement that the Project could explore the option of accessing the site via Redwall and Binks Road, to avoid passing through private properties and creek crossings; respondents also suggested that those access roads would also be beneficial as they have safer and more visible access to the Golden Highway.

The TTIA assessed the addition of construction traffic on the road network (assuming peak construction workforce would be in 2025, and accounting for 2% base rate traffic increase each year) and found it would result in a marginal increase in the average travel time of up to one second, with spare capacity, low average delays and minimal queues on all approaches during the morning and evening peak hour (Turnbull, 2023). Further, both the Ringwood Road/Golden Highway and Ringwood Road/Wollara Road intersections are predicted to continue to operate with spare capacity, low average delays and minimal queues during the morning and evening peak hour, the overall impacts on road network performance during construction are anticipated to be minor (Turnbull, 2023).



Furthermore, as identified in the TTIA, the Project would require road repairs and upgrades on Ringwood Road. These would be completed prior to the commencement of works for the solar farm. LSbp has committed to the following:

- Upgrades to culverts at Bow River and Killoe Creek located on Ringwood Road. The culvert upgrades will include:
  - Installing culverts designed to accommodate two-way heavy vehicles, including B doubles and various farm machinery.
  - Culvert width 7 m (3.5 m lane width) sealed carriageway with suitable guardrail and signage and associated drainage works.
  - Stockpile site to be located on disturbed land within the road reserve in consultation with the Upper Hunter Council.
  - Temporary side track at both locations to facilitate access during construction.
- Widening and resealing of 1.8 km of Ringwood Road between Bow River and Killoe Creek.
  - This will include an 8 m bitumen-sealed formation with a minimum of 500 mm unsealed shoulders with all works contained within the existing road corridor. The horizontal and vertical alignment of the proposed road will ensure safe sight distance, safe movement of longer vehicles, and an improved road network for the users.
  - In response to community feedback, LSbp had also proposed to seal a section of Wollara Road. These upgrades were not required to facilitate access to the site but were identified as a positive community benefit. Following further discussions with Forestry NSW and Upper Hunter Shire Council the sealing of this section of Wollara Road was not supported and as such is not currently proposed as part of the development.
  - While the sealing of Wollara Road would have benefited a portion of the local community at the southern extents of Wollara Road and its side roads, the larger benefit to the community is provided through the upgrades to Ringwood Road. Additionally, LSbp have committed to including the capital value of these proposed works as an additional contribution to the proposed Voluntary Planning Agreement with Upper Hunter Shire Council, to go towards on-going road maintenance.

During the December 2022 Community Information Drop-in Sessions, where LSbp presented the early designs of the proposed road repairs and upgrades, there was a high level of interest regarding the significance of proposed upgrades. Community members shared their appreciation with LSbp and Umwelt representatives about these, especially the culvert upgrades and what this will mean for safety and access of the road.

In addition, throughout consultation with Upper Hunter Shire Council in early December 2022, the Mayor and Deputy Mayor expressed their appreciation for the significant road upgrades, and their general support for the project.

Some positive responses from the community were also received relating to roads, with views expressed that if road upgrades are completed, there would be increased accessibility and usability of local roads for all users. Members of the local community expressed that appropriate work on upgrading the local roads would be felt as a great benefit for the local area.

*The building and laying tar on the Ringwood Road from the intersection of the Golden Highway to the Wollara Road. This will provide great community benefit.*

#### **4.1.1.2 Traffic-Generated Dust and Noise**

A proximal landholder raised concerns around the increased dust creation of additional traffic travelling along the dirt section of Wollara Road, as this dust may settle in his dam that is close to the road and will increase silt. This was of high concern to the landholder, as his grazing cattle drink from this dam.

*Where the road is dirt, the dust will be a problem.*

*By not upgrading the road this will be a negative impact to the residents, creeks, dams and atmosphere with the dust generated and additional silt run off Ringwood Road and Wollar Road have been significantly damaged due to the recent and ongoing wet weather, and this is on the Upper Hunter Council for the moment.*

*Silt increases in dams because of dirt road.*

Potential noise and dust related impacts associated with the Project will primarily be associated with the construction activities and will have the potential to affect rural residential properties located in proximity to the Project Area. With the implementation of the Ringwood Road repairs and the air quality controls and mitigation measures proposed in the Air Quality section of the Environmental Impact Statement (EIS), it is expected that the construction and decommissioning activities would have a negligible impact on local air quality (Umwelt, 2023).

*The more traffic means the more noise impacts.*

An assessment of the potential noise and vibration impacts has been assessed in accordance with the Interim Construction Noise Guideline (ICNG, 2009). The assessment found that construction noise levels associated with construction of the solar farm are predicted to comply with the established noise management levels. At the same time, construction noise levels associated with road upgrades have been assessed and found to exceed the noise management levels at the nearest dwellings, however, no receivers are predicted to be highly affected by noise. (Umwelt, 2023).

It is understood that major solar and battery components would be delivered to the Project Area by road via the Golden Highway and Ringwood and Wollara Road, which has been confirmed through the TTIA undertaken as part of the EIS, and in consultation with key stakeholders.

A summary of recommended mitigation and management measures to minimise road-related impacts during construction and/or operation of the Project as contained within the TTIA include:

- A Construction Traffic Management Plan (CTMP) be prepared in consultation with Transport for NSW, Upper Hunter Shire Council, National Parks and Wildlife Service and other relevant stakeholders.

- Notice for community regarding timeframes of proposed road repairs and transport network changes through appropriate media and other forms of community liaison.
- Construction workers would be encouraged to carpool or use the shuttle buses to travel to and from the construction site.
- Parking requirements for the Project during construction and operation would be provided on-site, and parking would not be provided on public roads adjacent to the site.
- Additional warning signs are recommended along sections of Ringwood Road and Wollara Road where the road narrows and near the site access points.
- Upper Hunter Shire Council would continue to be consulted on upgrades required on Ringwood Road and Wollara Road.

Community-identified strategies to reduce these impacts include:

- The consideration of other access routes was suggested.

*Consider the use of Redwell Road – not as many trucks going past people’s houses.*

- Support upgrades or maintenance of local roads.

*You need to tar the road in order to gather community support. Otherwise, there is no community benefit for the project. All the perceived benefits that are spoken off are not real and will not materialise unless greater community benefit through tarring the road is achieved.*

- Opportunity to work with both the Upper Hunter Shire Council (UHSC) and Mid-Western Regional Council to improve roadways to the north (Merriwa) and southwest (Mudgee).
- Explore feasibility/ necessity of installing a turning lane out onto Golden Highway from Ringwood Road.
- Traffic safety inductions for all workers, held in town before they drive out to the Project site. This will inform all workers about safety considerations and of livestock movements on the road. It was also suggested that there are consequences, or a protocol adhered to, to ensure safe driving is enforced to ensure everyone is kept safe.

*We move a lot of stock across the road. People driving along the road need to be informed around crop and livestock movement – safety inductions for drivers.*

- Provide mirrors for people who live along the road to be able to see if anyone is coming along the road when pulling out of driveway.

*Mirror for getting out of driveways, driveways that are dirt tracks that come out of the bush. Vision is poor.*

- Bus stop along Ringwood Road to be maintained and graded to ensure safely away from trucks passing.

## 4.1.2 Site Disturbance and Impacts on Environmental Values and Agricultural Land Use

A number of concerns were raised about the potential impacts of the development of the solar farm on farming land and the natural environment, with these concerns relating to:

- Ecological values of the native fauna in the area.
- Potential pollution to the waterways.
- Increased risk of pest animals and weed species.
- Changing land use.
- Project lifespan and recycling of materials.

In relation to ecological values, some participants (n=2) expressed concerns regarding impacts on areas on native fauna due to the fencing around the solar panels, while others mentioned the possibility of polluting the local water systems. When prompted to indicate the level of concern for potential negative impacts from the project on a scale from 1 (not at all concerned) to 5 (extremely concerned), ‘impacts on biodiversity and natural environment’ had an average ranking of 2.9, as indicated in **Figure 4.3**.

Responses received from the community are as follows:

*Ability for kangaroos, wallabies, and quolls to live naturally in the area – project may impact them.*

*Potential water pollution to the Bow River from stormwater runoff both during construction and operations, e.g. pesticides, sediment control, etc.*

Also, some respondents raised their concern regarding the natural environment. It was expressed by stakeholders their lack of trust on developers’ commitment with the local biodiversity, and therefore their fear that an enforcement of biodiversity offset regulations could be a challenge.

*Developers don't abide by the rules from the environmental legislation – no one enforces the biodiversity offsets. Lots of rules, who enforces them. Need someone from government to check that they are doing the right thing.*

Outcomes on the Biodiversity Development Assessment Report (BDAR) prepared for the Project by Umwelt, concluded that connectivity for terrestrial native fauna species was considered as part of the development layout design. The Development Footprint contains three separate areas containing solar farm infrastructure, which are connected by vehicle access tracks. While the three separate areas will be fenced to exclude terrestrial fauna, the vehicle tracks will not be fenced to maintain habitat connectivity and ensure passage for terrestrial fauna species is maintained through the Project Area (Umwelt, 2023).

According to the BDAR, impact avoidance and credit requirements documented in the report will be required, as well as any conditions associated with project approval.

Further, in relation to the concern that the Project could cause water pollution, solar panels are not known to leak chemicals into the environment or cause ground or water contamination while in use. The Water Resources Assessment for the Project concluded that construction of the project is unlikely to cause changes to the water quality environment against the identified NSW Water Quality Objectives (Umwelt, 2023).

The management and mitigation measures recommended to minimise water impacts during construction and/or operation are outlined in the EIS, which include suggestions of avoidance of infrastructure in certain areas of the Project site, waterway crossings to be compliant and an Operational Environmental Management Plan (OEMP) to address potential impacts on surface water quality during the operational phase.

Community-identified strategies to reduce these impacts include:

- Development of a land-based biodiversity offset plan to offset any impacts on biodiversity.
- Opportunity for increased research on agri-solar options in the Australian context.

*This project needs to be documented well and used as research, to add to the Australian data on agri-solar. There is limited data about Australian soils and our sheep, it might be different for Australia (in comparison to existing international studies).*

#### **4.1.2.1 Increased Risk of Pest Animals and Weed Species**

Most proximal neighbours and community groups (n=10, average level of concern 3.8/5) raised their concerns around the long-standing issue of a large wild dog population in and around the Project Area as indicated in **Figure 4.3**. As the Project plan includes running sheep on site, respondents fear that this could increase the presence of wild dogs, placing danger to the local community, livestock, and other domestic animals.

Local residents also expressed their concerns about the potential risk of sheep fatalities by the wild dogs, which as a result would attract even more wild dogs to the area. Respondents explained that the Project Area has not run sheep for decades due to the prevalence of wild dogs already living within the nearby national park, and instead has only had grazing cattle which are more resilient.

*Running sheep with wild dog problem will be an issue – will need exclusion fence around the site.*

*Wouldn't recommend running sheep on site, haven't run sheep there for over 40 years. Even if the sheep are fenced in, it will still bring wild dogs to area due to the smell of them, therefore increasing dogs on other proximal landowners' sites.*

A proposed project measure that has been suggested is high security fencing to be installed around the perimeter of the solar panels sections to protect the infrastructure and the livestock, however, this was not seen as a solution to the problem for a number of proximal residents who explained that the smell of sheep in the area would still encourage wild dogs and increase the numbers on the proximal properties.

*Get rid of the wild dogs, they need to be managed. they come close to the house; they might be a safety concern for people one day. Killed sheep and chickens.*

*A helicopter shooting program recently shot 150 wild pigs in an hour – there are groups of 20 or more a night, coming from project area.*

The community has recommended the following mitigation strategies, which include:

- Participate in pest animal management programs through financial contributions to the Merriwa Wild Dog Association.

*Supportive of LLS (Local Land Services) wild dog groups to protect what we have in the National Park – work with LLS to control wild dog population.*

*Wild dog problem – there's a lot there and will bring more dogs to the area. Lightsource bp will need to contribute to the wild dog association.*

Less respondents were concerned about the weed management on the site in comparison to the wild dog issue. However, proximal land holders expressed their view on the necessity for the Project to keep their weeds down to prevent them spreading to other properties.

*St Johns wart weed is spreading. Last year I spent 20 k spraying it – I bought a spraying unit 13 k – spent 3 weeks spraying going through multiple drums of chemicals. \$600 a drum.*

*Weed management - potential for them to take over and get out of control if not managed properly.*

*Will need chemical weed control.*

The community has recommended the following mitigation strategies, which include:

- Hire local contractors to spray the whole site for weeds.
- Lease part of the land to local people who are familiar, and who can manage keep the weeds under control, as spraying the weeds with a boom sprayer or helicopter is not understood to be satisfactory. Further, a spraying rig will need to be used to get to all the areas and to avoid killing trees.

#### **4.1.2.2 Change in Land-Use**

A concern for many neighbouring landholders and community members was the impact of the Project on agricultural land. The changing of agricultural land-use to energy generation is a multidimensional issue that encompasses community and sense of place considerations, livelihoods and economic productivity, food security, impacts on surroundings and visual and social amenity.

As discussed in **Section 3.4**, Merriwa has a long history of agricultural land use and large and productive land holdings. The Project Area is currently used to graze cattle, with most proximal properties also used for cropping and/or cattle grazing.

When prompted to indicate the level of concern for potential negative impacts from the project on a scale from 1 (not at all concerned) to 5 (extremely concerned), 'Impacts on land-use' had an average ranking of 2.8, and 'Change of land use from agriculture to solar panels' had an average ranking of 2.7, both indicated in **Figure 4.3**.

At the same time, other local community group members felt that the Project could help improve the land, given the reduced agricultural activity, and could also facilitate further opportunities for the dual use of land for both renewable energy production and agriculture (n=2).

*Sheep running under panels is great – keep grass down. Feral animals will be a problem for sheep – will need to be on the ball. Baiting, fencing etc.*

*Sheep will wreck the soil and ground – when it rains, they trod around all over the joint. Good idea because they will keep grass down.*

*Will be good to still run some cattle around the different patches of the site where there are no panels – it would keep grass down, and give me a way to be still connected to the land somewhat.*

When prompted to indicate the level of importance for the potential positive impacts from the project on a scale from 1 (not at all important) to 5 (extremely important), ‘dual land-use’ had an average ranking of 3.9, as indicated in **Figure 4.2**.

Should the Project be approved, and sheep grazing take place on the land as is proposed, the livestock would be managed by an external party in conjunction with Lightsource bp, similar to the model being undertaken on Lightsource bp’s nearby Wellington Solar Farm and as planned on a number of other Lightsource bp projects once they are operational. There is growing evidence that co-location of sheep and solar farms may be mutually beneficial. Recent news stories suggest that sheep grazing under solar panels at sites in NSW’s Central West have produced improved wool yield and quality, given access to water for livestock (condensation from panels, which has assisted during periods of drought) and improved weed management (ABC News, 2022).

Notwithstanding, the community has recommended the Project consider exploration of alternate options to co-exist with agriculture due to the particularities of this Project context.

#### **4.1.2.3 Project Lifespan and Recycling**

Concerns regarding the relatively short lifespan of the Project and decommissioning of the solar farm at the end of its lifecycle were discussed during consultation by different stakeholders, with a large emphasis on the need of solar panel recycling when they are no longer in use by the Project. When prompted to indicate the level of importance for the potential positive impacts from the project on a scale from 1 (not at all important) to 5 (extremely important), ‘sustainability of construction plans, materials, and end of life’ had an average ranking of 4.5. When prompted to indicate the level of concern for potential negative impacts from the project on a scale from 1 (not at all concerned) to 5 (extremely concerned), ‘Decommissioning of Project’ had an average ranking of 3, as outlined in **Figure 4.3**.

*What happens to solar panels at end of life, do they get recycled. Make sure this happens.*

*Project only has life span of 35 years. Panels are not reusable in 35 years. Government is short sighted. Renewable energy projects are not environmentally sustainable. This land which has been used for agricultural production for the last 120 years will become industrialised wasteland.*

While the Project is proposed to have an operational life of 40 years when decommissioning of the Project would occur, the Project may also be extended, or repowered, with equipment being replaced.

A decommissioning plan for the Project and associated infrastructure will be prepared in advance of decommissioning in consultation with the relevant regulatory authorities and local stakeholders, as per the Decommissioning and Rehabilitation Management Framework (DRMF) included in **Appendix 21** of the EIS. The basis of the plan will be that the Project and associated infrastructure are to be decommissioned in line with the applicable legislative requirements and best practice guidelines at that time. Further, Lightsource bp has a partnership with Lotus Energy to manage the recycling of solar panels, including through the life of the Project if panels are damaged during construction or operations, and in the decommissioning stage.

Lotus Energy is based in Melbourne and are in partnership with Lightsource bp to provide the option for solar panels to be recycled. Lotus Energy works with renewable assets, including solar, data mining, battery storage, electric vehicle charging, and waste to energy with revenue paid to unit holders.

The community has recommended the Project select a designated recycler and plan for future costings around this activity.

### **4.1.3 Public Safety Associated with Natural Disasters**

Public safety concerns and decreased access associated with natural disasters, such as fire and flooding, were also frequently raised during consultation, (n=5), proximal landholders described fears associated with increased bushfire and flooding events.

Concerns were raised by multiple stakeholders, including the local emergency services, regarding bushfire events, which have happened in the region multiple times in the past few years. It was suggested that lightning strikes in the National Park can spark large bushfires, which then move towards the Project Area and, if not controlled, have the potential to move towards proximal properties. Local emergency services explained that they would need to have ample access in and around the site in this case.

*Decreased access to site, and surrounding bushland during a fire. We will need access to and around site.*

Respondents also expressed their concerns about the lack of a full-time presence on site, which could delay the response time in case of a bushfire spreading quickly. They explained that relying on a CCTV system only would not be enough for a quick emergency response.

*Concerns for not having someone on site 24/7. CCTV are not good enough if there's a fire and it needs to be responded to asap. Reactions for fires, lightning strikes etc need to be quick to save the whole thing going up and it spreads quickly.*

In case there is a risk of bushfire in the National Park spreading towards the site, the Project has complying distances between high fire hazard materials to avoid any harmful levels of toxic gas fume release, and therefore maintain high standards of air quality. A risk assessment assessed the likelihood of bushfires on the site, and concluded that appropriate risk management measures would be in place, such as buffers between infrastructure and the boundary, refer to **Section 6.10.3** of the EIS (Umwelt, 2023).



The community has recommended the following mitigation strategies, which include:

- Implement a bushfire management plan.
- Lightsource bp providing training and site tours for local Rural Fire Service, Volunteer Rescue Association, and Fire & Rescue members and employees to familiarise them with the access points and procedures and to also provide solar farm specific bushfire skills.
- Fulltime workers on site to live locally and be ‘on-call’ to respond to issues on the site.
- Dedicate an emergency meeting spot on site that is clearly communicated with all surrounding emergency services.
- Ensure there is efficient helicopter access to onsite water tanks, in case of a large fire.
- Maintain the fire trail roads around the site, including the grading of these tracks and ensuring they are 4 m wide.
- Run livestock on site as a way to keep the grass down and prevent the spreading of bushfires.

#### 4.1.4 Dust and Noise Amenity Impacts

Stakeholders also raised concerns about impacts that may be experienced should the Project be approved, particularly in relation to the generation of noise and dust during the project construction.

Only one stakeholder raised concerns for the visual amenity impacts, stating that they would be able to see the Project’s solar panels in the distance when driving from their property, however, didn’t mention that they were significantly negatively impacted by this.

*in the intersection between Neverfail road and Ringwood Road you would see panels, north facing hillside is exposed.*

The landscape characteristics which make the local area distinct, as mentioned by community groups and proximal landholders throughout consultation, involved the agricultural land uses in particular the canola fields and green oat crop fields along Ringwood and Wollara Road, represented in **Figure 4.4**. The Project site however was not mentioned to have any significant visual value to the community groups or proximal landholders.



**Figure 4.4 Canola Fields in Merriwa**

*Source: (Merriwa Community Portal, 2022).*

The visual impact was considered the lowest concern of all the possible negative impacts from the Project, when prompted to indicate the level of concern for potential negative impacts from the project on a scale from 1 (not at all concerned) to 5 (extremely concerned), ‘visual impacts’ had an average ranking of 2.3, as indicated in **Figure 4.3**.

Many stakeholders mentioned the suitable location for a solar farm, due to the site not having any direct neighbours and having minimal visual impacts due to existing surrounding trees.

*Incredibly great spot for the solar farm – great site selection.*

The Visual Impact Assessment (VIA) states that the Project Area is visually isolated, surrounded by the dense native forest of Goulburn River National Park, which currently attracts relatively few visitors (Envisage Consulting, 2022). There is only one publicly accessible road past the Project Area (Wollara Road – an unsealed local road) which receives low traffic loads and does not provide access to the Park’s facilities (campground and picnic area) (Envisage Consulting, 2022). The VIA field assessment identified six representative viewpoints (VPs) to assess the potential impact of the Project, as listed below:

- VP1 Wollara Road: single public viewpoint located within the foreground (less than 1 km from the Project).
- VP2 – VP6: private, rural homesteads to the north-west, north and north-east within 4 km of the Project (there are other residences within close range to the Project, however, existing vegetation screening prevented views to the site).

All five private viewpoints assessed resulted in a low visual impact rating and do not require any mitigation measures. While the public viewpoint (VP1) at Wollara Road was assessed to have a very low residual visual impact, 3–5 years following implementation of mitigation measures as outlined in the Landscape Plan.

The Visual Impact Assessment suggests a series of mitigation measures, such as:

- Design to minimise impact, including implementation of lighting design principles.
- Screen planting and retaining existing vegetation in accordance with the Landscape Plan.
- Avoiding commercial signage.

## **4.2 Way of Life, Community and Culture**

Potential impacts to way of life and community may include changes to how people live, work, and play within their communities. Such impacts may include a change in community composition, cohesion, character, function, resilience, and sense of place because of a Project. Impacts or changes to culture include effects on people’s shared beliefs, customs, values, language, and dialect, as well as their local culture, heritage, and ability to access cultural resources.

Rapid changes to a social locality can cause a sense of loss or anxiety for existing community members, especially for those who feel a strong sense of place attachment. Place attachment refers to the cognitive and emotional connection of an individual to a particular environment or the experience of a long-term emotional bond to a particular geographical area (Low, 1992). Place attachment is associated with a sense of belonging or the emotional need to be an accepted member of a group that forms identity and social reference.

As **Table 4.2** illustrates, the way of life in communities within the area is strongly connected to agriculture – a sense of rurality, connection to the rural landscape/vista and the local community. These responses have been provided by the community through consultation for this Project.

**Table 4.2 Values of the Site and Area Surrounding the Site**

What do you like most about living in the area? What is important to you and why?	%	n
Rural / Country lifestyle	54%	13
Community	38%	9
Quietness	17%	4
Agricultural uses	17%	4
Safe	13%	3
Connection to country	13%	3
Connection to family	13%	3
Views / visual amenity	8%	2
Animals	4%	1
Environment	4%	1
Tourism	4%	1

Source: (Umwelt, 2022).

Total sample; Unweighted; base n = 24; total n = 53; 29 missing. Note: Multiple responses allowed.

Through discussions with local community members, the impact of the Project on people’s sense of place and community was raised frequently (n=11). It was noted that many properties within the area have been owned by the same families for generations, with the land predominantly used for sheep and cattle grazing. However, there was an understanding of the benefits of transitioning to renewable energy, as noted in **Section 4.3.1**, and also an appreciation of the site selection being appropriate.

### 4.2.1 Community Sentiment and Cohesion

Large-scale transitions, the introduction of new projects in a social locality, changes to the built and natural environment, and the subsequent influx of new residents, can influence the levels of social cohesion within a community as well as alter a community’s stability and character (NSW DPE, 2023).

Responses by some local businesses and community group members have been associated with a potential loss of the community’s character and its cohesion between members, as well as positively, that the incoming workforce could increase the population and positively contribute to the social and economic stability of the community. Previous experience with other developments in the region indicates that the incoming workforce may be perceived to not share the same values for the local area and that anti-social behaviour could occur affecting residents in and around town.

When prompted to indicate the level of concern for potential negative impacts from the project on a scale from 1 (not at all concerned) to 5 (extremely concerned), ‘change in community cohesion’ had an average ranking of 2.6, as indicated in **Figure 4.3**.

*Seeing lots of HIGH-VIS clothing in pubs/clubs & restaurants. This has a negative impact to locals and visitors as Gulgong needs tourists to visit often to survive.*

*Contractors coming in and using and abusing the town, worried about the workforce behaviour & rubbish.*

*Extra traffic in Merriwa township means degrading the roads and safety. The mine site out there sees a lot of trucks...one big truck needed police escort through the town which disturbs the traffic, and flow through town and especially disturbs people driving behind it.*

However, this is contrasted by some emergency service providers stating that the Project may be able to improve levels of community cohesion, as workers may want to get involved within the community organisations in the area by volunteering.

*Increased community cohesion with workers being involved in volunteer organisations in Merriwa.*

Others consider that the impact on community cohesion is inevitable as the Project will most likely bring changes to the area. Proximal residents and community group members felt that the decision making regarding how to mitigate some of the key impacts would influence the extent of the impact being felt or experienced, mentioning the road upgrades as an example.

*Community cohesion concerns regarding not upgrading road – will cause tensions.*

*Without the road tarred, the Project will struggle for community traction.*

When those consulted were asked to define local community needs, the top response was improved local roads (n=13, 52%), with other suggestions outlined in **Table 4.3** below.

**Table 4.3 Community Needs**

Community Needs	%	n
Improved local roads	52%	13
Increased employment and/or training opportunities	36%	9
Upgrades to health services – hospital, mental health, aged care	32%	8
Activities in town, e.g. movies and/or activities for teenagers & elderly	16%	4
Increased population	16%	4
Support for small local businesses	12%	3
Increased public transport accessibility	8%	2
Increased accommodation supply	8%	2
Maintain agricultural industry for local people	8%	2
Maintain visual beauty of area	4%	1
Pest animal management	4%	1
Increased environmental groups who encourage recycling & land care	4%	1

Source: (Umwelt, 2022).

The community has recommended the following mitigation strategies, which include:

- Clear communication and information sharing with the workforce regarding the area and incentivise respectful day to day behaviour in accordance with the local community way of living.
- Support, contribute to or get involved with the Festival of the Fleeces.
- Community benefit fund development and opportunities including investment in education and training, sporting groups, local charities, local agricultural and community farming initiatives and community battery programs.

#### **4.2.1.1 Population Change**

Changes to population are fundamental impacts within SIA, given that the size, composition, and behaviours of a community are underpinned by its population and characteristics. Population change (influx and outflux) is usually described as a first order social impact which has the potential to create second order social impacts, such as impacts on community infrastructure and services, changes in sense of community, sense of place, social cohesion, and community networks etc.

An examination of the potential impacts of population change due to the Project's establishment has been undertaken, utilising established population change characteristics adapted from Burdge (2004).

Burdge suggests that population change of greater than 5% in a local area is likely to result in a significant impact being experienced based on Burdge's threshold criteria.

Utilising workforce projections, existing ABS Census population data, and assumptions in relation to source locations for the workforce, an estimate of potential population change in the LGA has been undertaken. The population may change in a number of ways including:

- As a result of an influx of the construction workforce (most likely temporary and non-resident) during the construction period only.
- Cumulative temporary population increase when considering nearby projects with concurrent or overlapping construction programs.
- As a result of an influx of a proportion of the operational workforce.

#### **Construction Workforce**

The construction phase of the Project is expected to last for a period of 27 months, with the construction workforce predicting an average of 250 employees and a peak of 350 employees. According to the Economic Impact Assessment (EIA), 65% of the workforce is expected to be sourced from outside the social locality (Ethos Urban, 2023), which represents an average temporary population influx of 162 people, and a peak temporary population influx of 227 people.

Construction workforces can typically result in some specific social impacts to the communities in which they are housed, as construction work is transient, and workers often do not bring their families. Given the nature of the work being completed and the timeframe of the construction phase, the following assumptions have been made:

- It is not expected that any proportion of the construction workforce coming in from outside the LGA will choose to permanently relocate to a community within the Council boundary.
- The workforce is likely to want to temporarily reside near the Project, as much as is practicably possible.
- It is unlikely that families will accompany these workers in migrating to the area.
- Construction workers that come from outside the region are expected to be housed in temporary commercial accommodation, or possibly rental properties (as required).

The predicted temporary population influx at the peak of construction as caused by the incoming workforce has been assessed as a 2.3% population increase, when considering the scenario described above (65% of the construction workforce would be sourced from outside the LGA). This is considered a low level of change, yet still requiring ongoing management. Should a greater proportion of workers be sourced from within the LGA or from across the social locality, the level of population change would lessen.

Based on this, it is paramount that the Project consider proactive implementation of capacity-building initiatives in the pre-construction period to ensure that local workers and businesses have the opportunity and support to gain employment on the Project.

At the peak of construction, any potential strain on local infrastructure or services as a result of the temporary population increase, including on the housing market, health care or emergency services, or short-stay accommodation provision, would also need to be appropriately managed in coordination with local stakeholders.

### **Operational Workforce**

During the operational phase of the Project, up to 10 jobs are likely to be created; and it is expected that this workforce will permanently reside in the LGA. Given that the Project operational phase is expected to be up to 40 years, it is assumed that family members of workers who relocate from outside the LGA, will also move into the area, should they be not sourced from the social locality itself. Given the low workforce numbers required to operate the Project, the population change caused by the operational workforce is understood to be minimal.

#### **4.2.1.2 Transition to Renewable Energy**

Some members of the community expressed excitement and support for the Project and welcomed opportunities for the Project to change their community and way of life (n=8). Many argued that the transition to renewable energy was inevitable and important, and that the Project was a positive opportunity for the region, reducing reliance on carbon intensive industries, with the Project ultimately increasing access to clean energy, as identified within the Economic Impact Assessment (EIA) (Ethos Urban, 2023).

*We need renewable to keep power on.*

Survey respondents were asked what their aspirations were for the community, which prompted a respondent to explain the importance of transitioning away from the coal industry:

*Remain economically viable once a transition from coal starts, we don't want to lose jobs and become unattractive and unvisitable.*

Similarly, for community members seeking employment or contracting opportunities, the Project was considered an important opportunity to stimulate a growing industry and to upskill local workers in the renewable energy industry, outlined in **Section 4.4.1**.

When prompted to indicate the level of importance for the potential positive impacts from the Project on a scale from 1 (not at all important) to 5 (extremely important), 'contributing to renewable energy provision' had an average ranking of 4, as indicated in **Figure 4.2**.

## 4.2.2 Cultural and Heritage Values

Impacts or changes to culture include effects on people's shared beliefs, customs, values, language, and dialect, as well as their local culture, heritage, and ability to access cultural resources.

In relation to Aboriginal cultural values and sites of importance, throughout the engagement for the SIA, there was no concern amongst Aboriginal stakeholders that the site may contain specific values and artefacts of importance to the community.

*It is great that you are not hiding anything about the site. Great that you had Aboriginal people to do the site surveying, I believe if there were any concerns, they would have brought it up.*

*Positive for cultural values – preserve the value of the site.*

One Aboriginal group representative expressed their views on the importance of utilising Aboriginal knowledge and suggested the opportunity for the Project to engage in cultural cool burns on the site, explaining that this could help mitigate bushfire effects and also help as a carbon offset.

*Opportunity to cultural cool burn projects, which is also a carbon offset... We do this.*

When prompted to indicate the level of concern for potential negative impacts from the project on a scale from 1 (not at all concerned) to 5 (extremely concerned), 'Impacts on cultural values' had an average ranking of 2.4, as indicated in **Figure 4.3**.

While there was a low level of concern from respondents during the SIA-related community engagement activities, it is important to highlight that the ACHAR identified seven trees with scars during their survey, three of which are within the Project Area. While the scars on these trees did not display sufficient attributes to constitute cultural origins, and as a result, have not been recorded as Aboriginal objects, the trees were raised as having potential cultural significance to the Registered Aboriginal Parties involved in the survey (Ozark, 2022).

As a result, the three trees with scars located within the development footprint will be impacted, this will be managed in accordance with the ACHAR (OzArk, 2023). In addition, the ACHAR identified eight Aboriginal sites within the development footprint, which are planned to be salvaged by surface collection. Lastly, given the hosting of the Project Area of the homestead relating to the historic story of Jimmy Governor, and the significant archaeological, cultural, community and historic values that the site holds, the remains of the homestead will be avoided by the development of the Project. Recommendations concerning Aboriginal cultural values within the Project Area are as follows:

- Following development consent of the Project, Lightsource bp would develop an Aboriginal Cultural Heritage Management Plan (ACHMP).
- Nine Aboriginal sites will be salvaged by a surface collection. The recommended methodology for the salvage will be set out in the ACHMP.
- If the three trees of community interest within the Project boundary must be removed, the ACHMP will set out the procedure for their removal. This will include consultation with the RAPs and practical mitigation measures such as further photographic recording or a cultural site visit prior to the trees' removal.
- The ruins of the homestead (i.e. Slab Hut) would be avoided from all ground disturbing impacts by a 20-metre buffer.
- All land-disturbing activities would be confined to within the Project Area. Should the parameters of the proposed work extend beyond this, then further archaeological assessment will be required.

The community has recommended the following mitigation strategies, which include:

- Engaging in cultural cool burns on the site.
- Naming a section of the Project site using Aboriginal names as relevant to the site, in consultation with the Recognised Aboriginal Parties.

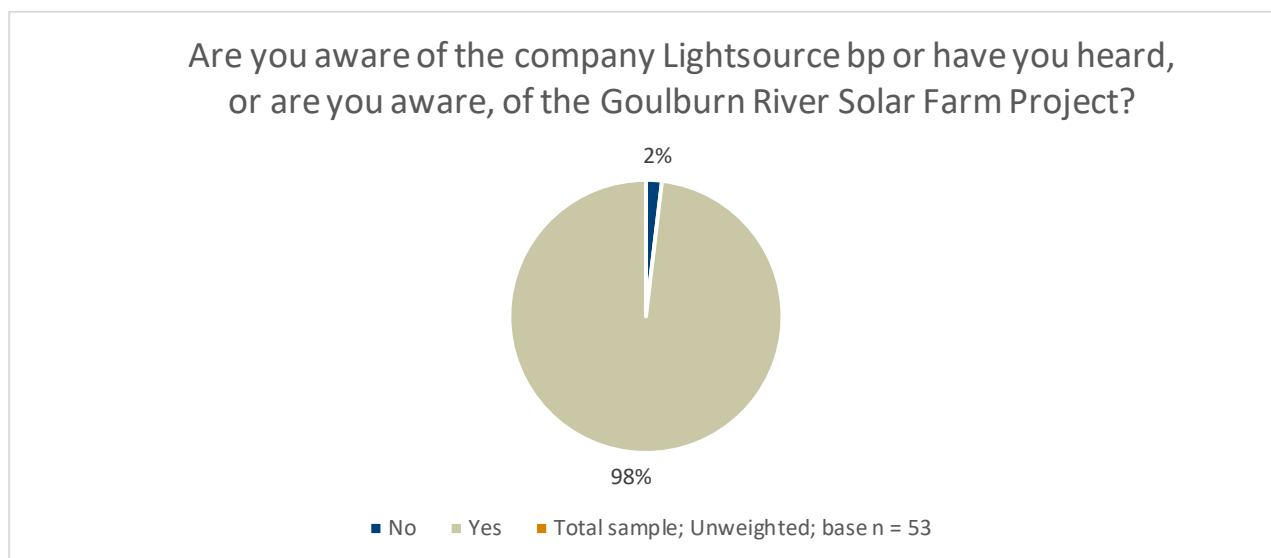
*Give the place an Aboriginal name – get the RAPs out there for a name. Legacy of having different names, and have a sign up with a bit of a story.*

### 4.3 Engagement and Decision-Making Systems

Impacts relating to this category refer to whether stakeholders can provide input to the planning and assessment process. This refers to whether they experience procedural fairness, are informed, and can meaningfully influence decisions in relation to the Project, and are able to access complaint, remedy, and grievance mechanisms.

As outlined in **Figure 4.5** below, there was a high level of awareness of Lightsource bp and the Project, with just 1 person (2%) consulted who had not heard of either before. A high level of awareness indicates a thorough engagement process from the beginning, ensuring that information about the Project is shared and all key groups are consulted with.





**Figure 4.5 Awareness of Lightsource bp and the Project**

*Total sample; Unweighted; base n = 53.  
Source: Umwelt, 2022.*

Proximal landholders suggested that it would be helpful if Lightsource bp had a designated person who the community could contact in order to have ongoing engagement and to support the local people with potential issues that may arise from the Project. It was explained that the neighbouring residents normally would communicate closely with one another in the event of an emergency or security situation in the local area, however it would be of benefit for the group if the Project could also be included, and kept informed, as part of this informal network.

Stakeholders engaged were also asked for their preference for engagement and Project communications by Lightsource bp in the future, with responses outlined in **Table 4.4** below. Responses indicated that the local community places high value on personal, small group, and face-to-face forms of communication, whereas public mechanisms and the use of social media would be less effective in this social locality.

**Table 4.4 Engagement Preferences**

Ways to be kept up to date with Project information?	N
Email	34
Face to face meetings	17
Community meetings	13
Newsletter	5
Local newspaper	3
Local radio	2
Phone calls	2
Website	1
Facebook	1

*Source: Umwelt, 2022.*

When prompted to indicate the level of concern for potential negative impacts from the project on a scale from 1 (not at all concerned) to 5 (extremely concerned), ‘cumulative effects of multiple projects in region’ had an average ranking of 3, as indicated in **Figure 4.3**.

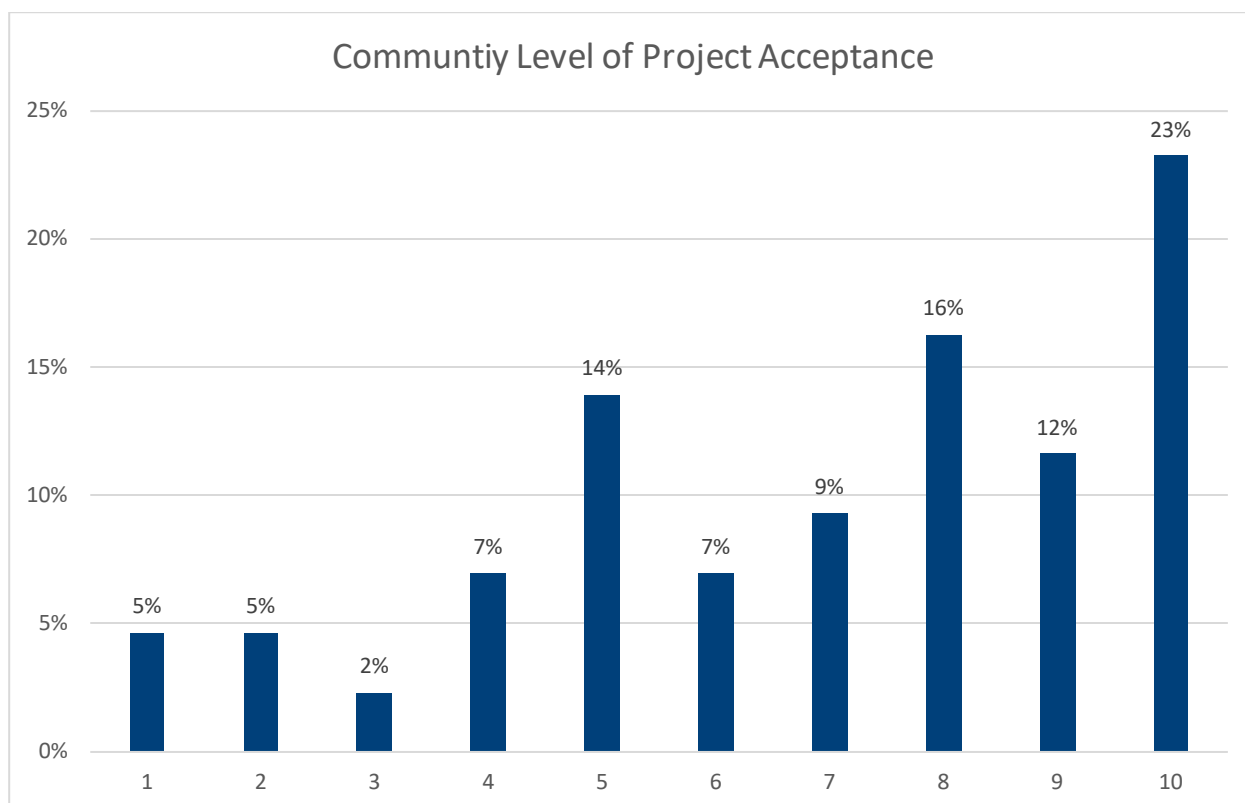
One community group member mentioned the possibility for some groups to be experiencing a level of consultation fatigue, but also suggested that they appreciated the engagement from Lightsource bp on the Project. Another community group mentioned that the cumulative impact would just be on the lack of accommodation available.

*Consultation fatigue in region due to so many projects – however, appreciative that Lightsource bp has engaged well and early.*

### 4.3.1 Trust in Planning Process

Effective community engagement can improve Project assessment and design and can result in improved community and environmental outcomes. The community engagement program that has been undertaken to inform the Project’s scoping and EIS phases has afforded a range of Project stakeholders with the opportunity to provide feedback on the Project and identify key Project risks and opportunities in early stages of development.

As **Figure 4.6** demonstrates there is a moderately high level of acceptance for the Project among those who have been consulted, with an average score of 6.9 out of 10 obtained (1 being not at all accepting and 10 being very accepting of the Project) and approximately a quarter of responses indicating that they are very accepting of the Project (10/10).



**Figure 4.6 Community Level of Project Acceptance**

Source: Umwelt, 2022.

Total sample; Unweighted; base n = 43; total n = 53; 10 missing.

For most stakeholders, the early and ongoing engagement has been well received, with positive responses received regarding transparency, timeliness, and the respectful process to date.

*Appreciate Lightsource bp coming out and meeting in person, and consulting early in the piece.*

As mentioned in **Section 4.1.4**, many stakeholders mentioned the suitable location for a solar farm, due to the site not having any direct neighbours and having minimal visual impacts due to existing surrounding trees.

When prompted to indicate the level of importance placed on the potential positive impacts that the Project could bring, on a scale from 1 (not at all important) to 5 (extremely important), the 'opportunity to participate meaningfully and influence project decision making' had an average ranking of 4.5, as indicated in **Figure 4.2**, indicating a strong association across the social locality with public participation processes within Project planning and decision-making, and community acceptance.

*Communication with the community is the best way to have a successful venture.*

*Build a relationship in the area and create longevity in the area.*

*Community engagement and information sharing. Keep everyone informed and let everyone know when we will be back in person.*

*Got to get it out there, share all the information possible. Good, bad and ugly! Important to chat about it.*

Multiple stakeholders also indicated that while their current level of acceptance of the Project is relatively high, their support would drastically decrease if Ringwood and Wollara Roads did not receive improvement works. Whereas, if there was certainty of road improvements in line with Project development, and therefore an improvement of traffic issues and road safety for the local community, levels of Project support and acceptance would be high.

In this regard, the community identified mitigations and strategies including:

- Continued face-to-face engagement with neighbouring and proximal landholders, to provide project updates in the future.
- The distribution of an ongoing newsletter.

## **4.4 Livelihoods**

Livelihood impacts refer to the Project's effect on people's capacity to sustain themselves through employment or business activities, and the economic contribution that a Project may have to local communities and the broader region. In this regard, the Project has the potential to contribute positively to the local community through employment and procurement and providing opportunities to local businesses. These impacts are further described in the sections below.

#### 4.4.1 Employment and Training Opportunities for Local People

Stakeholders expressed widespread enthusiasm and support for local employment opportunities and local economic benefits that may be associated with the Project, particularly the opportunity for capacity development within the renewable energy sector for the local workforce. Similarly, when asked to describe the most pressing needs of the local community, the second most frequently mentioned answer was increased employment and/or training opportunities (n=9, 36%), as described in **Section 4.2.1**. Further, when prompted to indicate the level of importance for the potential positive impacts from the Project on a scale from 1 (not at all important) to 5 (extremely important), ‘local employment and procurement’ had the highest average ranking of 4.8, as indicated in **Figure 4.2**.

*If it gives anyone jobs? Bring it on!*

*Make sure you use local contractors, for things like spraying weeds for example. Using local contractors is going to be seen very favourably by the community. If you get a large company, come in from Newcastle or Sydney, everyone knows, they see them come in, and that isn't seen favourably.*

The EIA outlines that the Project will require approximately \$1.1 billion in investment during the construction phase (of which approximately \$165 million will be retained in the social locality) and will support 350 Full Time Equivalent (FTE) positions directly over the 27-month construction period. Once operational, 10 FTE direct jobs will be supported by the Project (Ethos Urban, 2023).

As outlined in **Section 3.0**, despite the employment and training opportunities arising from the Project’s development, the social locality may experience challenges aligning the appropriate skill sets, industries of employment and available workforce to suit the workforce needs for the Project if appropriate measures are not in place ahead of construction activities commencing. Construction-related jobs are expected to be associated with a wide-range of on and off-site activities, including:

- Labour recruitment
- Training
- Installation of PV support structures
- Vehicle and equipment hire
- Earthworks
- Foundations
- Engineering services
- Roads and access tracks
- Transport and logistics
- Assembly and installation of PV panels
- Electrical works (cabling and connections)

- Installation of monitoring equipment
- Fencing
- Landscaping
- Security
- Waste disposal
- Business and financial services
- Administrative services.

According to the EIA, the region has moderate capacity in terms of construction-related workers (10,360 workers) and businesses (720 businesses) to service the requirements of the Project, and concurrent regional infrastructure projects if required. The Project would provide new participation opportunities for businesses and workers located in the social locality, having regard for the good match of skills and resources available (Ethos Urban, 2023).

Strategies and options to enhance local and regional procurement, training and employment for local people, include the provision of apprenticeships or traineeships throughout the construction period and having open communication with local businesses, organisations, and contractors around timeframes and requirements for supplies and services, to ensure that local stakeholders can sufficiently prepare in order to realise the opportunities that the Project presents.

*Genuine training and employment opportunities rather than a casual Labouring role for 6 months, consult with local apprentices or group training schemes to allow training in the renewables scheme for a timeframe to understand how it works assisting local hospitality during construction phase.*

*I would like to think as much local contractor influence as you can.*

*Engage with local contractors early to align construction time frames.*

One suggestion from a respondent was engaging a local member of the community to facilitate the construction workforce program. It was explained that an opportunity of a local resident to be part of the employment process, would be helpful not only for the Project, but also in connecting job seekers with the local businesses and service providers, ensuring as many locals are hired as possible.

*You need high up locals high up in production program, to hire as many locals as possible.*

In relation to this impact, the community recommended strategies, that include:

- Identify and deliver other capacity building programs in the region, through partnerships with local schools, TAFE or universities.

## 4.4.2 Increased Opportunity for Economic Benefits to Local Businesses

When prompted to indicate the level of importance for the potential positive impacts from the Project on a scale from 1 (not at all important) to 5 (extremely important), 'local business opportunities due to construction workforce' had an average ranking of 4.7, indicating that the community has heightened expectations of such benefits as a result of the Project, as displayed in **Figure 4.2**.

*Great for accommodation providers, mechanics etc.*

*More money for local businesses and local people.*

*Opportunities for young people to move here and start their own businesses. Tradies in town are flat out, healthy competition will be good for them.*

Already throughout the engagement process, local contractors, businesses, and people have indicated their interest in working for and on the Project. The contact details of those who have indicated their interest in servicing the project have been recorded, as they will be kept informed of any key Project updates to facilitate their ability to offer their services.

The EIA mentions that construction workers relocating to the region would be expected to inject approximately \$30.1 million in new spending into the economy over the construction phase, supporting approximately 150 FTE jobs in the service sector within the Social locality over this time. Ongoing economic stimulus associated with the operation of the Project is estimated at approximately \$120 million (over 40 years) relating to, operational wage stimulus, community and neighbourhood payments and net land tax revenue to Council (Ethos Urban, 2023).

## 4.5 Accessibility

This section discusses how the Project may impact upon people's ability to access local community infrastructure, services, and facilities. Issues raised during consultation in this category included the potential strain on local services and the increased accessibility to telecommunications for nearby residents. Each of these are further described below. Other relevant issues also associated with this category related to the decreased access to the site and surroundings during natural disaster events, which have been explored in **Section 4.1.3**.

### 4.5.1 Strain on Local Services

Some members of the community (n=6) also highlighted some of the challenges experienced at a local level with the service shortages and low unemployment rates, explaining that although the Project will provide benefits, it will also put a strain on local services. In particular, pressure on housing and accommodation has been raised by some participants (n=6) during community engagement, as outlined in **Figure 4.1**. When prompted to indicate the level of concern for potential negative impacts from the Project on a scale from 1 (not at all concerned) to 5 (extremely concerned), 'strain on local services due to construction workforce' had an average ranking of 2.9, as indicated in **Figure 4.3**.

Responses from the community relating to this matter include the following:

*False economies of construction workforce, not sustainable.*

*Availability of accommodation and employment – 300 vacancies in coal mines in the area – not enough workers – Mudgee has building boom. A local plumbing supply business of 20 years said he is the busiest he has ever been, maybe because of overlapping construction timelines.*

*Lack of staff in Merriwa, no contractors, or employees available in town. Already hard enough to get a builder or electrician now, let alone if Lightsource bp takes all of them because you might pay more.*

*Strain on hospital – no doctors, ambulance. Will have to go Mudgee.*

*Not enough accommodation locally.*

*The project will employ more people than otherwise could be employed by the agricultural sector. There is a major shortage of workers already and this will only make the situation worse and drive wages higher.*

*Make sure local businesses get heads up re. construction times so they know to expand services in time.*

*Need to talk with local council re. local services to make sure the area has capacity for this project.*

*(Lightsource bp) Needs to work together with other developers to ensure local workforce isn't overcome.*

*Developers to talk among themselves – to organize workers and services between each other. To get a social license (sic) to operate – whole industry need to work together. EnergyCo needs to work strategically with social impacts – working with developers all together.*

Whilst the construction workforce would likely not reside permanently in the region and may be accommodated up to one hour away, they would most likely access a range of community facilities and services such as accommodation, health, hospitality, and recreation services within towns; therefore, having the potential to impact on service capacity across the social locality during the construction period. Distributing the accommodation for the incoming workforce across towns may help alleviate the strain on local healthcare and emergency services in the locality of Merriwa itself, yet the impacts on availability and accessibility of community infrastructure and services for other users and residents caused by the temporary incoming population would still require considered management by the Project.

Concurrently, local businesses and service providers have opportunity through this projected population influx to realise commercial benefits of accommodating and servicing the workforce, accessibility issues for other user groups may negatively affect affordability and availability for other user groups or sectors such as tourism and mining. This would be particularly the case when considering the cumulative effect of population influx between multiple projects with potential concurrent development programs, in the context of the CWO REZ and multiple development projects in planning nearby. When considered cumulatively, the potential strain on local accommodation and other township services could result in a high social impact.

#### 4.5.1.1 Accommodation and Housing

The accommodation providers who responded to the community survey (n=5), located in Merriwa, Scone, and Denman, indicated their interest in servicing the workforce associated with the Project. The accommodation providers described their services as a traditional motel style accommodation service, except for one who is both a real estate agent and Airbnb housing provider.

Of the accommodation providers that responded to the survey, their average length of operation was 11.6 years, with one provider operating for over 20 years. These providers predominantly service workers, including construction and professional workers (n=5, 100%), with most of them also servicing tourists (n=4, 80%). The accommodation capacity is outlined in **Table 4.5** below, which shows the high occupancy rates in the area over the last year, indicating an increase in visitation, potentially due to the COVID-19 pandemic and the growth in infrastructure projects across the region.

Based on the above, it is apparent that there is already high competition in the short-term accommodation market, with little availability or supply for an increase in demand. However, considering the supply of short-term accommodation might be currently in use for workers on similar projects in the region, some of the accommodation demand for the Project could be potentially rolled over to be the Project's construction workers. In addition, as outlined in the third column, some providers have plans to expand on their services in the next 5 years due to the increasing number of rooms unavailable.

**Table 4.5 Snapshot of Accommodation Provider Capacity in Social Locality**

Accommodation Rooms	Occupancy rate in the past 12 months	Plans to expand in the next 5 years	Location
15	90%	Yes	Merriwa
16	75%	No	Denman
19	90%	No	Scone
21	85%	Yes	Denman
100 Rental properties	98%	Yes	Merriwa
3 Airbnb	98%	Yes	Merriwa

Source: (Umwelt, 2022).

As expected, when servicing workers, the trends in the service demands tend to be on weekdays, however, still having some spikes in service on weekends around holidays and special events in the area.

*Monday to Thursday we run almost 100% occupancy 10 months of the year from February to November. Saturday nights almost 100% occupancy all year round. Friday and Sunday nights are full sometimes but are the 2 days of lowest occupancy.*

*Our main trade is Monday to Friday with tradespeople and other professionals.*



Despite the high occupancy rates in the social locality, some providers (n=2, 40%) indicated they were under capacity and would be able to take on greater demand, with others expressing they either have no capacity (n=1, 20%), or that it would depend on the time of year (n=1, 20%). When asked if they felt as though there is adequate accommodation in the local area most said no (n=4, 80%), indicating that the accommodation types most sought after included regular motel accommodation (n=3, 60%), single accommodation (n=1, 20%) and 'all types' (n=1, 20%).

Further, as discussed in **Section 3.3**, there are several large-scale projects which have been approved for development, or currently in a planning phase across the social locality, which some service providers recognise as opportunities for business expansion.

According to the EIA, the Project labour requirement would be expected to generate an accommodation need for 65% of the Project's workforce (those who are expected to be sourced from outside the social locality), representing an average of 162 rooms required during the Project's construction phase. This represents an estimated 36% of total commercial accommodation rooms/cabins within a 60-minute drive of the Project Area, indicating a potential significant strain on an already limited, or competitive, short-stay accommodation market (Ethos Urban, 2023).

Nonetheless, it is understood that further capacity is available in private rentals (e.g., long-term houses/units, short-term Airbnb), and potentially unoccupied dwellings - some of which may become available to the market to support the Project. The Project would generate new revenue for commercial accommodation providers over the construction phase (especially in off-peak seasons) including in small townships such as Merriwa, as well as private property owners (Ethos Urban, 2023). The ways in which local accommodation providers indicated their interest to be involved in the Project include accommodating the workforce in existing accommodation, providing additional services or infrastructure to the construction workers and retrofitting, or adapting new accommodation to be able to house the workforce.

Further, initiatives that the Project adopts to facilitate the sourcing of construction workers from within the social locality would alleviate the pressure the Project would place on the local housing and accommodation market, and therefore should be given high priority throughout the development phase of the Project. According to the EIA, the social locality's occupational and business structures indicate a good base exists to service the needs of the Project (Ethos Urban, 2023). The major regional townships of Mudgee and Scone have the capacity and labour force to service many aspects of the Project, with smaller settlements such as Merriwa, Gulgong, Denman and Rylstone, also likely to provide workforce, accommodation and other general services to the Project (Ethos Urban, 2023).

#### **4.5.1.2 Healthcare and Emergency Services**

The limited capacity of the local medical centre in Merriwa and the general limited capacity of medical services across the social locality, was mentioned by some community members throughout consultation, noting that the closest hospital to the Project being an hour drive away in Muswellbrook. Another concern regarding the strain on local services was raised by the local Fire and Rescue service, who indicated current issues in recruiting local people, which has meant that they regularly have to source workers from the surrounding areas to cover shifts. An influx of population into the social locality could mean that additional workers would be required to cover shifts, which could exacerbate an already existing labour force shortage.

The community has recommended the following mitigation strategies, which include:

- Lightsource bp to work with local service providers on a Workforce Accommodation Strategy to identify the most suitable way to accommodate the temporary workforce.
- Training for local emergency service providers would be required specifically relating to fires around or caused by solar panels.
- As part of the full-time employment contract of workers on the Project, Lightsource bp could include a clause that they become a member of the local VRA, RFS or Fire and Rescue to increase their numbers of emergency respondents in the immediate area.

To mitigate any pressures on the local accommodation market and local services caused by the Project, it is suggested that Lightsource bp consider using multiple accommodation service providers to house the construction workforce across multiple towns to alleviate pressure on any one locality or community, as well as planning and sourcing accommodation as early as possible to ensure the appropriate management of the construction workforce influx. Further engagement with service providers will be required in the development of a comprehensive employment, procurement and accommodation strategy which considers other development projects, and their workforce needs where there are overlapping construction periods. Lastly, as suggested with the EIA, strategies to manage the heightened accommodation demand during construction, and the local procurement and employment, should be considered by the Proponent and the State Government when considering the timing of future renewable energy and major infrastructure projects in the region.

#### **4.5.2 Increased Access to Telecommunications**

Challenges relating to the access to telecommunications in the immediate social locality to the Project was raised during the engagement process by an emergency service provider and proximal residents. Most residents indicated that they did not have adequate mobile phone service coverage at their properties, and emergency service providers indicated that they have had general issues with radio communication access when fighting fires in the area in the past. Based on this, three local emergency services operating in the area mentioned the importance of a new telecommunications tower, as is proposed to be provided through the Project, as this would increase access to communications during emergencies and when working in this locality more generally.

The community has put forward the following enhancement strategies, which include:

- Lightsource bp to coordinate with the RFS, VRA and Fire and Rescue communication teams to ensure the telecommunications tower is set up to meet mutual needs of the Project and local service providers/emergency respondents.
- Electricity supply along road infrastructure nearby the Project.

*Would like to know if the project will provide power to the road... 10 km from property to project - opportunity to fund this and organise this.*

## 4.6 Health and Wellbeing

Health and wellbeing impacts include impacts to both physical and mental health and may include psychological stress resulting from uncertainty, financial and/or other pressures, as well as anticipated changes to individual and public health. It is important to acknowledge that psycho-social disruption may have a wide array of impacts that can affect individual wellbeing (e.g., psychological distress, fear, grief, and mental and physical health), project acceptance (e.g., attitudes, potential for division, trust), capacity to adapt to change (e.g., coping mechanisms) and community wellbeing (e.g., family relations and community support networks). Uncertainty about a possible future threat disrupts our ability to avoid it or to mitigate its negative impact, thus resulting in stress and anxiety (Grupe DW, 2013).

Psycho-social impacts, as noted, can have real and negative consequences for individuals and local populations. Engagement to date has included on-going information sharing, one-on-one meetings, and frequent phone calls from very early stages in the Project, to assist in addressing uncertainty in relation to the Project and to share information with potentially impacted neighbouring landholders and broader stakeholders throughout the Project's planning process, as outlined in numerous sections throughout this report.

The social impacts and concerns identified throughout consultation which relate to people's health and wellbeing are listed below:

- Loss of community sense of place due to change in the land-use from agricultural to solar panels.
- Loss of the sense of place due to changes in the visual landscape due to the Project development.
- Loss of local community sense of place or anxiety due to uncertainty about changes of their social locality.
- Decreased community cohesion due to an influx of construction workforce in town and changes to community composition and potential rising of anti-social behaviour.

During the engagement process, one stakeholder raised concerns about the potential for toxic smoke or fumes, during a fire event, as a by-product of the Project's establishment, impacting surrounding land holders and emergency services providers.

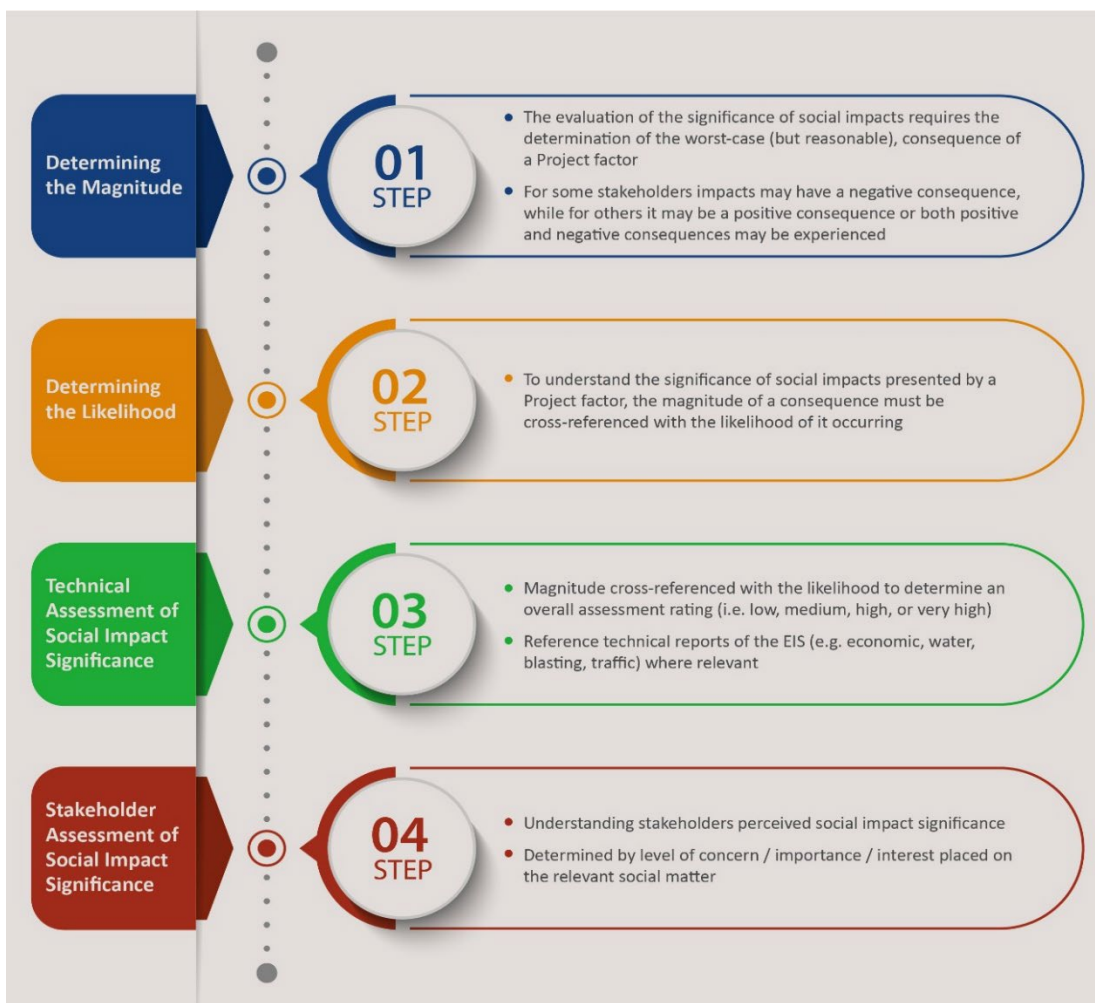
## 5.0 Impact Evaluation

This section provides an evaluation of the social impacts identified in relation to the Project, with the aim of assessing the anticipated changes to the current social baseline, due to the Project proceeding.

Supplementary secondary insights have also been compiled to further contextualise, benchmark, and qualify the matters raised to inform the evaluation of each social impact.

As outlined in **Section 3.0**, a range of perceived social impacts have been identified in relation to the Project, that require prioritisation for assessment and appropriate management and/or enhancement. It should also be noted that social impacts are often not mutually exclusive, with higher order impacts such as population change, resulting in second order impacts such as impacts on sense of community and service provision.

As noted in the SIA Guideline, the definitions and scale assigned to each of the likelihood and magnitude categories need to be relevant to the impact that is being evaluated and justified in the SIA; and where possible the consequence scale should be based on established measures and standards. The evaluation of social impact significance has involved four main steps as outlined in **Figure 5.1**.



**Figure 5.1 Social Impact Evaluation Process**

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In line with the process defined above, the following sections assess the technical and perceived social concern/interest in relation to the positive and negative consequences that may be experienced by stakeholders due to anticipated impacts/changes associated with the Project and have been categorised in line with the social impact categories outlined in the SIA Guideline (DPIE, 2021).

## 5.1 Summary of Social Impact Evaluation

Table 5.1 presents a summary of the social impact evaluation with the justification and proposed management and enhancement strategies. The colour blue has been used to represent the Significance Rating of impacts, while light shade of red and green has been used to indicate if an impact is negative or positive, respectively.

**Table 5.1 Social Impact Evaluation**

Impact Category	Project Aspect	Impact Description	Extent / Affected Parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating <sup>8</sup> (before mitigation)			Mitigation or Enhancement	Residual Significance Rating		
							L	M	S		L	M	S
Surroundings	Project establishment	Decreased road safety due to further deterioration and speeding along Wollara and Ringwood Road due to heavy vehicles traffic to and from Golden Highway through Merriwa Town	Proximal residents & all road users	Construction phase Decommissioning	Negative	High	B	4	H	Prepare a roads repair, upgrades and maintenance plan ahead of construction and communicate it to the community. Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP).	D	2	L
	Project establishment and construction	Decreased road safety for cars and the local traffic due to the combination of fast-growing grass along Wollara and Ringwood Road, affecting the level of visibility, in combination with the addition traffic of heavy vehicles	Proximal residents & all road users	Construction phase Decommissioning	Negative	High	C	4	H	Prepare a roads repair, upgrades and maintenance plan ahead of construction and communicate it to the community. Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP).	D	2	L
	Project establishment and construction	Lack of trust from the community relating to the developer's commitment to preserve/protect local environmental values, such as fast-growing weeds in the project site spreading to nearby properties	Proximal residents	Construction and Operation phase	Negative	Medium	C	2	M	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Preparation and implementation of the Construction Environment Management Plan (CEMP), Operational Environment Management Plan (OEMP) and land management plan. Provide community with information of the complaints procedure during construction (through CEMP) and operations (through OEMP).	D	2	L
	Project establishment and operation	Fears of increased presence of wild dogs in and around the Project site due to proposed sheep grazing on site, placing danger to the local community and other animals (pets and livestock)	Proximal residents	Operation phase	Negative	High	B	4	H	Support and become involved with the Wild Dog Association to support a wild dog management plan as part of the broader Community Benefit Sharing Strategy. Formulate plans for agri-solar initiatives to support other innovative forms of dual land use, including plan to support mitigation measures related to the wild dogs, ahead of Project construction in consultation with host and neighbouring landholders, as well as community organisations. The Project has been designed to be compatible with sheep grazing, to allow this potential in future. Wild Dog Management Plan as part of the OEMP.	D	2	L

<sup>8</sup> L = Likelihood (A: Almost Certain, B: Likely, C: Possible, D: Unlikely, E: Very Unlikely); M = Magnitude (1: Minimal, 2: Minor, 3: Moderate, 4: Major, 5: Transformational); S = Significance rating (L: Low, M: Medium, H: High, VH: Very High)

Impact Category	Project Aspect	Impact Description	Extent / Affected Parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating <sup>8</sup> (before mitigation)			Mitigation or Enhancement	Residual Significance Rating		
							L	M	S		L	M	S
	Project establishment and operation	Loss of community sense of place due to change in the land-use from agricultural to solar panels	Proximal residents	Construction and Operation phase	Negative	Low	C	1	L	Proactive, thorough and transparent consultation process throughout Project planning, assessment and development. Proactive and ongoing information sharing about the benefits of renewable energy in the area and Agri-solar initiatives. Community Benefit Sharing Strategy to consider initiatives that focus on increasing social wellbeing and community participation.	C	1	L
	Project Decommissioning	Concerns regarding the relatively short lifespan of the Project relating to waste creation and future land use, which could decrease community support for the project	Broader community	Operation and decommissioning phase	Negative	Low	C	1	L	Prepare a decommissioning strategy that explores options and formulate plans for future land use post-decommissioning and consideration of project life expansion. Proactive, thorough and transparent consultation process throughout the Project lifespan. Select a designated recycler for the solar panels and plan for future costings.	C	1	L
	Project construction	Increased noise and dust due to heavy vehicle traffic at Wollara and Ringwood Road causing disturbance to nearby residents	Proximal residents	Construction phase	Negative	Medium	B	2	M	Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP). Prepare a roads repair and maintenance plan ahead of construction and communicate it to the community. Limit construction activities to standard working daylight hours. Keep the local community informed around the construction hours and any subsequent changes.	C	1	L
	Project establishment, construction and operation	Loss of community sense of place due to changes in the visual landscape due to the Project development	Proximal residents	Construction and Operation phase	Negative	Low	D	1	L	Consider visual screening from public viewpoints.	D	1	L
Surroundings & Accessibility	Project establishment	Decreased accessibility between towns and services due to deterioration of Wollara and Ringwood Road as a result of the additional traffic.	Proximal residents & all road users	Construction phase	Negative	High	B	2	M	Prepare a roads repair and maintenance plan ahead of construction and communicate it to the community. Implementation of a road safety management plan and Traffic and Transport Management Plan (TTMP).	D	2	L
	Project establishment and operation	Increased community anxiety regarding potential delayed of emergency/bushfire responses due to the lack of public access to the site, which could reduce safety of local residents and ability to protect private properties in the event of a bushfire	Proximal residents, broader community and service providers	Construction and Operation phase	Negative	Medium	C	4	H	Communicate Bushfire Management Plan to community through consultation process and implement mitigation measures, including working with local Aboriginal community to engage in cultural cool burns on the site. Implementation of the Asset Protection Zone (APZ) and have on site water carts. Providing training and site tours for local emergency services (VRA, RFS and Fire and Rescue) to familiarise them with the access points and procedures and to also provide solar farm specific bushfire skills.	D	3	M

Impact Category	Project Aspect	Impact Description	Extent / Affected Parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating <sup>8</sup> (before mitigation)			Mitigation or Enhancement	Residual Significance Rating		
							L	M	S		L	M	S
Way of life, Community, Culture & Health and Wellbeing	Construction workforce influx	Potential decrease to levels of social cohesion in local communities due to influx of construction workers	Broader community	Construction phase	Negative	Medium	C	3	M	Proactive, thorough, and transparent consultation process throughout Project planning, assessment and development. Accommodation, Employment and Procurement Strategy to be in place ahead of construction. Community Benefit Sharing Strategy to consider initiatives that focus on increasing social wellbeing and cohesion in local communities. Clear communication and information sharing with the workforce regarding the area and incentivise a respectful day to day behaviour in accordance with the local community way of living.	C	2	M
	Project operation	Increased social wellbeing due to community hosting project that contributes to a more sustainable region by reducing reliance on carbon intensive industries	Proximal residents, Local and broader community	Planning, construction and operation phases	Positive	Medium	C	3	M	Clear communication and information sharing with the local community regarding the benefits of the renewable energy industry. Community Benefit Sharing Strategy to consider initiatives that focus on increasing social wellbeing and community participation.	C	4	H
	Project establishment and operation	Project being built in proximity of significant Aboriginal and European Heritage and cultural values causing concern over preservation and valuing of family and community histories	Traditional owners, RAPS, LALC, Aboriginal Groups and host landholders	Planning, construction, and operation phases	Negative	Low	B	2	M	Implementation of Aboriginal Cultural Heritage Management Plan in consultation with Registered Aboriginal Parties and local residents.	C	1	L
Engagement and Decision-Making Systems	Project determination and establishment	Opportunity for the local community to participate meaningfully and influence project decision making due to existing high-level awareness of project and activities in community	Broader community	Planning phase	Positive	Medium	C	3	M	Ongoing Community Engagement Strategy, implemented in a way that increases opportunities for the community to work together with Lightsource bp during the project development. Community Benefit Sharing Strategy to consider initiatives that focus on increasing social wellbeing and community participation.	B	3	H
Livelihoods	Project establishment and construction	Opportunity to stimulate a growing industry and to upskill local workers through project workforce requirements, which in turn can increase human and economic capital across social locality	Local and broader community, local business owners	Construction phase	Positive	Medium	C	4	H	Accommodation, Employment and Procurement Strategy to include targeted and proactive initiatives to maximise local employment and sourcing from local communities such as through job-ready training (i.e., apprenticeships), up-skilling and capacity building supports, in collaboration with local stakeholders and training providers, to improve job-readiness in the pre-construction phase of the Project.	B	4	H
	Project establishment and construction	Increased economic and human capital across social locality due to project procurement opportunities	Local and broader community, local business owners	Construction phase	Positive	Medium	C	4	H	Accommodation, Employment and Procurement Strategy to include targeted and proactive initiatives to maximise local employment and sourcing from local communities such as through job-ready training (i.e., apprenticeships), up-skilling and capacity building supports, in collaboration with local stakeholders and training providers, to improve job-readiness in the pre-construction phase of the Project.	B	4	H
	Project construction workforce	Increased spending in local towns bringing about positive growth for local businesses and services	Local and broader community, local business owners	Construction phase	Positive	Medium	B	3	H	Accommodation, Employment and Procurement Strategy to include targeted and proactive initiatives to maximise the capacity and use of local businesses, and to be developed in collaboration with local business providers.	B	4	H



Impact Category	Project Aspect	Impact Description	Extent / Affected Parties	Duration	+ve/-ve SIA Rating	Perceived Significance	Significance Rating <sup>8</sup> (before mitigation)			Mitigation or Enhancement	Residual Significance Rating		
							L	M	S		L	M	S
Accessibility	Project construction	Strain on local accommodation and housing sector due to the influx of workforce	Accommodation providers Local residents Service providers Local government	Construction phase	Negative	High	B	3	H	Accommodation, Employment and Procurement Strategy to be in place ahead of construction and to be developed in collaboration with local Council and stakeholders.  Proactive, thorough, and transparent consultation process throughout Project planning, assessment and development.	C	2	M
	Project construction	Strain on local health care and emergency services due to the influx of new population combined with the existing shortage of emergency services and healthcare workers	Emergency service providers,	Construction phase	Negative	Medium	C	4	H	Accommodation, Employment and Procurement Strategy to be in place ahead of construction and to be developed in collaboration with local Council and stakeholders.  Consideration given to workforce volunteering commitment, providing training and site tours for local and new emergency service workers to familiarise them with the access points and procedures.  Proactive, thorough, and transparent consultation process throughout Project planning, assessment and development.	C	3	M
	Project establishment	Improved access to telecommunication services	Emergency service providers, proximal residents	Construction and operation phases	Positive	Medium	C	3	M	Ongoing Community Engagement Strategy, implemented in a way to increase opportunities for the community to work with the Project during project development.  Ensure plans to install telecommunications services onsite is cognisant of local community and service provider access needs and integrates infrastructure provision with community benefit sharing program where feasible.	B	3	H

## 6.0 Preliminary Social Impact Management Plan

This section provides further detail on the proposed strategies to be implemented in response to the predicted social impacts associated with the Project and relates to those impacts (both positive and negative) that have been evaluated as significant. Social impact management planning is a key consideration of SIA and ensures that the impacts identified via the SIA process and through community consultation activities, are managed effectively across the life cycle of the development (Franks & Vanclay, 2013).

The strategies proposed have been developed from the mitigations and enhancement measures raised by the community as well as through industry benchmarking, consideration of the mitigation and management measures from other technical studies undertaken for this Project, and through the application of sound social performance practice.

SIA guidance (NSW DPIE 2021) outlines that mitigation measures to respond to project impacts may be:

- **Performance-based** – identify performance criteria that must be complied with to achieve an appropriate outcome, but do not specify how the outcome is to be achieved, demonstrating why the performance criteria are appropriate.
- **Prescriptive** – that outlines actions that need to be taken or things that must be done, with justification as to why this approach is appropriate by providing scientific evidence or referencing relevant guidelines or case studies.
- **Management-based** – where potential impacts can be satisfactorily avoided or mitigated by implementing known management approaches.

A framework for social impact management is presented in **Figure 6.1**. Guiding principles and key components of these strategies are outlined further below.



**Figure 6.1 Framework for Social Impact Management**

## 6.1 Community Engagement Strategy

Consistent and consultative engagement with communities throughout the Project's planning, pre-construction, construction, and operations is critical in ensuring social acceptance, strong local partnerships and overall, more successful, and sustainable Project outcomes. Fairness in the Project development process requires the establishment and management of processes to ensure that people have meaningful opportunities to influence the design, plans, and outcomes of a development as well as in realising the benefits of the Project.

In the case of the Project, proactive consultation, and the formation of strong working partnerships throughout the Project lifecycle with the following stakeholder groups is critical:

- Host and neighbouring residents.
- Locally active community and environmental groups.
- Local Government.
- The local Aboriginal community.
- Local businesses and service providers.
- The broader community.

It is recommended that in the remaining development phase of the Project, and throughout the pre-construction and construction phases, Lightsource bp prioritise the implementation of a Community Engagement Strategy, to be led by a dedicated resource and comprising project-specific stakeholder analysis, mechanisms or methods to be utilised, periodic action plans, targets, responsibilities for implementation, as well as the development of a monitoring and evaluation framework for the Strategy throughout the life of the Project.

The approach for community engagement and public participation should be guided by the following industry and government standards and frameworks:

- The International Association for Public Participation (IAP2)'s Spectrum of Public Participation (2018).
- Clean Energy Council's Australian Guide to Agrisolar For Large-Scale Solar (2021).
- NSW Government's Undertaking Engagement Guidelines for State Significant Projects (2021).

Objectives of the Community Engagement Strategy should at a minimum include:

- Ensure that those potentially affected by the Project understand the Project's pre-construction and construction activities and how it will affect them.
- Ensure ongoing community participation during the next stages of the Project to ensure people know how their input has been considered, and what strategies will be put in place to address their concerns.
- Inform the development and implementation of impact management strategies.
- Share regular and transparent information on the Project.

## 6.2 Community Benefit Sharing Strategy

Community benefit sharing in the context of the renewable energy sector in Australia relates to the establishment of an integrated model within projects to share the rewards of the development proactively and purposefully with local communities (Clean Energy Council, 2019). Outcomes of such a model are seen to contribute positively to the development and sustainability of a region.

Further, as part of the NSW Electricity Infrastructure Roadmap set by the NSW Government (2021), project developers must demonstrate tangible benefits to local communities who host renewable energy projects, beyond the national or regional value of delivering renewable energy and reducing carbon emissions.

The Clean Energy Council of Australia outlines a framework to be considered in developing a Benefit Sharing Scheme for renewable energy projects as follows:

- Establishment of benefit sharing objectives in partnership and consultation with community representatives.
- Research and understanding of community need, interests, and ideas from the community.
- Define the financial scope of the benefit sharing package.
- Plan community engagement process to support the development of the strategy.
- Determine preliminary criteria and 'negotiables'.
- Commence community consultation with an aim of building local networks and relationships.
- Assess, refine, and decide on key components, parameters, criteria, and governance arrangements.
- Establish the strategy and implementation.
- Governance and administration in collaboration with key stakeholders and members of the community.
- Monitoring, evaluation, and continual improvement.

Consequently, Lightsource bp is developing a Community Benefit Sharing Strategy for the Project, that includes an annual financial contribution for the life of the Project. The Scheme will include a Voluntary Planning Agreement (VPA) with Upper Hunter Shire Council and partnerships with the not-for-profit community groups and other educational organisations.

During consultation with community groups and local businesses, it was expressed that they would prefer a Community Reference Group (CRG) to allocate and distribute funding for community benefits. The CRG structure was suggested to have representatives from varying groups in Merriwa and business owners and was explained to be the preferred way of ensuring funds are spent in the Merriwa community. When discussing the VPA with the Upper Hunter Shire Council, they expressed their preference for the VPA structure to allow majority of funds to be spent on road maintenance and the rest to be distributed fairly, administered by a Section 355 Committee under the *Local Government Act 1993*.

It is recommended that the Strategy and VPA is designed and developed in consultation with local stakeholders, including Council, community representatives and groups, to ensure that it is participatory in nature and delivers effective social outcomes for the local context. Further, consideration must be given to other community investment initiatives underway with government and other developers, to ensure that such project-level programs are coordinated and where feasible, funding is also directed to strategic initiatives that support the successful development of the renewable energy sector across the region. Governance arrangements for the ongoing management and administration of the funding should consider nomination of a community-led steering group to work in collaboration with Lightsource bp to ensure that the initiatives receiving support are aligned with community needs, aspirations, and local priorities.

### **6.2.1 Community-Identified Strategies and Enhancement Opportunities**

Through community consultation on the Project to date, members of the community have identified and suggested a range of mitigation and enhancement strategies which, in their view, address the social impacts that they predict the Project may cause. In addition, local community groups shared their views of how the Project could best deliver benefit to the local community through a Shared Benefit Strategy. The majority of stakeholders consulted expressed the importance of the upgrades of the Wollara and Ringwood Road, as such being the most important benefit for the Project to provide to the local community.

Further, the thirteen (13) community groups consulted for this SIA indicated they had varying range of members, with groups of thirty (30) up to one hundred and forty (140) members, and when asked what the objectives of the community group were, answers varied but had a common theme of looking after one another and advocating for each other within the community. Examples of some objectives of the community groups are listed below:

*We want a healthy local environment, set up initially to help with gas well project proposals and underground coal mines.*

*Developing non-profit groups and programs to deliver benefits to community.*

*Advocacy for local farmers.*

*Look after members and community.*

*Support people in Merriwa living under the poverty line.*

*Connecting with each other to share information.*

These community-identified strategies and opportunities are summarised in **Table 6.1** below and can inform the development of the Shared Benefit Strategy and its sub-plans.

**Table 6.1 Community-Identified Enhancement Strategies and Opportunities**

Category	Community-Identified Strategy or Opportunity
<b>Surroundings</b>	<ul style="list-style-type: none"> <li>• Upgrade and seal Ringwood Road from the Golden Highway to Wollara Road to a B Double Truck standard.</li> <li>• Incorporate improvement of visibility of the current local roads in the design of the Roads upgrade.</li> <li>• Accessing and installing a turning lane out onto Golden Highway from Ringwood Road.</li> <li>• Opportunity to work with both UHSC and Mid-Western Council to improve roadways to north (Merriwa) and south west (Mudgee).</li> <li>• Traffic safety inductions for all workers, held in town before they drive out to the Project site, in order to inform safety consideration of livestock movements.</li> <li>• Bus stop along Ringwood Rd to be maintained and graded to ensure it is safely away from heavy truck movements.</li> <li>• Development of a biodiversity offset plan.</li> <li>• Opportunity for increased research and data on Agri-solar for Australian projects.</li> <li>• Implement a bushfire management plan.</li> <li>• Provide training and site tours for local RFS, VRA and Fire &amp; Rescue members and employees to familiarise them with the access points and procedures and to also provide solar farm specific bushfire skills.</li> <li>• Provide training to VRA and RFS in how to manage fires between solar panels – and where on site you can turn the power off.</li> <li>• Fulltime workers on site to live locally and be ‘on-call’ to respond to issues on the site.</li> <li>• Dedicate an emergency meeting spot on site that is clearly communicated with all surrounding emergency services.</li> <li>• Ensure there is efficient helicopter access to onsite water tanks, in case of a large fire.</li> <li>• Maintain the fire trail roads around the site, including the grading of these tracks and ensuring they are 4 m wide.</li> <li>• Run sheep on site as a way to keep the grass down and prevent the spreading of bushfires.</li> </ul>
<b>Way of life, Community and Culture</b>	<ul style="list-style-type: none"> <li>• Clear communication and information sharing with the workforce regarding the area and incentivise a respectful day to day behaviour in accordance with the local community way of living.</li> <li>• Support, contribute to or get involved with the Festival of the Fleeces.</li> <li>• Engaging in cultural cool burns on the site.</li> <li>• Naming section of the Project site after Aboriginal names relevant to the site, in consultation with the RAPS.</li> </ul>
<b>Engagement and Decision-Making Systems</b>	<ul style="list-style-type: none"> <li>• Continued face-to-face engagement with neighbouring landholders, to provide project update in future.</li> <li>• Ongoing newsletter.</li> </ul>

Category	Community-Identified Strategy or Opportunity
Livelihoods	<ul style="list-style-type: none"> <li>• Consult with local apprenticeships or group training schemes to allow training in the renewables sector.</li> <li>• Engage with local contractors early to align construction time frames.</li> <li>• Have a local member of the community to facilitate the construction workforce program.</li> </ul>
Accessibility	<ul style="list-style-type: none"> <li>• Lightsource bp to work with local service provider on an Accommodation Strategy to identify the most suitable way to accommodate temporary workforce.</li> <li>• Training for local emergency service providers would be required around solar panel bushfires.</li> <li>• As part of the full-time employment contract of workers on the Project, Lightsource bp could include a clause that they become a member of the local VRA, RFS or Fire and Rescue to increase their numbers of people.</li> <li>• Lightsource bp to work strategically with other renewable energy developers to organize workers and services between each other, especially those situated in the Central West Orana REZ.</li> </ul>

### 6.3 Accommodation, Employment and Procurement Strategy

To directly address and respond to the social impacts and opportunities of the Project as they relate to construction workforce matters, it is recommended that Lightsource bp develop, and then implement, an Accommodation, Employment and Procurement Strategy in the pre-construction phase of the Project. The Strategy should consider efforts to maximise benefits to the local economy and business community and management of the potential cumulative impacts on the local housing/accommodation market that the Project could contribute to, associated with other users, sectors/industries or other development projects in the social locality.

Of the community groups, organisations, businesses, and service providers who responded to the question regarding opportunities to work together with Lightsource bp during the project development, all (n=12, 100%) indicated that yes, they would be open to this, with some more specific ideas/responses listed below.

*The Goulburn River wild dog association can help provide the mechanics for the discharge of your biosecurity duty. Corporate membership, funding for baits & funding 2 people as part of the Professional Wild Dog Program run by Local land services. Could make onsite workers become part of the association to help contribute.*

*We have meeting rooms that we rent out. We have a hall with kitchen, CWA hall next to RSL.*

*Close the Gap activities. Lightsource bp could support the Game Changers program.*

*Community homeless/crisis accommodation in Muswellbrook.*

### 6.3.1 Construction Workforce Accommodation

The Strategy, as it relates to workforce accommodation, should:

- Be developed during the pre-construction period, in response to regional demands at that time and to ensure preparation ahead of any influx of workers into the local area.
- Be developed in consultation with local stakeholders such as Council and service providers.
- Identify measures to ensure there is sufficient accommodation for the required workforce, taking into consideration the cumulative impacts associated with other developments in the region within the same timeframe.
- Focus on measures to ensure there is sufficient accommodation for the workforce associated with the construction phase of the Project, such as through considering whether it is appropriate to disperse workers across multiple locations/towns and across numerous accommodation providers, or by sourcing long-term accommodation as early as possible in the lead up to construction. Measures will need to consider different scenarios due to cumulative impacts associated with other developments in the region within the same timeframe, that can impact in the availability of accommodations across the different towns.
- Include a program to monitor, review and evaluate the effectiveness of the measures during construction.

Feedback from the Upper Hunter Shire Council included ideas of either LSbp or Council building smaller housing in the region, such as 'tiny homes' or demountables, which could be transferred into aged or disability housing in the area. A councillor explained that Cessnock Jail are currently building demountables for the mines in the region, a transferrable skill worth exploring. Additionally, a councillor suggested the use of a fly-in-fly-out workforce, explaining that workers from the Solomon Islands are employed locally in another industry.

A critical first step in the development of this Strategy involves detailing the workforce requirements and job profile for the construction phase, to ascertain the planned proportion of locally sourced versus incoming workers. The development of the Strategy is dependent on the number of incoming workers and their staging, in that the more people employed from within the social locality, the less need for accommodation for additional workers. It is therefore understood that there would be a considerable amount of coordination required during the planning of workforce accommodation requirements and the Project's local employment plans for the construction period.

### 6.3.2 Local Employment, Training and Procurement

Relating to local participation planning (employment, training, and procurement), the Strategy should contain initiatives to proactively enable the maximisation of local employment and sourcing for the Project's construction and operational needs, and could include the following:

- Investigate options for prioritising the employment of local workers.
- Supplier and servicing opportunities for local businesses.



- Understanding existing capabilities within the social locality and the potential for the Project to contribute to build capacity in new areas i.e., up-skilling, re-skilling, and training opportunities for local people.
- Jobs, supplier, and servicing opportunities that target partnerships with local and active social enterprises.
- Mechanisms for local businesses, job seekers and services to register their capabilities and interest in working with the Project to be formalised and widely shared within the social locality.

Actionable targets with associated responsibilities should be contained within the Strategy, including mechanisms to involve local stakeholders in its development and implementation. Key stakeholder groups should include Council, industry associations or business groups, employment and training service providers, community committees or representative bodies and regional development organisations.

Information provision relating to the Project's construction requirements in the pre-construction phase (post development approval) is also critical in embedding a planned and proactive approach to local participation and should therefore also comprise a component of this Strategy in coordination with the Community Engagement Strategy as outlined above.

## 7.0 Conclusion

This Social Impact Assessment has documented the social baseline, social impacts and social impact management and enhancement measures associated with the Goulburn River Solar Farm and forms part of the EIS for the Project.

This social assessment has included the compilation of a social baseline profile for the Project, consolidation of community consultation outcomes to inform the assessment of and evaluation of Project -related social impacts and opportunities, and preliminary social impact management planning. The impact evaluation has been undertaken to inform and support the refinement of Project design and plans to reduce negative project impacts and achieve greater positive project benefits and social outcomes.

The assessment concludes that identified negative social impacts of the Project can be reasonably mitigated or managed to reduce their significance, with positive impacts increasing in significance if appropriate enhancement measures are put in place.

A social impact management planning framework has been outlined and includes the following key components for the successful development of the Project:

- A Community Engagement Strategy.
- A Community Benefit Sharing Strategy.
- An Accommodation, Employment and Procurement Strategy.

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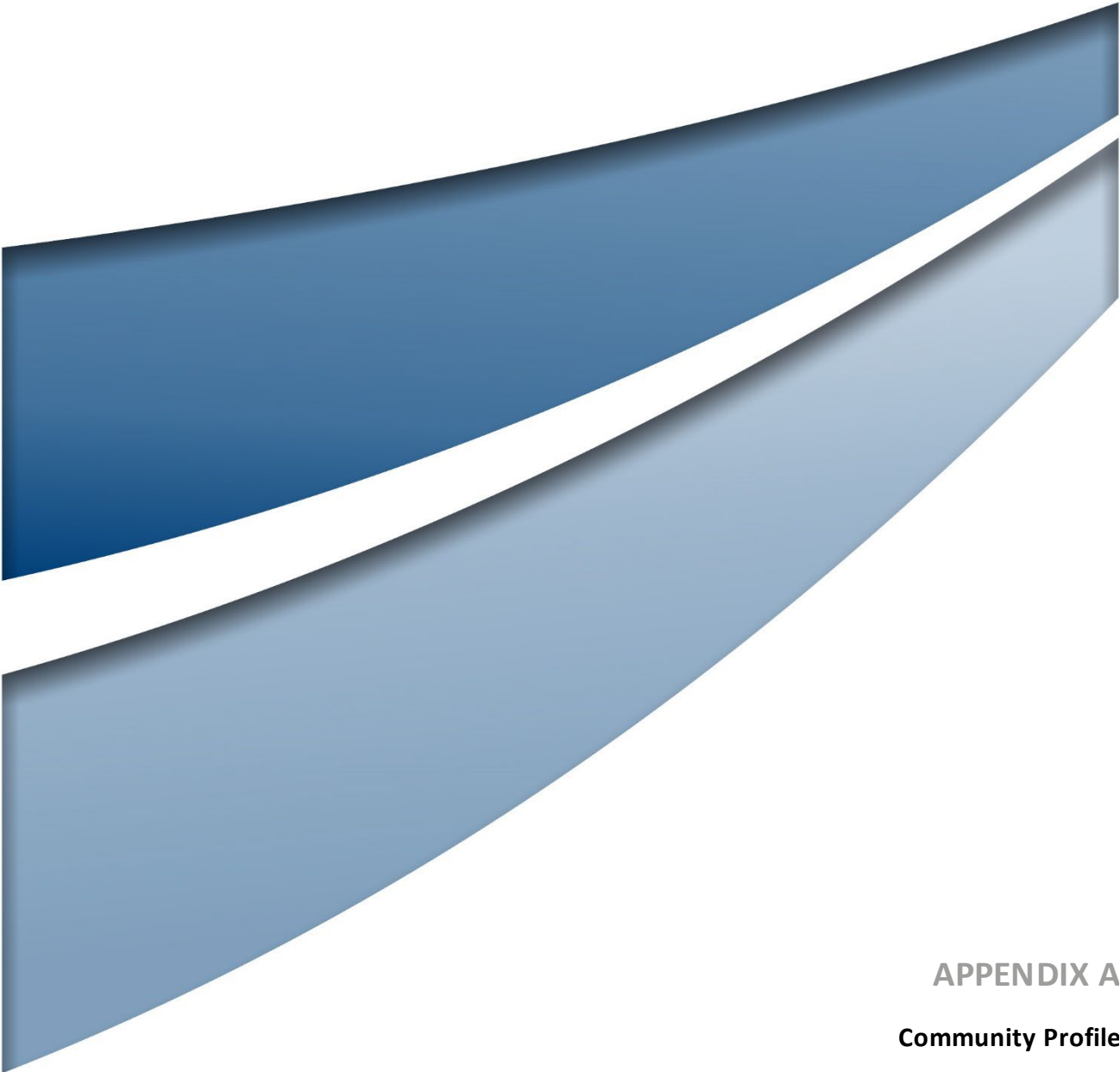
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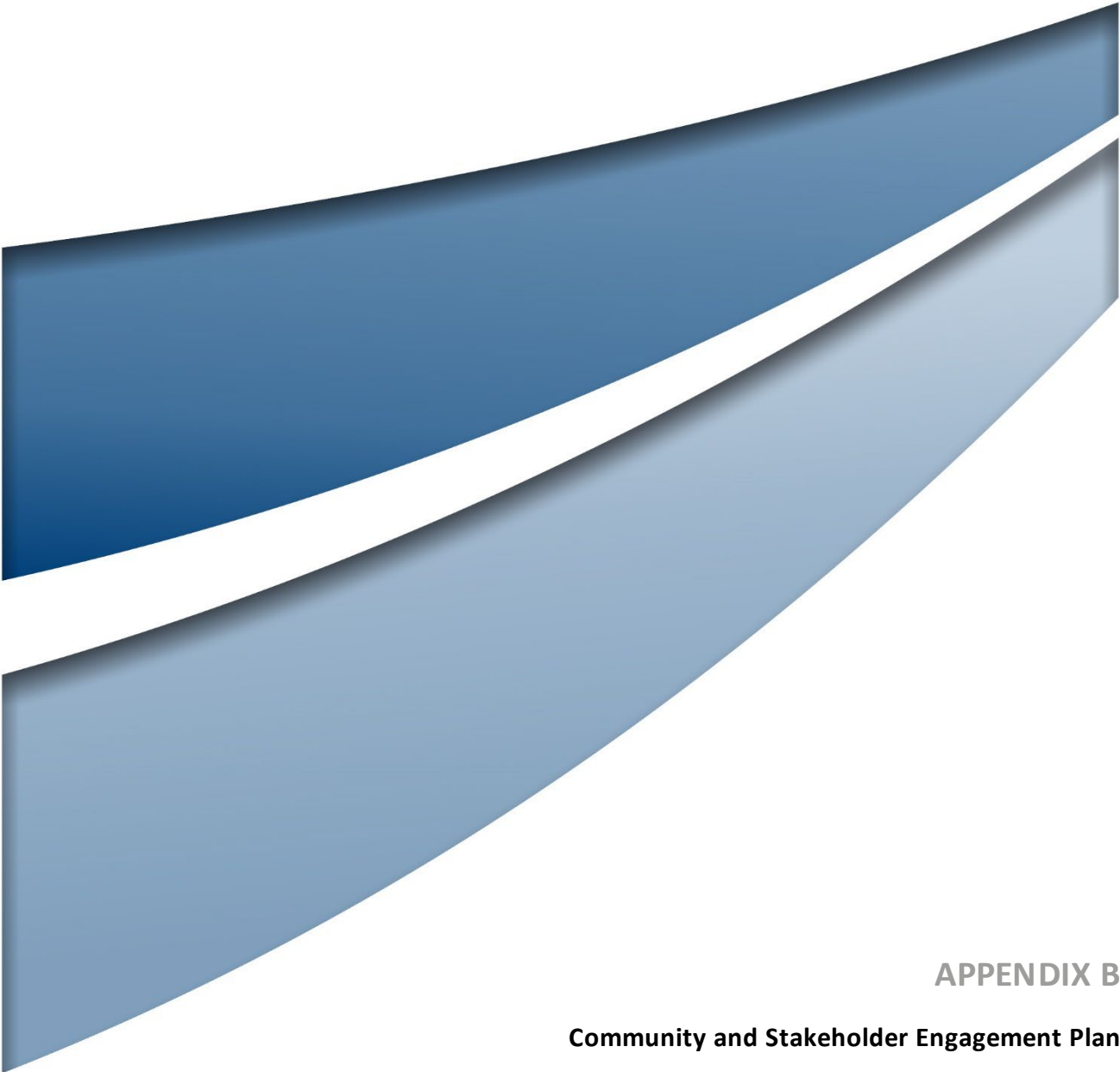
**APPENDIX A**  
**Community Profile**

Indicators	Upper Hunter LGA			Merriwa SSC			NSW		
	2011	2016	2021	2011	2016	2021	2011	2016	2021
<b>Human Capital</b>									
Population Size	13,752	14,110	14,229	972	985	1,825	6,917,660	7,480,231	8,172,500
Proportion Indigenous Population (%)	4	5	7	7	10	7.5	2	3	3.4
Median Age	39	41	42	43	44	45	38	38	39
Male Population (%)	50	49	50	51	48	48.7	49	49	49.4
Female Population (%)	50	51	50	49	52	51.3	51	51	50.6
Year 10 highest year of schooling (%)	38	37	n/a <sup>9</sup>	40	38	n/a <sup>9</sup>	26	23	n/a
Year 12 highest year of schooling (%)	34	39	n/a <sup>9</sup>	26	31	n/a	54	59	n/a
Bachelor's degree (%)	7	8	n/a <sup>9</sup>	4	6	n/a	14	16	n/a
Certificate (%)	24	24	n/a <sup>9</sup>	21	22	n/a	18	18	n/a
Attending vocational education (including TAFE and private training providers)	n/a <sup>9</sup>	n/a <sup>9</sup>	8.7	n/a <sup>9</sup>	n/a <sup>9</sup>	4.8	n/a <sup>9</sup>	n/a <sup>9</sup>	8.5
Attending university or other higher education	n/a <sup>9</sup>	n/a <sup>9</sup>	5.2	n/a <sup>9</sup>	n/a <sup>9</sup>	4.5	n/a <sup>9</sup>	n/a <sup>9</sup>	15.3
Proportion of population born overseas (%)	7.1	8.4	16	5.2	5.4	17	27.3	29.7	34.6
<b>Social Capital</b>									
Proportion of single parent families (%)	14	14	13.7	21	25	15.3	16	16	15.8
Proportion of family households (%)	70	69	68.5	66	64	67.4	72	72	71.2
Proportion of group households (%)	3	3	2.8	4	3	2.1	4	4	3.8
Proportion of lone person households (%)	27	29	28.8	30	34	30.5	24	24	25
Proportion of population with a different address 1 year ago (%)	15	13	TBC	16	17	TBC	14	14	TBC
Proportion of population with a different address 5 year ago (%)	37	33	33.2	38	37	31.7	37	39	37.5

<sup>9</sup> Comparable data not available, as the measurement of 'highest level of education' has changed to 'type of educational institution attending' in 2021 data.

Indicators	Upper Hunter LGA			Merriwa SSC			NSW		
Proportion of population aged 15+ who volunteer (%)	23	24	16.5	24	23	22.1	17	18	13
Population born overseas (%)	12	15.8	16	13.1	17.7	17	31.4	34.5	34.6
<b>Economic</b>									
Median household income (\$/week)	1,071	1,242	1,429	771	922	1,208	1,237	1,486	1,829
Median mortgage repayment (\$/month)	1,600	1,688	1,560	1,105	997	1,235	1,993	1,986	2,167
Median rent for a 3-bed house (\$/week)	170	220	270 <sup>10</sup>	165	200	245 <sup>10</sup>	300	380	420 <sup>10</sup>
Median rent as a proportion of median household income (weekly) (%)	16	18	18.8	21	22	20.2	24	26	22.9
Proportion of the labour force employed part-time (%)	26.5	29.8	27.9	33.1	29.9	30.4	28.2	29.7	29.7
Proportion of the labour force who are unemployed (%)	3.6	4.8	3.2	6.7	7.6	4.7	5.9	6.3	4.9
Proportion of population who did unpaid domestic work (week before census) (%)	70.8	69.8	67.5	65.7	66.7	64.7	68.7	67.7	66.5
<b>Physical Capital</b>									
Proportion of occupied private dwellings that are fully owned (%)	35.3	35.5	36.7	37.8	36.2	42.5	33.2	32.2	31.5
Proportion of occupied private dwellings being purchased/ owned by a mortgage (%)	30.8	31.9	32.0	23.0	27.1	25.5	33.4	32.3	32.5
Proportion of occupied private dwellings that are being rented (%)	29.6	29.0	24.2	32.8	33.6	23.6	30.1	31.8	32.6
Total occupied private dwellings (%)	85	86	86.5	82	85	84.1	90	90	90.6
Separate house (%)	92	91	90.7	100	91	95.3	70	66	65.6
Semi-detached, row or terrace house, townhouse etc. (%)	2	2	7	0	1	3	11	12	11.7
Flat or apartment (%)	4	5	0.8	0	0.8	0.6	19	20	14.2
Travel to Work (car as driver (%)	62	65	63.5	59	62	55.7	58	58	43.1
Proportion of dwellings with internet access (%)	70	76	N/a	63	69	N/a	79	85	N/a

<sup>10</sup> 2021 data does not indicate median rent for a 3-bed house, the 2021 indicator is for median rent generally.



## APPENDIX B

### Community and Stakeholder Engagement Plan



lightsource bp

**GOULBURN RIVER SOLAR FARM**

Community and Stakeholder Engagement Plan

**FINAL**

October 2022



## GOULBURN RIVER SOLAR FARM

Community and Stakeholder Engagement Plan

### FINAL

Prepared by  
Umwelt (Australia) Pty Limited  
on behalf of  
Lightsource bp

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Report No. 21507/R18/Appendix B  
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**Acknowledgement of Country**

*Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.*

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# 1.0 Introduction

The proposed Goulburn River Solar Farm (the Project) by Lightsource Development Services Australia Pty Ltd (Lightsource bp) (the proponent), comprises the construction and operation of a 520 megawatt (MW) photovoltaic solar farm and battery energy storage system (BESS), approximately 36 kilometres southwest of Merriwa, in the Upper Hunter local government area of the Hunter region, and bordering the Central West region of New South Wales (NSW).

Lightsource bp was formed and commenced operations in Australia in December 2017 through a partnership between European solar farm developer Lightsource Renewable Energy and global energy company BP. Lightsource bp's existing projects under construction include Wellington Solar Farm (NSW), the West Wyalong Solar Farm (NSW) and the Woolooga Solar Farm (QLD). In addition, development approval has been obtained for Wellington North Solar Farm (NSW), Naring Solar Farm (VIC), and Mokoan Solar Farm (VIC).

## 1.1 Purpose and Objectives

This Community and Stakeholder Engagement Plan (the Plan) outlines the objectives, approach, and implementation program for engaging and consulting with the community and stakeholders on the Project during the Project's planning and assessment phase.

The Plan's purpose is to inform the approach and process of community and stakeholder engagement for the scoping phase of the Project (as part of the Request for Secretary's Environmental Assessment Requirements (SEARs)) and the Environmental Impact Statement (EIS), as part of the Project's State Significant Development (SSD) application to be lodged with the NSW Department of Planning, Industry and Environment (DPIE). Further, the Plan supports the Social Impact Assessment (SIA) process, one of the key technical studies of the EIS which relies heavily on community participation and input.

As noted in the NSW DPIE *Undertaking Engagement Guidelines for State Significant Projects (2021)*, and the NSW DPIE *Social Impact Assessment Guideline for State Significant Projects (2021)*, community participation objectives are for engagement to be: open and inclusive, easy to access, relevant, timely, and meaningful. Proponent-led engagement is understood as a fundamental part of project planning and development.

This Plan has the following objectives:

- 1) To ensure people potentially affected by the proposed Project understand the project and its potential effects.
- 2) To consider the views of people in a meaningful way, including their values, interests and priorities, and how impacts may be experienced from their perspective.
- 3) To scope social and community interests or issues, by collecting relevant data, evidence, and insights to ensure representativeness and diversity of views.
- 4) To provide opportunities for people to input into project design and assessment matters and contribute to solutions to address impacts.

- 5) To ensure people know how their input has been considered, and what strategies will be put in place to address their concerns.
- 6) To listen, understand and respond to matters and concerns raised.

## 1.2 Project Overview

Lightsource bp propose the development of the Goulburn River Solar Farm, involving the construction, operation, maintenance and decommissioning of the solar farm. Additionally, the Project includes BESS infrastructure components, associated infrastructure including operation and maintenance buildings, civil works, and electrical infrastructure required to connect to the existing electricity network.

The solar farm and BESS are proposed to be located on two single freehold properties across multiple lots, currently used for livestock grazing activities. There are no identified immediate residential neighbours adjacent to the proposed Project Area due to it being surrounded by the Goulburn River National Park. The Project Area (Solar Farm and BESS) covers an area of approximately 800 hectares (ha). Access to the Project is proposed via Wollara Road, Merriwa from three existing driveways, providing northern, southern and central access to the site.

Locations of any powerline routes and potential road upgrades (if required) will be finalised as the Project design progresses.


**Table 1.1** outlines the key Project milestones that relate to this Plan.

**Table 1.1 Key Project Milestones**

Activity	Indicative Timing
CSEP development	August 2021
Launch of Project	September 2021
Round 1 stakeholder and community engagement	September–November 2021
Submission of Scoping Report to DPIE	December 2021
Issuance of SEARs	February 2022
Round 2 stakeholder and community engagement	July–September 2022
EIS Lodgement	November 2022
Public exhibition period	December–January 2022
Determination	January/February 2022

## 1.3 Approach

Best practice community and stakeholder engagement design and delivery is guided by the International Association of Public Participation (IAP2) Public Participation Spectrum, which outlines differing levels of public participation (refer to **Figure 1.1**).

INCREASING IMPACT ON THE DECISION 

	<b>INFORM</b>	<b>CONSULT</b>	<b>INVOLVE</b>	<b>COLLABORATE</b>	<b>EMPOWER</b>
<b>PUBLIC PARTICIPATION GOAL</b>	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
<b>PROMISE TO THE PUBLIC</b>	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

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**Figure 1.1 IAP2 Public Participation Spectrum**

Source: IAP2 International Federation (2018).

In the context of NSW, the approach to stakeholder and community engagement will largely be informed by the DPIE *Undertaking Engagement Guidelines for State Significant Projects* (2021), which guides proponents:

- To plan engagement early.
- To engage as early as possible.
- To engage effectively, proportionately, innovatively, and transparently throughout the process.

The Project will also be informed by the NSW Government’s *Large-Scale Solar Energy Guideline for State Significant Development* (2018), which requires proponents to include the following components of their stakeholder engagement program:

- To engage with communities about the proposed project, the likely infrastructure layout, access routes and potential location of ancillary infrastructure.
- To listen to the community's concerns and suggestions.
- To discuss potential noise impacts, the potential visual impacts and landscape changes, the proposed siting and potential alternatives.
- To discuss issues for landholder agreement if the project is approved, including siting, access, compensation, responsibility for decommissioning and rehabilitation.

Further, as SIA is applicable to all SSDs in NSW, which is informed by, and reliant on, the outcomes of early, and ongoing community and stakeholder engagement through the assessment of the Project.

Two key rounds of engagement are proposed for the Project prior to lodgement of the EIS.

### **1.3.1 Round 1 (Scoping Phase)**

The scoping phase will include community engagement activities to introduce the Project, share preliminary information, and to scope and understand stakeholder and community views, issues, interests and concerns in relation to the Project. This round of engagement will provide an opportunity for Lightsource bp to establish working relationships with key community groups and stakeholders. Information obtained will proactively inform the Project's design and planning.

The Scoping Report will include community views and any concerns, as well as Project constraints and opportunities identified as a result of engagement. Discussion items to include in consultation activities appropriate to this phase will include topics relating to:

- Awareness and attitudes towards solar farm development (and other renewables or industry development in the local or regional area).
- Awareness and public perceptions of Lightsource bp.
- Community values, identity, local needs and aspirations.
- Areas of value and use within and near the Project Area.
- Potential issues, concerns or interests related to the proposed project.
- Potential sensitive receivers and/or vulnerable community groups.
- Preferred engagement mechanisms, frequency and content.

### **1.3.2 Round 2 (EIS Phase)**

Proposed engagement activities undertaken during Round 2 will be focused on exploring and validating the matters identified during the Scoping Phase. The findings or results from the various technical studies that comprise the EIS will also be shared with Project stakeholders during this round. This assists in gathering feedback on the predicted project impacts and people's perceptions of them.

Therefore, engagement in this round will focus on:

- Sharing information and gathering feedback on the proposed design of the Project.
- Assessment of perceived or key social and environmental issues, impacts and opportunities associated with the Project.
- Potential mitigation or enhancement strategies to address and respond to issues, impacts and opportunities.
- Existing capacity of local service provision and projected future demand as relevant to the predicted Project impacts.
- Measures to improve collaboration between Lightsource bp and community or stakeholders, including potential community investment and benefit-sharing opportunities.

Engagement outcomes will be collated, integrated and documented within the Social Impact Scoping Study (Round 1) and Social Impact Assessment Report (Round 2). Engagement outcomes will also be disseminated throughout the EIS team to ensure that community and stakeholder inputs are considered, and where possible responded to and integrated, to ensure the best outcomes for the Project and the community.

## 2.0 Social Context

### 2.1 Policy Setting

The NSW Government's current energy security policy and approach to a clean energy transition is being delivered through the strategic development of the renewable energy sector, as outlined through the NSW Government's *Renewable Energy Action Plan (2013)*, *Electricity Strategy (2019)* and the *Electricity Infrastructure Roadmap (2020)*. This policy context is relevant to inform the public positioning and key messaging for the planning and development of the Goulburn River Solar Farm.

The Project Area is in close proximity to the Central West Orana Renewable Energy Zone (REZ) in NSW, situated to the west of the Project Area, and the proposed Hunter REZ to the east. This policy context has seen the development of numerous solar and wind farms in recent years planned across the region. In order to deliver renewable energy into the National electricity grid to support the REZ, transmission infrastructure continues to be required, resulting in upgrades to existing networks or the establishment of new transmission routes for projects within the region.

As a part of TransGrid's recently announced Central West REZ Transmission Project, TransGrid is planning new 500 kV and 330 kV transmission lines, substation(s) and related infrastructure to support the development of the Central-West Orana REZ. Investigations are currently underway for a study corridor running north-west from the existing 500 kV network to the immediate north of the Project Area and south of Merriwa, then passing south of Dunedoo, and connecting to the existing network east of Wellington. The corridor also includes an option to extend further south to near Lake Burrendong and TransGrid's existing substation at Wollar will also be upgraded as part of the REZ Project. In recent months, some local groups have formed specifically in response to the Central West REZ Transmission Project, including the Merriwa-Cassilis Alliance who have established a working group with TransGrid to advocate for alternative routes for the Central West REZ Transmission Project, so as not to interfere with agricultural or private land uses.

It must be noted, however, that Goulburn River Solar Farm Project will be connecting into TransGrid's existing infrastructure, a 500 kV line from Mt Piper to Liddell and therefore is not reliant on the TransGrid infrastructure proposed as part of the REZ.

### 2.2 Community Characteristics

The Project Area is located at the far west of the Upper Hunter Shire, approximately 36 kilometres southwest from the regional town of Merriwa. Merriwa has a population of 1,761 people (approximately 864 households) with a median age of 44 years (ABS, 2016). The broader community places high value on its farming heritage and present-day practice, with a rich agricultural history.



The Project Area is proposed to be situated on an area of cleared freehold land surrounded by the Goulburn River National Park. Historically, the land was occupied by the Wonnarua (or Wanaruah) Nation, with Gamileroi and Wiradjuri Peoples also frequenting the area. The Wonnarua Nation Aboriginal Corporation and the Wanaruah Local Aboriginal Land Council are existing governance structures to represent the traditional owners of the land today. There are over 300 known Aboriginal cultural sites within the Goulburn River National Park, however there is one known cultural site within the Project Area

Whilst the proposed site does not have direct neighbouring properties, the Merriwa community is considered close-knit and well-networked, with several organised community groups as identified in above and outlined further in **Section 3.0**.

The small villages of Cogan and Wollar, located within the Mid-Western Regional Council area, are the closest communities to the proposed Project Area, located approximately 15 and 16 km to the south and south-west, respectively (Six Maps, 2021). At the last census, 69 people (mean age of 41 years) are recorded living in 50 dwellings in Wollar and four people reside in Coggan (ABS, 2016).

Wollar has had significant population decline since the 2011 Census, with a decrease of 74% (191) of its population. In 2016, 82% of the remaining residents were employed in mining and agriculture activities (ABS, 2016), with Peabody's Wilpinjong Coal Mine only 1.5 kilometres to the south-east. Peabody has acquired all but one private property in Wollar as a part of the mine's expansion approval in 2018.

Development consent for the 280 MW Wollar Solar Farm was granted to Wollar Solar Development Pty Ltd in February 2020 and is located on the western side of Barigan Road, approximately 7 kilometres south of Wollar Village. Construction began late in 2020, with connection to TransGrid's existing infrastructure and is expected to take approximately 18 months to complete. The Solar farm is expected to operate for 30 years.

The Mid Western Regional Council area also includes the larger township of Mudgee, a popular regional tourist area, which is located approximately an hour away (77 kilometres) from the Project Area. Unlike Merriwa, Mudgee has ample supply of short and long-stay accommodation providers which could potentially service the Project's workforce needs.

The infographics presented in **Figure 2.1** outline key demographic characteristics of Merriwa and Mudgee (the social locality) that will inform this Plan.



**Figure 2.1 Community Demography Snapshot**

Source: ABS Community profiles 2016.

Umwelt © 2021.

## 2.3 Key Project Considerations

Proposed solar energy projects across NSW have in recent years received diverse responses from local communities on the perceived environmental and social impacts of the developments, and the level of social acceptance. Following an initial review of public submissions received on recently announced or developed solar projects, as well as a scan of local media and other publicly available documentation, we understand the following potential community issues to be of relevance for consideration in planning and developing the Project:

- A perceived inadequacy with community engagement approaches by other proponents, including a lack of adequate community representation and limited information provision.
- Land use conflict with productive agricultural areas.
- Visual amenity – views of solar panels, glare and glint, lighting issues and lack of screening.
- A lack of local economic benefit realised and detraction from local tourist areas and attractions.
- Construction workforce changing local townships – effect on supply, demand, and accessibility of local services (housing, health, education, recreation, employment etc.).
- Little research demonstrated in the devaluation of properties and overall local property market changes, especially where location of site is close to townships and/or to residential properties.
- Traffic issues for local roads, including road deterioration, effect on school buses, safety on roads and increased traffic noise.
- Localised noise caused by construction activities.
- Concerns about electromagnetic fields (EMFs), radiation issues for residents increasing health risks, hazardous material posing a hazard/safety risk, heat generation, the welfare of cattle and sheep, spread of noxious weeds, and wildlife deaths associated with heat.
- Established community groups mobilising in response to other projects in the region could affect how communities perceive and respond to the project.
- Cumulative community effects of multiple projects in the local area at once.

### 3.0 Stakeholder Identification

Stakeholder groups identified as relevant to the Project are outlined in **Figure 3.1** below.



**Figure 3.1 Stakeholder Groups**

A stakeholder identification process has been undertaken to further define relevant stakeholders for the Project within each of these stakeholder groupings. An overview of the stakeholder identification process is presented in **Table 3.1** which will be used to guide engagement planning throughout the EIS process as per the 'Level of Engagement' indicated.

**Table 3.1 Stakeholder Identification**

Stakeholder Group	Stakeholders	Level of Engagement (IAP2)	Potential Interest/Concern
Nearby residents/landholders	Approximately 17 Properties along Wollara Road, Merriwa are residential	Consult	Transportation route - Accessibility impacts from construction workforce Land use conflict Cumulative impacts from multiple projects Conservation and ecological values Sense of community/sense of place Commercial stimulus for local economy
Community and special interest groups	NSW Farmers Association – local branch Hunter Region Landcare Network Scone Landcare Inc Merriwa-Cassilis Alliance (MCA) Incorporated Merriwa Country Women’s Association Cassilis Country Women’s Association Merriwa District Progress Association Merriwa Healthy Environment Group Inc Merriwa Historical Society Merriwa Railway Society Wollar Progress Association	Consult	Conservation and ecological values Land use conflict Community values Site access Cumulative impacts from multiple projects Accessibility impacts from construction workforce Sense of community/sense of place Commercial stimulus for local economy Local infrastructure and services provision
Local industry groups, businesses and service providers	Chambers of Commerce (Scone, Mudgee, Gulgong) Service providers (employment, training, health, accommodation, recreation, tourism etc.) Utilities providers; TransGrid, Essential Energy, Telstra Bus companies Emergency services such as RFS, SES, Ambulance and Police	Involve	Increased demand/use of local and regional services by construction workforce Livelihood impacts Public safety for other road users (e.g., children and school bus drop off locations) Commercial stimulus for local economy

Stakeholder Group	Stakeholders	Level of Engagement (IAP2)	Potential Interest/Concern
Local Government	Upper Hunter Shire Council	Collaborate	Cumulative impacts from multiple projects Accessibility impacts on local and regional services and businesses Commercial stimulus for local economy Development of a Voluntary Benefit Agreement (VPA) if required Local infrastructure and services provision (e.g., road upgrades) Land use planning Concerns of community and local stakeholders
	Mid-Western Regional Council Muswellbrook Shire Council	Involve	
State/Commonwealth Government	DPIE Secretary DPIE Director - Energy Infrastructure and Renewable Energy Zones NSW Energy Corporation NSW Parks and Wildlife Service NSW Environment Protection Authority (EPA) Aboriginal Affairs NSW Transport for NSW Heritage NSW Commonwealth Department of Agriculture, Water and the Environment	Involve	Regulation and compliance with relevant legislation/regulation Planning and assessment process Cumulative impacts from multiple projects Alignment to NSW Government initiatives Transport accessibility and potential road upgrades
Traditional Owners and Aboriginal stakeholders	Wanaruah Local Aboriginal Land Council Mudgee Local Aboriginal Land Council Wonnarua Nation Aboriginal Corporation	Involve	Impacts on cultural connection to Country or place or on cultural values Inequity of impacts on Aboriginal community Cultural heritage surveys

Stakeholder Group	Stakeholders	Level of Engagement (IAP2)	Potential Interest/Concern
Broader community	Residents of the Upper Hunter LGA Residents of the Mid-Western LGA Residents of the Muswellbrook LGA	Consult	Cumulative impacts from multiple projects Accessibility impacts from construction workforce Land use conflict Regional economic benefits Infrastructure and services provision
Local media	The Scone Advocate Muswellbrook Chronicle 2NM radio Hunter Valley/Power FM	Inform	Cumulative impacts from multiple projects Regional economic benefits

## 4.0 Engagement Methods

The engagement of stakeholders and community groups will include a combination of:

- **Consultation and engagement:** to facilitate stakeholder involvement in the identification of issues/impacts, areas of interest/concern and strategies to address the issues raised.
- **Information provision:** to improve knowledge and awareness of the company, its activities, the project, and key issues/impacts as they arise.

Various methods will be used to engage with the different stakeholder groups based on the type of information being conveyed, level of feedback required, understanding of the stakeholder needs regarding engagement and identified stakeholder engagement preferences. This will include existing or previous mechanisms utilised by Lightsource bp and additional mechanisms to target the stakeholders identified for this Project and the SIA and EIS requirements.

**Table 4.1** outlines the engagement mechanisms that will be used to engage each stakeholder group, that aligns with the level of engagement as noted in **Table 3.1**.

**Table 4.1 Engagement Mechanisms**

	Project Website	Media Release	Community Hotline	Project Email	Project Information Sheets	Community Information Sessions	Personal Interviews/ Meetings	Project Meetings	Community Feedback Form
<b>Stakeholder</b>									
Host landholder						✓	✓		✓
Residents of neighbouring or nearby communities	✓	✓	✓	✓	✓	✓			✓
Local businesses and service providers	✓	✓	✓	✓	✓	✓	✓	✓	✓
Local Government	✓	✓					✓	✓	
State/Commonwealth Government							✓	✓	
Aboriginal stakeholders	✓	✓	✓	✓	✓	✓	✓	✓	✓
Community and special interest groups	✓	✓	✓	✓	✓	✓	✓	✓	✓
Broader community	✓	✓	✓	✓	✓	✓			✓
Local media	✓	✓	✓	✓	✓				



## 4.1 Engagement Materials

Materials to be used to support the engagement activities outlined in **Section 5.0** will be prepared prior to delivery. Materials and tools to support the proposed engagement activities include the following:

- Meeting agendas/run sheets.
- Website content.
- Interview and survey guides.
- Feedback forms for community information sessions.
- Project information sheets/flyers/posters.

## 4.2 Key Project Messages

Key messages will be developed and refined throughout the EIS process, around the following categories. These will be used to inform the delivery of engagement activities and include:

- 1) **Project Messages** – details on the site and plans, ‘quick facts’ and profile of the proposed Project.
- 2) **Process Messages** – the development planning and assessment process and current Project status, including key milestones for the EIS submission, public exhibition and determination, when stakeholders and the community can be involved through consultation to influence design and project outcomes, and the timing of the proposed Project, to create awareness on the anticipated stages of construction and operation.
- 3) **Issues and Benefits Messages** – key issues in relation to the Project i.e., engineering, layout and design, social and environmental issues, community interests or concerns, and positive outcomes of the Project for the community, including local benefit sharing opportunities to be delivered through the Project.

### 4.2.1 The Project

#### Who is Lightsource bp?

- Lightsource bp is a global market leader in the funding, development and long-term management of large-scale solar projects and smart energy solutions and we work closely with local businesses to deliver sustainable renewable energy projects. Lightsource bp entered Australia in December 2017 through a partnership between European solar farm developer Lightsource Renewable Energy and global energy company bp. Lightsource bp’s has a total of 500 MWp across three projects underway with the Wellington Solar Farm in the final stages of commissioning, and the Woolooga and West Wyalong Solar Farms due to complete construction early 2021.

#### What is the Project and where is it located?

- Lightsource bp are proposing to develop a solar farm on 2,000 hectares of farmland, surrounded by and adjacent to, the Goulburn River National Park.
- The Project Area is located approximately 36 kilometres from the town of Merriwa and 16 kilometres from Wollar, NSW.

- The site will be accessed via Merriwa, along the Wollara Road.
- The Capital Investment Value of the Project is \$750 million AUD.

### **Why was the site selected?**

- The Project Area is already cleared for agriculture and is relatively secluded from neighbouring residences, meaning it is less likely to affect many people or their properties.
- There are two private property owners whose land is affected by the Project and each has already entered agreement with Lightsource bp to sell, access and utilise the land for the Project.
- The site already has a transmission line traversing through it, therefore no new transmission lines are needed to connect to the grid. It is proposed that the Project will connect into this existing transmission line via installation of an on-site substation. Standard operations of Lightsource bp include low density grazing as a means of retaining an agricultural purpose and to reduce undergrowth and bushfire risk.

### **The Goulburn River National Park is not in an area identified as a Renewable Energy Zone. How has this area been approved for the Project? Has Lightsource bp leased or bought the land?**

- Lightsource bp has entered an 'option to purchase agreement' with the two current landowners in the Project Area. The land is zoned RU1 – Primary Production (i.e. agricultural), with the surrounding land zoned as National Park. Energy generation is a permitted land use within land zoned RU1, and the Project does not plan to enter the National Park. The Central West Orana Renewable Energy Zone is nearby, however, this Project is located outside of its area and will not utilise any of the REZ infrastructure.

### **What will the Project deliver?**

- The project will deliver up to 500 construction jobs over a 20-month period, and up to 20 full time positions.
- The Project Area is approximately 800 hectares in size and will have a capacity of powering 156,000 homes, at it's peak producing over 5% of NSW's average electricity demand.
- The solar farm is comprised of solar photovoltaic (PV) modules and a battery energy storage system (BESS) that deliver renewable energy on demand and help stabilise the electricity grid.
- The solar farm is proposed to be operational for a minimum of 35 years.

### **How long will the Project be operational?**

- Current plans intend for the Project to be operational for 35–40 years, based on the expected lifecycle of the panels. At the end of the Project life, Lightsource will make the decision to either continue the operations of the Project where infrastructure would be replaced, or the Project could be decommissioned and return the land to agricultural use. Lightsource bp is soon to announce a commitment to ensure the solar panels are recycled where practical upon decommissioning, leaving minimal need for landfill.

### **What infrastructure will be required?**

- Once constructed, the Project will include site offices, an operations and maintenance building, a substation, solar panels and invertors, BESS, carpark area, and storage facilities.

### **When will Lightsource bp bid for network access?**

- Lightsource bp has been working with the Transgrid, the Network Operator over the past few months to explore options for the Project to connect to the network. Initial studies indicate a feasible connection option is available at the site and studies continue to define the technical aspects of the connection. This process is forecast to conclude in late 2022.

### **Who will own and operate the solar farm?**

- Lightsource bp intends to own and operate the solar farm through the appointment of an operations and maintenance contractor, following the Engineering, Procurement and Construction (EPC) Contractor's term.

### **What will be done to manage the increase in local traffic and changes to the roads?**

- A preliminary survey of the main access road to the Project Area has been undertaken and Lightsource bp have noted the current deteriorated state of Wollara/Ringwood Road. Lightsource bp plan to manage the road throughout the construction period to ensure the road is safe for existing traffic and for our construction workforce. In consultation with Upper Hunter Shire Council, Lightsource bp have committed to complete road upgrades and rehabilitation following the construction works. It is expected that the road will be returned to the same, or to a better standard than its current state.

## **4.2.2 The Process**

### **What is Umwelt's role on the Project?**

- Umwelt Australia (Umwelt) is an environmental and social consultancy with over 25 years' experience providing speciality services in ecology, heritage, environmental planning, community engagement, and social impact assessment. Lightsource bp have engaged Umwelt to prepare the Environmental Impact Statement (EIS) for the Project and as part of this, will undertake several technical studies guided by the Secretary Environmental Assessment Requirements (SEARs) to be issued by DPIE in late 2021 or early 2022. Several preliminary assessments are currently underway during the current scoping phase of the Project, including the Social Impact Assessment which includes consultation with local landowners, community groups, service providers and businesses to understand the potential impacts of the Project (positive and negative) on the community.

### **If approved, when will the Project commence?**

- Pending the Project's planning and assessment process and determination, construction would commence in mid-2023. Due to the scale of the Project, the construction period is expected to be 18–24 months in duration.

## What is the assessment process?

- The Project is currently in the early stage of planning and assessment. It will be assessed as a State Significant Development (SSD) under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (the EP&A Act). The NSW Department of Planning, Industry and Environment (DPIE) is the State planning authority for the Project. The Project will also be assessed under the bilateral agreement between the Commonwealth of Australia and the State of NSW relating to environmental assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This agreement allows the Commonwealth Minister for the Environment to rely on NSW environmental impact assessment processes for assessing actions under the EPBC Act.
- The EP&A Act requires a Scoping Report to be prepared and submitted to DPIE. DPIE will then prepare and issue the Secretary's Environmental Assessment Requirements (SEARs) for the Project, which would outline the range of environmental and social matters to be addressed in the Environmental Impact Statement (EIS).
- Once the EIS is lodged, a public exhibition period will commence for a period of approximately 4–6 weeks to encourage community and agency feedback on the proposal. A Response to Submission (RTS) Report addressing this feedback is then developed and lodged with DPIE, who will assess the development application together with the EIS to consider all Project impacts assessed, as well as public submissions received, and provide a project determination to Lightsource bp.
- Lightsource bp have recently engaged Umwelt Environmental and Social Consultants to prepare the EIS for the Project.

## What is included in the EIS?

- A range of technical studies will be undertaken to ensure environmental and social impacts are identified and appropriate measures are considered to mitigate or enhance the impacts.
- Assessments within the EIS will include, noise, biodiversity, visual amenity, Aboriginal and non-Aboriginal heritage, traffic and transport, social and community, water and soil resources, and hazards and safety.
- A Social Impact Assessment (SIA) is one of the studies undertaken as part of the EIS to assess the effects of the Project on the community.
- Umwelt and Lightsource bp will be consulting with the community during both the scoping phase and during the EIS preparation period, to understand any concerns, interests, issues, or the benefits that people perceive the Project may have. This consultation is an important part of the Project's planning and design, as feedback provided by the community is integrated throughout the planning process to inform the technical studies and Project design.
- Lightsource bp will endeavour to undertake regular, open and transparent engagement with the local community and stakeholders throughout the process.

### **What community engagement activities will be undertaken for the Project?**

- Lightsource bp and Umwelt will be consulting with the local and wider communities surrounding the Project, including Aboriginal community representatives, to gain a detailed understanding of the views, issues, interests, and feedback on the Project. Councils and NSW Government agencies will also be consulted.
- A first round of engagement will occur in September 2021 to introduce the Project and to gather early feedback.
- A second round of engagement is expected to take place in 2022 during the preparation of the EIS, to understand the impacts on the community and to provide the outcomes of the EIS technical assessments to the community.
- Engagement activities to be organised will include project briefings, one on one meetings or interviews, community information sessions, and community surveys.
- Prior to the determination of the Project from the DPIE, the EIS will be made public, allowing for submission to be made by any member of the community or interested party. This gives the public and the wider community the opportunity to contribute directly to the Project's assessment and determination following the two rounds of community consultation.

### **When will face-to-face community consultation take place?**

- Lightsource bp and Umwelt would like to host an in-person community event during the EIS preparation period, in early 2022. As COVID-19 restrictions have recently eased, the team is looking to hold individual face to face meetings with community members. Further, the Social Impact Assessment process as it progresses will include a range of community consultation activities where the team hopes to hear from different groups and members of the community. These activities will be organised and promoted in the coming months. A meeting with the Project team can also be organised at any time by getting in touch with us.

### **Where will materials required for the Project be sourced from?**

- The procurement of materials for the Project covers global markets including Europe and Asia as well as domestic markets for other requirements. Lightsource bp works to ensure that all our suppliers are passed through extensive due diligence processes, including investigation into our suppliers' Environmental, Social and Governance practices before purchases are made.

### **How is Lightsource bp working with other renewable energy developers across the region?**

- Although this Project is not situated in the Central West Orana Renewable Energy Zone, Lightsource bp is an active member of an Industry Roundtable hosted by RE-Alliance, where several developers in the region are working together on how to best maximise local benefits with a particular focus on employment generation. Lightsource bp is also a member of the Clean Energy Council and are involved in a number of their working groups, including their Community and Stakeholder Engagement working group.

## **Will Lightsource bp be consulting with local industry groups?**

- Lightsource bp plans to consult with and work with a range of local stakeholders including industry groups, businesses, service providers, and community and environmental organisations as the Project planning and assessment process progresses. Initial meetings have been held in recent months with some of these groups, and as the Project commences the preparation of the EIS, further consultation and feedback from local groups will be sought to ensure that the extent of the impacts and opportunities are understood, and how to best work together in planning and managing the Project as it progresses.

### **4.2.3 Issues and Benefits**

#### **Renewable Energy Provision**

- Solar energy development supports the diversification of NSW's energy mix and more broadly is contributing to Australia's clean energy transition.
- This project will have the capacity to generate 520 MWp of clean electricity each year; enough to supply electricity to approximately 180,000 homes.
- The project's generation of solar energy will ensure that 705,000 tonnes of carbon is not emitted into the atmosphere, equating to taking approximately 254,000 cars off the road.

#### **Workforce and Employment**

The Project intends to source employment locally as much as possible to provide opportunities to local job seekers and contractors and to maximise the commercial benefit for the local community. Lightsource bp's recently constructed Wellington Solar Farm Project sourced approximately 35% of the workforce from the local area; for the Goulburn River Solar Farm Project we would like to do better.

It is anticipated that between 300–500 jobs will be available within the construction period, and ongoing employment of up to 10 jobs during operations. Lightsource bp plan to work closely with Council and other key stakeholders to deliver an appropriate business engagement, employment, and accommodation strategy for the Project. Construction roles would be made up of licensed electrical trade personnel, mechanical and electrical trades assistants, machinery operators, riggers and labourers.

Lightsource is working to a target of 35% locally sourced labour for construction and will be working with stakeholders during the planning and assessment phase to further develop plans.

Construction workers will be accommodated in towns within approximately a 1-hour drive of the site, such as Merriwa, Mudgee, Gulgong and Rylstone. The outcomes of the Social Impact Assessment together with feedback from the community will support Lightsource bp in refining these plans.

Local service providers and suppliers will also have opportunities to contract services during the construction period.

Lightsource bp will own and operate the solar farm and will employ a local resource to manage the site operations.

## Traffic and Effect on Local Roads

During peak construction, we estimate approximately 80% of the 350 personnel would travel to and from the Project Area via shuttle buses, indicating approximately 14 two-way shuttle bus trips per day. There would be an additional estimated ~60 two-way light vehicle trips per day along Wollara Road from both the north and south during construction. Heavy vehicles would be restricted to travelling to the Project Area from the north and estimate 55 two-way heavy vehicles per day during peak construction.

During the first 1–3 months of the construction, mobilisation would see traffic movements that could include:

- Light vehicles to mobilise workers (daily) to and from site.
- Shuttle bus services to facilitate workers to and from the site on a daily basis from nearby population centres.
- Delivery of infrastructure including temporary offices and associated equipment, power generation equipment, ablutions.
- Delivery of equipment and machinery for civil construction, clearing (if required) and general site establishment.
- Delivery of structural components and PV equipment.

More intense construction would be expected to follow during months 3–17 to achieve mechanical completion with the following traffic movements:

- Light vehicles to mobilise workers (daily) to and from site – numbers ramping up from mobilisation.
- Shuttle bus services to facilitate workers to and from the site on a daily basis from nearby population centres.
- Delivery of equipment and machinery for structural, electrical and civil construction activities.
- Ongoing delivery of PV and electrical equipment including deliveries of major equipment such as inverters, switchgear, transformer etc.
- Trucks for removal of waste.

Following mechanical completion, the Project would move into a commissioning phase estimated from months 18–20 of the construction phase, where equipment deliveries and workforce numbers would be significantly reduced. During commissioning, the majority of traffic would be expected to be light vehicles for personnel movement.

Following commissioning, the Project would move into its operations phase, which would be expected to extend for the life of the asset with very limited light vehicle movements predominately for routine operations and maintenance personnel and activities.

At the end of the life of the Project, approximately 35 years depending on possible extensions to the development consent, it is envisaged that decommissioning would take place which would involve mobilisation of a workforce and additional temporary facilities, and then move to the removal of equipment and infrastructure. At this time, it is expected that significant movements of light vehicles and trucks for transporting waste will occur. The decommissioning phase would be expected to last less than eight months.

### **Community Sustainability and Social Investment**

The community engagement process during the EIS will support Lightsource bp in understanding the community's values, priorities and aspirations in order to consider establishing relationships and partnerships with local or regional groups through a community investment program or further sponsorship initiatives.

Lightsource bp is committed to building strong relationships in the local community from the early stages of Project planning and development.

### **Hazardous Materials**

Hazardous materials would be limited to that associated with the substation (e.g. transformer insulating oil) and the BESS.

### **Environmental Matters**

Ecological surveys have recently commenced in accordance with the Biodiversity Assessment Method (BAM), approved by the NSW Government. Several ecological communities have already been identified living within or near the Project Area. The Environmental Impact Statement (EIS) will assess any possible impacts that the Project will have on these ecological communities and Lightsource bp is already working with the NSW National Parks and Wildlife Services to best manage and offset any impacts on local biodiversity through Project design and mitigation. It is possible that the Project's environmental impacts can be minimised, and high value environmental areas conserved to protect ecological values.

In addition, Lightsource bp intends to maintain the ability for continued livestock grazing on the Project Area following construction to preserve the existing agricultural land uses. It is likely that an Environmental Management Plan will be required in the case that the Project is approved, to manage both livestock and feral animals (including wild dogs). This would also include the maintenance of fencing surrounding the Asset Protection Zone; the area of cleared land surrounding Project infrastructure.

A bushfire assessment will be undertaken as part of the EIS process, informing a Bush Fire Management Plan (BFMP) that will be developed in accordance with the Rural Fire Service requirements. As part of the BFMP, Lightsource bp will continue to undertake vegetation management for the life of the Project. An Asset Protection Zone would be established within the Project Area whereby land would be cleared around Project infrastructure and public access restricted. Activities on the Project will be managed particularly cautiously during bushfire season to ensure preventative measures are in place and/or undertaken regularly.

There are no plans to expand beyond the current parameters, as the Project Area is bound by the Goulburn River National Park on all sides.



### 4.3 Record-Keeping

Outcomes and records of each engagement activity will be documented by the team member in attendance. An Engagement Register will also be maintained throughout the delivery of the Implementation Plan to ensure consistent tracking and recording of all community or stakeholder engagement activities and outcomes. Information to be recorded includes:

- activity details (including stakeholder engaged, attendees, time and place, mechanism used)
- discussion points
- summary of key outcomes or any actions
- stakeholder contact details
- correspondence
- preferences for future engagement.

## 5.0 Implementation Plan

The engagement activities proposed within this Plan consider the possibility of future restrictions on public gathering and movement that may be imposed due to the COVID-19 pandemic. Whilst it is the preference for stakeholder interactions to occur in-person where possible, appropriate provisions would be included to ensure stakeholder activities may still occur if restrictions are still in place. An overview of the activities proposed to effectively engage each stakeholder group across the two assessment phases is provided below.

### 5.1 Round 1 (Scoping Phase)

Table 5.1 presents the Scoping Phase Implementation Plan.

**Table 5.1 Phase 1 (Scoping Phase) Implementation Plan**

Mechanism	Detail	Objectives (Section 1.1)	Stakeholder Group
Project Information Sheet 1	A project information sheet to provide an overview of the proposed project, its planning and assessment pathway, and how the community can get involved in the EIS process and specifically the SIA. To be distributed via maildrop to nearby residents or based on a pre-determined radius.	1	Residents in nearby areas Residents along access route from Merriwa Broader community
Project Website	Design and launch a specific Project website to provide updates, Q&As, infographics, EIS/SIA process and timeline. Can also include a feedback form or online survey.	1, 2, 3	Residents in neighbouring communities Broader community
Community Hotline and Email	Set up dedicated project email address and community hotline (free phone) to make project enquiries or contact with the Project team.	1, 4, 6	Broader community
Community Feedback Form	Set up feedback form to be completed either online or on paper. Feedback form to be linked via the Project Website.	1, 2, 3, 4, 6	Residents in neighbouring communities Community and special interest groups Broader community
Media Release	Promote and advertise Project and upcoming community information sessions in local media (2–4).	1	Broader community
Project Briefings	Key stakeholder meetings to provide a briefing and to introduce the Project.	1, 2, 3, 4, 5	State Government Local Government (3) NPWS – Goulburn River National Park Aboriginal stakeholders (1–2)

Mechanism	Detail	Objectives (Section 1.1)	Stakeholder Group
Personal interviews/ briefings (phone or online)	Meetings with key community groups or representatives to understand the social locality, any sensitivities, concerns held regarding similar projects nearby, community values and expectations, and to scope perceived impacts of the project to be fully assessed in the EIS.	1, 2, 3, 4, 5	Community and special interest groups (approx. 3) Local businesses and service providers (approx. 3)
Community Information Session	2 x information sessions to be held to allow the broader community and any interested parties to review information regarding the Project, ask questions, provide feedback and raise any concerns or interests.  To be held either as a drop-in session at a local venue or virtually (e.g. Zoom) if COVID-19 restrictions are in place at the time.  2 sessions to allow for flexibility in day/time to suit a broader range of community members.	1, 2, 3, 4	Broader community

## 5.2 Round 2 (EIS Preparation)

Table 5.2 contains the tasks that are proposed to be undertaken in Round 2 (EIS preparation), however, this will be revised and expanded as required following the outcomes of Round 1 and following the issuance of SEARs.

**Table 5.2 EIS Preparation Phase Implementation Plan**

Engagement Mechanism	Detail	Objectives (Section 1.1)	Stakeholder Group
Project Information Sheet 2	Second project information sheet will outline the outcomes of the Phase 1 engagement program to validate understanding of the community's perceived impacts; share additional project information and detailed plans; and provide an update on the approvals process, including the EIS and technical studies' outcomes.	1	Proximal residents Broader community
Community Information Session 2 and 3	2 x information sessions will be held with attendance by Umwelt and Lightsource bp to allow the broader community and any interested parties to review updated planning and design information (including findings of technical studies), ask the project team questions, provide feedback on the project planning and assessment. It is proposed that 2 sessions are run on different days and at different times, to enable the wider community to access opportunities to learn about the project and provide feedback.	1, 2, 3	Broader community

Engagement Mechanism	Detail	Objectives (Section 1.1)	Stakeholder Group
<b>Personal interviews/ meetings</b>	Meetings with individual landholders to explore impacts and issues identified in Phase 1, validate their perceived impacts of the Project, discuss options around mitigation measures, and evaluate any specific sensitivities to be experienced by each landholder.	2, 3, 4, 5	Host landholder Proximal residents
	<p>Meetings with key community groups and/or local key stakeholders to further explore and investigate issues of the project as scoped in Phase 1 and evaluate the impact from the community or stakeholder perspective.</p> <p>Local service providers are likely to be targeted through these interviews to understand the existing capacity of infrastructure and services in the context of an incoming construction workforce (health, housing/accommodation, recreation etc.). Potential mitigation measures and enhancement strategies will be identified and explored through these discussions.</p> <p>1 x meeting with Council to further explore any local issues and benefit sharing strategies is also likely to be included.</p>	2, 3, 4, 5	Community/ environment/ special interest groups

## 6.0 Plan Review

As the Plan is a live document, updates will be required following completion of each engagement phase. Therefore, the Plan will be reviewed at the completion of each of the following milestones:

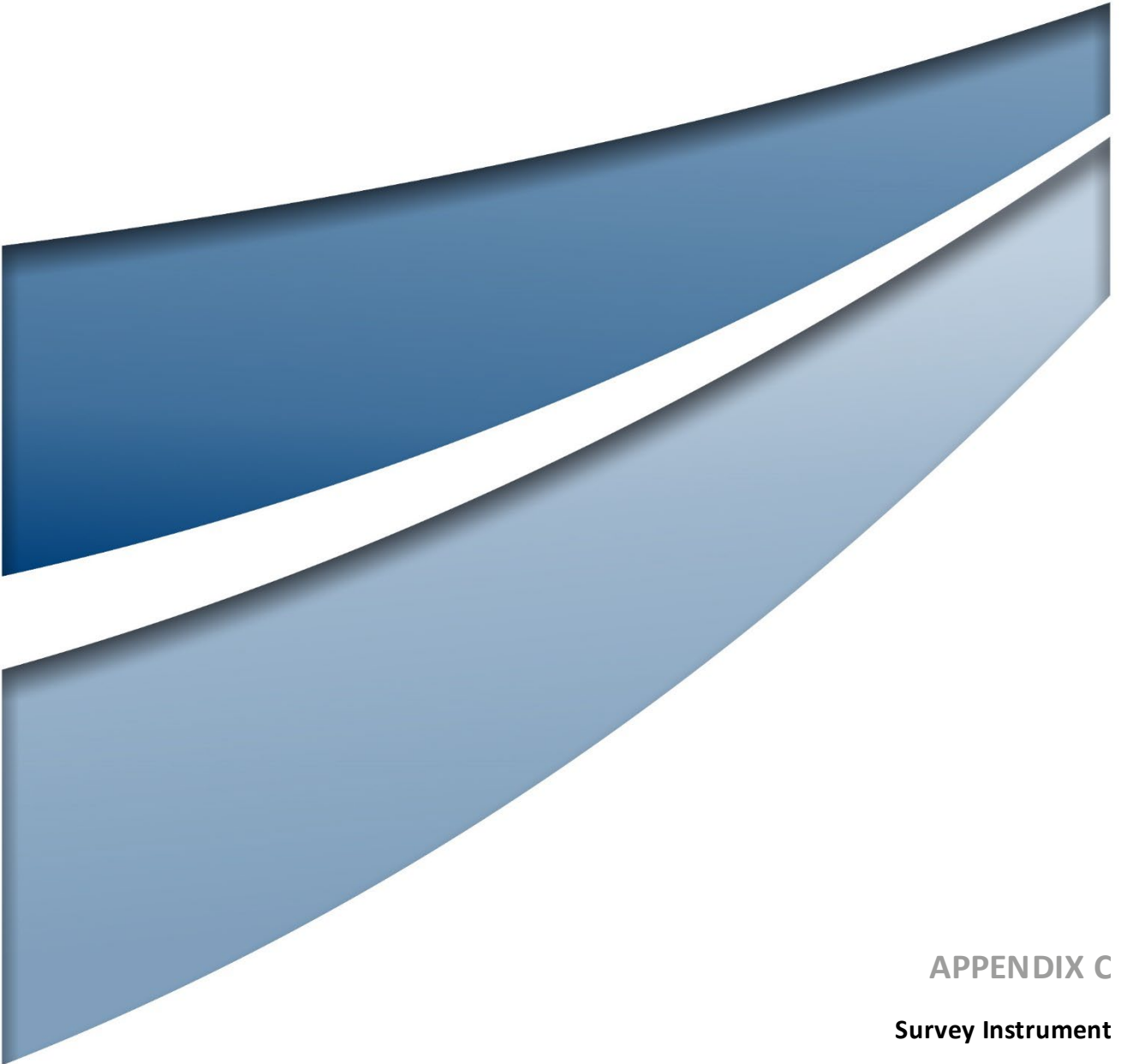
- Completion of Round 1 Engagement (Scoping Phase).
- Attainment of SEARs.
- Completion of Round 2 Engagement (EIS Preparation).

Post EIS lodgement, the Project may require ongoing or follow up stakeholder and community engagement during and following phases:

- Public exhibition.
- Response to Submissions (RTS).
- Assessment determination.
- Early works and construction.

Therefore, the Plan may require further review before the commencement of these phases.





**APPENDIX C**  
**Survey Instrument**

# Goulburn River Solar SIA Survey

## Introduction and Demographics

Between August 2021 and November 2021, the scoping phase for the Goulburn River Solar Farm Project was completed, with the submission of the Scoping Report to the NSW Department of Planning and Environment (DPE) in December 2021. The Secretary's Environmental Assessment Requirements (SEAR's) were received in February 2022. The SEARs outline the requirements of the Environmental Impact Statement (EIS).

The Goulburn River Solar Farm Scoping Report, SEARs and information on the Project as it progresses can be accessed at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/goulburn-river-solar-farm-0>

The early-stage community consultation and preliminary assessments undertaken over the past months have informed several refinements and updates to the project as we work to ensure that the feedback provided from the local community and project stakeholders has contributed to project planning and design.

### **Project features:**

Onsite power line connection: Existing 500 kV transmission line

Battery Energy Storage System (BESS)

Battery: 280 MW<sub>p</sub> | 570 MWh



Telecommunications tower: approximately 30 m tall

Number of Panels: Around 1 million

Construction Cost: \$750 million

2000 Ha of land in total, two landowners

Development footprint: approximately 862 Ha with about 1,200 Ha reserved for ecological conservation and/or agricultural use

Security fencing around panels, not property boundary

Primary access from existing driveway

Incorporate Asset Protection Zones and 4m wide access roads

Avoiding 705,000 tonnes of CO<sub>2</sub> – enough to fill one MCG per day

All information you provide is confidential and will only be reported in aggregate form.

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## Contact Information (Optional):

Full Name

---

Mobile

---

Landline

---

Address

---

Postal Address (If different from above)

---

Email Address

---

Organisation / Company

---

## Which stakeholder groups best represent you?

- Proximal landowner / resident
  - Community Group/Association and/or broader community member
  - Service Provider (Health, Emergency, Education, local business)
  - Aboriginal or Torres Strait Islander Group/Corporation
  - Accommodation provider
  - Other (please specify)
-

Are you aware of the company Lightsource bp or have you heard, or are you aware, of the Goulburn River Solar Farm Project?

Yes

No

---

### **Demographics - (Landholders / local residents / Aboriginal Groups)**

Which gender do you identify with?

Female

Male

Other / prefer not to say

---

Which of the following age groups do you belong?

Under 18

18-34 years

35-54 years

55-64 years

65+ years

---

Do you identify as Aboriginal and/or Torres Strait Islander?

Aboriginal

Torres Strait Islander

Both

Neither

---

Do you live in the Upper Hunter Shire Council Local Government Area?

Yes

No

Please specify your suburb/locality

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How long have you lived in the Upper Hunter Shire Council Local Government Area area?

0-5 years

6-10 years

11-25 years

26 years or more

What cultural values or community connections does the local community have to the site and area around the site?

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**Comm Group Details (Community Groups/ Associations & Aboriginal groups)**

Please provide details of your group including name, year established and approximate membership numbers.

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What is the main purpose or objectives of your group?

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Do you see any opportunities for your organisation and Lightsource bp to work together in relation to the Project?

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---

**Impacts (All stakeholders)**

What do you see as the positive impacts/opportunities associated with the Project and why?

Positive Impacts

Positive Impact 1

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Positive Impact 2

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Positive Impact 3

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Positive Impact 4

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Positive Impact 5

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Can you think of any strategies you would like to see Lightsource bp consider, to enhance these positive impacts?

Enhancement Strategies

Enhancement Strategy 1

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Enhancement Strategy 2

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Enhancement Strategy 3

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Enhancement Strategy 4

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Enhancement Strategy 5

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What do you see as the negative impacts associated with the Project and why?

Negative Impacts

Negative Impact 1

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Negative Impact 2

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---

Negative Impact 3

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---

Negative Impact 4

---

---

Negative Impact 5

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What would you like to see Lightsource bp do to reduce these negative impacts?

Mitigation Strategies

Mitigation Strategy 1

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Mitigation Strategy 2

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Mitigation Strategy 3

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---

Mitigation Strategy 4

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---

Mitigation Strategy 5

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On a scale of one (1) to ten (10) how would you rate your overall level of acceptance of the project, where one (1) is a low level of acceptance and ten (10) is a high level of acceptance.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Very Unlikely

Very Likely

**Community Values and Needs (Community groups, landholders, Aboriginal Groups & service providers)**

How would you describe your community?

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What do you like most about living in the area? What is important to you and why?

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Do you have any suggestions of strategies to support the Community needs?

Community Need Strategies

Community Need Strategy 1

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Community Need Strategy 2

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Community Need Strategy 3

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Community Need Strategy 4

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Community Need Strategy 5

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Are there any particularly vulnerable or disadvantaged groups in your community? If so, please specify

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Do you have any recommendations of social investment programs, in addition to those currently in place?

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## Service Capacity (Accommodation Providers)

Please provide an overview of the services you provide and some background on your organisation.

---

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How long has the organisation been in operation? (Please enter years of operation to the nearest whole number i.e., 25)

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How many rooms do you manage?

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What is your current occupancy rate in the past 12-months? (Percentage % out of 100)

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Describe any annual or seasonal trends in the supply and demand of your service.

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Who do you predominantly serve in your accommodation? (i.e. tourists, business travellers, construction workers, families, social housing, crisis accommodation)

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Describe your current capacity to provide your service?

- No capacity at present / already under pressure
- Under capacity / able to increase or take on greater demand
- Depends on the time of year/season
- Other

Please specify:

---

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Do you feel there is adequate accommodation in your local area for the current demand?

- Yes
- No
- Unsure

---

What accommodation type would you say is currently the most sought after in your local area/town?

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What impact has COVID-19 had on the ability to offer your service and the demand?

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Do you have plans to expand your business/service in the next five years?

- Yes
- No
- Unsure

Provide any detail:

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---

**Lightsource bp have advised the project will provide up to 500 jobs over a 20-month construction period. Timing is yet to be confirmed, but is predicted to commence mid-2024.**

Would you like to be involved in providing housing or services to this workforce?

- Yes
  - No
  - Unsure
-

If yes, in what ways would you like to be involved? (Select all that apply)

- I would like to accommodate the workforce in my existing accommodation
- I would consider building, retrofitting or adapting new accommodation to house this workforce
- I would consider changing my delivery model to house more or different groups
- I would consider providing additional services or infrastructure to the construction workforce (i.e. catering, bus shuttles, health services)
- Other

Please explain:

### Service Capacity (Service providers)

Which type of service are you?

- Health provider
- Education provider
- Emergency service
- Local business

Please provide an overview of the services you provide and a little on your history. What type of service do you provide? How long has the service been operating in the area?

How would you describe your business market trends over the past years, including Covid-19 restrictions? Describe any annual or seasonal trends.

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What challenges does your service experience or issues are you currently facing? What would you say are your highest needs or priorities?

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What is your capacity to provide the service to more people?

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Would your business/service be interested in working with the Project and/or collaborating with Lightsource bp?

- Yes
  - No
  - Unsure
-

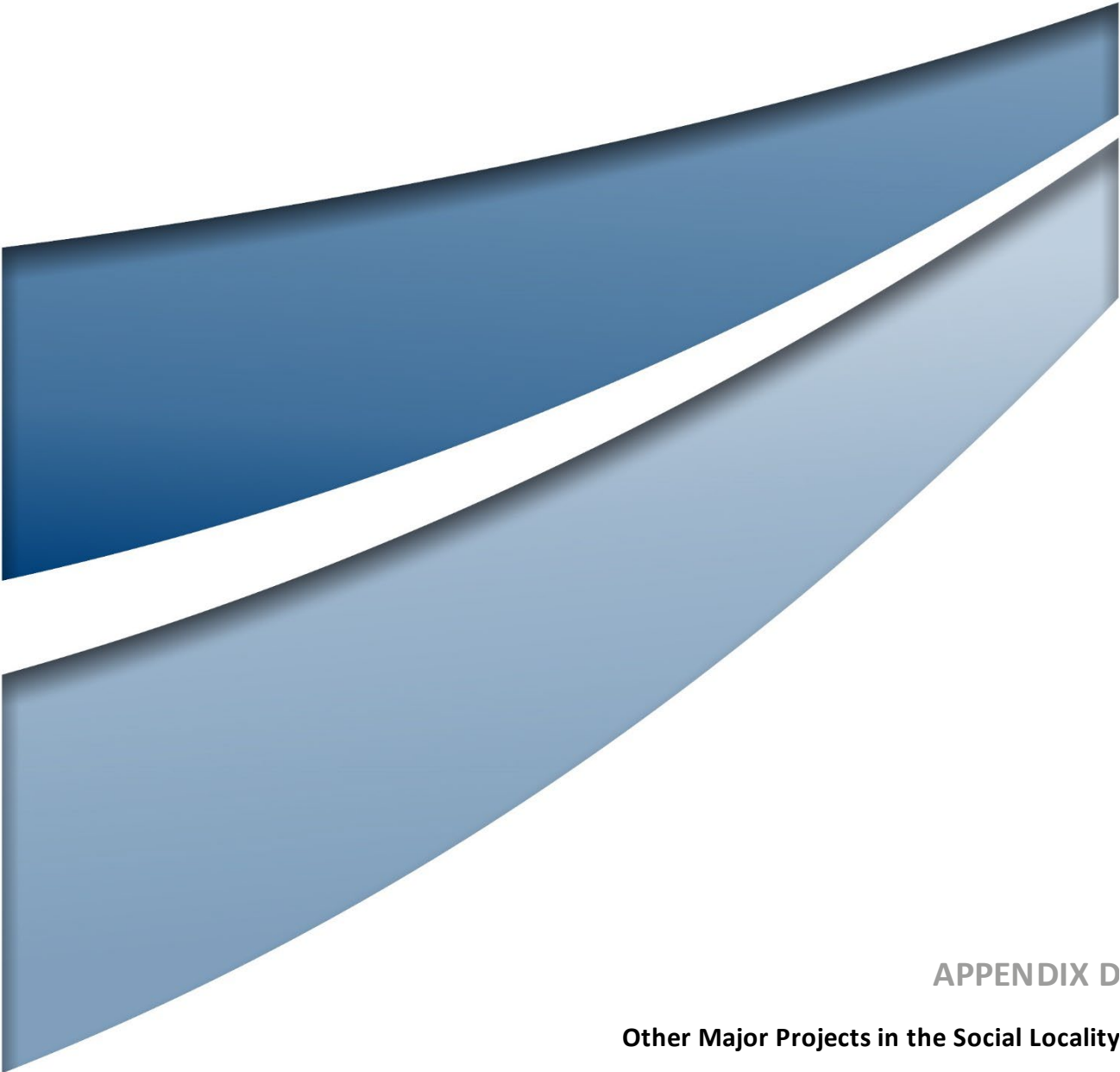


Do you have anything else to add or any further questions? Do you have a recommendation of anyone else you think we should speak with?

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APPENDIX D

**Other Major Projects in the Social Locality**

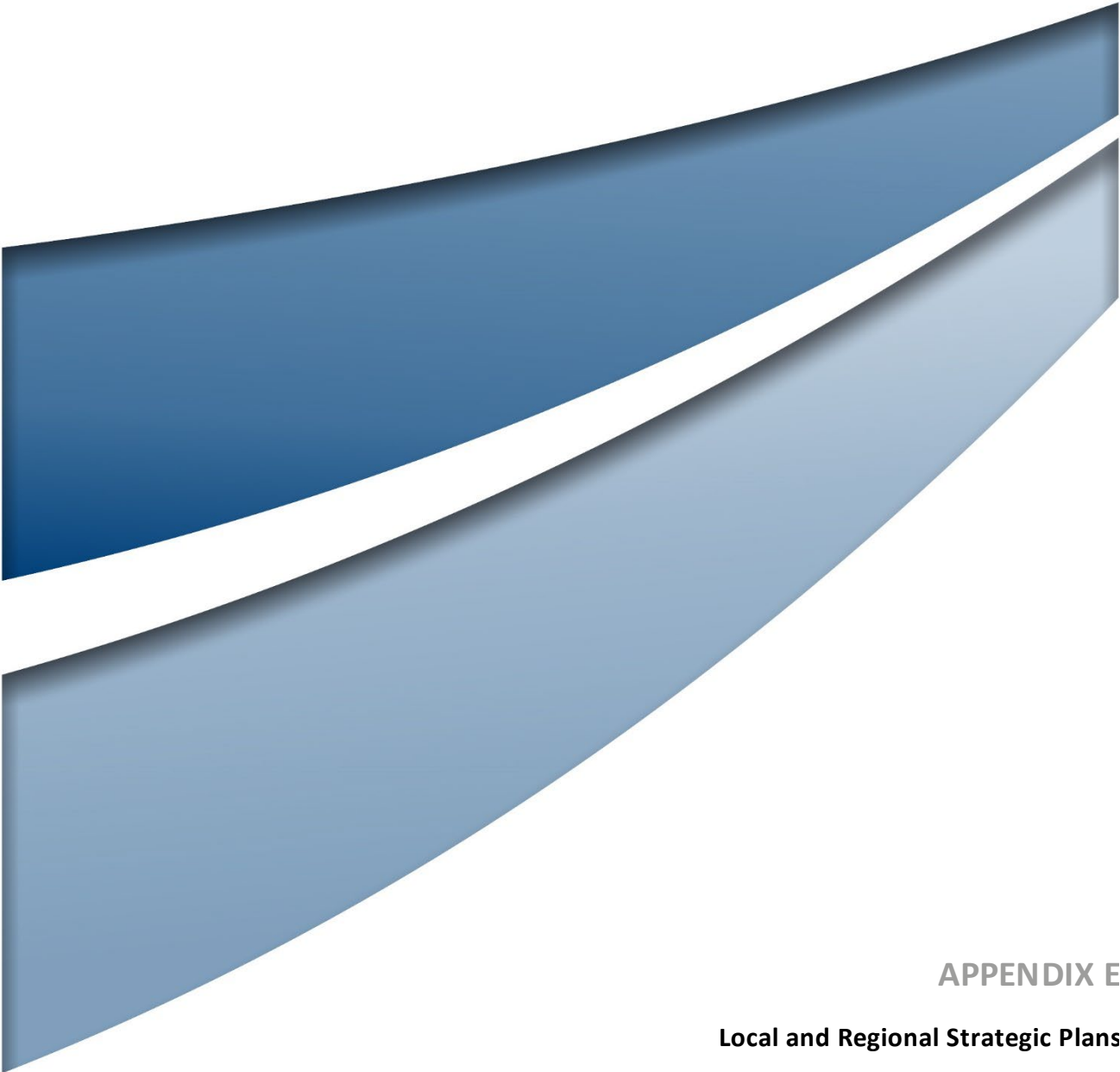
Project	Proximity	Details/Timing/Overlap	Social impact Considerations
<b>Operational</b>			
Beryl Solar Farm	56 km	No overlap as operational impacts of the solar farm are minor.	No social impact considerations to be determined at this point.
Ulan Coal Complex, Moolarben Coal Complex and Wilpinjong Mine	29 km	All coal transported by rail. Potential overlap with light vehicle traffic along Wollar Road during shift changes. Conditions are in place requiring the three mines to co-ordinate shift changes to minimise the potential cumulative traffic impacts and to avoid school bus hours.	Impacts to sense of community, lifestyle, and local amenity. Construction traffic impacts to road safety and road conditions. Physical health conditions resulting from dust pollution. Mental health conditions due to noise, stress and anxiety. Employment and community investment.
Kyoto Wind Farm	62 km	No overlap as potential for cumulative operational impacts is minor.	No social impact considerations to be determined at this point.
<b>Approved – construction to commence, underway or completed</b>			
Liverpool Range Wind Farm	55 km	Approved but construction timing unknown; currently seeking a modification. Potential overlap for heavy vehicle construction traffic along Golden Highway.	Construction workforce: 800 direct jobs. Operational workforce: 47 FTE staff. Visual impacts of turbines on the local community and significant vistas. Shadow flickering. Operational noise. Damage to local roads from construction vehicle movement.

Project	Proximity	Details/Timing/Overlap	Social impact Considerations
Stubbo Solar Farm	48 km	Construction commenced in 2022. Assumed no overlap in construction phase.	Construction workforce: 400 direct jobs. Operational workforce: 10 ongoing jobs. Potential impacts to existing and future land use. Impacts/disturbance to Aboriginal artefacts. Impacts to landscape character and visual amenity. Operational and construction noise and vibration. Increased road traffic movements, and associate impacts to roadways. Positive socio-economic impacts such as employment opportunities, local procurement, and a diversifying economy. Cumulative impacts associated with other renewable energy projects.
Wollar Solar Farm	22 km	Construction commenced in July 2022. Assumed no overlap in construction phase	Peak workforce of approximately 500 workers.
Dunedoo Solar Farm	70 km	Construction is expected to commence late 2022. Assumed no overlap in construction phase.	Construction workforce: 100 direct, and 160 indirect positions. Operational workforce: 3 direct, and 9 indirect positions. Habitat clearance and impacts to natural biodiversity and ecology. Impacts to Aboriginal heritage items. Visual amenity concerns and changes to landscape. Agricultural land use conflict. Dust and noise generation during construction.
<b>Proposed – under assessment or in planning and design phase</b>			
Birriwa Solar and Battery Project	60 km	On exhibition Oct-Nov 2022. Possible overlap of construction phase but no anticipated overlap of transport routes.	Changes to local population and increased demand for local services. Opportunities for employment, training and skills development, local procurement, and community investment.

Project	Proximity	Details/Timing/Overlap	Social impact Considerations
Central West Orana Transmission Project	25 km	SEARs issued October 2022. Assumed no overlap in construction phase.	Construction workforce: 3,900 jobs during peak construction. Landowner and community consultation ongoing. Potential impacts to existing and future land use. Impacts to landscape character and visual amenity. Operational and construction noise and vibration. Increased road traffic movements, and associate impacts to roadways. Positive socio-economic impacts such as employment opportunities, local procurement, and a diversifying economy. Cumulative impacts associated with other renewable energy projects.
Valley of the Winds Wind Farm	57 km	In submissions phase. Construction expected to commence in Q1 2023 for 24 to 42 months. Possible overlap for heavy vehicle construction traffic along Golden Highway.	Construction workforce: 400 FTE jobs; operational workforce: 50 FTE jobs. Opportunities for employment, training and skills development, local procurement, and community investment. Construction amenity. Incoming workforce may impact community cohesion.
Barneys Reef Wind Farm	50 km	SEARs issued September 2021. Construction anticipated to commence in Q4 2023 for approximately 28 months. Possible overlap for heavy vehicle construction traffic along Golden Highway.	Construction workforce: 340 direct jobs; operational workforce: 10 ongoing jobs. Changes to the landscape's visual character. Increased traffic and road safety risks. Changes to local population and increased demand for local services.
Tallawang Solar Farm	50 km	On exhibition Oct-Nov 2022. Construction expected to commence in mid-2024 for 34 months. Possible overlap for heavy vehicle construction traffic along Golden Highway.	Construction workforce: 430 direct jobs; operational workforce: 7 direct jobs. Competing land uses. Changes to the landscape's visual character, including glare and glint from solar panels. Increased traffic and road safety risks. Changes to local population and increased demand for local services.

Project	Proximity	Details/Timing/Overlap	Social impact Considerations
Spicers Creek Wind Farm	80 km	SEARs issued May 2022. No information available on anticipated construction timing. Possible overlap for heavy vehicle construction traffic along Golden Highway.	Construction vehicle routes that overlap with the construction vehicle routes for the Goulburn River Solar Farm include the Golden Highway. Increased traffic and road safety risks. Changes to local population and increased demand for local services.
Merriwa Solar Farm	30 km	SEARs issued January 2022. No information available on anticipated construction timing. Possible overlap for heavy vehicle construction traffic along Golden Highway. Possible cumulative impacts on local biodiversity due to site proximity and similarities (both located on agricultural land adjacent to Goulburn River National Park).	Forecasted 18-month construction period and 2025 completion. Construction vehicle routes for the Merriwa Solar Farm that overlap with the construction vehicle routes for the Goulburn River Solar Farm include the Golden Highway, Ringwood Road, Wollara Road, Wollar Road and Ulan Road. A review of the construction program indicates that the project would be completed in 2023, prior to the commencement of construction of this Project in 2024. Hence there is no overlap in the construction timing of the Wollar Solar Farm and this Project (Turnbull, 2022).
Bowmans Creek Wind Farm	96 km	In assessment phase. Possible overlap of construction phase but no anticipated overlap of transport routes.	Changes to local population and increased demand for local services. Opportunities for employment, training and skills development, local procurement, and community investment.
Hills of Gold Wind Farm	101 km	In assessment phase. Possible overlap of construction phase but no anticipated overlap of transport routes.	Changes to local population and increased demand for local services. Opportunities for employment, training and skills development, local procurement, and community investment.
Bellambi Heights Renewables Project	54 km	SEARs issued May 2022. Possible overlap of construction phase but no anticipated overlap of transport routes.	Changes to local population and increased demand for local services. Opportunities for employment, training and skills development, local procurement, and community investment.

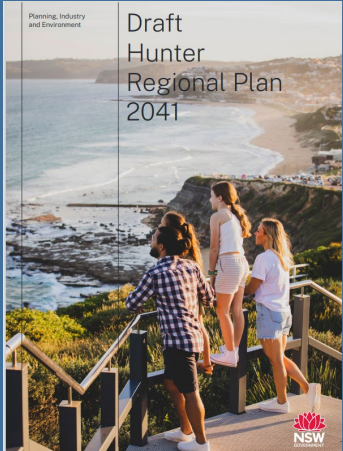
Project	Proximity	Details/Timing/Overlap	Social impact Considerations
Ulan Solar Farm	38 km	SEARs issued September 2022. Possible overlap of construction phase but no anticipated overlap of transport routes.	Increased traffic and road safety risks. Changes to local population and increased demand for local services.
Sandy Creek Solar Farm	83 km	SEARs issued May 2022. Possible overlap for heavy vehicle construction traffic along Golden Highway.	Construction vehicle routes that overlap with the construction vehicle routes for the Goulburn River Solar Farm include the Golden Highway. Increased traffic and road safety risks. Changes to local population and increased demand for local services.
Cobbora Solar Farm	82 km	SEARs issued November 2021. Possible overlap for heavy vehicle construction traffic along Golden Highway.	Construction vehicle routes that overlap with the construction vehicle routes for the Goulburn River Solar Farm include the Golden Highway. Increased traffic and road safety risks. Changes to local population and increased demand for local services.
Bowdens Silver Project	45 km	In assessment phase. Possible overlap for heavy vehicle traffic along Golden Highway.	246 on-site workers and 74 off-site workers during construction, and between 192–228 workers over 15 years for the operational workforce. Economic benefits to local community. Impacts on human health and social amenity; dust, noise, vibrations, and visual disturbances.





**APPENDIX E**


**Local and Regional Strategic Plans**

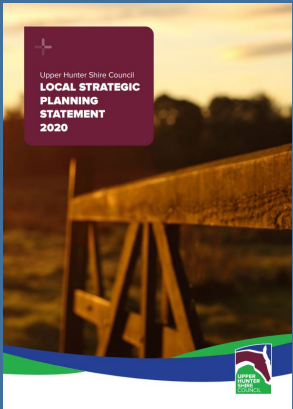
## Strategic Plans and Their Relevance to the Project

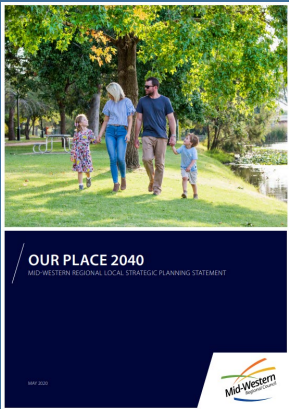
Plan	Overview and Relevance to the Project
<p data-bbox="163 304 510 411"><b>(Draft) Hunter Regional Plan 2041</b> <b>(NSW Government DPIE, 2022)</b></p> 	<p data-bbox="557 304 2078 368">Outlines the goals and actions for the Hunter Region to achieve a sustainable future; the plan applies to 10 local government areas including the Upper Hunter and Muswellbrook Shires.</p> <p data-bbox="557 384 1048 411">The Plan establishes the following objectives:</p> <ul data-bbox="557 427 1664 767" style="list-style-type: none"> <li>• Diversify the Hunter’s mining, energy and industrial capacity.</li> <li>• Ensure economic self-determination for Aboriginal communities.</li> <li>• Create a 15-minute region made up of mixed, multi-modal, inclusive and vibrant local community.</li> <li>• Plan for “Nimble neighbourhoods”, diverse housing and sequenced development.</li> <li>• Increase green infrastructure and quality public spaces and improve the natural environment.</li> <li>• Reach net zero and increase resilience and sustainable infrastructure.</li> <li>• Plan for business and services at the heart of healthy, prosperous and innovative communities.</li> <li>• Build an inter-connected and globally focused Hunter.</li> </ul> <p data-bbox="557 783 1525 810">The economy is expected to further diversify and cater to demand for renewable energy:</p> <ul data-bbox="557 826 2096 1098" style="list-style-type: none"> <li>• The plan outlines renewable energy developments, using materials with low embodied emissions and the circular economy as a key opportunity in the region.</li> <li>• Increased infrastructure assets and skilled workforce to support more renewable energy generation.</li> <li>• Rehabilitated mines and decommissioned power stations could become renewable energy and storage hubs that cover wind, solar, pumped hydro and batteries.</li> <li>• The Upper Hunter is recognised as undergoing a transition with major transformation occurring in power generation and emerging technologies. The high voltage transmission lines and transport infrastructure mean the Hunter plays an important role in powering NSW.</li> </ul>

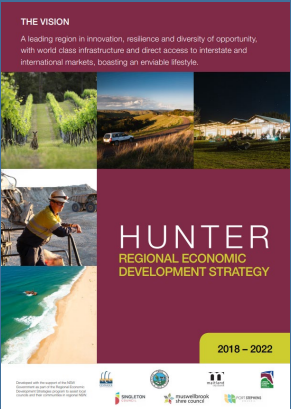


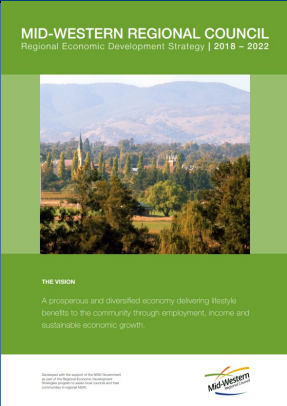
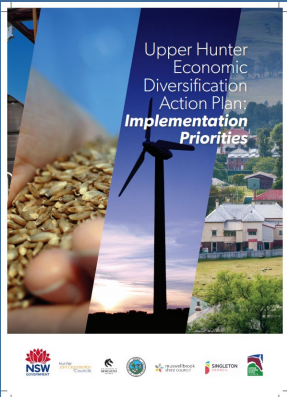
Plan	Overview and Relevance to the Project
<p data-bbox="163 260 450 357"><b>Central West and Orana Regional Plan 2036</b> (NSW Government, 2016)</p> 	<p data-bbox="557 260 2092 325">Outlines the goals and actions for the Central West and Orana Region to achieve a sustainable future; the plan applies to 19 local government areas including the Mid-Western Region LGA, being the closest to the Project.</p> <p data-bbox="557 336 1155 363">The Plan identifies the following 4 goals for the Region:</p> <ul data-bbox="557 379 1832 544" style="list-style-type: none"> <li>• A growing and diverse regional economy.</li> <li>• A region with strong freight transport and utility infrastructure networks that support economic growth.</li> <li>• A region that protects and enhances its productive agricultural land, natural resources, and environmental assets.</li> <li>• Strong communities and liveable places that cater for the region’s changing population.</li> </ul> <p data-bbox="557 560 2047 655">The Plan also characterises the Mid-Western Regional LGA as being well known for its built heritage, food and wine tourism, and mining. The regional importance of the area is emphasised throughout the plan, with particular reference to supporting the mining and resources sector and associated businesses.</p> <p data-bbox="557 671 1935 699">Increasing renewable energy generation is a key direction in the Plan, with actions identified to achieve this direction including:</p> <ul data-bbox="557 715 2069 868" style="list-style-type: none"> <li>• Identify locations with renewable energy generation potential and access to the electricity network.</li> <li>• Facilitate small-scale renewable energy projects using bioenergy, solar, wind, small-scale hydro, geothermal or other innovative storage technologies through local environment plans.</li> <li>• Promote best practice community engagement and maximise community benefits from all utility-scale renewable energy projects.</li> </ul> <p data-bbox="557 884 2101 948">The Plan highlights the need across the region for diverse accommodation options to support mining workforces, as well as other seasonal and itinerant workers (in large-scale infrastructure, renewables and agriculture).</p>
<p data-bbox="163 975 517 1107"><b>Upper Hunter Council Community Strategic Plan 2027</b> (Upper Hunter Shire Council, 2017)</p> 	<p data-bbox="557 975 2101 1002">The Upper Hunter Community Strategic Plan provides a road map for the development of the community over a shared 10-year vision to 2027.</p> <p data-bbox="557 1011 824 1038">The vision for the CSP is:</p> <ul data-bbox="557 1054 1406 1082" style="list-style-type: none"> <li>• A Quality Rural Lifestyle – in a vibrant, caring, and sustainable community.</li> </ul> <p data-bbox="557 1098 1189 1125">The Plan identifies the following key community priorities:</p> <ul data-bbox="557 1141 1429 1347" style="list-style-type: none"> <li>• Increased and innovative tourism and visitor opportunities.</li> <li>• Rural lifestyle and country feel are valued and protected.</li> <li>• Well-maintained, safe, reliable, and additional infrastructure.</li> <li>• A stronger economic base to attract and retain residents, particularly youth.</li> <li>• Upper Hunter has improved and well-maintained roads and bridges.</li> </ul>

Plan	Overview and Relevance to the Project
	<ul style="list-style-type: none"> <li>• Increased focus on local business, shop occupation and revitalisation of town centres.</li> <li>• Reliable and safe water supply.</li> <li>• Protect the natural environment.</li> </ul> <p>A number of strategies are identified to achieve the community priorities, with key priorities of interest to the Project including:</p> <ul style="list-style-type: none"> <li>• Encourage a diverse economy whilst promoting and preserving our agriculture and equine industries.</li> <li>• Encourage and support innovative industry and a diversity of businesses that provide a range of services and employment opportunities for current and future generations.</li> <li>• Facilitate and provide access to a range of local educational and training opportunities that complements the economy.</li> <li>• Maintain and advocate, facilitate and/or provide traffic management and public transport facilities to meet the needs of the community.</li> </ul>
<p><b>Towards 2030: Mid-Western Region Community Plan (Mid-Western Regional Council)</b></p> 	<p>The Mid-Western Regional Council's Community Plan identifies the community's aspirations for the area. The Vision of the Plan is:</p> <ul style="list-style-type: none"> <li>• A prosperous and progressive community that we are proud to call home.</li> </ul> <p>The Plan identifies the following key community priorities:</p> <ul style="list-style-type: none"> <li>• Strong budget and economy.</li> <li>• Building infrastructure.</li> <li>• Protecting the vulnerable.</li> <li>• Better services.</li> <li>• Safer communities.</li> </ul> <p>A number of strategies are identified to achieve the community priorities. Key priorities of interest to the Project include:</p> <ul style="list-style-type: none"> <li>• Ensure land use planning and management enhances and protects biodiversity and natural heritage.</li> <li>• Support the attraction and retention of a diverse range of businesses and industries.</li> <li>• Encourage the development of a skilled and flexible workforce to satisfy local industry and business requirements.</li> <li>• Support projects that create new jobs in the Region and help to build a diverse and multi-skilled workforce.</li> <li>• Build strong linkages with institutions providing education, training and employment pathways in the Region.</li> <li>• Provide a roads network that balances asset conditions with available resources and community needs.</li> </ul>

Plan	Overview and Relevance to the Project
<p data-bbox="163 260 535 357"><b>Upper Hunter Shire Council Local Strategic Planning Statement 2020</b></p> 	<p data-bbox="557 260 2007 323">The Local Strategic Planning Statement (LSPS) is the Upper Hunter Shire Council’s plan for the community’s social, environmental, and economic land use needs over the next 20 years.</p> <p data-bbox="557 336 1469 368">The following themes and planning priorities of relevance are identified in the LSPS:</p> <ul style="list-style-type: none"> <li data-bbox="557 384 1218 544">• Sustainable Development: <ul style="list-style-type: none"> <li data-bbox="607 427 1218 459">○ Avoid long-term degradation of natural ecosystems.</li> <li data-bbox="607 472 965 504">○ Planning for climate change.</li> <li data-bbox="607 517 1077 549">○ Facilitate the use of renewable energy.</li> </ul> </li> <li data-bbox="557 560 1532 847">• Caring Community: <ul style="list-style-type: none"> <li data-bbox="607 603 1532 635">○ Planning anticipates and responds to the rapidly ageing nature of the population.</li> <li data-bbox="607 647 824 679">○ Rural Economy.</li> <li data-bbox="607 692 1070 724">○ Promote sustainable primary industry.</li> <li data-bbox="607 737 927 769">○ Protect agricultural land.</li> <li data-bbox="607 782 1160 813">○ Agriculture is the largest most visible land use.</li> <li data-bbox="607 826 1585 858">○ Provide a sufficient supply of land to accommodate employment generating activities.</li> </ul> </li> <li data-bbox="557 863 2092 1015">• Vibrant towns <ul style="list-style-type: none"> <li data-bbox="607 906 1048 938">○ Encourage economic diversification.</li> <li data-bbox="607 951 2092 1015">○ The town of Merriwa is identified as a key area for the diversification of the NSW energy resources sector. Managing the growth and change of the town over the long-term is a priority.</li> </ul> </li> </ul> <p data-bbox="557 1031 1503 1062">The LSPS also highlights the following actions to facilitate the use of renewable energy:</p> <ul style="list-style-type: none"> <li data-bbox="557 1075 2114 1139">• Facilitate wind farm development in the Upper Hunter and Liverpool Range areas, and any other potential new renewable energy ventures by developing a public position supporting renewable energy development.</li> <li data-bbox="557 1152 1872 1184">• Support the investigation of renewable energy opportunities throughout the region and infrastructure requirements.</li> </ul>

Plan	Overview and Relevance to the Project
<p data-bbox="161 260 528 395"><b>Our Place 2040: Mid-Western Regional Local Strategic Planning Statement (Mid-Western Regional Council, 2020)</b></p> 	<p data-bbox="557 260 2085 323">The Mid-Western Regional LSPS sets out the 20-year vision for land use planning in the Mid-Western Regional Council LGA. The vision for the plan is:</p> <ul data-bbox="557 339 2101 403" style="list-style-type: none"> <li>• To provide for sustainable growth and development, having regard to the Region’s unique heritage, environment, and rural character, and to support agricultural enterprises and the Region’s economic base.</li> </ul> <p data-bbox="557 419 1066 448">The following planning priorities are identified:</p> <ul data-bbox="557 464 2069 954" style="list-style-type: none"> <li>• Maintain and promote the aesthetic appeal of the towns and villages within the Region.</li> <li>• Provide infrastructure and service to cater for the current and future needs of our community.</li> <li>• Minimise the impact of mining and other development on the natural environment.</li> <li>• Support the attraction and retention of a diverse range of businesses and industries.</li> <li>• Identify resources and infrastructure required to drive investment and economic growth.</li> <li>• Support the expansion of essential infrastructure and services to match business and industry development.</li> <li>• Develop a regional transport network.</li> <li>• Renewable energy development is considered within the planning framework where it is proposed in appropriate areas that avoids impacts on the scenic rural landscape and preserves valuable agricultural land.</li> <li>• Regarding workforce provision, future growth and development in the region will drive the demand for a new skilled workforce. Skilled workers such as engineers, builders, tradespeople, child and health professionals, are expected to be in highest demand over the near future to cater for new major projects.</li> </ul>

Plan	Overview and Relevance to the Project
<p><b>Hunter Regional Economic Development Strategy (Supported by the NSW Government, 2018)</b></p> 	<p>The Hunter Regional Economic Development Strategy articulates a framework for identifying actions crucial to achieving the following vision for the Hunter region:</p> <ul style="list-style-type: none"> <li>• A leading region in innovation, resilience, and diversity of opportunity, with world class infrastructure and direct access to interstate and international markets, boasting an enviable lifestyle.</li> </ul> <p>The following core strategies are identified:</p> <ul style="list-style-type: none"> <li>• Improve inter and intra-connectivity in the Region to boost business opportunities in the ‘engine’ industries of agriculture, mining, and manufacturing.</li> <li>• Manage transitions and risks to the coal mining and electricity generation sectors.</li> <li>• Improve infrastructure, services, and amenities.</li> </ul> <p>The Strategy recognises ‘Energy Generation’ (comprising existing power stations, high voltage transmission, and grid and gas infrastructure) as an industry cluster. It also acknowledges the transition taking place in the region, and is planning for other opportunities (including wind, solar, biofuels, and hydro), following the scheduled closure of Liddell Power Station in 2022 and Bayswater Power Station in 2035.</p> <p>Managing the transitions and risks to the coal mining and electricity generation sectors is therefore a key focus area in diversifying the Region’s economy. A number of key infrastructure priorities are identified to support this, including:</p> <ul style="list-style-type: none"> <li>• Manage potential land-use conflicts arising from mining expansions.</li> <li>• Develop land-use plans for the Region (specially to provide investment certainty to the wine and equine industry).</li> <li>• Support transition to power generation.</li> <li>• Support transitioning and expansion of the workforce.</li> </ul>
<p><b>Mid-Western Regional Council Regional Economic Development Strategy (2018-2022) (Balmoral Group Australia Pty Ltd on Behalf of Mid-Western Regional Council)</b></p>	<p>The Regional Economic Development Strategy articulates a framework for identifying actions crucial in achieving the following vision for the Mid-Western Regional Council area:</p> <ul style="list-style-type: none"> <li>• A prosperous and diversified economy delivering lifestyle benefits to the community through employment, income, and sustainable growth.</li> </ul> <p>Relevant aims to the Project include:</p> <ul style="list-style-type: none"> <li>• Grow industry clusters around mining, manufacturing &amp; agriculture – Healthy environment for agricultural processing, metals and related manufacturing, and mining and agricultural support services.</li> <li>• Support the attraction and retention of an increased number of diverse businesses and industries.</li> </ul>

Plan	Overview and Relevance to the Project
	<p>Within these aims are a number of identified priorities of relevance to the Project including:</p> <ul style="list-style-type: none"> <li>• Maintaining the quality of the inter-regional road and air networks; with the Bylong Valley Way Road project taking the highest priority, and Wollar Road upgrades also being important.</li> <li>• Support for technical training to ensure a steady supply of workers.</li> <li>• Strategies to lower the cost of electricity in the Region to support businesses should be a priority.</li> </ul>
<p><b>Upper Hunter Economic Diversification Action Plan: Implementing Priorities (NSW Government, 2018)</b></p> 	<p>The Upper Hunter Economic Diversification Action Plan sets priorities for business growth and sustainable economic transitions in the region. This Plan is driven by the need to plan for global and regional economic shocks, and to support new emerging industries. One key opportunity identified is:</p> <ul style="list-style-type: none"> <li>• Working with power asset owners, industry and research partners to foster growing renewable energy capacities and support agribusiness development.</li> </ul> <p>The following items are identified in the Plan to achieve a successful transition for the power and energy sector:</p> <ul style="list-style-type: none"> <li>• Business <ul style="list-style-type: none"> <li>○ Transitions: generation capacity; existing workforces; future site use; dispatchable renewable power; and circular bioeconomy.</li> <li>○ Investment: existing capacity; new facilities; renewables; R&amp;D/innovation.</li> </ul> </li> <li>• Industry <ul style="list-style-type: none"> <li>○ Maintain required generation capacity across regional, state, and national grids.</li> <li>○ Invest in renewable and smart technologies.</li> <li>○ R&amp;S support for Hunter Research Centres.</li> </ul> </li> </ul>

