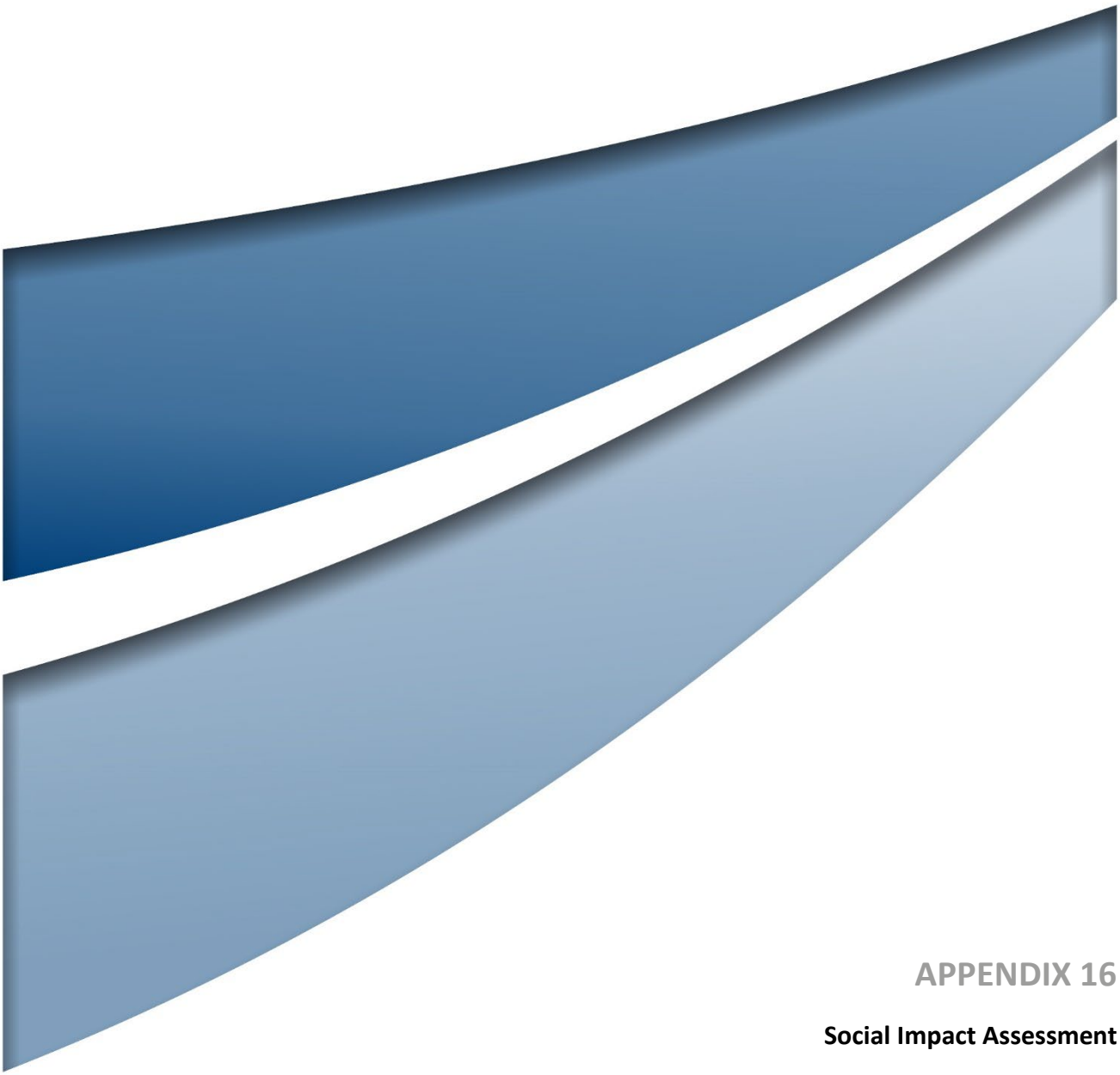

APPENDIX 16

Social Impact Assessment

WATTLE CREEK BATTERY ENERGY STORAGE SYSTEM PROJECT

SSD-63345458
Social Impact Assessment

FINAL

March 2025

WATTLE CREEK BATTERY ENERGY STORAGE SYSTEM PROJECT

Wattle Creek Battery Energy Storage System - SSD-63345458

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Spark Renewables

Project Director: Paul Douglas
Project Manager: Penelope Williams
Technical Director: Dr Sheridan Coakes
Technical Manager: Rhiannon Jaeger-Michael
Report No. 22492/R18
Date: March 2025

Environmental & Social Consultants

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.

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
Final	Rhiannon Jaeger-Michael	5/15/2024	Paul Douglass	5/12/2024
Final V2	Rhiannon Jaeger-Michael	9/01/2025	Paul Douglass	9/01/2025
Final V3	Rhiannon Jaeger-Michael	12/03/2025	Paul Douglas	12/03/2025

Author 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 Rhiannon Jaeger-Michael (the SIA Project Manager) under the guidance and review of Dr Sheridan Coakes (the SIA Project Director). We declare that this SIA, completed on 5 December 2024:

- was prepared by a team that has suitable qualifications, proven experience and competence in SIA practice, and relevant professional memberships as outlined in **Table D.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; and
- that the SIA contains all relevant information.

We declare that through the development of this SIA, the authors have adhered to:

- the SIA principles outlined in Table 2 of the SIA Guideline (DPE, 2023)
- the IAIA Professional Code of Conduct and Ethical Responsibilities (IAIA, 2009); and
- the EIANZ Code of Ethics and Professional Conduct (EIANZ, 2021).

SIA Project Manager **Rhiannon Jaeger-Michael**

SIA Project Director **Dr Sheridan Coakes**

Table D.1 Author Qualifications

Requirement	SIA Project Manager: Rhiannon Jaeger-Michael	SIA Project Director: Dr Sheridan Coakes
Suitable qualifications	Bachelor of Science – Psychology Master of Disaster Resilience and Sustainable Development	Bachelor of Applied Science – Psychology Honours First Class – Psychology Doctor of Philosophy – Psychology
Proven experience in SIA practice	6 years	30 years
Professional memberships	International Association of Impact Assessment – Member	International Association of Impact Assessment – Long standing Member (30 years) Environmental Institute of Australia and New Zealand – Co-convenor of the SIA Community of Practice Chair – Strategic Environmental Advisory Committee (SEAC) – Social Impact Assessment Certification

Executive Summary

Spark Renewables Pty Ltd (Spark Renewables) propose to develop the Wattle Creek Battery Energy Storage System (BESS) Project (the Project) located on the Arthursleigh Farm, owned by the University of Sydney, approximately 80 kilometres (km) west of Wollongong and 15 km northwest of Marulan within the Upper Lachlan Shire Council Local Government Area (LGA). The Project Area abuts the Wingecarribee Shire LGA to the east, and Goulburn Mulwaree Shire Council LGA to the south. The Project will include the construction, operation and decommissioning of a 350 MW capacity BESS and associated infrastructure.

Umwelt has been engaged by Spark Renewables to undertake a Social Impact Assessment (SIA) in relation to the development of the Project. The Project is State Significant Development (SSD) as defined under State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) and requires development consent under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Methodology

This SIA has been prepared to address relevant aspects of the NSW Planning Secretary's Environmental Assessment Requirements (SEARs) for the Project and in accordance with the NSW Department of Planning, Housing and Infrastructure (DPHI) Social Impact Assessment Guideline for State Significant Projects (the SIA Guideline) (DPE, 2023), as well as considering construction workforce accommodation requirements.

This SIA Report has followed the following key methodological steps:

- Definition of the social locality.
- Stakeholder analysis and mapping to ascertain those likely most affected by the Project.
- Review and update of the social baseline profile, including compilation of community characteristics, analysis of existing social conditions and trends, including opportunities and challenges across the social locality.
- Community and stakeholder consultation to ensure participatory social assessment methods.
- Impact identification and evaluation, including an impact significance assessment and scenario analysis, including validation of the proposed assessment of social impacts as outlined in the Social Impact Scoping Report (2022).
- Consider potential Project design refinements in response to identified social impacts.
- Development of mitigation, enhancement and management measures to address social impacts.
- Preparation of a social impact management framework to guide the implementation of the proposed social impact management strategies.

Social Baseline Summary

The social baseline provides a comprehensive overview of the existing social conditions and trends in the social locality, which covers the host Local Government Area (LGA) of Upper Lachlan Shire and the proximal LGAs of Goulburn-Mulwaree and Wingecarribee. It draws on various sources of primary and secondary data to describe the key characteristics and existing conditions of the communities within the social locality.

There is a strong history of agriculture in the locality, with the industry continuing to have a strong economic presence. There is also a strong presence of the quarrying sector, predominately located around the township of Marulan. The Wingecarribee LGA also has a strong focus on tourism, particularly around the Bowral-Mittagong area.

The township of Goulburn is anticipated to be the largest service centre for the Project, with the Project also expected to draw on services from townships within the Wingecarribee Shire (i.e. Bowral and Mittagong).

The social locality demonstrates high levels of social cohesion and connectedness within the community with a number of active community groups, organisations and associations, and is characterised by low household mobility. In recent years, there has also been clear community and government opposition to renewable energy within the locality.

The area has experienced an increase in property demand in recent years. The locality is also predicted to experience population growth, which may further impact housing availability. Importantly, there are currently high rates of unoccupied dwellings associated with holiday rentals and weekenders. There is also currently limited availability of rental accommodation, and overall high rates of home ownership.

The locality experiences low rates of unemployment. Despite having low rates of tertiary education levels, the area demonstrates high rates of vocational education.

Outcomes of Assessment

The SIA has identified and assessed potential impacts of the Project. Impacts have been identified and assessed drawing on engagement inputs, secondary data sources and technical studies undertaken for the EIS.

Positive impacts / benefits that are likely to be of medium to high significance are likely to include:

- Provision of local employment opportunities during construction.
- Opportunity for the Project to increase training and skills of local residents.
- Procurement of local suppliers, services and contractors.
- Use of the site for ongoing research and education associated with renewable energy.
- Intergenerational equity given emphasis on renewable energy production and reduction in carbon emissions.

The SIA has also identified and assessed potential negative impacts of the Project. Impacts that are likely to be of medium to high significance to the community are listed in **Table ES.1** by social impact category.

Table ES.1 Negative Social Impacts of Medium and High Significance

Impact Category	Impact Description
Surroundings	• Change in the rural landscape resulting in impacts on visual amenity. • Social amenity impacts due to noise and vibration associated with construction activities. • Loss of important environmental values on the site e.g. flora and fauna due to site clearing. • Potential for reduced environmental value and degradation associated with decommissioning (e.g., removal of waste, recycling, site remediation) of Project Infrastructure. • Potential for environmental degradation associated with ineffective weed management.
Livelihoods	• Livelihood impacts associated with potential property devaluation. • Livelihood impacts associated with property damage due to heightened bushfire risk.
Accessibility	• Increased travel time and safety issues associated with deterioration of local roads as a result of increased project-related traffic. • Decreased pedestrian and road user safety due to increased traffic during construction. • Reduced access to the project site for emergency services e.g. RFS and subsequent safety impacts. • Reduced access to housing and accommodation due to influx of cumulative workforces. • Reduced access to health and emergency services due to cumulative workforce project influx.
Community	• Reduced community cohesion due to differing attitudes towards renewable energy development in the local community and broader region. • Reduced community cohesion due to incoming workforce resulting in changed community characteristics and composition.
Health and wellbeing	• Increased stress and anxiety due to uncertainty associated with project development and changes to way of life.
Culture	• Impact on Aboriginal cultural values due to land clearing associated with development of project infrastructure.
Decision making systems	• Perceived inability to influence planning and decision-making in relation to the Project. • Lack of trust in the company and the landholder (University of Sydney) due to a perceived lack of information provision and transparency around bequeathment of the property. • Perceived inequitable distribution of costs and benefits associated with the Project.

In response to these identified impacts, a number of mitigation and enhancement strategies are proposed to manage social impacts effectively and enhance project benefits.

Social Impact Management Planning

A social impact management planning framework has been outlined to guide the implementation of proposed strategies relating to management of key social impacts (positive and negative). The strategies in the framework include Spark Renewables developing and implementing the following strategies:

- Accommodation and Employment Strategy (AES).
- Neighbour Agreements.
- Community and Stakeholder Engagement Plan (CSEP).
- Industry and Aboriginal Participation Plan (IAPP).

A number of commitments have been made by Spark Renewables, in response to assessment studies, to reduce impacts of the Project, including project design changes.

Abbreviations

Abbreviation	Definition
ABS	Australian Bureau of Statistics
APZ	Asset Protection Zone
AEMO	Australian Energy Markey Operator
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
CEMP	Construction Environment Management Plan
CSEP	Community and Stakeholder Engagement Plan
EIS	Environmental Impact Statement
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
DPE	Department Planning and Environment
DPHI	Department Planning, Housing and Infrastructure
FTE	Full Time Equivalent
GW	Gigawatt
Ha	Hectare
IEO	Index of Education and Occupation
IRSD	Index of Relative Socio-economic Disadvantage
Km	Kilometre
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
LOTE	Language other than English
LSC	Land and Soil Capability
LSPS	Local Strategic Planning Statement
LVIA	Landscape and Visual Impact Assessment
MW	Megawatts
MWh	Megawatt hour
NEM	National Electricity Market
NVIA	Noise and Vibration Impact Assessment
NSW	New South Wales
OEMP	Operational Environmental Management Plan
O&M	Operation and Maintenance
PHIDU	Public Health Information Development Unit

Abbreviation	Definition
REZ	Renewable Energy Zone
SAL	Suburb and Locality
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	Socio-Economic Indexes of Area
SIA	Social Impact Assessment
SISR	Social Impact Scoping Report
SEPP	State Environmental Planning Policy
SSD	State Significant Development
SUA	Significant Urban Area
TNB	Tenaga Nasional Berhad

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1.0 Introduction

This Report documents the process and outcomes of the Social Impact Assessment (SIA) undertaken by Umwelt for the proposed Wattle Creek Battery Energy Storage System (BESS) (the Project) located in the locality of Brayton in the Upper Lachlan Shire Local Government Area (LGA) of New South Wales (NSW). The Project includes a 350 MW capacity (AC or DC coupled) BESS and project-related infrastructure.

The 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 considered a State Significant Development (SSD) under Part 4 of the EP&A Act. The SIA report has been prepared to address the requirements of the NSW Department of Planning, Housing and Infrastructure (DPHI) (formerly Department of Planning and Environment (DPE)) *Social Impact Assessment Guideline for State Significant Projects* (2023) (the Guideline), *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2024) as well as the Secretary's Environmental Assessment Requirements (SEARs) issued on 22 December 2023. The SIA builds on the Social Impact Scoping Report for the Project submitted in September 2023.

1.1 Project Overview

The Project Area is located on the Arthursleigh Farm, approximately 80 kilometres (km) west of Wollongong and 15 km northwest of Marulan within the Upper Lachlan Shire Council Local Government Area (LGA). The Project Area abuts the Wingecarribee Shire LGA to the east, and Goulburn Mulwaree Shire Council LGA to the south.

The Project involves the construction, operation and decommissioning of a 350 MW BESS, and project-related infrastructure. In addition to the Project, the Wattle Creek Solar Farm Project (SSD-63344210), which is a 265 MW(AC) photovoltaic (PV) generation facility is also proposed within the Project Area. The Wattle Creek Solar Farm project is being assessed independently within a separate EIS and SIA.

The Project Area is currently operated commercially and is used for a range of research initiatives including agricultural science, pasture agronomy and unmanned vehicle application. The Project Area encompasses land within Land and Soil Capability (LSC) classes 4, 5, 6 and 7, which range from moderate to very low capability. The development footprint predominantly occurs on moderately low to very low land capability (LSC classes 5,6 and 7), with 32 ha on moderate capability land (LSC class 4). The land surrounding the site is largely used for agricultural purposes.

The Arthursleigh Farm was bequeathed to the University of Sydney in 1979 and is currently operating commercially producing Merino Wool, Angus cattle and cereal, and supports a range of teaching and research. A key aspect of the Project is a two acre "test-bed facility", which would enable the University of Sydney to undertake research on new and emerging technologies.

The key components of the Project include:

- Batteries – most likely a lithium-ion technology.
- Inverters – bi-directional inverters to convert DC current to AC current (when exporting electricity) and vice versa (when importing electricity).
- Transformers – skid-mounted transformers will be installed adjacent to each inverter to step up the voltage to the internal reticulation voltage of the plant.
- Substation and transmission connection – on-site collector substation and overhead powerlines to connect the Project to the electricity transmission network via Marulan Substation.
- A substation communication mast of up to 80 m in height is also included at the substation location.
- A research Test-Bed Facility – comprising of a 2-ha stand area, demountable buildings, security fencing, parking, 200 kVa power supply and 100 kVA dummy load (simulated electrical load for testing purposes).
- Electrical connections – a combination of underground cables and overhead powerlines connecting BESS facility to the on-site collector substation.
- Operations and maintenance (O&M) facility – including control rooms, O&M buildings, amenities, equipment sheds, storage, a hardstand and bench, and parking areas.
- Minor upgrades to the existing site access point from Canyonleigh Road and internal access roads.
- Temporary construction infrastructure – to facilitate construction and likely to include laydown and storage areas and site offices.
- Security fencing – to prevent unauthorised access to the Project infrastructure and guard high voltage or dangerous equipment.
- Two transmission line options are being investigated, to allow for optionality during the assessment process and greater flexibility in the connection design. Only one transmission option will be constructed, the two options are being assessed separately.

Spark Renewables initially investigated including a wind farm component, however, Spark Renewables is not proceeding with this component of the Project. Spark Renewables is not proceeding with the wind farm component and is focused on developing the BESS and the Wattle Creek Solar Farm Project (subject to separate assessment process (SSD-63344210)) components only.

1.2 The Proponent

Founded in 2018, Spark Renewables is one of Australia's leading developers and long-term owners of renewable energy generation assets.

Spark Renewables is a wholly owned subsidiary of Tenaga Nasional Berhad (TNB), a global energy giant, with a 75-year operating history and a global workforce of over 35,000 staff. TNB is listed on Malaysian Stock Exchange and has an equity market capitalisation of >A$30 billion, an investment grade credit rating of A- (S&P).

TNB's operating renewables footprint spans 115 projects globally (Australia, UK, Malaysia, Turkiye) and includes onshore and offshore wind, solar, hydro, and solar-BESS projects (4,156 MW of generation and 25 MW of storage or in excess of 4 GW).

Spark Renewables is a leading developer, long-term owner, and operator of renewable energy projects. The company's portfolio comprises the Bomen Solar Farm, operational since 2020, and Spark Renewables is currently developing more than 7 GW of solar, wind, and renewable storage projects across the NEM, including the Dinawan Energy Hub and Mallee Wind Farm, within NSW.

Spark Renewables has grown rapidly and employs an experienced team of 30 people, with over 250 years of experience in end-to-end development, construction and operations of wind, solar and BESS projects. The company retains industry experts across the key areas of engineering, development, consenting, financing, construction and commissioning, with the team having cumulatively worked on over 36 GW of capacity globally. Spark Renewables currently have an additional four renewable energy projects in the NSW planning system.

Throughout the development of the Project, Spark Renewables aim to:

- Contribute to and support the National Energy Market (NEM).
- Facilitate a shift away from coal-fired power generation, supporting Australia's transition towards clean and renewable sources of energy.
- Establish a strong network of positive and long-term relationships within the local community and contribute to economic and social growth with establishment of a community fund and a neighbour benefit fund that meets the unique needs of the broader community and local landholders, and delivers long-lasting social, economic, and environmental benefits.
- Provide energy storage for sustainable renewable energy to enable continuous and reliable electricity output as part of a rapidly expanding industry in NSW.
- Make efficient use of existing transmission electrical infrastructure.
- Provide direct and indirect financial benefits to the regional and local community, including employment generation creating approximately 100 jobs during the construction phase and approximately 3 jobs during the operational phase.
- Flow-on economic benefits to local services through the construction and operation phases.
- Facilitate economic empowerment of First Nations people through implementation of an Aboriginal Participation Plan that will be developed to address the NSW Electricity Infrastructure Roadmap First Nations Guidelines (Office of Energy and Climate Change, 2022).
- Enabling continued research on new and emerging technologies in partnership with UoS, through the establishment of a dedicated onsite testbed facility on the Project site.

1.3 Partnership and Research Opportunities

As noted above, the Project will involve a research collaboration between Spark Renewables and the University of Sydney with a fund for research initiatives focused on supporting the energy transition.

Research initiatives will be in line with the Office of the NSW Chief Scientist & Engineers 20-year Research and Development Road map titled: *Shaping the future of NSW in science and technology* (Office of the NSW Chief Scientist & Engineer, 2022). This will include the development of a new Research Facility (or 'Testbed') to be used to test innovative technologies. Whilst the exact initiatives are yet to be determined, they may include energy storage, efficiency and optimisation, sustainable fuels, Power to X (P2X)[1], electrification, smart grids and agricultural technology.

1.4 Report Purpose

Pursuant to the objectives of the SIA Guideline (DPE, 2023), the purpose of this SIA Report is to:

- Validate social data, assumptions and outcomes of the engagement undertaken to date and proposed assessment of social impacts as outlined in the September 2023 Social Impact Scoping Report.
- Predict and analyse the extent and nature of likely direct and indirect social impacts (positive and negative) against baseline conditions, that have been informed by engagement with key stakeholders.
- Develop appropriate and justified responses to social impacts identified as moderate to high, including consideration of potential Project design refinements, mitigation and enhancement measures to address social impacts.
- Propose arrangements to monitor and manage any residual social impacts over the life of the Project.
- The SIA forms part of a suite of technical studies being undertaken for the Project.

[1] P2X is an umbrella term for technologies and processes producing green power fuels and clean chemicals using renewable energy and sustainable materials. P2X products include green hydrogen, ammonia, synthetic hydrocarbons such as methane, methanol and aviation fuels.

2.0 Methodology

SIA is an approach to predicting and assessing the likely social consequences of a proposed action and developing options and opportunities to improve outcomes for people.

Best practice SIA is participatory and involves understanding impacts from the perspectives of those involved in a personal, community, social or cultural sense, to provide a complete picture of potential impacts, their context and implications (Ross, 1992).

2.1 Assessment Requirements and Process

The SIA approach adopted, addresses the SIA Guideline and the *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2024), with this process illustrated in **Figure 2.1** and **Figure 2.2**.

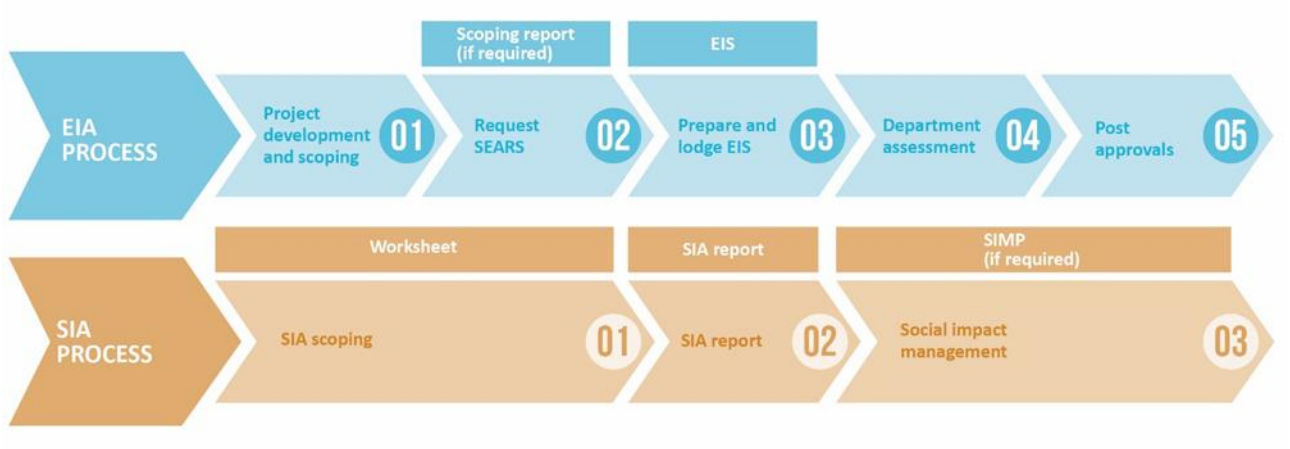

Figure 2.1 SIA and EIA Process

Source: DPE, 2023.

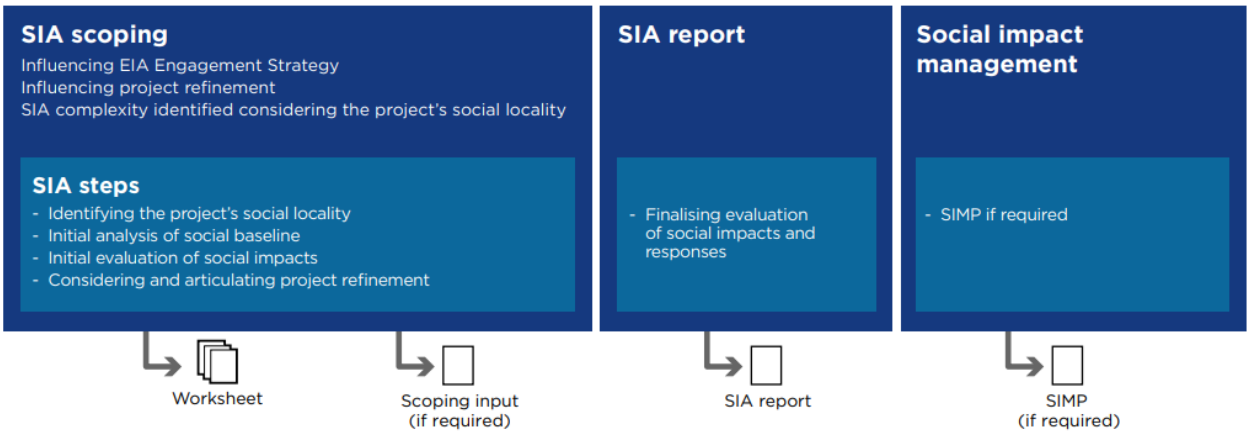

Figure 2.2 SIA Steps in Detail

Source: DPE, 2023.

The SIA has been completed to address the SEARs for the Project as issued by DPHI with relevant requirements relating to undertaking an assessment of social impacts in accordance with the SIA Guideline (DPE, 2023) and consideration of construction workforce accommodation.

The report contains the following:

- **Section 2.0** – a description of the SIA methodology, including a definition of the social locality, identification of stakeholders and an overview of the engagement undertaken to inform the preparation of the SIA and detail on social impact prediction.
- **Section 3.0** – a description of the social locality and the Project's development context.
- **Section 4.0** – identification and evaluation of the positive and negative social impacts that may arise from the Project, including community perceptions on potential Project impacts.
- **Section 5.0** – an overview of the assessment of identified social impacts and a description of the management measures designed to address impacts.
- **Section 6.0** – a description of the Project design refinements in response to social impacts, an overview of the social impact management framework and subsequent sub-plans including: Accommodation and Employment Strategy, Industry and Aboriginal Participation Plan and Community and Stakeholder Engagement Plan.

The preparation of this report has also taken into consideration the requirements of Appendix C (Review Questions) of the SIA Guideline. Responses to these review questions and where in the SIA report these have been addressed is provided at **Appendix A**.

Community and stakeholder engagement is a key component of a SIA, to identify key social impacts from the perspectives of those likely to be most affected/interested in the Project, and to explore strategies that may be put in place to reduce negative impacts and enhance positive social impacts and outcomes.

Engagement to inform the SIA has largely been undertaken by Spark Renewables with support from Umwelt in the design of interview guides and survey instruments. Umwelt has also undertaken a small number of phone interviews with proximal landholders to inform the SIA, further detail on the roles and responsibilities of parties in the engagement program can be found in **Section 2.3.3**. A coordinated approach to engagement for the Project with the Wattle Creek Solar Farm project was adopted due to the projects being proposed within the same Project Area and to ensure engagement provided clear and consistent information across both projects.

A SIA, informed by community and stakeholder engagement, affords opportunities to effectively identify, integrate and address social impacts within the detailed Project planning, design and assessment phase. The phases involved in identifying and managing social impacts and activities undertaken in each phase, are further outlined in **Figure 2.3**.

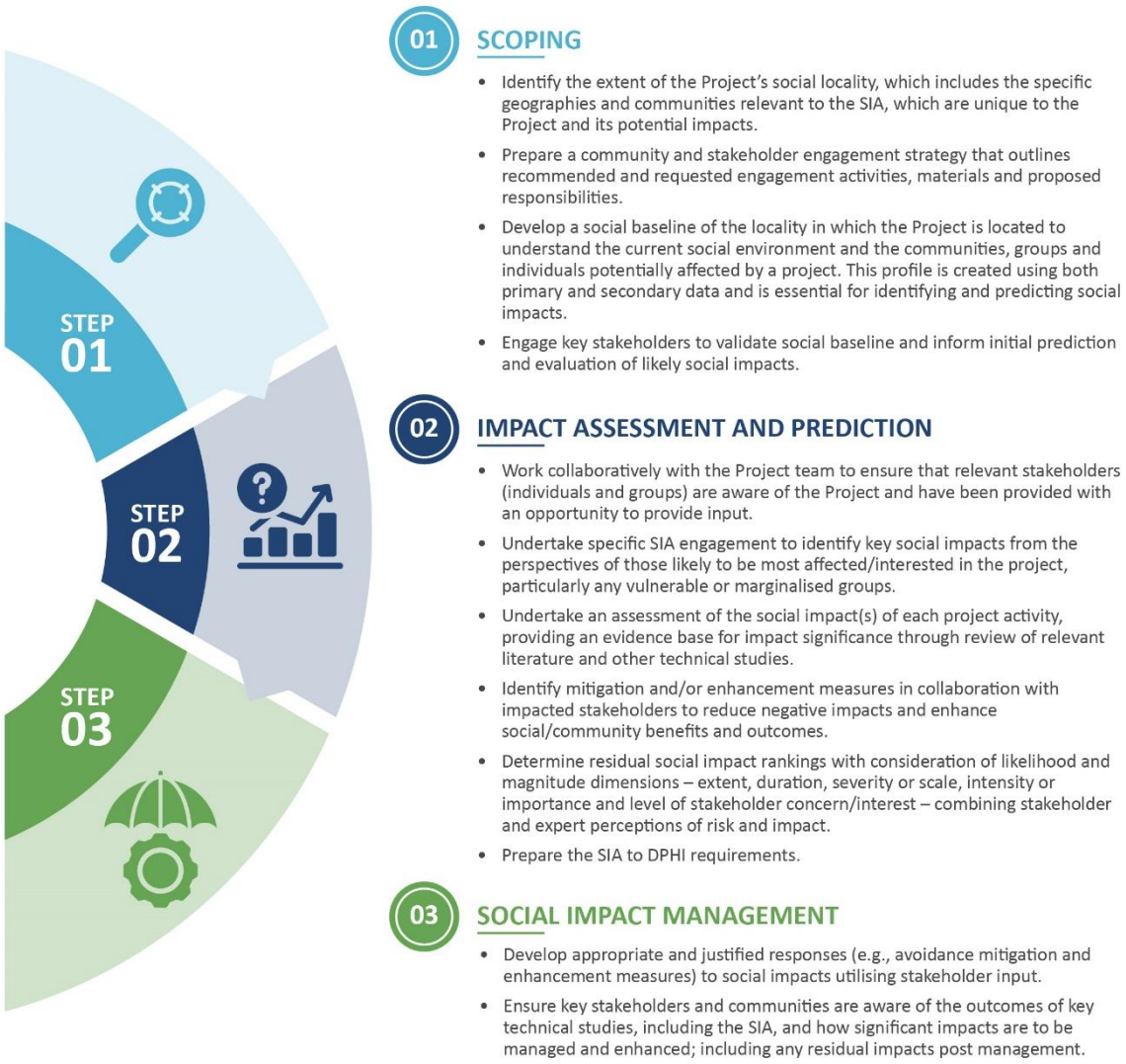

Figure 2.3 SIA Program Phases

Umwelt, 2024.

According to the SIA Guideline, and as outlined in **Figure 2.4**, social impacts can be grouped according to several categories and may involve changes to people's way of life, community, accessibility, culture, health and wellbeing, surroundings, livelihoods, and decision-making systems.

Figure 2.4 Social Impact Categories

Umwelt, 2024 (Derived from: DPE, 2023).

While some social impacts may directly occur because of the Project, others may be indirectly caused by changes in the biophysical environment and biophysical impacts, as outlined in **Figure 2.5**. Consequently, both direct and indirect social impacts are equally valid and should be considered.

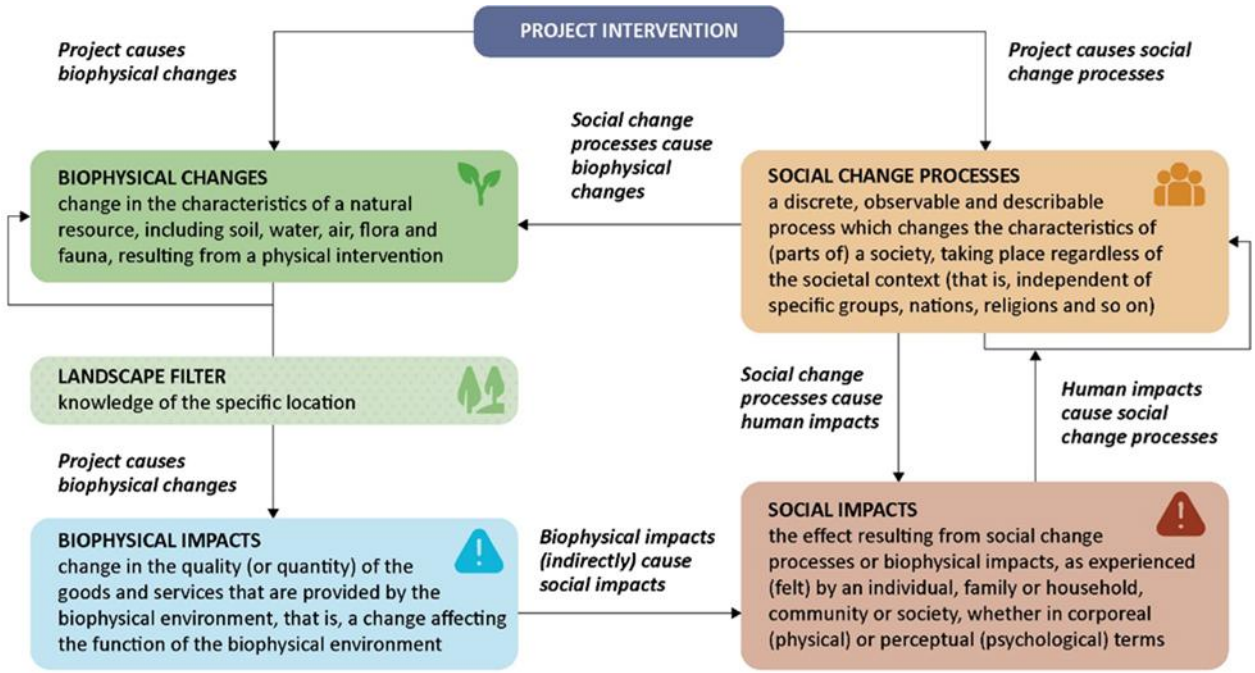

Figure 2.5 Direct and Indirect Social Impacts

Source: Umwelt, 2023, Adapted from Slootweg et al, 2013 (p.28).

As is the case with any type of change, some individuals or groups within the community may benefit because of the Project, while others may experience negative impacts. Social impacts may also manifest as *tangible* impacts, these being impacts that may have a material outcome on the lives of individuals and communities, and more *intangible* impacts, such as justified fears or aspirations associated with a project:

'Social impacts may be physically observable or may manifest as rational or justified fears or aspirations; may be experienced positively and negatively by different stakeholders; and may be tangible or more tangible' (DPE, 2023).

If negative impacts are predicted, it is the role of the SIA to determine if such impacts may be addressed effectively through Project design or management measures to reduce the degree of disruption to those affected. If positive impacts are predicted, the aim of the SIA is to identify how benefits and opportunities might be further enhanced and realised.

Ongoing monitoring and evaluation are also key components of a SIA process, to identify any unanticipated impacts that may arise because of the Project, and which may not have been anticipated, and to monitor social impacts, should the project proceed.

Section 4.0 provides a description of the Project's potential social impacts, and an evaluation of the significance of each of these impacts. This assessment is undertaken using:

- outcomes of engagement activities
- consideration of other SIA's and relevant projects undertaken in the area
- relevant social science literature on key social impact matters
- outcomes of relevant environmental technical studies
- the expertise and experience of the social impact assessors undertaking SIA in other relevant contexts.

All these aspects are considered in the application of the consequence and likelihood framework, as identified in the SIA Guideline, and summarised in **Figure 2.6**.

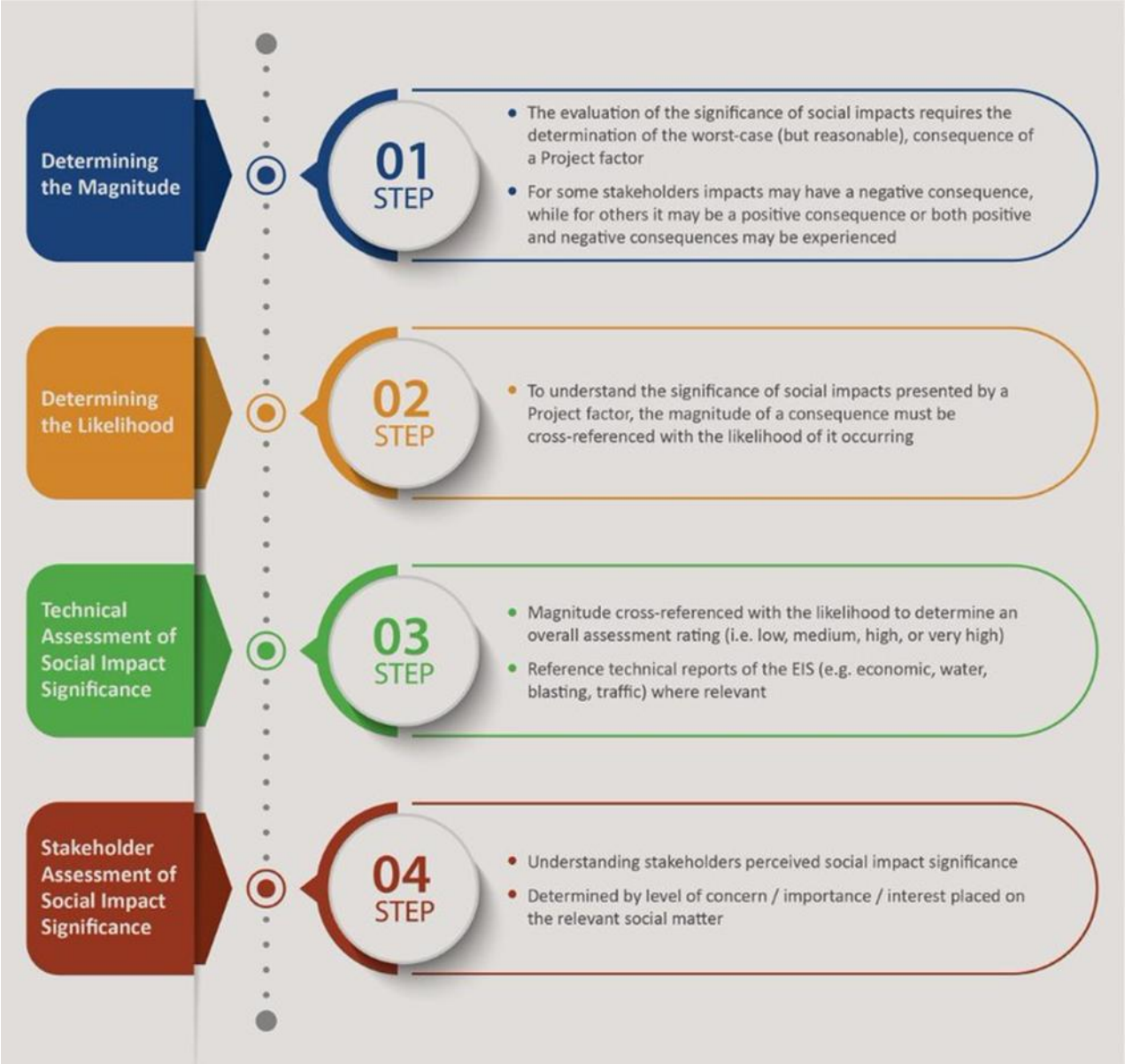

Figure 2.6 Social Impact Evaluation Process

Source: Umwelt, 2024.

Appendix B further details the methodology, data sources and consultation mechanisms utilised to inform the SIA.

2.2 Defining the Social Locality

The term 'social locality' commonly used in SIA practice refers to the geographies included within the SIA. There is no fixed meaning or predefined geographic boundary to determining a social locality, instead, the scale of the social locality should be established on a case-by-case basis, having regard to the nature of the project, and its impacts (DPE, 2023).

Determining the social locality should consider where people are located in relation to the Project and how groups of people interact with the Project Site and any associated features. For further direction, the SIA Guideline states that the social locality should be defined by:

- the scale and nature of the project
- who may be affected by the project
- whether any vulnerable or marginalised people may be affected by the project
- built or natural features on or near the project that could be affected, and the tangible and intangible values that people may associate with these features
- relevant social, cultural, demographic trends or social change processes
- the history of the proposed project and the area.

The primary communities of interest that comprise the social locality are identified in **Figure 2.6**, which also illustrates the extent of the social locality related to the Project. **Table 2.1** provides further definition of the social locality visually represented in **Figure 2.7.**

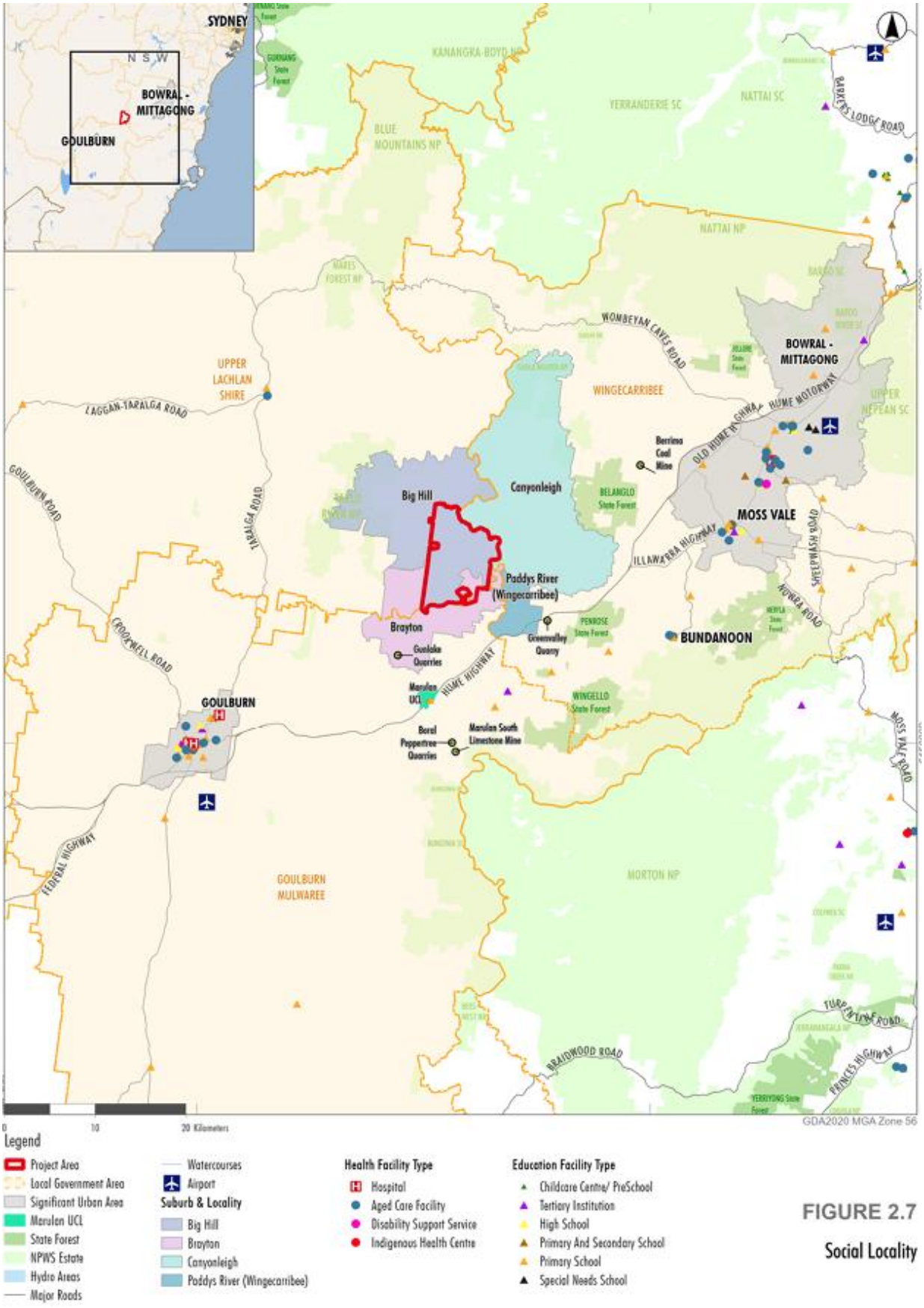

Figure 2.7 Social Locality

Source: Umwelt, 2024. Table 2.1 Social Locality Definition

Table 2.1 Social Locality Definition

Aspect	ABS data boundary	Township / locality	Reason for inclusion
Proximal landholders within 4 km of the Project Area	SAL	Residents located within the neighbouring localities of Canyonleigh, Big Hill, Brayton and Paddys River. These SALs are directly adjacent or contained within the Project boundary.	There are approximately 47 non-associated dwellings located within 4 km of the Project Area across the SALs listed. The Canyonleigh township (population of around 455) is located in the Wingecarribee LGA and is directly north-east of the Project Area. The town is often referred to as the outback of the Southern Highlands due to its rural landholdings and location (Visit Southern Highlands, n.d.). The rural landscape has made Canyonleigh a popular location for bed and breakfast style accommodation, including homestays such as Airbnbs. With a population of 208, Brayton is the second largest SAL by population, located along the proposed transportation route. Big Hill and Paddys River have smaller populations than the other two SALs. Big Hill, located directly to the north-west of the Project Area is characterised by agricultural land use as well as National Parks such as Limeburners Creek and has a population of 78 (NSW National Parks and Wildlife Service, 2023). Paddys River has a smaller population of 64 people.
Host and neighbouring Local Government Areas (LGAs)	LGA	Goulburn, Upper Lachlan, Wingecarribee	Upper Lachlan is the host LGA. The Shire has three main centres – Crookwell, Gunning and Taralga, however it is not expected that the Project will draw heavily on the services available in these townships given drive times to the Project Area being greater than 60 minutes. Goulburn is expected to be key service centre, with access to the Project site through the Goulburn Mulwaree LGA. Wingecarribee has been included due to its proximity to the Project Area, and the expectation that townships within the LGA, such as Bowral and Mittagong, will also serve as service centres for the Project workforce. There is also a high level of interest in the Project from areas within this LGA.
Service centres located within 60-minute drive of the Project Area with a population above 10,000	SUA	Goulburn Bowral-Mittagong	The significant urban areas of Goulburn and Bowral-Mittagong have been included as it is likely they will act as key service centres for the Project, with workforces relying heavily on these areas for access to services including accommodation, retail, health and emergency services.

Aspect	ABS data boundary	Township / locality	Reason for inclusion
Smaller townships offering additional services.	UCL	Marulan and Bundanoon	Marulan is the nearest population centre to the Project Area and is situated along the transportation route. Marulan is located directly on the Hume Highway and has often been considered a stop for those travelling from Sydney to Canberra. All heavy vehicle movements for the Project will traverse the Hume Highway, along Ambrose Road and Brayton Road, with site access proposed along Canyonleigh Road. Bundanoon, whilst further away from the Project Area, has a number of accommodation options available that the Project may draw on during the construction phase; however, it should be noted that this area has a strong tourism economy.
Natural features	NA	Tarlo Naional Park Bangadilly National Park	The Project is located in proximity to a number of National Parks and State Conservation Areas. These areas have high ecological and Aboriginal cultural heritage value, with a number of threatened species and heritage sites recorded.

2.3 Stakeholder Engagement

2.3.1 Stakeholder Identification

SIA involves the participation and collaboration of people that may have an interest in, or those that are affected by, a project. As Burdge (2004) outlines, stakeholders may be affected groups or individuals that:

- live nearby the resource or Project
- have an interest in the proposed action or change
- use or value a resource
- are interested in the use of the resource
- may be forced to relocate as a result of the Project.

To identify key stakeholders, Spark Renewables undertook a stakeholder identification process to inform the development of the Project's CSEP. This process involved identifying stakeholders with an interest in the Project, or those that may be directly and/or indirectly affected, including any potentially vulnerable or marginalised groups. Umwelt reviewed the CSEP and provided guidance on additional stakeholder groups to consider, with these incorporated into the plan (see **Appendix C**).

Key stakeholder groups consulted or engaged during the SIA are italicised in **Table 2.2**, with further detail provided in **Section 2.3.2**. Engagement with Government agencies was also undertaken in the development of the EIS and is summarised in Section 5 of the EIS.

Table 2.2 Key Stakeholder Groups

Stakeholder group	Stakeholders[2]
Local Government	*Upper Lachlan Shire* *Goulburn-Mulwaree* Wingecarribee Shire
Broader community	*Residents of Canyonleigh, Big Hill, Marulan.*
Proximal landholders and residents	~130
Community environmental and special interest groups	*Marulan Progress Association* *Marulan & District Historical Society* *Marulan CWA* *Marulan Lions Club* *Community Voice for Hume* *Canyonleigh Community Association* The Goulburn Group Jerrara Action Group Bannaby Resident Action Group Upper Lachlan Landcare Upper Lachlan Foundation
Emergency service providers	*Big Hill RFS* *Marulan RFS*

[2] Stakeholders which are italicised have been consulted during the scoping and or SIA/ EIS phase.

Stakeholder group	Stakeholders[2]
Accommodation providers	*Briars Country Lodge – Moss Vale* The Argyle Hotel – Moss Vale *Moss Manor Hotel – Moss Vale* *Marulan Motor Inn – Marulan* Tattersalls Hotel – Goulburn Mercure Goulburn – Goulburn Astor Hotel – Goulburn *Best Western Plus Goulburn – Goulburn*
Industry and business	*Regional Development Australia – Southern Inland* Marulan Region Chamber of Commerce *APM Employment Services – Goulburn / Moss Vale* Sureway Employment and Training Goulburn Think Recruitment Moss Vale *Highland Recruitment* TAFE NSW – Moss Vale
Aboriginal stakeholders	*Pejar LALC* *Gundungurra Aboriginal Group* *Sonione Wakabut Rangers* *The Burra Burra Corporation*

Source: Umwelt, 2024.

2.3.2 Engagement Mechanisms

Consultation activities undertaken to inform the SIA focused on providing information on the Project and planning process, understanding the social context within which the Project is being proposed, identifying the social impacts of the proposed Project, and gathering community feedback on potential management measures to address social impacts.

Stakeholder engagement has been undertaken over two main rounds as part of the SIA program:

- **Round 1:** to inform the scoping phase of the SIA and the development of the Scoping Report. This engagement round, undertaken between March and April 2023, sought to identify the perceived impacts from the perspective of near neighbours and key stakeholders in the social locality to inform the level of assessment of these impacts in the SIA phase. Mechanisms utilised in this phase included website development, social media channel, distribution of project information sheets, community drop-in sessions with dedicated materials, meetings with local Councils, and personal meetings and calls with proximal landholders.

- **Round 2:** to inform the SIA, engagement was undertaken in May–June 2024. Engagement sought to validate social impacts scoped in the first round of engagement, and identity management and enhancement measures for predicted impacts. Engagement was also undertaken with local service providers to understand existing capacity and potential impacts on service provision associated with the Project.

A summary of all consultation mechanisms utilised throughout Rounds 1 and 2 is included in **Appendix B**.

provides a summary of the number of stakeholders consulted during engagement to inform the Scoping Report and the SIA. As noted in **Section 2.1**, a coordinated approach to engagement for the Project was undertaken with the Wattle Creek Solar Farm Project, and therefore all mechanisms utilised included discussion relating to both Projects.

Table 2.3 Stakeholders Consulted by Phase

Stakeholder Group	Mechanism	Phase 1 – Scoping		Phase 2 – SIA/EIS	
		No. of stakeholders contacted	Number Participants Engaged	No. of stakeholders contacted	Number Participants Engaged
Aboriginal stakeholders and Traditional Owners	Project briefing and interview	2	1	4	4[3]
Proximal landholders	Personal meetings	113	26[4]	130	35[5]
	SIA phone / online survey	-	-	29	21
	Newsletter	113	NA	110	NA
Broader Community	Project website (new users visiting the website for the first time)	NA	249 new users (1 Apr–16 Aug 2023)	NA	573 new users (1 Jan–1 Oct 2024)
	Community drop-in session (Marulan)	NA	42[6]	NA	12[7]
	Community drop-in session (Canyonleigh)	-	-	NA	18[8]
	Canyonleigh community meeting briefing	NA	56[9]	-	-
	Online survey	NA	19	78 via newsletter	21
Local Government	Project briefing and interview	3	2[10]	3	2[11]
Local community, environmental and special interest Groups	Project briefing and interview	2	1	3	2
Local Businesses and Service providers	Phone interviews	-	-	7	4
Accommodation Service Providers	Phone interviews	-	-	8	4
Emergency Service Providers	Project briefing	2	2	-	-

[3] Refers to the number of groups engaged.
[4] Meetings were held by Spark Renewables.
[5] Meetings held by Spark Renewables, often with multiple landholders in attendance.
[6] Some attendees at the drop-in session were also engaged by alternate methods, such as personal meetings and online surveys.
[7] Based on those who signed in on the attendance sheet.
[8] Based on those who signed in on the attendance sheet.
[9] Some attendees at the community meeting were also engaged by alternate methods.
[10] Refers to number of Councils, rather than number of meetings.
[11] Refers to number of Councils, rather than number of meetings.

Quantitative and qualitative information collected through engagement activities has been analysed to inform the evaluation of social impacts associated with the Project, as outlined in **Appendix B**.

2.3.3 Roles and Responsibilities

Umwelt and Spark Renewables were jointly responsible for the delivery of the EIS and SIA consultation programs.

Spark Renewables was responsible for:

- Initiating contact and providing project briefings to proximal landholders.
- Initiating contact with community and special interest groups to provide a Project briefing.
- Providing Project briefings to local government representatives.
- Consulting emergency service providers (i.e. RFS).
- Consulting Aboriginal stakeholders.

Umwelt was responsible for:

- Conducting SIA interviews with proximal landholders along the transportation route and those with potential visual impacts.
- Consulting local business, accommodation, and service providers.
- Conducting interviews with representatives from local government following initial contact from Spark Renewables.
- Conducting interviews with community and special interest groups following initial contact from Spark Renewables.

Other organisations that supported consultation for the Project include:

- Austral Archaeology undertook heritage surveys and consultation with relevant Aboriginal stakeholders to inform the Aboriginal Cultural Heritage Assessment (ACHA).
- Spectrum Communication supported consultation undertaken by Spark Renewables in Round 1 of engagement.

2.4 Assessment Limitations

The following limitations to the study are noted:

- The views of the community represented throughout the report are based on the sample of community members and stakeholders consulted as outlined above, and do not represent the views of the entire community.

- Elements of the SIA have been developed based on knowledge and information collected from secondary data sources and community consultation. It is assumed that secondary data sources contain valid, representative data and have not been misconstrued.
- Umwelt were not involved in consultation with all stakeholders (as outlined in **Section 2.3.3**) and therefore have had to rely on engagement records collated and maintained by Spark Renewables.
- Efforts have been made to initiate contact by Spark Renewables, however, there has been limited engagement with Traditional Owners and Aboriginal Stakeholders aside consultation conducted to inform the ACHA.
- Whilst Spark Renewables has met with a number of proximal landholders (refer to
-), and these meetings informed the Scoping Report, there has been limited integration of additional meeting outcomes in the SIA.
- Spark Renewables are aware that ongoing consultation with all relevant stakeholders is required as part of ongoing Project planning and assessment (this is outlined in the Project's CSEP provided in **Appendix C**), specifically, consultation will be ongoing to inform the strategies to be developed as outlined in the Social Impact Management Framework in **Section 6.0.**

3.0 Social Baseline Profile

The social baseline profile has been compiled based on the definition of the Project's social locality and provides an overview of the baseline social context. This section provides information on the existing social environment, conditions and trends from which potential social impacts may arise, to provide a foundation from which impacts can be predicted and analysed.

3.1 Local and Regional Setting

The Project Area is approximately 6,200 hectares (ha) and is located within the LGA of the **Upper Lachlan Shire**. The township of Crookwell is the most populous within the LGA, with 2,014 residents. Other significant townships include Gunning and Taralga with smaller population sizes (Upper Lachlan Shire Council, 2022).

The Shire is situated in the Central Tablelands of NSW and covers an area of approximately 7,200 km^2. The LGA has a population of 8,514 and is largely characterised by its regional character (Upper Lachlan Shire, 2013). The Upper Lachlan Shire LGA Regional Economic Development Strategy 2018-2022 recognises the need for a plan for renewable energy which benefits the community (Upper Lachlan Shire Council, 2018).

The **Goulburn Mulwaree LGA** borders the southern Project Area boundary. It covers a smaller area (3,223 km^2) and has a much larger population than Upper Lachlan Shire, sitting at 32,053. The township of Goulburn within the LGA, has a population of 24,565, with other key townships including Marulan, Tarago and Towrang. The Goulburn Mulwaree Council Operational Plan 2020-2021 outlines renewable energy as the future of energy to create sustainable outcomes for the community (Goulburn Mulwaree Council, 2020).

Wingecarribee LGA, bordering the eastern boundary of the Project Area is the most populous of the three LGAs, with a population of 52,709. The major townships within the LGA include Bowral, Moss Vale, Mittagong and Bundanoon. The LGA has a semi-rural landscape, characterised by small towns and villages (Wingecarribee Shire Council, 2022). Wingecarribee LGA forms part of Destination Southern Highlands, the official and peak tourism body for the Southern Highlands (Wingecarribee Shire Council, 2024). As a key tourist area, there is good connectivity to both the south-western fringe and CBD of Sydney via the Southern Highlands rail line. The Wingecarribee 2040 Local Strategic Planning Statement outlines the move to reduce greenhouse gas emissions through an increased uptake in renewable energy and storage solutions (Wingecarribee Shire Council, 2020).

The South East and Tablelands Regional Plan 2036 (NSW Planning and Environment, 2017) relevant to the three LGAs, has a clear direction to position the region as a hub for renewable energy to ensure a connected and prosperous economy.

3.2 Development Context

This section draws on several data sources to build an understanding of the development context within the region, and the social locality relevant to the Project, to better understand any potential cumulative impacts.

3.2.1 Energy Policy in NSW

Australia's commitment at the international level to the Paris Climate Accord has influenced the growth of and investment in the renewable energy sector across the country. 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), the Electricity Infrastructure Roadmap (2020) and Net Zero Plan 2020–2030 (NSW Climate and Energy Action, 2023). The project aligns with the strategic objectives as set out within these plans and roadmaps.

The NSW Government is currently drafting the NSW Energy Policy Framework which provides a framework to support timely and consistent decision-making and enable increased certainty for the energy industry and the relevant communities. The framework contains the following guidelines: Wind Energy Guideline, Transmission Guideline, Solar Energy Guideline, Benefit- Sharing Guideline and Private Agreement Guideline. These guidelines aim to ensure that communities gain benefits from renewable energy development and have improved transparency and understanding regarding the location and process of development. (NSW Government , 2024).

3.2.2 Proximal Development Projects

Historically, the social locality has seen the development of other renewable energy projects, with the Crookwell Wind Farm located approximately 50 km to the northwest of the Project site being the first wind farm to be developed in Australia, commissioned in 1998 (Tilt Renewables, 2022). The Taralga Wind Farm located approximately 30 km to the north was commissioned in 2015.

A select number of renewable energy projects in the region have been reviewed to identify how relevant stakeholders and communities have responded to these proposed developments, to inform an understanding of the potential concerns and community perceptions in relation to renewable energy and the Project. These projects are outlined in **Table 3.1** .

Table 3.1 Other Renewable Energy Projects within the Social Locality

Project	Location	Approximate Distance to Project[12]	Status	Description	Cumulative Impact
Approved / construction not yet commenced					
Crookwell 3 Wind Farm, Crookwell Development Pty Ltd	Crookwell, Upper Lachlan Shire	32 km west	In construction.	The Project site will cover approximately 1,500 ha. It includes two separate development parcels to the east and south of the existing Crookwell 1 and approved Crookwell 2 Wind Farms. Community responses were broadly positive with majority in support of the wind farms. Although *'the community raised a number of significant concerns about the visual impact of the project on surrounding residences and the cumulative effect of wind farm projects'* (Mazengarb, 2020), the Upper Lachlan Shire Small Business Association Vice-President supports the project due to its economic benefits to the Crookwell region (McCabe, 2021).	Unlikely to have cumulative impacts as construction is likely to be completed prior to construction commencing.
Marulan Solar Farm, Terrain Solar	Marulan, Goulburn-Mulwaree	16 km south	Approved in 2023, construction anticipated in 2024.	150 MW solar farm located to the west of Marulan. Construction expected to take 18 months, with a peak workforce of 300 and up to 5 FTE during operations. Community responses were broadly positive, with some concern for the cumulative impacts of nearby quarries and heavy vehicles.	Construction workforce may have a cumulative impact on access to accommodation and services. Traffic volume increase on the Hume Highway and Munro Road.

[12] Straight line distance measured from Project address: 1001 Canyonleigh Rd, Brayton NSW 2579.

Project	Location	Approximate Distance to Project[12]	Status	Description	Cumulative Impact
Hume Link, Transgrid	Wagga Wagga City, Snowy Valleys, Cootamundra-Gundagai Regional, Yass Valley, Upper Lachlan Shire	32 km south	Approved in 2024, construction is anticipated in 2024 with a duration of 2.5 years	Development of new transmission lines between the existing substations at Wagga Wagga and Bannaby and the proposed Maragle substation; and a new substation at Gugaa.	Hume Link, Transgrid
Gunning Solar Farm and BESS, Canadian Solar	Gunning, Goulburn-Mulwaree	88 km	Approved in 2024.	A 250 MW Solar farm and a 150 MW BESS. Anticipated peak construction workforce of 350, and operational workforce of 3. Construction anticipated to last 18 months.	Gunning Solar Farm and BESS, Canadian Solar
Proposed					
Wattle Creek Solar Farm Project, Spark Renewables	Canyonleigh, Upper Lachlan Shire	Within the Project Area	In assessment	A 265 MW solar farm combined with a 100 MW BESS, Construction is anticipated to take 18 months, with a peak workforce of 147, and an average workforce of 96.	Cumulative changes to social amenity in the locality due to visual, noise and dust. Traffic volume increases. It is likely that the project will draw heavily on services and accommodation in Goulburn, resulting in a cumulative impact.
Gundary Solar Farm, Lightsource bp	Goulburn, Goulburn-Mulwaree	37 km	Response to submissions, construction anticipated in 2025	A 400 MW solar farm and 400 MW BESS. Anticipated construction workforce of 400, with a peak workforce of 250 and up to 4 FTE operational staff. Community responses have been divisive with a significant degree of opposition from organised groups.	Likely the project will draw heavily on services and accommodation in Goulburn, resulting in a cumulative impact on access within the township.

Project	Location	Approximate Distance to Project[12]	Status	Description	Cumulative Impact
				Divided community sentiment is evident in organised groups either opposing or supporting the project, for example, Stop Gundary Solar Farm, The Goulburn Group (Bloch, 2022). The community has expressed concerns regarding impact to local landscape character and visual impacts, impacts to way of life and wellbeing, livelihoods (i.e. property devaluation and insurance increases) impacts for nearby residents, construction and operational noise impacts and biodiversity impacts (Umwelt, 2022).	
Merino Solar Farm, ITP	Tirrannaville, Goulburn-Mulwaree	44 km	Preparing EIS, construction anticipated in early-mid 2025	450 MW solar farm with 300 MW BESS. Construction expected to duration of 12–18 months. The project has received limited community feedback, with some opposition from local council due to lack of consultation (Thrower, Goulburn Mulwaree Council takes shot at Merino Solar Farm consultation, 2022).	Likely the project will draw heavily on services and accommodation in Goulburn, resulting in a cumulative impact on access within the township.

Furthermore, **Table 3.2** outlines major projects and operations occurring in other industries across the region and the potential cumulative impact such projects may have in relation to the Project.

Table 3.2 Proximal Projects – Non-renewable

Project	Location	Approximate Distance to Project	Status	Description	Cumulative Impact
Gunlake Quarry, The Gunlake Group	Marulan	10 km	Operational	Opened in the early 2000's the quarry is consented for 2 million tonnes per annum. Based on current reserves, the quarry has an expected life of over 100 years (Olsen Environmental Consulting, 2008). Community response and sentiment towards the project is generally positive, with some concern and opposition expressed towards the expansion plans and increased heavy vehicle movements (Ballard, 2021) (Sparks, 2021).	Traffic volume increase on the Hume Highway, Brayton Road and Red Hills Road.
Marulan gas-fired power station, Energy Australia	Marulan	12 km	Approved	Two gas-fired power stations with 350 MW open cycle gas-fired power station. Expected to be operational in October 2024. There have been *'longstanding community objections'* to the project (Cole, 2018).	An increase in traffic along Brayton Road and the Hume Highway.
Lynwood Quarry, Holcim	Marulan	14 km	Operational	A hard rock quarry initially approved in 2005 with the consent modified five times. The most recent modification (MOD 5) was approved in May 2017. The quarry produces up to 5 million tonnes per annum and was initially approved for a period of 30 years. The quarry has an expected life of over 50 years (Holcim, 2004). Community sentiment towards the project is broadly positive, with the Marulan Region Chamber of Commerce supporting the project (Quarry, 2015) and ongoing complaints being addressed (Thrower, 2019). The quarry has not received any complaints in the first two quarters of 2024, however in previous years demonstrated a high volume of concerns relating to dust (Holcim, 2024).	Potential for minor cumulative impact on the transport route, namely the Hume Highway.

3.3 Sustainable Livelihoods Approach – Community Capitals

As discussed in **Section 2.2** to understand the communities of interest to the Project and to evaluate their resilience and adaptive capacity to change, a Sustainable Livelihoods or Community Capitals Approach (DFID, 2001) has been adopted. This includes an analysis of seven community capitals as illustrated in **Figure 3.1.**

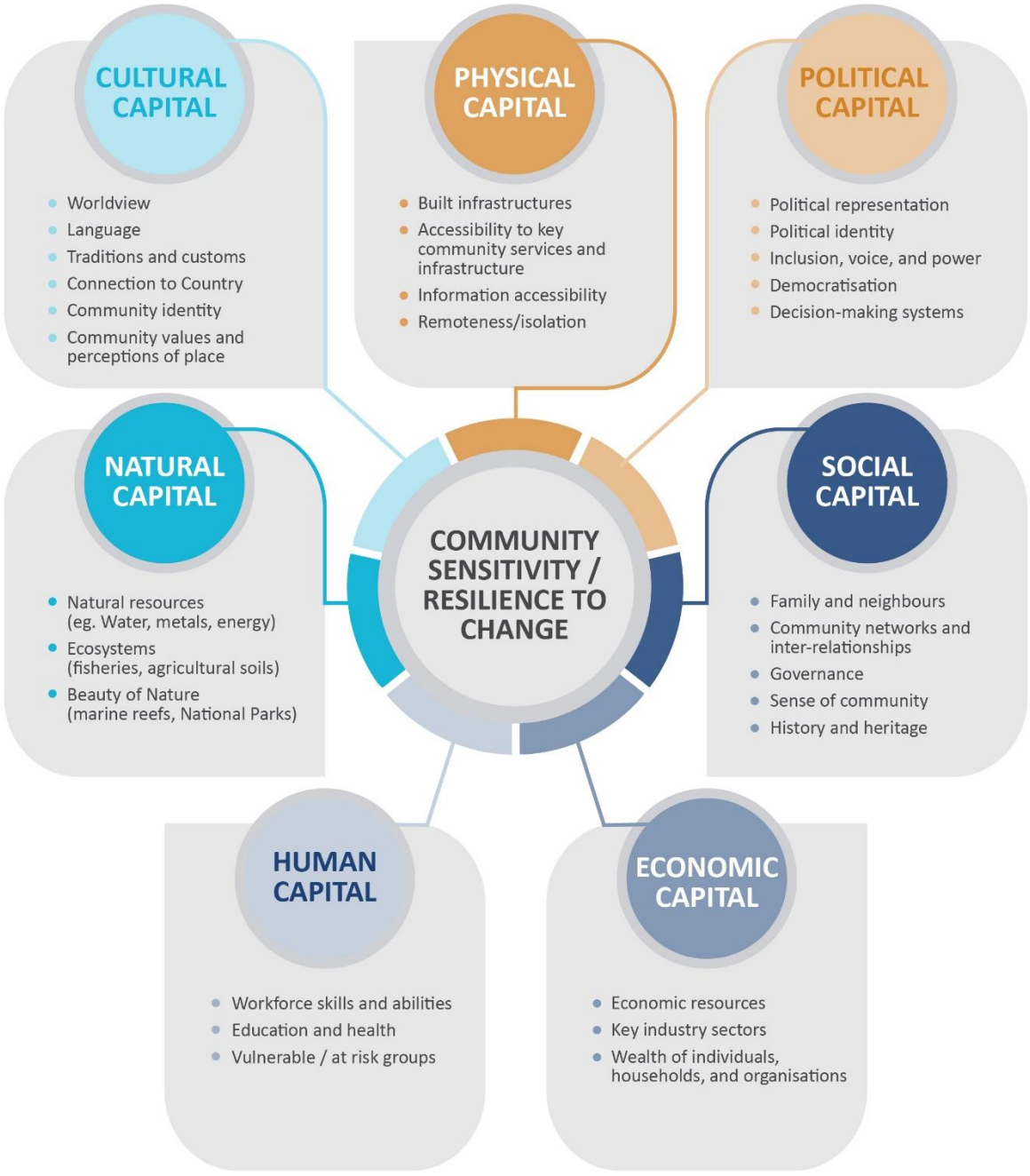

Figure 3.1 Capitals Framework

Source: Adapted from Coakes and Sadler (2011).

Central to Hart's (1999) model is the inter-relationship and linkages that exist across different community capitals and assets, such that where one capital is depleted, other community capitals and assets are also likely to be correspondingly compromised. For example, should human capital be depleted, in terms of a potential deterioration in levels of education or health, the subsequent maintenance of built capitals (e.g., physical infrastructure) are likely to also become affected, thus compromising the overall sustainability of the community. Communities, therefore, require all capital areas to be strong to respond to planned change. Use of this framework informs the evaluation of sensitivity or conversely resilience, as required by the SIA Technical Supplement (DPE, 2023).

3.3.1 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, that provide benefit to the community, as well as environmental assets that hold or provide cultural, social, or recreational value.

The natural capital of the Project and surrounds can be characterised as outlined in **Table 3.3**.

Table 3.3 Natural Capital Summary

Key Implication	Description
The region includes conservation areas, national parks and reserves important for biodiversity and tourism purposes highlighting the importance of environmental surroundings to local residents	The Southern Highlands includes a range of conservation areas, reserves and national parks that are valued in the local community. The Tarlo River National Park is located directly to the west of the Project site. The park is home to some threatened animal and plant species, and sites of Aboriginal cultural value have been recorded (NSW National Parks and Wildlife Service, 1998). The Wombeyan Karst Conservation Reserve, located to the northwest of the Project site is a popular tourist attraction and also a conservation area for endangered species. The reserve consists of a series of limestone caves (NSW National Parks and Wildlife Service, 2023). These areas are of great social value to the community, as domestic tourism is a key industry in the region. In 2019, the Southern Highlands received just under 2.1 million visitors, an increase of over 50% since 2014 (Lucid Economics, 2020)
There is a long history of agriculture and grazing in the community which may result in conflicts with the Project regarding land use	The Southern Highlands has a long history of agriculture, with livestock grazing continuing to occupy most of the productive land in the Upper Lachlan Shire. Agricultural production, such as sheep and cattle grazing, alpacas, potato growing and wool industries are an important contributor to the local economy in the Upper Lachlan Shire (Upper Lachlan Shire Council, n.d.) (further explored in **Section 3.3.2**). The Upper Lachlan Shire Council recognises the importance of the rural landscapes, with new development such as building, renovating, demolishing, tree removal, subdividing land, the display of advertising, or changing the use of a building or land, needing to compliment this landscape. The Shire also notes the need to foster an agricultural industry that is "diverse, adaptive and innovative" (Upper Lachlan Shire Council, n.d.). Goulburn Mulwaree is predominantly rural, with the main land use (accounting for 69.6%) being for primary production. This is largely dominated by sheep grazing, with some cattle grazing and boutique industries (.id, 2022).

Key Implication	Description
	Similar to the other two LGAs, the Wingecarribee is predominately agricultural land use (.idcommunity, 2021). Wingecarribee Council have expressed the desire to maintain the rural landscape as the north of the Shire is characterised by Eucalyptus bushland. The western part of the shire features rivers, sandstone valleys, and includes areas that contribute to the catchment of the Warragamba Dam (Wingecarribee Shire Council, 2023). NSW Landcare and the community group Growing at Goulburn have collaborated to secure potential investment totalling $16 million. The initiative aims to develop 1,600 acres of farmland, which will include vegetable growing, grazing, dairy, and cheese making. Additionally, 800 acres of biodiverse bushland will be conserved. A solar farm is planned to provide power not only to the farm but also to the surrounding area. This project is set to establish a University Agriculture Hub (NSW Landcare, n.d.).
The existing presence of the quarrying industry has already resulted in changes to the landscape (i.e. industrialisation)	The Marulan South Limestone Mine is one of the oldest mines in the locality (since the 1830s) and has been an employment hub for generations of families in Marulan, further contributing to the economic and social life of the area (Boral, n.d.). Mining has continued to grow in the Southern Highlands and draws on the natural resources present, with various quarries, including Holcims's Lynwood Quarry, Boral Quarry, Gunlake Quarries and Global Quarries operating near the township of Marulan.

*Source: refer to **Appendix B**.*

3.3.2 Economic Capital

Examining a community's economic capital involves consideration of several indicators, including industry and employment, workforce participation, unemployment, income levels and cost of living pressures, such as weekly rent or mortgage repayments. **Table 3.4** provides a summary of the key characteristics of the social locality from an economic capital perspective.

Table 3.4 Economic Capital Summary

Key Implication	Description
The social localities demonstrate low rates of unemployment, potentially indicating little capacity to access a local workforce for the Project	In March 2024, unemployment rates for the Goulburn-Mulwaree LGA were at 2.9%. This is a significant decrease from the prior 3-year average of 5.0% (with the highest rate being 7.2% in March 2022) and is now lower than the state average of 3.5% (SALM, 2024). The unemployment rate for the Upper Lachlan LGA in March 2024 was 1.6%, lower than the NSW average (SALM, 2024). The unemployment rate for Wingecarribee LGA in March 2024 was much lower than the state average and those of the two proximal LGAs at 1.4% (SALM, 2024). Between March 2015 to March 2024, the Goulburn-Mulwaree unemployment rate had been consistently higher than the Upper Lachlan LGA and Wingecarribee LGA rates (SALM, 2024). Again, representing a significant change in the employment patterns within the Goulburn-Mulwaree LGA. This data suggests that the Project may find it challenging to obtain a local workforce and may have to source workforce from further afield.

Key Implication	Description
The agricultural and construction sectors produce high economic output across the localities and thus are industries relied upon within the region	The largest industry sector by output varies across the three LGAs. In the Upper Lachlan Shire, agriculture, forestry and fishing is the largest sector, generating $372.5 million 2021/2022 (.idcommunity, 2022), whilst for the Goulburn Mulwaree LGA and Wingecarribee Shire LGA's largest industry by output is construction, generating $585.5 million in 2021/22 for Goulburn Mulwaree and 874.1 million in 2020/21 in the Wingecarribee Shire (.id, 2022) (.idcommunity, 2021).
There is employment across a wide range of industry sectors, potentially indicating varied skillsets within the locality	Sheep and beef cattle farming accounts for 18% of total employment in the Upper Lachlan Shire LGA, a significant proportion of the workforce, and is the top industry of employment. There is less of a focus on agriculture in the other two LGAs and a more diverse labour force, with the top industries of employment in Goulburn-Mulwaree largely focused on the provision of healthcare / social assistance (7.7%). Similarly, the largest industry of employment in Wingecarribee LGA is aged care and residential services (3%), followed by hospitals (3%), and cafes and restaurants (2.9%). Unsurprisingly given the high volume of quarries in proximity to Marulan, the largest industry of employment in the Marulan UCL is other construction material mining (accounting for 4.9% of total employment) (ABS, 2021). Given an apparent industry sector mix, renewable energy development would add further diversification across the locality, particularly in construction.
The social locality demonstrates low median incomes and varying levels of economic disadvantage across the locality which suggests potential vulnerabilities to change in the economy	Low weekly household median incomes were recorded in the Upper Lachlan Shire LGA ($1,465) and Goulburn LGA ($1,196) in comparison to the state ($1,829), whereas the median household income in Wingecarribee LGA was closer to the state average ($1,687), potentially due to its connectivity to Sydney. The SALs of Big Hill and Canyonleigh have higher median household incomes ($2,333 and $2,016 respectively) when compared to Paddys River and Marulan, as well as the state (ABS, 2021). Of the three LGAs, Goulburn-Mulwaree LGA is ranked as having the lowest access to economic resources of the three LGAs (in the 6th decile), Upper Lachlan and Wingecarribee both sit within the 9th decile, indicating higher access to economic resources such as higher paid incomes and general economic health when compared with other LGAs in the state.
There is a growing demand for housing with varying median house prices and levels of rent and mortgage stress, which may be exacerbated by an incoming workforce	As of July 2024, the Upper Lachlan Shire has a median house listing price of $708,500, increasing by 26.51% in the past 2 years (Real Estate Investar, 2024). Goulburn-Mulwaree has also seen a substantial increase in listing prices in the past 2 years, up 10.32% to sit at $689,500 in July 2024 (Real Estate Investar, 2024). The median listing price in Wingecarribee is much higher, sitting at $1,350,000, however has seen a smaller percentage of increase in the past two years (8.4%). For context, the median listing price for NSW is currently $920,000, having seen an increase of 2.22% in the past 2 years (Real Estate Investar, 2024). Most people in the LGAs either own outright or with a mortgage. Despite the median income in Wingecarribee LGA being below the state average, the median monthly mortgage repayments are the same as the State ($2,167 for both). Of the three LGAs, Upper Lachlan Shire has the lowest median mortgage repayments with these significantly lower when compared to the State ($1,540 in the Upper Lachlan LGA compared to $1,733 in Goulburn Mulwaree and $2,167 in the State) (ABS, 2021). The percentage of people in rental or mortgage stress is greater than the NSW % in Wingecarribee, and lower in the Upper Lachlan Shire and Goulburn Mulwaree.

*Source: refer to **Appendix B**.*

3.3.3 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 considers the prevalence of at-risk groups within a community. This section provides a summary of the key characteristics of the social locality from a human capital perspective.

Table 3.5 Human Capital Summary

Key Implication	Description
The social localities have an older, ageing population, potentially indicating further challenges to employing a local workforce on the Project and potentially greater levels of community concern	All areas within the social locality have a higher median age than the state average of 39. The Upper Lachlan Shire LGA and Wingecarribee LGA are notably higher, sitting at 49 and 48 years respectively (ABS, 2021). Unsurprisingly given the high median age, the Upper Lachlan Shire LGA had a higher proportion of persons aged 60 or older in comparison to NSW indicating an aging population (.idcommunity, 2021). Wingecarribee LGA also has a large proportion of elderly people, with the largest proportion of people sitting within the 70–74 age bracket (.idcommunity, 2021), whilst in Goulburn LGA the 55–59 years age group has the highest proportion of residents (.idcommunity, 2021). By 2041, all LGAs will see an increase in both younger and older age groups (NSW Government, n.d.)
The population is projected to increase across all localities potentially increasing strain on local services and accommodation/housing	The population of Upper Lachlan Shire is estimated to increase annually by 0.76% to reach a population of 9,699 in 2041. Of the three LGAs Wingecarribee is expected to increase at the greatest rate (1.54% annually) to reach a total of 70,969 in 2041 (NSW Planning Portal, 2021), whilst the population of Goulburn Mulwaree is also expected to increase by an annual rate of 1.18%. Upper Lachlan Shire is the only LGA of the three that has a slower annual growth rate than the state, which has an annual increase rate of 0.95% (NSW Planning Portal, 2021). Drivers of population change in Wingecarribee have been attributed to the LGAs proximity to Sydney which attracts a number of residents from Sydney to a quieter and greener environment with good access to the City (.idcommunity, 2021). Migration patterns impact the Upper Lachlan Shires population as the area loses populations to the ACT and to Goulburn-Mulwaree but gains population from other parts of southern NSW. The area attracts younger families and a small proportion of older adults and retirees (.idcommunity, 2021). The driver of population growth in Goulburn-Mulwaree LGA has been attributed to the economic growth and employment opportunities within the area as well as being located close to Canberra (Condie, 2021).
Goulburn Mulwaree LGA has a high proportion of Aboriginal and Torres Strait Islander, potentially meaning enhanced opportunities for local Indigenous participation in the Project	The Upper Lachlan Shire LGA (3.1%) and Wingecarribee LGA (2.3%) had a slightly lower percentage of Aboriginal and/or Torres Strait Islanders residents in comparison to the state (3.4%). Whilst Goulburn LGA (5.0%) and Marulan UCL (5.1%) have a significantly higher Indigenous population when compared to surrounding localities and the state (ABS, 2021).

Key Implication	Description
The social localities have lower rates of health and wellbeing, meaning community may be more vulnerable to change	There was a lower percentage of people who recorded no long-term health conditions when compared with the state (Goulburn Mulwaree 51.3%, Upper Lachlan 50.9% and Wingecarribee 56% compared to the State 61%) (ABS, 2021). In terms of perceived levels of health, Upper Lachlan Shire is considered poor, Wingecarribee is considered good, and Goulburn Mulwaree is considered acceptable (PHIDU, 2021). Further, the age standardised rate (ASR) of mental health in the LGAs is higher than the NSW rate (8.8 in Upper Lachlan Shire, 8.7 in Wingecarribee, 10.7 in Goulburn Mulwaree, and 8 in NSW), particularly in Goulburn Mulwaree (PHIDU, 2021). This is an important consideration as the Project may exacerbate such conditions given reported psychosocial impacts of renewable energy developments in other part of the state.
There are high rates of vocational qualifications and low rates of university qualifications across the localities indicating there may be a labour pool with suitable skills available for the Project	Goulburn Mulwaree is in the bottom 30% of LGAs for education and occupation status in the State. This indicates lower levels of qualifications and higher levels of people employed in lower skilled occupations. Wingecarribee and Upper Lachlan LGAs however both sit within the top 80% of LGAs within the State, indicating greater levels of education and employment in skilled occupations.

*Source: refer to **Appendix B**.*

3.3.4 Cultural Capital

Cultural capital refers to underlying factors that provide human societies with the means to adapt to their environment (Cochrane, 2016). 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). This section provides a summary of the key characteristics of the social locality from a cultural capital perspective.

Table 3.6 Cultural Capital Summary

Key Implication	Description
There is limited cultural diversity across the social locality reducing the necessity to provide engagement materials in multiple languages	The Upper Lachlan Shire (42.4%), Goulburn (41.6%) and Wingecarribee LGAs (37.6%) have a significantly higher proportion of Australian ancestry in comparison to the State (28.6%). This correlates to the high percentages of the populations in the Upper Lachlan Shire LGA (83.5%), Goulburn LGA (82.3%) and Wingecarribee (76.7%) being born in Australia and comparatively low rates in NSW (65.4%) (ABS, 2021). Upper Lachlan Shire, Goulburn Mulwaree LGA, and Wingecarribee LGA have significantly lower rates of the population speaking languages other than English at home in comparison to the state (2.5%, 7.9% and 8.6% respectively compared to 29.5% in NSW) (ABS, 2021). Compared to NSW, a higher proportion of the LGAs populations were born in Australia (ABS, 2021), further indicating low cultural diversity.

Key Implication	Description
The LGAs have a rich intangible and tangible Aboriginal cultural heritage which highlights the need for the Project to respect and avoid impacts to cultural heritage and values and to engage First Nations Communities appropriately	The Upper Lachlan Shire LGA and Goulburn-Mulwaree LGA recognises the Gundungurra People as the Traditional Owners of the land. Wingecarribee also acknowledges the Gundungurra and Tharawal people as the Traditional custodians of its Shire (Wingecarribee Shire Council, n.d.). Both groups have a continuous and deep connection to their Ngurra (Country). Gundungurra Dreaming includes the Gundungurra creation story of Gurangatch vs Mirrigan which tells the tale of how the southern highlands and its waterways were formed (ABC Indigenous, 2019). Gurangatch was a Burringilling, a Dreamtime spirit in the form of a part fish, part rainbow serpent. Mirragang was a tiger cat intent on catching Gurangatch for his flesh. Gurangatch escaped from Mirragang's pursuit by burrowing into the ground at the Blue Mountains. Gurangatch passageway created the Wollondilly River through the Southern Blue Mountains and the caverns of the Wombeyan Caves. The holes in the roof of the caves are where Mirragang attempted to spear him with a stick. When Mirragang gave up, Gurangatch returned, forming the waterways of Gundungarra Country where he still rests. This Dreaming includes 21 sacred waterholes, some of which were flooded when the Warragamba Dam was built (Dinalie Dabarera, 2022) The State Government records indicated that there are over 400 significant Aboriginal sites within Wingecarribee Shire (Wingecarribee Shire Council, n.d.). This includes Nungungnungulla (Jubilee Rocks) which was declared by the State Government as the 100th Aboriginal Place in NSW. Nungungnungulla is a significant Aboriginal landmark in the Gundungurra cultural landscape, where Aboriginal engravings, paintings and stencils, grinding grooves, scarred trees and campsites occur. Tharawall (also spelt Dharawal) is said to be the language spoken by the mobs that had a relationship with the area south of Botany Bay and the Georges River, west to Appin, down as far as Goulburn and to Wreck Bay near Nowra (Bursill, Jacobs, Lennis, Timberly-Beller, & Ryan, 2001). The whale is the main totem for the Tharawal people. There are multiple initiatives aimed at reawakening Tharawal culture and language for example the Gujaga Foundation, through its Dharawal Language Program, has launched the Dharawal Language and Culture App (Gujaga Foundation, n.d.). There are currently no Native Title determinations in close proximity to the Project location.
There is a strong sense of pride in the heritage, arts, and cultural scenes of the Southern Highlands which attract a high volume of tourism to the locality and strengthens the social capital of the region through participation and connection	Residents of the Goulburn Mulwaree take pride in the city's heritage and modern assets, strong arts and emerging entertainment scene, and associated economic opportunities (NSW Planning and Environment, 2017). Cultural projects like the Wollondilly Walking Track in the Guul Ngurra National Park, and adaptive re-use of a heritage building for a Performing Arts Centre contribute to community life (NSW Planning and Environment, 2017). The European heritage reflects historical agricultural and gold mining booms that resulted in the construction of many significant buildings particularly within the Goulburn CBD (Goulburn Mulwaree Council, n.d.).

Key Implication	Description
	Wingecarribee is known for its natural and built heritage with the community valuing the streetscapes gardens and buildings. The Wingecarribee Community Heritage Study 2021–23 found that the LGA has up to 480 places of heritage significance which contribute to the area's history (Wingecarribee Shire Council, 2023). Wingecarribee's street scape highlights the regions European heritage from 1820 with many of the buildings from the 19th and 20th century (Wingecarribee Shire Council, n.d.). Properties such as Throsby Park, Oldbury, Vine Lodge and Wingecarribee have buildings dating back to the early to mid-19th Century which survive today (Wingecarribee Shire Council, n.d.). The Upper Lachlan region has significant historical and cultural heritage as highlighted in the Taralga Historical Society Museum, the Self-Guided Historical Walk of Crookwell and Self-Guided Historical Walk of Gunning (Visit Upper Lachlan, n.d.). the self-guided heritage walks show the regions significant building. The Upper Lachlan Shire Heritage Study (2010), outlines the historical significance of Orchard St in Taralga, with its commercial and residential buildings such as the post office, St Luke's Anglican Church and Hotel Taralga adding to the heritage ambiance

*Source: refer to **Appendix B**.*

3.3.5 Social Capital

Various indicators can be used to examine and assess social capital. Such indicators include level of volunteering, population mobility, crime rates and demographic composition of the community **Table 3.7** provides a summary of the key characteristics of the social locality from a social capital perspective.

Table 3.7 Social Capital Summary

Key Implication	Description
The social localities demonstrate high levels of social cohesion and connectedness within the community indicating the importance of utilising local networks to inform the community about the Project	Volunteering rates are used as an indicator of how well connected and cohesive a community is. High rates suggest that there may be a fast spread of information throughout the community and investment in the sense of community in the local area. The Southern Highlands more generally has a higher rate of voluntary assistance (18%) when compared with NSW (13%), suggesting a high level of social cohesion. Upper Lachlan Shire LGA (21.9%), Wingecarribee LGA (18%), and Canyonleigh SAL (18%) have similarly high rates of volunteering. Rates in Goulburn Mulwaree LGA (13.8%) and Marulan UCL (12.2%) were more relative to the state average (ABS, 2021). The Upper Lachlan Shire Community Strategic Plan identifies that the LGA is a "network of close-knit and well supported communities that value our rural lifestyle" (Upper Lachlan Shire Council, 2021). The survey respondents in the online survey for the Project echoed this sentiment, identifying the region as having a quiet country lifestyle which brings the community together. The Upper Lachlan Shire Community Strategic Plan also notes the importance the local community place on its strong sporting clubs, volunteering organisations and community spirit. This was

Key Implication	Description
	echoed throughout discussions in the consultation program for the Project. The Wingecarribee Community Strategic plan highlights the collective voice of the community to support the challenges and opportunities the community (Wingecarribee Shire Council, 2021), whilst the Goulburn Mulwaree Community Strategic Plan outlines the vision for the community as "to build and maintain sustainable communities while recognising and respecting the region's environment and heritage" (Goulburn Mulwaree Council, 2022).
Upper Lachlan Shire LGA has low mobility, suggesting a closely connected community that may have a strong interest in the Project	The Upper Lachlan Shire is less mobile than the other relevant LGAs and the state. Of those who reside in the LGA, 60.7% had the same address as five years prior. In comparison, Goulburn Mulwaree and Wingecarribee had rates similar to the state average of 53.4%. Rates for those who lived at the same address one year prior were relatively stable across the LGAs and the state (ABS, 2021). This suggests that the community are likely well connected and interested in developments within the community.
There are a high number of lone person households compared to broader NSW indicating a potential vulnerability in support networks for some households	In the Upper Lachlan Shire LGA, lone person households accounted for 26.7%, while family households comprised 71.3%. In contrast, Goulburn LGA and Goulburn SA2 had a higher percentage of lone person households compared to the state of NSW, with rates of 30.4% and 32.7% respectively, compared to NSW's 25%. Wingecarribee LGA and Marulan SUA both recorded 26.2% for lone person households. The highest proportion of lone person households was found in Big Hill SAL at 40%. Regarding family households, Upper Lachlan Shire LGA, Wingecarribee LGA, and Canyonleigh SA1 had rates similar to NSW, whereas Goulburn Mulwaree LGA showed a slightly lower proportion (ABS, 2021).
Goulburn-Mulwaree has higher rates of Socio-economic disadvantage indicating that residents within the LGA are more vulnerable to changes in access to material and social resources	Goulburn Mulwaree experiences a higher level of socio-economic disadvantage than the other two LGAs (SEIFA, 2021).

*Source: refer to **Appendix B**.*

3.3.6 Political Capital

Political capital refers to the individuals, institutions, and systems that contribute to a community's ability to maintain and uphold a governance structure. Political capital can determine the extent to which people are able to participate in decisions that affect their lives, the level of democratisation within a community, and the resources provided for this purpose. A summary of the political capital relating to the social locality is provided below.

Table 3.8 Political Capital Summary

Government/Council Area	Description
Pejar Local Aboriginal Land Council (LALC)	The Upper Lachlan Shire LGA sits within the Pejar Local Aboriginal Land Council (LALC). The Pejar LALC was established in 1977 under the NSW *Aboriginal Land Rights Act 1983* as the Land Council for the area and sits within the Wiradjuri region. The Regional Councillor for Wiradjuri is Cr Leanne Hampton who is a member of the NSW Government's Aboriginal Culture and Heritage Advisory Committee (NSW Aboriginal Land Council, 2023).
Upper Lachlan Shire Council	The Shire is governed by the Upper Lachlan Shire Council. The Shire was formed in 2004, following the amalgamation of the former Crookwell Shire, and parts of the former Gunning and Mulwaree shires (Upper Lachlan Shire, 2013).
Goulburn Mulwaree Council	The Goulburn Mulwaree LGA is governed by the Goulburn Mulwaree Council, which was formed in 2004 following the amalgamation of Goulburn City and parts of the former Mulwaree Shire. The Goulburn Mulwaree Council has formally opposed the Gundary solar farm on the outskirts of Goulburn due to impacts on agricultural land, the wellbeing of nearby residents, biodiversity, increased fire risk and impacts on council strategic planning (Goulburn Post, 2024).
Wingecarribee Shire Council	In September 2021, the NSW Government announced a Public Inquiry would be held into Wingecarribee Shire Council. The inquiry resulted in the dismissal of the councillors due to concerns over infighting, and in turn the Council's ability to perform its required functions (Fuller, 2022). Administrator, Mr Viv May will remain at Wingecarribee Shire Council until the local government election is held in late 2024 (Wingecarribee Shire Council, 2022).
State Government	The Project Area is in the State electoral district of Goulburn, which extends to the Australian Capital Territory border in the south-west, bordered by the Abercrombie River in the north and encompassing Moss Vale in the east. Goulburn is strongly associated with the Liberal Party, as the Liberal Party has held the seat of Goulburn since 2007, and similarly, the federal seat of Hume has been held by the Liberal Party since 1998 (ABC News, 2023) (ABC News, 2019). The current Member of Parliament representing Goulburn on the NSW Legislative Assembly is the Hon. Wendy Tuckerman. Wendy Tuckerman has been the Member for Goulburn since 2019 and is a member of the Liberal Party (Parliament of New South Wales, 2022). In recent years, Tuckerman has spoken out against renewable projects in the region, with Tuckerman supporting the Save Gundary Plains Action Group (Parliament of New South Wales, 2022) (Renew Economy, 2022). The seat of Goulburn is considered to be a marginal seat with a 3% margin despite being held by the Liberal Party since 2007. The presence of a smaller margin can sometimes correlate to a higher diversity of opinions in the local community as opposed to the communities within so called 'safe seats' which are more likely to have homogeneous perspectives on key issues and values, although this isn't always the case. Being a marginal seat can indicate that a change or major event, such as a renewable energy development, within the local community has the potential to destabilize local political leadership. It also interesting to note that both the state and federal Members for Goulburn are members of the opposition and marginal seats such as Goulburn often receive more political attention in the run up to an election.
Federal Government	The Federal Member of Parliament representing Hume in the House of Representatives is Hon Angus Taylor. Taylor is a member of the Liberal Party and has held the seat since 2013. Taylor was the Minister for Energy and Emissions Reduction from 2019 to 2021. More recently (October 2021 to May 2022) Taylor was the Minister for Industry, Energy and Emissions Reduction (Parliament of Australia, 2022). Angus Taylor has been openly opposed to wind and solar farms, as demonstrated in his speaking at numerous anti-wind farm rallies and said Australia's Renewable Energy Target was increasing electricity costs, a claim that is disputed by the renewable energy industry, which points to rapidly falling costs in the sector (Davis, 2019).

Government/Council Area	Description
Community mobilisation	The social locality has a number of community groups, associations and organisations. Most notably, the Canyonleigh Community Association with approximately 115 members, and the Marulan Progress Association which meets once a month. Recently, a number of community groups have formed in opposition to renewable energy development in the region. Most notably the Save Gundary Plains Action Group in response to the proposed Gundary Solar Farm located in the Goulburn-Mulwaree LGA. Concerns of the group largely relate to changes in landscape character, potential for increased fire risk and decrease in mental health (Stop Gundary Solar Farm, 2023). Despite this, a media review has revealed that there is support for renewable energy in the community, with media reporting on positives associated with increased local spending, and through supplementary income for property owners who host renewable infrastructure (ABC, 2017).

*Source: refer to **Appendix B**.*

3.3.7 Physical Capital

Physical or built capital includes provision of infrastructure and services to the community. Within this capital area, it is important to consider the type, quality, and degree of access to public, built and community infrastructure (including amenities, services, and utilities), as well as housing. This section provides a summary of the key characteristics of the social locality from a physical capital perspective.

Table 3.9 Physical Capital Summary

Key Implication	Description
The social localities are well connected through established transport routes however Councils and community have identified a need to improve local road networks which may be further impacted by Project related traffic	The three LGAs are situated along the Hume Highway. The Hume Highway is one of Australia's major inter-city national highways connecting Melbourne and Sydney (My Travel Jam, 2019). Rail connectivity is also good, with connections at Moss Vale Station, Marulan Station, and Goulburn Station to the Southern Highlands Line for access to Sydney. Despite the connectivity, the Upper Lachlan Shire has recognised the need to improve key regional road infrastructure to improve agriculture and other industry competitiveness (Upper Lachlan Shire Council, n.d.). The Upper Lachlan Shire Council has also recognised that prioritisation of a priority of the upgrades to the highway and secondary roads is needed to improve transport networks (Upper Lachlan Shire, 2013). Wingecarribee Council have noted their desire to improved road infrastructure (Wingecarribee Shire Council, n.d.), whilst Goulburn-Mulwaree Council has previously invested $3 million into road construction and improvements for the area to improve transport routes for residents and livestock transporters (Goulburn Mulwaree Council, 2021). It was raised by stakeholders during the social scoping phase that quiet roads for horse riding, easy access to highways and improved local roads were valued aspects of the community that they did not want impacted by the Project. In addition, some stakeholders commented on the poor conditions of some local roads, particularly following extreme weather events such as flooding. The Goulburn Airport is privately owned and is home to the Goulburn Flight Training Academy (Airport Guide, n.d.). Larger airports offering commercial flights are located in Sydney and Canberra (Canberra Airport, n.d.) (Airport

Key Implication	Description
	Guide, n.d.).
The LGA's have lower access to educational facilities than other regional areas suggesting a potential focus area for the Project's Community Benefit Sharing Program	Upper Lachlan Shire have expressed a desire to increase educational facilities targeted at agriculture in the LGA (McCabe, Farmers reach regenerative agriculture success in the Upper Lachlan Shire, 2022). Whilst the LGA has various public primary and secondary schools, they have no tertiary institutions within the Shire (School Parrot, n.d.). TAFE NSW Goulburn, however, is the largest TAFE location in the highlands and Wingecarribee also hosts a TAFE campus in Moss Vale (TAFE NSW, n.d.). Moss Vale TAFE offers some courses of relevance to the Project, including a Diploma and Undergraduate Certificate in Renewable Energy Engineering, Foundation Studies in Renewable Energy and Sustainability, Energy Storage Systems, Wind Energy Conversion Systems, and a Grid-Connected Solar PV Systems Design Accreditation, amongst other more general trades such as welding and electrotechnology (TAFE NSW, 2021)
There are high rates of unoccupied dwellings associated with holiday rentals & low availability of rental accommodation presenting a potential challenge for the Project in accommodating the construction workforce	Upper Lachlan Shire has a much higher rate (23.3%) of unoccupied dwellings than the State (9.4%) and other LGAs. When considering the localities of Big Hill (27%) and Canyonleigh (23%) there is a high rate of unoccupied private dwellings (ABS, 2021). Throughout consultation, it became evident there are a number of property owners within the locality that either travel to the area of a weekend, or who AirBnB their homes (as detailed below) which may contribute to these higher rates of unoccupied dwellings. Within Upper Lachlan Shire, 81.2% of households are owned outright or with a mortgage, significantly higher than NSW (31.5%). Wingecarribee and Goulburn LGAs also have higher rates than the state average (77.1% and 67.6% respectively). Upper Lachlan Shire has the lowest proportion (12.6%) of dwellings rented of all localities, significantly lower than the state average of 32.6% (ABS, 2021). Low rates of renting suggest there would be fewer rentals available within the locality for the Project to utilise for a construction workforce, and therefore would need to rely on short term accommodation.
The social locality has seen an increasing demand for property in the locality with varied rental vacancy rates which may be exacerbated by the Project's incoming construction workforce	Goulburn-Mulwaree's proximity to Sydney and ACT, and short distance to major regional centres has increased the demand for properties from local and out-of-town buyers. The township of Crookwell in Goulburn Mulwaree LGA has potential for more residential properties due to future subdivision, which will increase availability of properties (Thistleton, 2023). The rental vacancy rate in Goulburn-Mulwaree LGA is slightly higher than the state average (1.11% compared to 1.08%). The Upper Lachlan Shire has seen an increase in land value as demand for commercial space has increased from local businesses (Opteon, 2017). The Upper Lachlan Shire is estimated to gain 250 more dwellings by 2036, this has been estimated against the small population growth predicted for the area (.idcommunity, 2021). Despite this estimation, the current rental vacancy rate sits at 0.5%, with 27 available rentals. Wingecarribee has had a steady growth in housing supply as estates on the edges of the Shire have become subdivided and developed. The rental vacancy rate however remains relatively low, sitting at 0.91%, with 229 available rentals. When considering renter households where rent repayments are greater than 30% of household income, Wingecarribee has the highest proportion of households (41.7%) suggesting high rates of rental stress. Upper Lachlan and Goulburn-Mulwaree (27.1% and 33.6% respectively) experience lower rates of

Key Implication	Description
	rental stress than the state average of 35.5%. Of the three LGAs, Wingecarribee also has the highest rates of mortgage stress (23.9%) however this is still lower than the state average of 26.9%. Further analysis of workforce accommodation capacity is provided in **Section4.3.2.**
There are varying levels of access to short term accommodation presenting a potential challenge for the Project accommodating the construction workforce	As of December 2023, Goulburn Mulwaree LGA and Wingecarribee LGA had similar occupancy rates (49.8% and 48.0%) whilst Upper Lachlan Shire had a slightly lower rate at 45.0% (AirDNA, 2023). As of April 2024, the suburb of Goulburn had a total sleeping capacity of 681 (ATDW, 2024). Throughout the stakeholder analysis process, people at risk of or experiencing homelessness, and low-income earners who may be susceptible to continued rental increases, and therefore loss of access to housing were raised as a vulnerable group. Largely, this was centred around Goulburn. Furthermore, through the development of the social baseline users of short-stay accommodation and tenants in the private rental market, may be more vulnerable or susceptible to the social or economic changes associated with the Project. It is noted that demand for accommodation in the area is already high due to demand from other industry sectors, e.g., tourism and mining and ongoing coinciding development in the region. Further analysis of short-term accommodation capacity is provided in **Section 4.3.2.1**.
The LGAs have good access to medical facilities and practitioners which may be exacerbated by the Project's incoming construction workforce	Goulburn has a variety of health care facilities, including the Goulburn Base Hospital and Kenmore Hospital. Goulburn Base Hospital underwent an upgrade, which included a new emergency department, completed in 2021 (NSW Health Infrastructure, n.d.). Goulburn Base hospital has 5 emergency department beds (NSW Health, 2023). The hospital provides a range of health care services to the region and broader region. The Crookwell District Hospital operates an 18-bed acute care facility, as well as a 24-hour emergency department and services the Upper Lachlan Shire LGA and Wingecarribee LGA (NSW Health, 2020). When compared to NSW, all LGAs have a higher rate of general practitioners per 100,000 people than the state (145.8 in Goulburn Mulwaree, 229.6 in Upper Lachlan Shire, and 150.7 in Wingecarribee, compared to 122.4 in NSW). The rate per 100,000 people for registered nurses is higher in Goulburn Mulwaree LGA when compared to the State (1,251.9 compared to 960.7) while both Upper Lachlan Shire LGA and Wingecarribee LGA have lower rates than the state (737.2 and 873.3 respectively, compared to 960.7). However, there were fewer specialist practitioners per 100,000 people in Goulburn Mulwaree and Wingecarribee than the State (79.2 and 106.3 compared to 146.2) (data was not available for Upper Lachlan Shire LGA). Rates of access to healthcare in terms of hospital admissions and emergency department presentations is higher in the LGAs than NSW (PHIDU, 2021).

*Source: refer to **Appendix B**.*

3.4 Local Challenges and Opportunities

The community profile has highlighted key strengths and vulnerabilities arising from the capital infrastructure assessment that will be important in the assessment of social impacts. **Table 3.10** identifies key challenges and opportunities experienced across the social locality, as gathered in the development of the social baseline profile and through community consultation.

Table 3.10 Community Challenges and Opportunities

Challenge	Capital	Opportunity
• Opposition to utilisation of farming land for renewable energy in the region.	**Natural**	• History of agriculture and grazing. • A large land use of national parks and conservation areas which bring natural beauty to the areas which are highly valued by locals and tourists. • Ongoing capitalisation of natural resources (local quarrying industry).
• Upper Lachlan and Goulburn-Mulwaree experiences low median household incomes. • Low access to economic resources, particularly in Goulburn-Mulwaree. • Upper Lachlan Shire more susceptible to fluctuations in labour and market demands. • Potential for labour force competition due to low unemployment rates across the three LGAs.	**Economic**	• Diverse local economies. • Strong industry presence in agriculture, forestry and fishing and construction. • Employment across a wide range of industry sectors within the locality. • High growth in the value of properties across the three LGAs. • High rates of home ownership within the social locality. • Low rates of mortgage stress in Upper Lachlan and Goulburn-Mulwaree.
• High rates of socio-economic disadvantage in Goulburn-Mulwaree suggesting residents are more vulnerable to change. • History of strong community opposition to renewable energy development in the region.	**Social**	• Strong community and social relationships, characterised by high volunteering, and low mobility rates.
• Aging population leading to less potential workforces from the areas. • Low rates of university level education. • Lower health and wellbeing when compared to the State.	**Human**	• Higher rates of certificate attainment. • Continued sustained population growth in the social locality. • High proportion of Aboriginal and Torres Strait Islander People.
• Limited cultural diversity, with high reported rates of Australian ancestry.	**Cultural**	• Rich intangible and tangible Aboriginal cultural heritage suggesting a strong connection to Country. • Strong cultural heritage, pride in the landscape and built heritage which contributes to local tourism sector. • Strong European and mining history in the region.

Challenge	Capital	Opportunity
• Public inquiry into local council suggests a level of distrust in Council function. • Opposition from State and Federal parliament members (both seats currently held by Liberal Party) to renewable energy projects in the locality.	**Political**	• Active community associations, and a number of community groups formed in relation to renewable energy development in the locality, suggesting a politically involved and mobile community.
• Lower access to educational facilities Educational facilities desired for agricultural learning. • Need for local road and highway upgrades. • Low access to accommodation in Goulburn-Mulwaree and Upper Lachlan Shire. • Strain on current social infrastructure due to a number of other major developments occurring in the LGAs. • Low access to hospitals and specialist practitioners. • Increasing demand for properties in the area with varied rental vacancy rates.	**Physical**	• High rates of available housing due to unoccupied dwellings. • Well-connected LGAs via Hume Highway. • High availability of accommodation across study areas particularly in Wingecarribee. • Hospital redevelopment at Goulburn Base Hospital.

Source: Umwelt, 2024.

In summary, based on our understanding of the social locality and the characteristics of the community identified, the Project is:

- Located in Wentworth LGA, but will likely draw on employment and service provision from the LGAs of Goulburn-Mulwaree and Wingecarribee in which services are currently strained.
- Likely to experience competition for sourcing employees due to low rates of unemployment across all the LGAs.
- Located in an area with low rates of tertiary education qualifications, however higher rates of certificate level attainment which will likely be aligned with the Project's workforce needs.
- Project site is well connected via major roads (i.e. Hume Highway).
- Accommodation availability exists across the social locality, but tourism a strong contributor to the local economy which the Project needs to mitigate impacts on.
- Positioned to connect to existing electricity infrastructure.
- Area holds environmental and cultural values for residents and key groups.
- Proposed site is well known in the locality and currently an existing agricultural enterprise. Consequently, conflicts in land use may be experienced.

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

The following section expands on the positive and negative impacts raised during consultation and through an assessment of the Project, categorising them according to the social impact categories of livelihoods, community, way of life, accessibility, culture, health and wellbeing, surroundings, livelihood, decision making systems (including engagement), as outlined in the SIA Guideline (DPE, 2023).

Notably, social impacts are not usually mutually exclusive to one social impact category, so where social impacts can be categorised across multiple impact categories, this is identified through the use of icons as displayed in **Figure 4.1** Social Impact Categories.

Figure 4.1 Social Impact Categories

Source: Umwelt, 2024.

The likelihood and magnitude of the social impact occurring has also been considered, utilising impact likelihood and magnitude dimensions as outlined in the SIA Guideline. In addition, stakeholders' perceived concern regarding Project impacts is also considered and is determined through analysis of engagement outcomes, including any potential impact on marginalised or vulnerable groups/communities in the social locality. Importantly, given the engagement program was undertaken for both the Project and the proposed Wattle Creek Solar Farm Projects, the perceived social impacts may relate to both Projects. Where possible, the perceptions of impacts have been categorised by Project, however at a community level, it is evident that the two Projects are perceived as one, presenting challenges in separating out the impacts for each Project independently.

The section outlines a number of perceived impacts relevant to both Projects that have not been categorised as an impact of one project or the other. Where the following sections draw on technical assessments undertaken for the Project, these refer directly to the Project and do not consider studies undertaken for the proposed Wattle Creek Solar Farm project.

As noted in **Section 2.1**, social impact evaluation also considers the outcomes of engagement activities; consideration of other SIA outcomes and relevant projects undertaken in the area; relevant social science literature on key social impact matters; outcomes of relevant environmental technical studies; and the experience of the social impact assessors undertaking SIA in other relevant contexts.

Table 5.1 presents a summary of the social impact evaluation and proposed management and enhancement strategies that have also been identified to address social impacts, particularly those that have been ranked as moderate to high and which may assist in reducing the social impact experienced by particular stakeholder groups.

It should be noted, that when community stakeholders (n=19) in the initial scoping phase of the Project (April, 2024) were asked to indicate their level of acceptance of the Project, a low acceptance rating was obtained (2.7 out of 10, where 10 indicates a high level of acceptance). Acceptance of renewable energy projects within the region was also relatively low (3.2 out of 10). Community data obtained during the SIA phase indicates that the level of acceptance of the Project, and of renewable energy projects in general was still seen to be relatively low, however, had slightly increased, resulting in rankings of 2.9 out of 10, and 4.0 out of 10 respectively.

Figure 4.2 and **Figure 4.3** provide an overview of the positive and negative social impacts identified through the engagement process, for both the Project and the Wattle Creek Solar Farm project. When considering the potential impacts of the Project (prompted), stakeholders who completed a community survey were particularly concerned about the loss of environmental values associated with the site, potential decline in property values and decreased social amenity as a result of visual impacts and noise impacts associated with the BESS, with average rankings of 6.8 out of 10 respectively. Other impacts related to increased travel times and public safety on local roads, a change in sense of place due to visual impacts, property damage and safety related to fire risk, and general social amenity impacts relating to construction.

Benefits of the Project that obtained more positive rankings included investment in community benefit sharing program (average rating of 3.2 out of 7), provision of local employment opportunities during construction (2.9), and procurement of local suppliers, contractors and services (2.7) and employment opportunities during operations of the Project.

Further description of salient social impacts identified through consultation, are provided in the following sections.

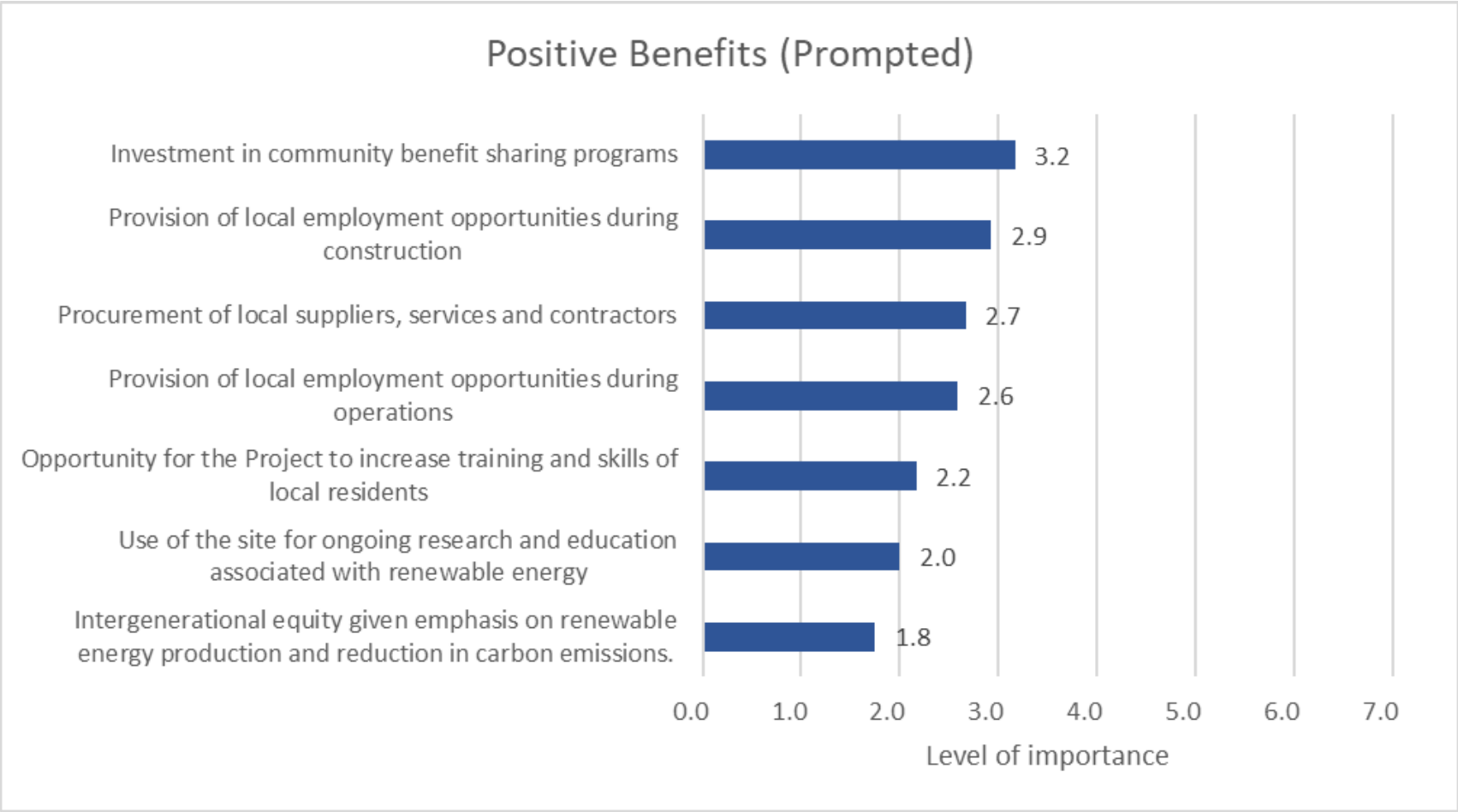

Figure 4.2 Positive Benefits (Prompted)

Source: Umwelt, 2024
n=22.

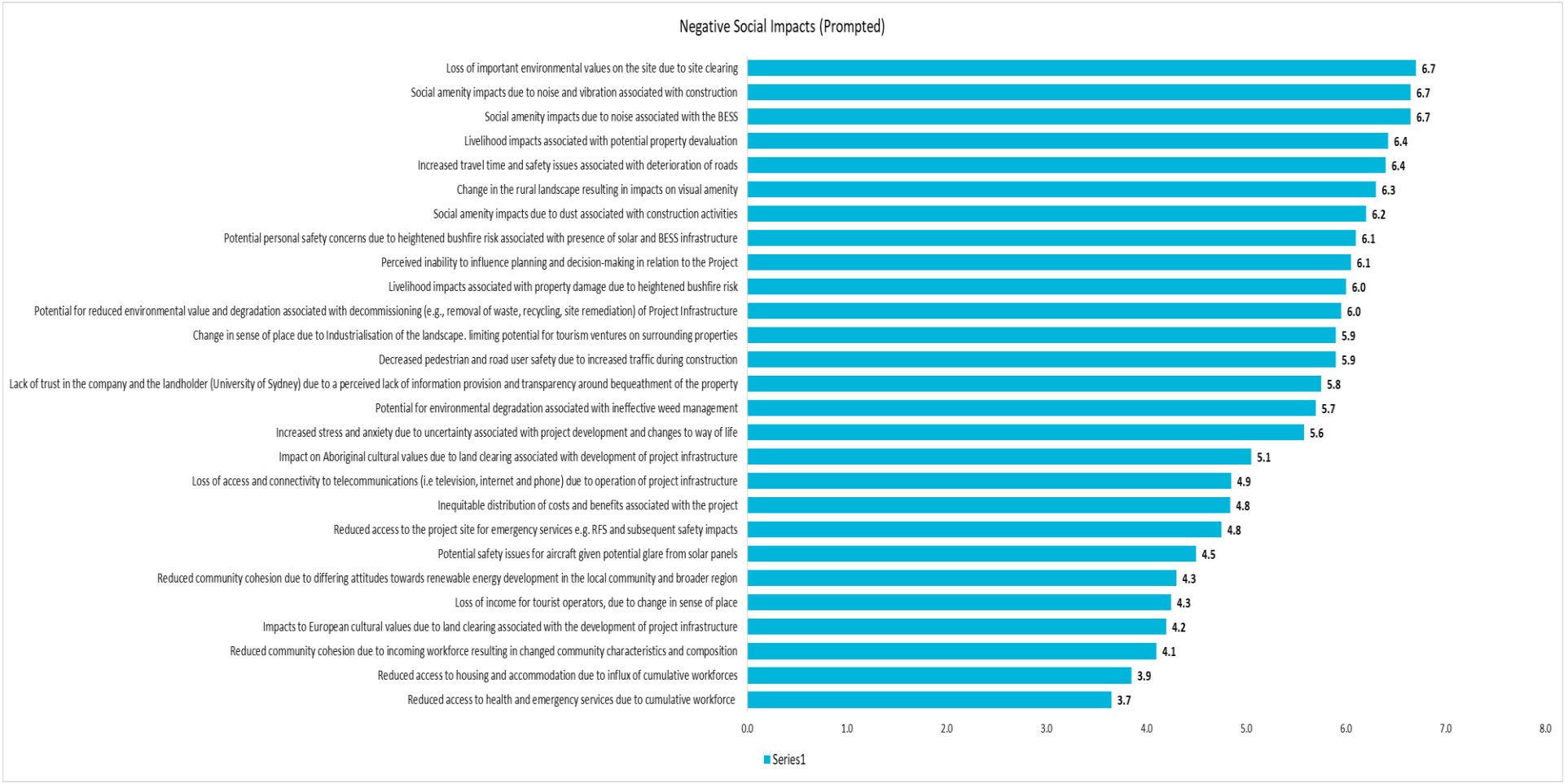

Figure 4.3 Negative Impacts (Prompted)

Source: Umwelt, 2024
n=22.

4.1 Surroundings

As outlined in the SIA Guideline (DPE, 2023), impacts relating to surroundings and social amenity can include changes in ecosystem services such as shade, pollution control, erosion control, public safety and security, access to and use of the natural and built environment and aesthetic value and amenity.

4.1.1 Changes in the Rural Landscape

Industrialisation of the rural landscape (5.9 out of 7), **resulting in visual amenity impacts** (6.3 out of 7) were key concerns for stakeholders who completed the survey. Similarly, some attendees at the community drop-in sessions held concerns relating to visual amenity.

> *Yes, we purchased the land due to the incredible views across the site that this is being planned for!! – Proximal landholder*

> *This is a quiet rural idyllic area, where more appropriate agricultural and agritourism businesses are more suited, any form of industrial business should be moved elsewhere. Not appropriate in such a rural setting which is lucky enough to have such rural such idyllic views – Broader community*

Stakeholders who completed the online survey, when asked to consider the landscape characteristics that make the landscape unique, noted the undulating hills, farmland, rock formations, bushland, and spoke of the tranquillity and peaceful nature of the natural landscape.

> *Undulating farm land with landscape features such as unique rock formations and hills – Proximal landholder*

> *Magnificent vistas of undulating hills, farmland and distant mountain ranges – Proximal landholder*

> *Idyllic, unobstructed rural views for miles. Rare, precious, serene, tranquil, beautiful, magical – Broader community*

The Landscape and Visual Impact Assessment (LVIA) (Mior LA, 2025) for the Project determined that there would be no visual impact for non-associated dwellings and would be considered to have low or very low visual impact from public viewpoints, with minimal opportunities to view the BESS infrastructure from publicly accessible areas. The transmission infrastructure associated with the Project will be visible, however it has been assessed as resulting in a low contrast with the existing landscape. Given this low impact, no mitigation measures are required on site.

Throughout engagement, it was evident that stakeholders were more concerned about the visual impact of the Wattle Creek Solar Farm project. Given the location of the proposed BESS infrastructure and resulting low visibility from outside the Project Area, the assessment indicates the Project will not result in cumulative visual impact when considering the potential impact of the Wattle Creek Solar Farm.

One landholder also raised specific concerns relating to cumulative visual impacts, given development of additional transmission infrastructure. Despite these concerns, the decision by Spark Renewables not to pursue the development of wind component within the Project Area, was viewed favourably by the community. In relation to cumulative impacts, there are 8 renewable energy developments that have been identified within 40 km of the Project at differing stages of development.

Additionally, some stakeholders questioned the nature of land use and the overall **loss of agricultural land in the area**. As identified in **Section 1.1**, the development footprint of the Project predominantly occurs on land which has been classified as having moderately low to very low capability and is therefore anticipated to have a minimal impact on agricultural land. As noted in **Section 1.1**, since the Project Area was bequeathed to UoS, the site has been operating commercially, producing wool, cattle and cereal whilst also supporting education and research. One proximal landholder raised concerns around how the change in land use would affect local wildlife.

> *They should be restoring the land rather than destroying it, will stop all of the area is brown because of soil erosion – Proximal landholder*

Table 4.1 demonstrates the social impact ranking of impacts relating to visual amenity because of the Project.

Table 4.1 Social Impact Ranking – Visual Amenity and Landscape Changes

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Changes in the rural landscape resulting in visual amenity impacts	C & O	Proximal landholders	Medium	Low (*unlikely, minimal*)	Low
Change in sense of place as a result of land use changes and subsequent industrialisation of the landscape	C & O	Proximal landholders using Canyonleigh and Brayton roads	Medium	Low (*unlikely, minimal*)	Low

Source: Umwelt, 2024.

4.1.2 Social Amenity Impacts Associated with Construction Activities – Noise & Dust

Of those who completed the survey, there was a high level of concern (6.7 out of 7) associated with the potential for **noise and vibration due to construction activities**. One stakeholder specifically noted concerns around the potential for an increase in noise associated with construction traffic, with some proximal landholders commenting on how an increase in noise associated with the Project would change their way of life and particularly how they enjoy their properties/homes.

> *I have concerns regarding the traffic movement causing noise and damage along Canyonleigh Road – Proximal landholder*

> *The noise, traffic changes will significantly impact the amenity of the area – Proximal landholder*

> *No one wants to have any member of our community disadvantaged with noise, light pollution, construction work – Proximal landholder*

More specifically, social amenity impacts due to **noise during operations** was also raised as a concern (rated 6.7 out of 7) and again noted by a number of attendees during the community drop-in sessions.

The Noise and Vibration Impact Assessment (NVIA) (2025) prepared by Marshall Day has assessed the potential noise and vibration impacts associated with the construction, operation and decommissioning of the Project, with outcomes of noise modelling for the operations of the Project indicating that compliance can be achieved for all proximal landholders and dwelling entitlements. In addition, noise from Project traffic may be noticeable but is expected to be compliant. However, whilst the Project is predicted to comply with noise criteria, the ways in which individuals' experience noise may vary depending on individual sensitivity to noise (Eriksson & Lai, 2023).

Spark Renewables are offering construction disruption payments to residential receivers located along Canyonleigh Road (between Brayton Road and the Project Area entrance) during the construction period to compensate for disruption caused by traffic and associated noise impacts.

Social amenity impacts due to dust associated with construction activities were also of high concern for stakeholders who completed the survey (6.2 out of 7). One proximal landholder raised specific concerns relating to how an increase in traffic in the area had the potential to also increase the dust levels experienced at nearby properties due to the nature of the local road network, commenting on how previous road closures, and subsequent increases in traffic on local roads has resulted in an increase in dust.

Additionally, the dust generated from the dirt road with increased traffic was a key issue given Canyonleigh Road is not sealed. Along with a commitment to improve the surface of Canyonleigh Road (explored further in **Section 4.1.6)**, Spark Renewables are also committed to ongoing dust suppression throughout the construction period.

> *The highway was closed the other day, and we had some cars detouring through our area and my husband had to remain inside the house due to his asthma and the huge amount of dust in the air – Proximal landholder*

Table 4.2 outlines the social impact rankings relating to social amenity due to an increase in noise and dust as a result of construction and operational activities.

Table 4.2 Social Impact Ranking – Social Amenity (Noise and Dust)

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Decline in social amenity due to noise associated with Project operation	Operation	Proximal landholders	High	Low (unlikely, minor)	Low
Decline in social amenity due to noise and vibrations associated with construction activities	Construction	Proximal landholders	High	Medium (possible, minor)	Low
Decline in social amenity due to dust associated with construction activities	Construction and operation	Proximal landholders	High	Medium (possible, minor)	Low

Source: Umwelt, 2024.

4.1.3 Loss of Environmental Values

Loss of environmental values on the site (e.g., flora and fauna) associated with site clearing and the construction of the Project was ranked highly in the community survey (6.7 out of 7). Proximal landholders raised particular concerns about a number of endangered and threatened species in the area, as well as impacts to local wildlife corridors that support a range of flora and fauna.

> *There are sensitive ecological corridors. Echidnas, koalas, platypus. Riparian regions of the rivers. They're irreplaceable this close to Sydney – Proximal landholder*

Removal of important habitat and the impact this would have on biodiversity in the area was also a concern for some community members, with one stakeholder suggesting the need for a botanist to be consulted to further understand the types of vegetation that should be planted in the area in regard to visual screening and biodiversity offsets.

> *It has long been an access point to and crossing of the river for wildlife. Trees will be removed. We have been planting for the honey eaters and black cockatoos – Proximal landholder*

> *The project wants to remove trees within potential endangered black glossy and swift parrot territory. We have made a huge effort to plant trees to increase habitat on our own property so their removal would be devastating. The ridgeline trees that have been targeted for removal are home to eagles and hawks, which we often watch hunting – Proximal landholder*

> *If the project goes ahead despite the wishes of local community, planting 10,000 native trees and shrubs would be my first suggestion – Proximal landholder*

The Project has undergone a comprehensive Biodiversity Development Assessment Report (BDAR) undertaken by Umwelt (Umwelt, 2025) to understand and minimise its impact on local biodiversity values. Between October 2022 and September 2024, extensive surveys were conducted to catalogue the area's flora and fauna; with surveys including vegetation assessments and threatened species searches.

While the Project has been designed to avoid areas of biodiversity value, there will still be residual direct impacts to biodiversity. Clearing associated with the Project is anticipated to directly impact three PCTs and the habitat of four threatened species. The Project will impact 2.12 ha of White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland Critically Endangered Ecological Communities (CEEC). Redesign of the Project has also minimised impacts on areas of intact native woodland and hollow bearing trees which reduced impacts to suitable foraging and/or breeding habitat for the gang-gang cockatoo, south-eastern glossy black-cockatoo, squirrel glider, diamond firetail, dusky woodswallow, large-eared pied bat, scarlet robin, speckled warbler, spotted harrier and varied sittella.

Spark Renewables will develop and implement a range of biodiversity management and mitigation measures through the Construction Environmental Management Plan (CEMP) and Vegetation Management Plan (VMP) prior to construction to manage residual impacts. Residual impacts that are not able to be managed through mitigation would be offset in accordance with Biodiversity Assessment Method calculations for ecosystem credits and species credits.

To reduce the impact on biodiversity, the development footprint is proposed to be located predominately in areas of degraded grassland with lower biodiversity value. Ancillary facilities, access tracks and transmission lines have also been predominately located in existing cleared land to minimise impacts to TECs, intact woodland and habitat for threatened species where practicable.

Furthermore, potential for **reduced environmental value and degradation associated with decommissioning** was a concern (average ranking of 6.0 out of 7), with stakeholders commenting on the potential generation of waste associated with decommissioning and querying planned disposal methods.

Concerns relating to decommissioning and disposal of renewable energy project infrastructure has been documented in broader national surveys. For instance, a study completed by CSIRO on Australian attitudes towards renewable energy transition noted that waste created when infrastructure was decommissioned or at end of life was found to be the third highest concern of fourteen potential impacts associated with living near renewable energy projects (Poruschi, Scovell, McCrea, Walton, & Gardner, 2024). The report also found that information and transparency about the lifespan of the installations and decommissioning disposal methods was a key information need.

The decommissioning process would be guided by the initial Project conditions of approval and would be the responsibility of Spark Renewables to decommission and rehabilitate at the end of the project life. Project decommissioning would involve the removal of infrastructure except for the transmission lines and substation unless stated otherwise in the development consent conditions. Spark Renewables will prepare a detailed Decommissioning Environmental Management Plan (DEMP). It is recommended that the DEMP consider the latest advances in recycling and waste management, and be prepared in the first 5 years of operations, reviewed halfway through the Project's operational life and within 2 years of the commencement of decommissioning works. The DEMP should be prepared in consultation with DPHI and local government.

Table 4.3 demonstrates the impact ranking of loss of environmental values associated with Project establishment and decommissioning.

Table 4.3 Social Impact Ranking – Loss of Environmental Values

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Loss of environmental values on the site (e.g. flora and fauna) associated with site clearing and Project construction	Construction	Environmental groups	Unknown[13]	Medium *(likely, minor)*	Medium
		Proximal landholders	High	Medium *(likely, minor)*	Medium
		Broader community	High	Medium*(likely, minor)*	Medium
Potential for reduced environmental value and degradation associated with decommissioning (e.g., removal of waste, recycling, site remediation) of Project Infrastructure	Decommissioning	Environmental groups	Unknown	Medium *(possible, minor)*	Low
		Proximal landholders	High	Medium *(possible, minor)*	Low

Source: Umwelt, 2024.

[13] Due to insufficient engagement data.

4.1.4 Reduced Water Quality

Whilst not raised during the scoping phase of engagement, some proximal landholders raised concerns relating to the **potential leeching of chemicals from Project infrastructure into ground and surface water and therefore reduced water quality**, particularly given the location of the Project and proximity to the Wollondilly River. To mitigate this, some landholders suggested the need for greater areas of exclusion around these features.

> *It impacts water quality. They [Sydney Water] want to stop grazing on the water bed to increase water quality, BESS leeching, would lead directly into Wollondilly and into Sydney water. There should be exclusions areas – Proximal landholder*

> *Other concern is the leeching and chemicals. Its more the impact putting them in will have. The digging, how will it affect soil erosion – Proximal landholder*

> *Any impact of the Wollondilly - in terms of leeching into that. It supplies water into Warragamba [dam] but I'm sure they're thinking about that – Proximal landholder*

The Water Resources Impact Assessment (WRIA) by WRM (2025) found that the Project could have a minor effect (without appropriate management and mitigation) on surface and groundwater quality, flood regimes, soil resources, water supply, and aquatic habitats. The WRIA found that the Project will have minimal impact on water resources once operational, with impacts to surface water associated with the Project's construction. Impacts have been assessed as being contained within a small area, with these impacts able to be managed through the implementation of management plans including development of a:

- CEMP for construction soil and water management and mitigation measures.
- Emergency Response Plan (ERP) for operational phase flood hazards and safety.
- Operational Environmental Management Plan (OEMP) for surface water quality and flooding impacts.

During decommissioning, the construction soil and water management and mitigation measures would be review and included in a DEMP.

Furthermore, impacts are proportional to land disturbance, so minimising disturbed land reduces pollutant risks. Hazardous materials associated with the Project will be stored as per NSW EPA's Storing and Handling Liquids: Environmental Protection – Participants Handbook (Department of Environment and Climate Change NSW, 2007). Additionally, the above management plans should consider risks associated with contamination from water runoff from fire extinguishing on site, should this occur. Furthermore, monitoring of ground and surface water may assist in alleviating community concerns regarding the potential for leeching from Project infrastructure and fire management activities.

Table 4.4 considers the social impact ranking associated with the potential leeching's of chemicals into ground and surface water.

Table 4.4 Social Impact Ranking – Water Quality

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Potential leeching from Project infrastructure of chemicals into ground and surface water	Construction and operation	Environmental groups	Unknown	Medium *(unlikely, major)*	Low
		Water users, including those located downstream	Unknown	Medium *(unlikely, major)*	Low
		Proximal landholders	High	Medium *(unlikely, major)*	Low

Source: Umwelt, 2024.

4.1.5 Intergenerational Equity

Intergenerational equity is the idea of applying fairness or facilitating distribution of well-being between/across generations, preserving natural resources and/or caring for the environment for the benefit of future generations. 'A sustainable world is one in which human needs are met equitably without sacrificing the ability of future generations to meet their needs' (Summers & Smith, 2014).

Positive impacts associated with renewable energy generation and storage and in turn the positive impact it will have on contributing to a decline in global warming was noted by attendees at the community drop-in sessions, however **intergenerational equity given emphasis on renewable energy production and reduction in carbon emissions** was not seen as a particularly salient benefit by those who completed the survey (rating of 2.7 out of 7).

Table 4.5 considers the social impact ranking associated with intergenerational equity associated with a reduction in carbon emissions given an emphasis on renewable energy production.

Table 4.5 Social Impact Ranking – Intergenerational Equity

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Intergenerational equity given emphasis on renewable energy production and reduction in carbon emissions	Operations	Broader community	Low (+ve)	Medium (+ve) *(likely, minor)*	Medium (+ve)

Source: Umwelt, 2024.

4.1.6 Public Safety

Decreased pedestrian and road user safety due to increased traffic during construction was also noted as a concern (5.9 out of 7) by those completing the survey, with one landholder commenting on how an increase in traffic would reduce the ability of residents to utilise the road for recreational purposes.

> *Inability for residents to continue to use the road for exercise and recreation i.e. running and bike riding – Proximal landholder*

Additionally, some proximal landholders raised concerns specifically relating to **dangerous driver behaviour**. There is a concern that as contractors and construction workforces are not permanent residents in the community, they are less likely to drive with care when accessing the site and may decrease safety on local roads.

> *We have a concern that contractors are not always the best and don't operate with care and responsibility you would expect. They're not a part of the community. Driver safety and following the rules. Roads aren't massive, but even with the local trucks they come around the corner on the wrong side of the road – Proximal landholder*

Should the construction period for the Project overlap with that of the Wattle Creek Solar Farm project, there is potential for cumulative impact given increase in traffic movements along Canyonleigh Road, these impacts would be managed through the development and implementation of a Traffic Management Plan (TMP). Prior to construction commencing, a Drivers Code of Conduct will be developed detailing expectations relating to driver behaviour for travel to and from the Project Area, and specifying expected travel routes. Spark Renewables is committed to not utilising Canyonleigh Road to the east of the Project Area access point, with all project related traffic turning on to Canyonleigh Road from Brayton Road. Additionally, the Transport Impact Assessment (Access Traffic Consulting, 2025) has recommended the following management measures:

- To minimise the impacts on schools it is recommended that temporary road closures for oversize/ overmass movements should be avoided during school peaks.
- Vehicle layovers should be identified along the proposed haulage routes to allow vehicles to wait until appropriate times for travel.
- Speed reductions, use of fog lights during periods of low visibility, cessation of work and site shutdowns will be implemented as required during periods of adverse weather.

These details will be specified in the Project's TMP.

Community respondents were also concerned that the Project would result in **reduced access to the project site for emergency services e.g. RFS and result in subsequent safety impacts** (4.8 out of 7). This issue was particularly heightened given experiences of flooding and bushfires in the area, and due to the Project being in a bushfire zone.

> *Canyonleigh Road floods significantly and not infrequently. Workers, vehicles, emergency services will not be able to access the site at these times. It happened when there was a small explosion at the substation. The fire fighters could not get through – Proximal landholder*

> *Regular flooding causing inaccessibility to the site, for workforce travelling both ways but also emergency services – Proximal landholder*

A representative from the Rural Fire Service (RFS) in Marulan also raised concerns around the provision of information to RFS brigades, highlighting during a meeting with Spark Renewables that the RFS agencies in the area work across multiple territories, often covering the territories of neighbouring brigades. Therefore, any information, education and training exercises planned for the Project site that are likely to involve the local area RFS would need to involve the brigades from neighbouring areas i.e., in addition to including the Marulan and Big Hill RFS Brigades.

Furthermore, those who responded to the survey were concerned about **personal safety due to potential heightened bushfire risk** particularly associated with the Project (6.1 out of 7), with one proximal landholder elaborating on this concern with the belief that should a fire start, it would be unable to be extinguished.

BESS is the problem – the fire. You can't put the fires out – Proximal landholder

A Bushfire Threat Assessment prepared by Umwelt has determined that the proposed infrastructure has been appropriately sited centrally within the Project Area to maximise separation distances to the Project Area boundary to retained vegetation as far as practicable. Throughout the planning process, the Project has increased the width of the Asset Protection Zone (APZ) surrounding the BESS to further reduce risk. Furthermore, the BESS infrastructure will be subject to detailed design controls to appropriately manage and mitigate fire risk associated with the operation of the Project.

With the implementation of an Emergency Response Plan (ERP) and Bushfire Protection Measures (in consultation with the RFS and NSW Fire and Rescue) it is considered that potential bushfire risk associated with the Project can be appropriately managed.

Furthermore, whilst the Preliminary Hazard Analysis (PHA) undertaken by Riskcon Engineering (2024), identified a number of hazardous scenarios that may be caused by the Project, including lithium-ion battery faults or fires, toxic gas dispersion, and electrical equipment failure and fire; however, it was concluded that if these scenarios occurred, they would be managed onsite and were within acceptable risk criteria.

During consultation, one proximal landholder noted that Spark Renewables would be installing the best technology and implementing maintenance programs to mitigate any potential risks.

Table 4.6 considers the social impact ranking associated with these social impacts.

Table 4.6 Social Impact Ranking – Public Safety

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Decreased pedestrian and road user safety due to increased traffic during construction	Construction	Proximal landholders	High	Medium *(possible, moderate)*	Low
Driver behaviour decreasing safety of public road networks	Construction	Proximal landholders located along the transportation route	High	Medium *(possible, moderate)*	Low
Reduced access to the project site for emergency services e.g. RFS and subsequent safety impacts	Construction and operations	Proximal landholders	Low	Medium *(possible, moderate)*	Low
		Emergency services	Medium	Medium *(possible, moderate)*	Low
Decreased personal safety due to	Construction and operation	Proximal landholders	High	Medium *(unlikely, major)*	Low

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
heightened bushfire risk					
Property damage due to heightened bushfire risk	Construction and operation	Proximal landholders	High	Medium *(unlikely, major)*	Low

Source: Umwelt, 2024.

4.2 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 make to local communities and the broader region.

4.2.1 Decline in Property Value and potential loss of income for agricultural and tourism sectors

Livelihood impacts associated with **potential property devaluation due to proximity to the Project** was of concern to stakeholders who completed the survey (6.4 out of 7), with proximal landholders commenting on how potential decreases in social amenity and a change in the nature of the area (refer to **Section 4.0**) may negatively impact property prices. Concerns in this regard were exacerbated given the high volume of properties that had been purchased at relatively high prices since 2020, with fears that the resale value would be much smaller.

> *Property prices - it will have a detrimental impact on the value of project. It will be a negative financial outcome. A lot of people bought in the Covid period and paid top dollar and they could get shitty - they paid a lot for a rural property, and the Project will change that – Proximal landholder*

Furthermore, survey respondents were also concerned about potential **livelihood impacts associated with property damage due to heightened bushfire risk** (6.0 out of 7).

It is understood by the renewable energy industry nationwide that neighbouring landholders to renewable energy projects have recurring concerns regarding the potential impact of project infrastructure on their property values (Office of the Australian Energy and Wind Farm Commissioner, 2020). A report by the NSW Agriculture Commissioner in 2022 concluded that there is very little reliable evidence of large-scale renewable energy developments influencing adjacent land values (NSW Agriculture Commissioner, 2022).

Furthermore, it was identified during the scoping phase that there was concern among some community stakeholders, that there would be **a loss of income for tourist operators**, particularly accommodation hosts, due to changes in the local landscape. Concerns may have been exacerbated given the high volume of Airbnb operators in the locality (approximately 30 active listings across the suburbs of Canyonleigh and Brayton (AirDNA, 2024)). Community members and proximal landholders who completed the survey noted a high level of concern regarding visual impact (average rating of 5.9 out of 7), however one proximal landholder commented that their concerns had been alleviated given the removal of the wind component

from the Project (refer to **Section 1.1**). Importantly, as engagement was undertaken in conjunction with the Wattle Creek Solar Farm project, it is likely that this level of concern may be further reduced in relation to the Project in isolation.

> *Main problem was the turbines given the BnB, it was going to impact that but don't think it will affect us at all now – Proximal landholder*

Some community respondents also noted concerns around the **potential for environmental degradation associated with ineffective weed management** (5.7 out of 7) within the Project Area, whilst others raised the potential for the Project to contribute to increased weed management on the site, particularly serrated tussock, due to increased activity. Concerns were largely centred around how this in turn may impact livelihoods and land productivity on neighbouring properties. A detailed plan for how to manage weeds will be included in the CEMP.

The project could provide: Weed control / management (especially Serrated Tussock) over the entire site – Proximal landholder

The Soils, Land, and Agriculture Impact Assessment (Minesoils, 2025) has determined that the Project is likely to have a low, temporary and limited impact on agriculture. The Development Footprint comprises approximately 75 ha of agricultural land, which is considered a negligible impact in the context of the agricultural industry's gross value in the Upper Lachlan LGA (<0.2%). The temporary impact on agricultural productivity during the Projects duration is estimated at around $28,800 per year, with no permanent impact to land and soil capability following the life of the Project.

Furthermore, the development and implementation of a DEMP for the Project, two years prior to closure, would assist in ensuring that land and soil are returned to an approximate pre-disturbance condition to facilitate ongoing agricultural use.

Table 4.7 considers the impact rankings associated with the social impacts outlined above.

Table 4.7 Social Impact Rankings – Reduction in Property Value and potential loss in income in other sectors

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Reduction in property prices due to proximity to the Project	Planning, construction and operation	Proximal landholders	High	Medium *(possible, minor)*	Medium
Loss of income for tourist operators	Construction and operation	Business owners	Medium	Low *(unlikely, minor)*	Low
Potential for environmental degradation associated with ineffective weed management	Construction and operation	Proximal landholder	Medium	Medium *(possible, minor)*	Low

Source: Umwelt, 2024.

4.2.2 Employment Opportunities

Several attendees at the community drop-in session identified that the Project may have a positive impact on **local employment during construction and operation**, benefits that were rated more highly in survey responses (2.9 and 2.7 out of 7 respectively).

Providing opportunities for local people to be employed in the project, and **procurement of local suppliers and contractors** (average rating of 2.8 out of 7), was seen to assist in balancing the environmental impacts of the Project on the local community.

Despite this recognition, several community respondents questioned the extent of local employment and procurement opportunities that would result, suggesting that it was likely that the majority of employees would be sourced from other locations (i.e. Sydney).

> *I am sure all construction companies will be from Sydney or beyond. Most jobs will be for non-locals during construction and I'm sure there will be a minimum of permanent ongoing jobs for locals – Proximal landholder*
>
> *There are no significant benefits for residents. Canyonleigh is not an area which requires job growth, training – Broader community*
>
> *How much will really take place? Jobs for a few, negative impact for many – Proximal landholder*

The Project is anticipated to have a peak workforce of 102 FTE and an average construction workforce of 71 FTE. The operational workforce is anticipated to be 5 FTE. Approximately 75% of jobs in renewable energy over the next 15 years are likely to be available for labourers, trades and technicians and professionals, with electricians, electrical trade assistants, mechanical trades and technicians, finance, business, legal and planning professions and administrative staff generating the largest number of jobs (Rutovitx, Briggs, Dominish, & Nagrath, 2020).

As outlined in the Ethos Urban Economic Impact Assessment (Ethos Urban, 2025), most jobs created for the construction period of the Project are likely to be taken by people with backgrounds in the construction industry or people employed as trades workers, technicians or labourers.

Table 4.8 examines the potential to employ a local workforce, assuming the workforce is likely to be derived from two key sources:

- currently employed people within the region with relevant skills i.e. those currently employed in the construction industry or those employed as labourers, technicians or trades workers, noting that this may have a converse effect creating a skills drain from other sectors, or
- people who are currently unemployed.

It is apparent that unemployment rates are low across the three LGAs, with around 921 people across the LGAs looking for work (SALM, 2024). The number of employable persons across the LGAs further decreases when considering occupations of relevance and those that are currently within the labour force working in construction, or related industries.

Table 4.8 Potential Project Workforce

Locality	Unemployment rate[14]	Unemployed people	No. of people in construction industry	No. of unemployed people in construction industry[15]	No. of people in relevant occupations[16]	No. of unemployed people in relevant occupation[17]	No. people employed as electricians	Number of unemployed electricians	No. of employed people with relevant skills	No. of unemployed people with relevant skills[18]
Upper Lachlan LGA	1.6%	77	317	5	934	15	30	0	848	14
Goulburn-Mulwaree LGA	2.9%	493	1507	44	3878	112	164	5	3220	93
Wingecarribee LGA	1.4%	351	2547	36	6065	85	265	4	5739	80
Total		921	4371	84	10877	212	459	9	9807	187

Source: ABS, 2021; SALM, 2024.

Furthermore, engagement with local employment/recruitment representatives suggests that the regional job market is particularly challenging due to the following:

- Difficulty in maintaining a steady flow of suitable candidates and job openings.
- Prolonged time to fill certain roles, unless they offer hybrid or remote work options.
- A shortage of qualified blue-collar workers, with businesses often relying on overseas workers with regional work visas.
- High salary expectations from candidates due to the cost of living, which often small businesses struggle to meet.

In terms of the local workforce, employment agents noted that there is a high level of skill in finance, business, and administration, with roles such as administrators and accounts staff being common, with more specialised positions harder to fill. Furthermore, blue-collar jobs, including labourers, electricians, and engineers were highlighted as being particularly difficult to find suitable candidates, which may result in a challenge for the Project to achieve local participation targets.

Given the above, there appears a limited capacity to employ people locally for the Project, and consequently an estimated 20% local participation has been assumed. Given such a low percentage, there

[14] As at March 2024 (SALM, 2024).
[15] This is an estimate calculated by applying the unemployment rate to the number of people in the construction industry.
[16] Relevant occupations has been defined as labourers, and technicians and trade workers as defined by Clean Energy Council.
[17] This is an estimate calculated by applying the unemployment rate to the number of people with relevant occupations.
[18] Relevant skills have been defined as those with qualifications in the engineering and related technologies, and architecture and building fields of study.

is likely to be a large proportion of construction workers that will be required to temporarily relocate to the area and consequently these workers will need to be accommodated in surrounding townships.

Despite a low capacity for local employment for the Project, those involved in employment and recruitment highlighted their willingness to work with Spark Renewables to ensure that employment opportunities for the local community are maximised and prioritised. In this regard, it was emphasised that Spark Renewables should strive to facilitate local employment and procurement to ensure positive impacts are realised through appropriate upskilling and training of local residents and through transparent and accessible procurement processes.

Table 4.9 considers the social impact rankings associated with local employment during construction and operations, and local procurement opportunities. Spark Renewables has committed to develop an Industry and Aboriginal Participation Plan (IAPP) in consultation with Traditional Owners and Aboriginal organisations to maximise local and Indigenous employment on the Project (further detail is provided in **Section 6.2.4**).

Table 4.9 Social Impact Ranking – Local Employment and Procurement

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Provision of local employment opportunities during construction	Construction	Broader community	Medium (+ve)	Medium (+ve) *(likely, minor)*	High (+ve)
		Local businesses and service providers	Medium (+ve)	Medium (+ve) *(likely, minor)*	High (+ve)
Provision of local employment opportunities during operations	Operation	Broader community	Medium (+ve)	Low (+ve) *(likely, minimal)*	Low (+ve)
		Local businesses and service providers	Medium (+ve)	Low (+ve) *(possible, minor)*	Low (+ve)
Procurement of local suppliers, services and contractors	Construction and operation	Local businesses and service providers	Medium (+ve)	Medium (+ve) *(likely, minor)*	High (+ve)

Source: Umwelt, 2024.

4.2.3 Training and Education

The **opportunity for the Project to provide training and skills development** was seen as a positive impact of the Project by community survey respondents (2.3 out of 7), with one proximal landholder identifying a desire to see educational scholarships introduced, with the emphasis that such scholarships should not only be renewable energy focused. One broader community member also suggested Spark Renewables host open days and site tours to allow residents to learn more about the technology used on the site.

Additionally, training opportunities were also noted, with views expressed that Spark Renewables should collaborate with local educational institutions e.g. schools, TAFE, around awareness and education of renewable energy and where possible to facilitate training and skill development through student placements and apprenticeships.

An industry body representative recognised the potential benefit of proponents collaborating to ensure currently unemployed individuals can be trained across projects with the end goal of reaching a qualification (i.e. certificate level training) and ultimately securing employment.

An opportunity for pathways to train unemployed people, they then become semi-skilled. Collaboration of developers to take workers across different project but at the end they have a qualification – Industry body

Spark Renewables should strive to ensure local employment and procurement positive impacts are realised through appropriate upskilling and training of residents, and through transparent and accessible procurement processes. Further actions to develop and facilitate such opportunities will be defined in the IAPP (as discussed in **Section 6.2.4**). Given that the Project site also has a research focus, such education and training may also be facilitated in this regard.

Table 4.10 considers the social impact rankings associated with education, training and research opportunities associated with the Project.

Table 4.10 Social Impact Ranking – Training and Education

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Opportunity for the Project to increase training and skills of local residents	Construction and operation	Broader community	Low (+ve)	Medium (+) *(possible, minor)*	High (+ve)
		Education providers		Medium (+) *(possible, minor)*	High (+ve)

Source: Umwelt, 2024.

4.3 Accessibility

The SIA Guideline (DPE, 2023) defines accessibility as those impacts of the Project that affect how people access and use infrastructure, services and facilities, and any changes to way of life, including how people live, get around, work, recreate and interact.

4.3.1 Traffic and Transport

Increased travel time and safety issues associated with deterioration of local roads from use by Project-related traffic was a key concern for those who completed the survey with a rating of concern 6.4 out of 7. Similarly, this was raised by a number of people who attended the community drop-in sessions with proximal landholders and broader community members commenting on the existing poor quality of the road network, and the potential for this to get worse, should the Project progress. Some community members recognised that improved roads were a key need for the local community. These concerns may have been particularly salient due to the cumulative impact of the development of the Wattle Creek Solar Farm project, and the use of the same road network for that project.

The roads are very narrow and dangerous – Community group

Canyonleigh road itself has a few bends in it so if big trucks and utes are roaring along there could be a lot of accidents – Proximal landholder

Access roads and access to the area are very temporary dirt roads. Canyonleigh Road is poorly maintained from both directions and not fit for many vehicles, it will significantly impact the road quality – Proximal landholder

Been told there will be no traffic on our road, but we have heard that before and know in practice it doesn't happen. We have very few on our road currently and any additional traffic you would really notice – Proximal landholder

The roads do not support this type of building/infrastructure. The plan to bring all the heavy trucks for building the plant will not be able to come through Marulan, Inverary Rd side of Canyonleigh Rd river is almost impassable in the rain, Canyonleigh Rd from Moss Vale or via Hoddles Crossing has huge pot holes opening up regularly in the rain. The local Council cannot pay to re surface the road now, let alone during construction of something this size, which is not only dangerous for residents but leaves us in a worse state than prior to the project – Broader Community

Such concerns were exacerbated for some, given previous experiences with other industries in the area and the cumulative impact the Project may have with other industry activities.

There is the major quarry, there are always trucks running, roads are terrible and severely damaged. It will make the roads even more problematic. I drive on that road regularly – Proximal landholder

Brayton road – truck movements, residents have had a rough trot. Large trucks carrying heavy materials, steep gradients, frustration for residents if stuck behind vehicles. Also linked to driver behaviour – Local Government

Access to Marulan is the contention. Tricky logistics of getting through Marulan for large vehicles, and waying stations – Local Government

Whilst Spark Renewables propose the transport route to the site will not use Canyonleigh Road east of the existing site entrance, some proximal landholders were also concerned that construction workforces would use roads not specified in the transportation route to decrease their travel time to site, and the resulting potential for increased traffic and road deterioration within the local road network.

If they use it then it will become a 4 by 4 track by the end of the month – Proximal landholder

It is noted that traffic and transport impacts would primarily occur during the construction phase as a result of the increase in traffic movements associated with workforce mobilisation and delivery of materials and equipment. Impacts during the operational and decommissioning phases would be lower compared to the construction phase.

To mitigate impacts, proximal landholders suggested Spark Renewables could contribute to improvements to the quality of local road networks (including to Canyonleigh Road) and raised the need for ongoing collaboration with other industries and projects utilising the same transportation route.

> *Complete upgrade of Canyonleigh road including two lanes, drainage, footpath and a bridge spanning the whole portion flood zone or relocate to a more appropriate site – Proximal landholder*
>
> *Re the traffic and road management impacts a strategy is to ask that the developer resurface all roads used to ensure they are in a better state than when project commences – Proximal landholder*
>
> *Roads during construction are maintained and dealt with as a progressive issue - work in with quarry trucks – Proximal landholder*

As a part of the design refinements, Spark Renewables will be resurfacing Canyonleigh Road to facilitate the safe movement of vehicles. As noted in **Section 4.1.6** a Driver Code of Conduct and TMP will detail the route in which vehicles travelling to site will need to follow to mitigate impacts to the residents in Paddys River and Canyonleigh.

A Transport Impact Assessment (TIA) was prepared by Access Traffic Consulting (2025) that found that traffic scenarios associated with the Project on all identified roads were all within the generally accepted capacities and therefore, the roads provide adequate capacity to cater for additional traffic volumes generated by the Project. The increase in traffic was highest on Canyonleigh Road, however the TIA states that the proposed road works are expected to provide suitably capacity to accommodation additional traffic volumes generated by all stages of the Project.

The TIA outlined a number of mitigation measures that will be outlined in the TMP to address any residual impacts of the Project on the local road system.

Table 4.11 considers the social impact rankings associated with traffic and transport, including increased travel times and safety.

Table 4.11 Social Impact Ranking – Traffic and Transport

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Increased travel time associated with deterioration of local roads as a result of increased project-related traffic	Construction	Proximal landholders/ users of Brayton Road	High	Medium (possible, minor)	Low
		Proximal landholders/ users of Canyonleigh Road	High	High *(likely, moderate)*	Medium

Source: Umwelt, 2024.

4.3.2 Reduced Access to Accommodation

Reduced access to housing and accommodation because of an influx of construction workforce, when considered cumulatively with other projects, was of medium concern to survey respondents (3.9 out of 7). A representative from local council raised concerns that incoming workforces would further reduce access

to accommodation in the area, particularly for already vulnerable groups such as social housing and crisis accommodation providers.

The representatives from the accommodation sector who completed the online survey (n=4) have a diverse offering of accommodation services catering to a broad range of people including:

- business-related guests, including government and corporate workers
- families and friends or local residents
- tourists including wedding groups and wellness retreat attendees[19]
- truck drivers who are passing through the area.[20]

One industry representative raised concerns that the type of accommodation offered by these providers is not fit for purpose for an incoming workforce.

Goulburn accommodation is minimal and is being used for other projects. Bowral / Mittagong – not set up for this kind of workers. It's not an economy of people sitting around waiting for an 18-month contract…Bowral not impressed with construction workers. Every available bed for visitor economy, those beds are for that and it is the value add to the economy – Tourism Industry representative

When asked if they would like to be involved in providing housing or services to the proposed Project construction workforce, all of the accommodation provider representatives who completed the online survey (n=4), outlined that they would be interested in providing accommodation.

The representatives of accommodation venues with the largest number of rooms (ranging from 34 – 67 rooms) noted that they were currently under capacity and had room to cater to a larger demand for accommodation services in the area.

When asked to specify the ways they would like to be involved in providing housing or services to the proposed Project construction workforce, two respondents indicated they wanted to accommodate the workforce within their existing accommodation, with another noting they would consider changing their existing delivery model to house more or different groups. One accommodation provider indicated they would also consider providing additional services or infrastructure to the construction workforce (i.e., catering, bus shuttles, health services).

Another accommodation provider and owner who described themselves as semi-retired- shared that they 'would only be interested in providing accommodation if the entire place was leased for a long term period and returned to the way it was before at the end'.

One of the representatives of a smaller boutique style accommodation offering indicated they 'would consider providing accommodation for workers as a long-term contract at a negotiated price (i.e., whole of house hire for one week)'.

[19] Accommodation providers in Moss Vale were more likely to cater towards this type of guest.
[20] Accommodation providers in Marulan were more likely to cater towards this type of guest.

For the purposes of the SIA, it is assumed that:

- Peak construction workforce numbers would total approximately 102 people.
- Average construction workforce numbers would total approximately 71 people.
- Workforces may commute up to 60 minutes to the Project Area[21].

As discussed in **Section 4.2.2** it is unlikely that a significant proportion of the workforce will be able to be sourced locally given current workforce constraints. Therefore, it is highly likely that a large proportion of construction workforces would need to be sourced from outside of the social locality. The two scenarios considered below provide some indication of the likely population impact of incoming construction workforce across the respective LGAs and subsequent impacts on local service provision.

- **Scenario 1** – assumes 10% of the Project workforce will be sourced locally, and a total of 90% of the workforce will migrate to the area for the 18-month construction period, thus seeking accommodation within the region.
- **Scenario 2** – assumes 20% of the Project workforce will be sourced locally, and a total of 80% of the workforce will migrate to the area for the construction period. This is considered the most likely scenario and would equate to approximately 21 workers being sourced locally and approximately 81 relocating to the area during peak construction.

Population change estimates are provided at a LGA level only given there is insufficient data available to accurately model how the incoming workforce (both construction and operational) will be distributed across specific communities in each LGA. It has been further assumed that all incoming employees would reside in each LGA in entirety, which while unlikely as the workforce is likely to be more dispersed across the relevant towns outlined in the social locality, it does provide an indication of worst-case impacts on each of the LGAs. **Table 4.12** also provides an analysis should peak construction workforces overlap.

Table 4.12 Construction Workforce Population Change Estimates – All Scenarios

Scenario	Population of LGAs: Upper Lachlan (8,514), Goulburn Mulwaree (32,053), Wingecarribee (25,709)			
	Population Increase[22]	% increase in Upper Lachlan population	% increase in Goulburn Mulwaree population	% increase in Wingecarribee population
Scenario 1	92	1.1%	0.4%	0.4%
Scenario 2	80	0.9%	0.2%	0.3%

Source: Umwelt, 2024; ABS, 2021.

Burdge (2004) suggests that any increase or decrease in population greater than 5% may be considered a significant population impact. In the highest impact scenario in which there is 90% migration into the Upper Lachlan LGA alone, this would result in a population change of around 1.1%, although as noted it is unlikely that the entire incoming construction workforce will be accommodated in one LGA.

[21] It is assumed that those townships within 60 minutes drive are most likely to service the Project's local accommodation and employment requirements due to the maximum daily commute time for workers to safely get to and from their place of work.

[22] It is important to note that this population increase assumes workers would not be permanently relocating to the area and therefore does not consider the influx of families associated with the workforce.

As noted in **Section 3.3.3**, the three LGAs are predicted to experience general population growth in addition to growth associated with the Project, however, cumulative growth rates would remain below 5%.

For the purposes of assessing accommodation availability, locations identified in **Table 4.13** have also been considered, given they are within a 60 minute drive time of the Project area.

4.3.2.1 Analysis of Accommodation Options

For the purposes of assessing accommodation available to house the Project's construction workforce, the following accommodation types have been considered:

- Short-term accommodation, including short-term let platform Airbnb, hotel and motel accommodation.
- Rental accommodation.

Short-term Accommodation Options

This assessment considers accommodation availability based on: 1) number of rooms available; 2) occupancy rates across the social locality and 3) the impact of cumulative project development on short-term accommodation demand.

An analysis of short-term accommodation data in the social locality has indicated that there are approximately 86 short term accommodation providers. Across these providers, an estimated total of 1,843 rooms are available at any given time throughout the year (refer to **Table 4.13**).

In addition to short term hotel stays, it has been identified that there are 1,110 active short-term rentals currently advertised in the Economic Impact Assessment (EIA) Study Area[23] (based on data sourced from www.airdna.com in April 2024). Based on an average short-term rental of 2.7 rooms per listing across the EIA Study Area, a total of 2,980 rooms could be available.

Table 4.13 Short Term Accommodation Data

Locality	Approximate distance from Project[24]	Number of providers	Total number of rooms
Goulburn	35 km	27	767
Marulan	15 km	5	55
Moss Vale	30 km	12	159
Mittagong	40 km	13	256
Bowral	35 km	23	386
Taralga	33 km	3	18
Crookwell	58 km	3	37
Gunning	76 km	23	24
Bundanoon	23 km	20	27
Remainder of study area	NA	21	113
Total	-	**150**	**1,842**

Source: STR and Tripadvisor 2024; Ethos Urban, 2024.

[23] Includes the LGAs of Upper Lachlan Shire, Goulburn-Mulwaree and Wingecarribee Shire.
[24] As the crow fly's kilometres.

Occupancy Rates

Furthermore, consultation with local government has highlighted the lack of vacant accommodation available in the area, commenting that rental accommodation does not stay available for long periods when it is put on the rental market, raising further concerns when considered cumulatively with other proposed project development within the locality.

Currently, there is no publicly available data regarding the occupancy rates of hotels and motels in the social locality. However, as **Figure 4.4, Figure 4.5** and **Figure 4.6** demonstrate, occupancy rates of short-term let booking platform Airbnb's and hotel comparable accommodation[25] categories range from 20.1%–67.2% over the past 3 years across the three LGAs in the social locality. Based on averages for each LGA over this 3 year's period (42.7% in Upper Lachlan, 48.2% in Goulburn-Mulwaree and 50.2% in Wingecarribee), the average occupancy rate across the three LGAs at any given time is around 47.0%, with peak occupancy across the LGAs over this time period totalling 67.2%[26].

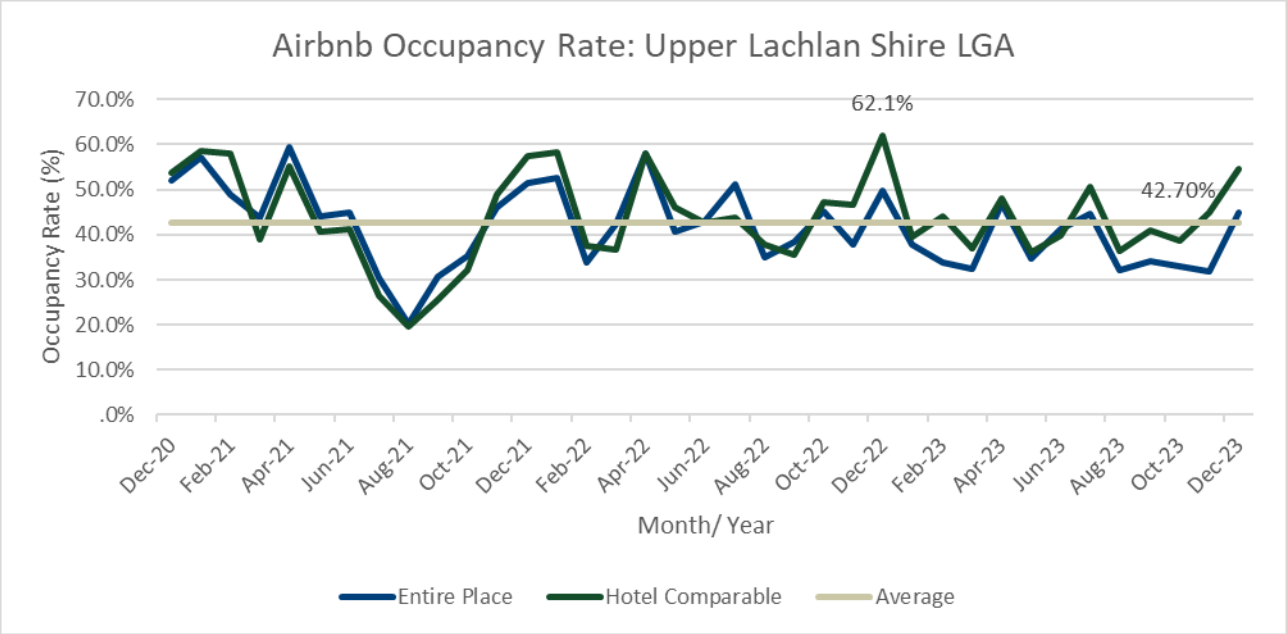

Figure 4.4 Airbnb Occupancy Rate: Upper Lachlan Shire LGA

Source: (AirDNA, 2023).

[25] Studio and one-bedroom entire place rentals. AirDNA believes these are the type of listings most likely to compete directly with hotels.
[26] Based on peak occupancy rates of 62.1% in Upper Lachlan, 61.8% in Goulburn-Mulwaree and 67.2% in Wingecarribee LGAs.

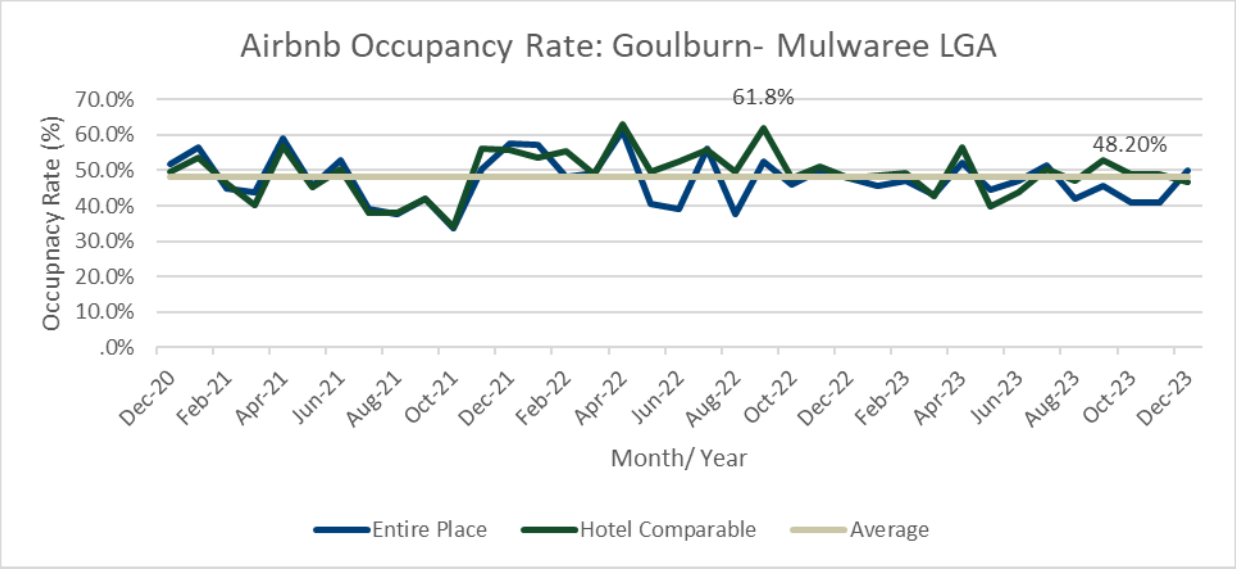

Figure 4.5 Airbnb Occupancy Rate: Goulburn-Mulwaree LGA

Source: (AirDNA, 2023).

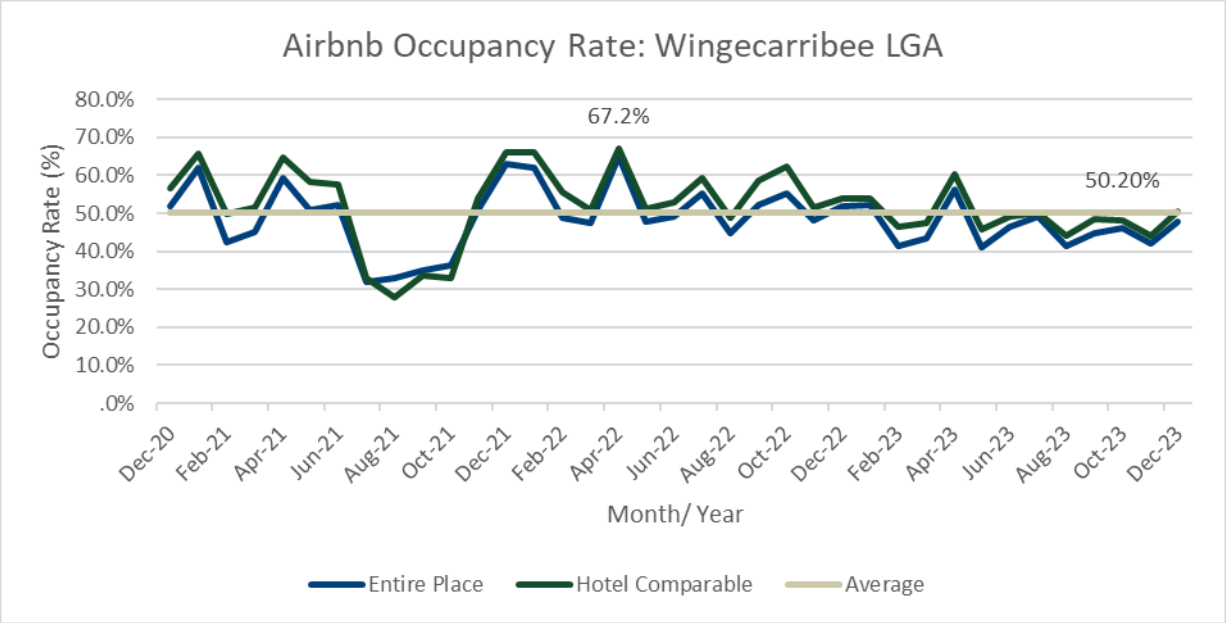

Figure 4.6 Airbnb Occupancy Rate: Wingecarribee LGA

Source: (AirDNA, 2023).

Private Accommodation

It has been assessed that as of March 2024 there were a total of 194 vacant dwellings within approximately 60 minutes' drive of the Project Area. As identified in **Table 4.14**, there is some current capacity within the private rental market that may be available to the Project to house the workforce, however, it is likely that these figures may change before any construction were to commence.

For the purpose of the current analysis, it has been assumed that not all homes may be available to be utilised by the Project, given competition from other projects and existing pressures on the housing market. The Project should seek to take as little of the available rental stock as possible, utilising short term accommodation where possible to ensure broader community is not impacted, particularly considering the high rates of rental stress already experienced within the Wingecarribee LGA (refer to **Section 3.3.7**). However, as the construction period occurs over 18 months, it is highly likely that workforce may seek to rent properties in the area either individually or with other workers, given that such an option will be cheaper than staying in more short-term rental accommodation.

Table 4.14 Residential Vacancy – Study Area by Postcodes

Location	Rental stock availability[27]	Vacancy rate
Goulburn	57	1.6%
Mittagong	30	2.0%
Bowral	34	3.5%
Moss Vale	37	2.7%
Bundanoon	9	5.4%
Marulan	21	9.7%
Gunning	5	4.5%
Crookwell	1	0.5%
Total	**197**	-

Source: SQM, March 2024.

Summary

Across the three LGAs, the highest occupancy rate at any given time across the sample period was 67.2%, and therefore this figure has been used to demonstrate a worst-case scenario as it relates to the availability of short-term accommodation. If this was the case, currently, there would be a total of 604 rooms in short term accommodation facilities unoccupied at any given time.

During the peak construction period, approximately 102 FTE workers would be seeking accommodation, and that should all these rooms be taken up by these workers in short term rental accommodation, they would be able to be accommodated. If the Project employed a proportion of local workers, as described in **Section 4.2.2**, this would further reduce the number of rooms required.

However, as noted above, it is likely that some of the construction workforce may seek longer term rentals given the 18 month construction period, but such accommodation is likely to be harder to access across the social locality and particularly within the Wingecarribee Shire, where levels of rental stress are being experienced (as discussed in **Section 3.3.7**).

As identified in **Section 3.2.2**, there are other projects in various stages of the development process underway within the social locality. Should the construction phases of these projects occur concurrently, impacts associated with the incoming construction workforces, including the need for short- and medium-term accommodation, could be exacerbated for a period of time, resulting in a temporary cumulative impact effect, and further reducing the availability of local accommodation options for other industries. An Accommodation and Employment Strategy will be developed for the Project that will further consider the

[27] Rental stock available as of September 2024.

cumulative impact the construction of the Wattle Creek Energy Solar Farm project may have on accommodation/housing and seek ways to minimise impacts across the two projects. Additionally, local tourism events, as identified in **Section 3.3.4**, will need to be considered when timing construction activities to reduce workforce impacts, where possible, on other sectors.

It is recommended Spark Renewables continue to consult with local accommodation providers, local council, renewable energy proponents and industry bodies to further understand local capacity and needs and identify accommodation providers to work with during the construction phase. To mitigate access to accommodation issues, local government representatives also suggested that the company investigate opportunities to see funds as a part of VPAs contributed to affordable housing.

Table 4.15 Social Impact Ranking – Access to Accommodation

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Reduced access to housing and accommodation due to influx of cumulative workforces (this and other Projects)	Construction	Broader community	Low	Low *(unlikely, minor)*	Low
		Vulnerable groups	Unknown	Medium *(unlikely, moderate)*	Low

Source: Umwelt, 2024.

4.3.3 Access to Health and Emergency Services

Respondents to the survey held moderate concerns that the Project would **reduce access to health and emergency services** because of the incoming project workforces (3.7 out of 7).

As identified in **Section 3.3.7**, there is adequate healthcare provision across the three LGAs.
Existing research suggests that non-resident workforces tend to access General Practitioners (GPs) at a similar rate to the general population, with access to emergency departments experienced at a higher rate than the general population (Australian Healthcare and Hospitals Association, 2019).

Approximately 5.5% of labourers and technicians experience a workplace related injury each year in Australia (Safe Work Australia, 2023). In applying this statistic to the Project, in a worst-case scenario where all of the reported injuries required medical attention, approximately 4 people per annum (based on an average workforce of 71) over the 18 month construction period may need to access a local GP service and/or attend a hospital Emergency Department or 6 people during peak construction. While a small proportion of this workforce may be local and thus already have an established GP relationship in place, it does not consider the potential cumulative effects to allied health services that may be required to provide rehabilitation support post injury.

As noted above, constraints on health services are more likely to be experienced at the GP level.
On average 79.2% of Australian adults between the ages of 25 to 54 years attended a GP in 2022–2023 (ABS, 2023). Utilising this average, this would equate to approximately 56 worker visits (for the average workforce) or 81 worker visits (peak workforce) per year. Furthermore, this may also result in more complex caseloads, as local GPs are less familiar with non-residents and often experience limited sharing of patient records (Australian Healthcare and Hospitals Association, 2019).

To further mitigate this impact, Spark Renewables should engage with GPs and other health services in the locality to provide an overview of the construction program timing and consult on existing capacity and ability to service an incoming workforce. The importance of partnering with local GP services in the locality that may have capacity to reduce the service load on GPs that are currently at capacity, will be important throughout the construction period. Additionally, as many of the conditions requiring presentation to a GP are preventable and/or can be assisted with active health promotion, such as hypertension, mental health, and asthma (NPS Medicine Wise, 2022) it is important that Spark Renewables consider providing their own health care promotion to their staff/employees rather than solely relying on local and regional community health services.

Table 4.16 outlines the social impact rankings related to the impact of the Project's construction workforce on access to health services.

Table 4.16 Social Impact Ranking – Access to Health and Emergency Services

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Reduced access to health and emergency services due to cumulative workforce project influx	Construction	Broader community	Low	Medium *(possible, moderate)*	Low
		Health services	Unknown	Medium *(possible, moderate)*	Low

Source: Umwelt, 2024.

4.3.4 Reduced Access to Telecommunications

Loss of access and connectivity to telecommunications (i.e. television, internet and phone) due to operation of Project infrastructure was of moderate concern to those who completed the survey (4.9 out of 7). While the Project is not expected to have a material impact on existing telecommunications services, there is a potential for the Project to contribute to improved infrastructure and service, and program delivery in the region through community investment activities. Spark Renewables will continue to consult with relevant Councils to understand key investment areas.

Table 4.18 outlines the social impact ranking related to accessibility of telecommunication services due to Project construction.

Table 4.17 Social Impact Ranking – Access to Telecommunications

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Loss of access and connectivity to telecommunications (i.e. television, internet and phone) due to operation of project infrastructure	Operations	Proximal landholders	Low	Low *(unlikely, minor)*	Low
		Broader community	Low	Low *(very unlikely, minimal)*	Low

Source: Umwelt, 2024.

4.3.5 Accessibility to Properties Due to Flood Risk

During consultation, a number of proximal landholders raised concerns in relation to localised flooding that occurs in the area, particularly along Canyonleigh Road, and how this impacts accessibility to their properties. In turn, some landholders raised concerns that the Project would increase the risk of flooding events or conversely such flooding could be considered a risk to the Project.

The WRIA (WRM, 2025) modelling has shown the Project Area to generally be of low flood hazard with minimal risk of changes in internal or external waterway flows. Mitigation measures to minimise flood impacts would be addressed in the development of a CEMP. Furthermore, potential cumulative impacts on waterways and flooding are considered negligible, given lack of interconnection to local watercourses.

Table 4.18 considers the social impact rankings associated with the potential for increased flood risk in the locality as a result of the Project.

Table 4.18 Social Impact Ranking – Increased Flood Risk

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Increased flood risk decreasing accessibility to properties	Operations	Proximal landholders	High	Low *(unlikely, minor)*	Low

Source: Umwelt, 2024.

4.4 Community

Potential impacts to way of life and community may include changes to how people live, work, and play within their communities and any changes in community composition, cohesion, character, function, resilience, and sense of place because of a project.

Changes to community cohesion associated with both an incoming construction workforce and differing perspectives/attitudes in the community related to renewable energy were ranked at 4.1 and 4.3 out of 7 respectively), with one proximal landholder commenting that the Project would change the social dynamic of the area and another outlining that proximal neighbours should be appropriately compensated for disturbance and inconvenience, particularly during construction.

> *It will change the social dynamic of the area – Proximal landholder*
>
> *The project might provide above mentioned landholders with a payment to compensate for stress experienced during the planning phase, upheaval during the implementation phase and potential downside impacts as a result of the project on its completion – Proximal landholder*

Table 4.19 considers the social impact ranking associated with reduced levels of community cohesion and community benefit.

Table 4.19 Social Impact Ranking – Community Cohesion and Investment

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Reduced community cohesion due to incoming workforce resulting in changed community characteristics and composition	Construction	Broader community	Low	Medium *(possible, minor)*	Low
		Proximal landholders	Low	Medium *(possible, minor)*	Low
Changes to community cohesion associated with differing views in the community related to renewable energy	Planning	Broader community	Medium	Medium *(possible, minor)*	Low
		Proximal landholders	Medium	Medium *(possible, minor)*	Low

Source: Umwelt, 2024.

4.5 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.

Increased stress and anxiety due to uncertainty associated with project development and changes to way of life was seen as a concern of the Project (5.6 out of 7) with one proximal landholder commenting on how the Project is significantly impacting their mental health. This is a common theme in large infrastructure projects, where uncertainty, fear of the unknown and a sense of loss of control over surroundings and processes can drive anxiety and stress (psychosocial impacts) surrounding projects.

Major environmental changes can diminish the social and psychological well-being of individuals and their communities. Psycho-social impacts can be seen in how people experience their world - their 'lifescape' and their patterns of daily activities - their 'lifestyle', as well as their mental health. Stress can increase, coping resources within the community can diminish, and overall psychological functioning can decline – 'lifestrain' (Edelstein, 2004).

Psycho-social impacts can result from shared perceptions of betrayal and unfairness, distrust of government or 'big business', and fear of unknown health impacts, such as possible illness from pollutants. Historical trauma experienced by First Nations peoples and concerns about changing environmental conditions are examples of triggers.

Psycho-social impacts that are overlooked can contribute to greater opposition to a project, conflict, and poorer long-term outcomes for affected communities but can be mitigated through meaningful engagement programs that focus on capturing lived experience, values, concerns and expectations of those who feel most impacted and clearly defining the scope of assessment and consideration of impacts of relevance and importance to those most affected. Psycho-social impacts may also be exacerbated where multiple development is proposed within a social locality.

As evidenced in **Section 3.3.5**, mental health conditions in the LGAs are currently slightly higher when compared to NSW, which may be further exacerbated by the introduction of the Project and other infrastructure projects in the area.

It is significantly impacting on our mind health as a family… We are devastated – Proximal landholder

Should the Project be approved, ongoing engagement and communication from Spark Renewables will be important to provide relevant provision of information in relation to the Project and to work with proximal landholders/neighbours, particularly during the construction phase of the Project.

Table 4.21 considers the social impact ranking associated with health and wellbeing.

Table 4.20 Social Impact Ranking – Health and Wellbeing

Social Impact	Phase	Affected Parties	Perceived significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Increased stress and anxiety due to uncertainty associated with project development and changes to way of life	Planning and construction	Proximal landholders	High	Medium *(possible, moderate)*	Low

Source: Umwelt, 2024.

4.6 Culture

Impact on Aboriginal cultural values due to land clearing associated with development of Project infrastructure was also noted of concern to those who completed the survey (5.1 out of 7), however, survey respondents did not elaborate on their concerns.

An Aboriginal Cultural Heritage Assessment (ACHA) has been undertaken in consultation with representative Aboriginal stakeholders to assess and understand the archaeological potential of the Project Area. The ACHA identified 30 Aboriginal sites within the Project Area or those located within close proximity. A total of 28 of these sites have been identified as low significance and two of moderate significance. The Project will impact a total of 8 identified Aboriginal sites across the Project Area. However, these have been identified as having low archaeological significance.

The Project has undergone several design changes to avoid areas of high Aboriginal archaeological values. It is noted that whilst Aboriginal sites were avoided, the change in the landscape resulting from development of the Project may also affect intangible cultural heritage and values held by First Nations people before any works occur.

While Spark Renewables will commit to the development of an Aboriginal Cultural Heritage Management Plan (ACHMP) to mitigate and manage impacts to all Aboriginal heritage sites within and directly adjacent to the Project; the ACHMP should include ongoing consultation with Registered Aboriginal Parties (RAPs) and ongoing consultation with Aboriginal stakeholders regarding the conservation and management of Aboriginal cultural heritage in the Project Area.

Impacts to European cultural values due to land clearing associated with the development of project infrastructure was considered less of a concern by those who completed the survey (4.2 out of 7), however,

this issue was raised by one attendee at the community drop-in session, particularly as they relate to the history of the agriculture industry in the area.

The Statement of Heritage Impact (SoHI) by Austral Archaeology Pty Ltd (2025), concluded that the Project Area is not listed in any heritage database. Although the Arthursleigh property has several items of state significance, graded from moderate to exceptional. However, the proposed work area and development will not negatively impact these items.

Table 4.22 Table 4.21 considers the social impact rankings as it relates to cultural heritage.

Table 4.21 Social Impact Ranking – Cultural Heritage

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Impact on Aboriginal cultural values due to land clearing associated with development of project infrastructure	Construction	Aboriginal stakeholders	Unknown	High *(likely, moderate)*	Low
Impacts to European cultural values due to land clearing associated with the development of project infrastructure	Construction	Special interest groups	Low	Low *(unlikely, minor)*	Low

Source: Umwelt, 2024.

4.7 Decision-making Systems

Impacts relating to this category refer to whether stakeholders are able to 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.

The **perceived inability to influence planning and decision-making in relation to the Project** was identified as a high concern (6.1 out of 7) for those who completed the community survey, with individuals who attended the community drop-in sessions commenting on feelings of powerlessness and a fear that the Project will be approved regardless. Similarly, some attendees at the drop-in session raised a lack of trust in the assessment process. This is reflective of a lack of trust in government bodies, with trust levels in government considered to be lower than levels of trust in private companies (Edelman, 2023). Research undertaken by CSIRO (2014) and Sandman (1998) suggest the importance of developing trust in increasing acceptance of project development.

A lack of trust in the company and the University of Sydney was evident during consultation as a result of a **perceived lack of information provision and transparency around bequeathment of the property** (5.8 out of 7), with some stakeholders believing that the land would be used for agricultural education not for renewable energy development.

What Arthursleigh meant for the beneficiaries – people were concerned it was meant to be agriculture – Proximal landholder

Despite these concerns, the benefit in relation to **ongoing research and education associated with renewable energy generation and storage** was seen as a positive by some survey respondents. The Project also involves research collaboration between Spark Renewables and the University of Sydney with a fund for research initiatives to support the energy transition including topics ranging from energy technology innovation, to optimising design and operation of renewable energy projects to sustainable land use practices and circular economy opportunities for the energy transition. It is expected the research element of the Project will benefit both industry and government to ensure greater knowledge surrounding the energy transition.

The potential for **inequitable distribution of costs and benefits associated with the Project** as previously noted in **Section 4.4**, was also of concern to those who completed the survey (4.8 out of 7), with respondents commenting on the belief that any type of compensation related to the Project should be based around those who are more likely to experience negative impacts, particularly traffic impacts.

Distributive inequity is often a key social impact identified in renewable energy projects, with stakeholders often concerned that those located within close proximity are more likely to experience negative impacts of development, whilst perceiving that the majority of benefits of the Project (clean and cheap electricity) are being delivered to those located further away from the Project.

> *The project might provide above mentioned landholders with a payment to compensate for stress experienced during the planning phase, upheaval during the implementation phase and potential downside impacts as a result of the project on its completion – Proximal landholder*

A further proximal landholder recognised the need to ensure ongoing and regular communication and engagement with the community. Another recognised the need for construction management plans to be communicated to the community to ensure that everyone in proximity to the Project is aware of the impacts they may experience, and in turn how these are being managed to build trust within the community.

> *Construction plan and methodology communicated to people, so that they understand what the real impacts are. For community confidence and trust. Without that info you will get objections – Proximal landholder*

Of those who completed the survey, self-reported levels of knowledge of the Project were rated on average 5.1 out of 10, suggesting there is an opportunity for Spark Renewables to engage more meaningfully and provide additional information on the Project to increase understanding of the Project and its impacts, and to develop more positive relationships with key community stakeholders.

Table 4.22 considers the social impact rankings associated with the ability of community stakeholders to influence decision making systems.

Table 4.22 Social Impact Ranking – Decision-making Systems

Social Impact	Phase	Affected Parties	Perceived Significance	Social Impact ranking (pre-mitigation)	Social Impact ranking (post-mitigation)
Perceived inability to influence planning and decision-making in relation to the Project	Planning	Proximal landholder	High	Medium *(possible, minor)*	Low
Perceived inequitable distribution of costs and benefits associated with the Project	Planning	Broader community	Medium	Medium *(possible, minor)*	Low
		Proximal landholders	High	High *(likely, moderate)*	Medium
Lack of trust in the company and the landholder (University of Sydney) due to a perceived lack of information provision and transparency around bequeathment of the property	Planning	Proximal landholders	Medium	Medium *(possible, minor)*	Low
Use of the site for ongoing research and education associated with renewable energy	Operations	UoS	High	High (+ve) *(almost certain, moderate)*	High (+ve)
		Industry Government	Unknown	High (+ve) *(likely, moderate)*	High (+ve)

Source: Umwelt, 2024

5.0 Social Impact Evaluation Summary

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.

A range of perceived social impacts have been identified in relation to the Project, requiring 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. The evaluation of social impact significance has involved four main steps as outlined in **Figure 5.1.**

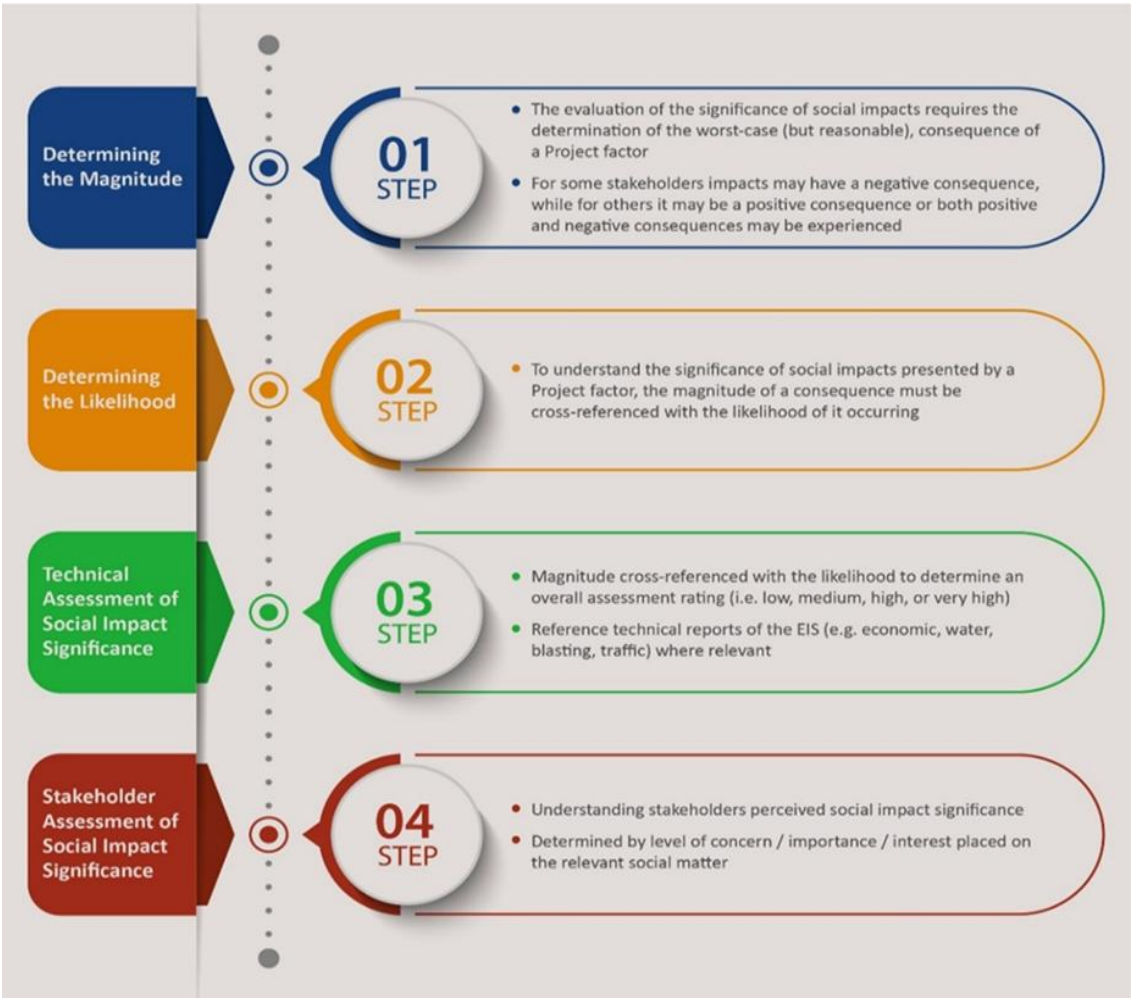

Figure 5.1 Social Impact Evaluation Process

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 (DPE, 2023). It should be noted that the residual social risk ratings represent the risk post implementation of mitigation measures outlined in **Section 6.0**.

It is also important to note that unlike in the context of other technical studies undertaken as a part of the environmental impact assessment, there are no thresholds in SIA, with the identification of possible consequences largely made qualitatively. Therefore, the social risk assessment is also informed by the socio-economic baseline data, outcomes of relevant literature and research studies and experiences with other projects, outcomes of consultation and findings of technical studies; with a conservative approach taken in assigning social impact ratings.

Table 5.1 Social Impact Evaluation

Social Impact Category	Potential Social Impact on People	Project Aspect/ Activity	Timing/ Duration[6]	Affected Stakeholder Group	Perceived Impact Significance	Likelihood	Magnitude	Preliminary Impact Significance	Project Refinements / Management Measures[28]	Residual Impact Significance
Way of Life **Livelihoods**	**Livelihood impacts associated with potential property devaluation**	Establishment and operation of Project infrastructure including ancillary infrastructure	P, C, & O	Proximal Landholders	High	Possible	Minor	Medium	*Active community engagement throughout the lifecycle of the Project, providing clear information on next steps of Project development.*	Medium
Livelihoods	**Loss of income for tourist operators, due to change in sense of place**	Installation and operation of Project Infrastructure	C & O	Business Owners	Medium	Unlikely	Minor	Low	*Active community engagement throughout the lifecycle of the Project, providing clear information on next steps of Project development.*	Low
Livelihoods	**Provision of local employment opportunities during construction**	Construction of Project infrastructure	C	Broader Community Local businesses and service providers	Medium (+ve)	Likely	Minor	Medium (+ve)	*Implementation of the AES (refer to Section 6.2.1).* *Implementation of IAPP.* *Implementation of strategies and actions to maximise local employment and sourcing from local communities such as through supporting training, up-skilling and capacity building, in collaboration with local stakeholders and training providers, to improve job-readiness in the pre-construction phase of the Project.* *Ensure procurement and employment opportunities for women, Indigenous people and people with disabilities*	High (+ve)
Livelihoods	**Provision of local employment opportunities during operations**	Operation of Project infrastructure	O	Broader Community	Medium (+ve)	Likely	Minimal	Low (+ve)		Low (+ve)
				Local businesses and service providers	Medium (+ve)	Possible	Minor	Low (+ve)		Low (+ve)
Livelihoods	**Opportunity for the Project to increase training and skills of local residents**	Establishment, construction, and operation of Project infrastructure	C & O	Broader Community Education providers	Low (+ve)	Possible	Minor	Medium (+ve)	*Proactive support for the establishment of programs that encourage and incentivise re-skilling and upskilling of local workers to remain in the region.*	High (+ve)
Livelihoods	**Procurement of local suppliers, services and contractors**	Establishment, construction, and operation of Project infrastructure	C & O	Local service providers and businesses	Medium (+ve)	Likely	Minor	Medium (+ve)	*Implementation of the AES (refer to Section 6.2.1).* *Implementation of IAPP.* *Coordinate efforts and liaise with key stakeholders to coordinate provision of accommodation and other services or suppliers giving preference to local contractors and services.*	High (+ve)
Livelihoods	**Use of the site for ongoing research and education associated with renewable energy**	Research opportunities associated with the site	O	UoS	High (+ve)	Almost certain	Moderate	High (+ve)	*Release of research on the site on an ongoing basis throughout the lifecycle of the Project.*	High (+ve)
				Industry Government	Unknown	Likely	Moderate	High (+ve)		High (+ve)

[28] This column refers to mitigation measures outlined in technical studies, italicized measures are additional and have been developed to address specific social impacts.

Social Impact Category	Potential Social Impact on People	Project Aspect/ Activity	Timing/ Duration[6]	Affected Stakeholder Group	Perceived Impact Significance	Likelihood	Magnitude	Preliminary Impact Significance	Project Refinements / Management Measures[28]	Residual Impact Significance
Surroundings	**Intergenerational equity given emphasis on renewable energy production and reduction in carbon emissions**	Operations of the Project	O	Broader community	Low (+ve)	Likely	Minor	Medium (+ve)	*Sharing of research on site within the industry to advance renewable energy technology.*	Medium (+ve)
Surroundings **Way of Life**	**Change in the rural landscape resulting in impacts on visual amenity**	Installation and operation of Project Infrastructure	C & O	Proximal landholders	Medium	Unlikely	Minimal	Low	Project design changes (i.e. infrastructure siting and reduction in development footprint) has reduced visual impacts on adjoining properties.	Low
Surroundings	**Social amenity impacts due to noise and vibration associated with construction activities**	Construction of Project infrastructure	C	Proximal landholders	High	Possible	Minor	Medium	Implementation of CEMP. Construction distribution payments to residential receivers on parts of Canyonleigh Road. *Ongoing communication and transparency of Project information, including construction timing and works required.*	Low
Surroundings	**Social amenity impacts due to noise associated with the BESS**	Operations of Project infrastructure	O	Proximal landholders	High	Unlikely	Minor	Low	Implementation of OEMP.	Low
Surroundings	**Social amenity impacts due to dust associated with construction activities**	Construction of Project infrastructure	C	Proximal landholders	High	Possible	Minor	Low	Implementation of a CEMP.	Low
Surroundings	**Loss of environmental values on the site e.g. flora and fauna due to site clearing and Project construction**	Project establishment and operations	C & O	Broader Community Proximal landholders Environmental groups	High	Likely	Minor	Medium	Project design changes including the reduction of the development footprint has ensured the avoidance of areas of high biodiversity value as far as practicable. Implementation of a CEMP. Offset credits will be acquired in line with the Biodiversity Assessment Method as part of a biodiversity offset plan to offset the loss of biodiversity from the project. Ongoing communication around the implementation of mitigation measures to protect biodiversity.	Medium
Accessibility **Surroundings**	**Increased travel time associated with deterioration of local roads as a result of increased project-related traffic**	Establishment and construction of Project Infrastructure	C	Proximal landholders/ users of Brayton Road	High	Possible	Minor	Medium	Undertake public road upgrades to facilitate the safe movement of vehicles as per the TMP. Implementation of a Traffic Management Plan and Driver Code of Conduct.	Low
				Proximal landholders/ users of Canyonleigh Road	High	Likely	Moderate	High		Medium

Social Impact Category	Potential Social Impact on People	Project Aspect/ Activity	Timing/ Duration[6]	Affected Stakeholder Group	Perceived Impact Significance	Likelihood	Magnitude	Preliminary Impact Significance	Project Refinements / Management Measures[28]	Residual Impact Significance
									Consultation and notification to residents along the Local Transport Route and other road users.	
Surroundings **Accessibility**	**Decreased pedestrian and road user safety due to increased traffic during construction**	Construction of Project infrastructure	C	Proximal landholders Road users	High	Possible	Moderate	Medium	Undertake public road re-surfacing as required on Canyonleigh Road to facilitate the safe movement of vehicles. Implementation of the TMP and Driver Code of Conduct. *Consultation and notification to residents along the Local Transport Route and other road users.*	Low
Surroundings **Accessibility**	**Driver behaviour decreasing safety of public road networks**	Construction of Project infrastructure	C	Proximal landholders Road users	High	Possible	Moderate	Medium		Low
Surroundings	**Potential personal safety concerns due to heightened bushfire risk associated with BESS infrastructure**	Operations	O	Proximal landholders	High	Unlikely	Major	Medium	Implementation of an ERP and Bushfire Protection Measures as part of the CEMP and OEMP (in consultation with the RFS and NSW Fire and Rescue).	Low
Livelihoods **Surroundings** **Accessibility**	**Livelihood impacts associated with property damage due to heightened bushfire risk**	Establishment and operation of Project infrastructure including ancillary infrastructure	C & O	Host and proximal landholders, including for ancillary infrastructure	High	Unlikely	Major	Medium	Implementation of an ERP and Bushfire Protection Measures as part of the CEMP and OEMP (in consultation with the RFS and NSW Fire and Rescue). *Active community engagement throughout the lifecycle of the Project, providing clear information on next steps of Project development.*	Low
Accessibility	**Reduced access to the project site for emergency services e.g. RFS and subsequent safety impacts**	Construction and operations	C & O	Emergency service providers	Medium	Possible	Moderate	Medium	Implementation of an ERP and Bushfire Protection Measures as part of the CEMP and OEMP (in consultation with the RFS and NSW Fire and Rescue)	Low
				Proximal landholders	Low	Possible	Moderate	Medium		Low
Surroundings	**Potential for reduced environmental value and degradation associated with decommissioning (e.g., removal of waste, recycling, site remediation) of Project Infrastructure**	Decommissioning	D	Proximal landholder Environmental groups	High	Possible	Minor	Medium	Implementation of a DEMP prior to commencement of decommissioning	Low
Surroundings	**Potential for environmental degradation associated with ineffective weed management**	Operation of Project and ongoing land management	C & O	Proximal landholder and broader Community	Medium	Possible	Minor	Medium	Implementation of weed management measures detailed in the CEMP.	Low
Surroundings	**Changes in rural landscape resulting in visual amenity impacts**	Operations	C & O	Proximal landholders	Medium	Unlikely	Minimal	Low	Appropriate project design and siting of infrastructure to avoid visual impacts.	Low

Social Impact Category	Potential Social Impact on People	Project Aspect/ Activity	Timing/ Duration[6]	Affected Stakeholder Group	Perceived Impact Significance	Likelihood	Magnitude	Preliminary Impact Significance	Project Refinements / Management Measures[28]	Residual Impact Significance
Surroundings	**Potential leeching from Project infrastructure of chemicals into ground and surface water**	Establishment and operation of Project infrastructure including ancillary infrastructure	C & O	Environmental groups, water users (including those located downstream), proximal landholders	Unknown	Unlikely	Major	Medium	Implementation of a CEMP. Implementation of an OEMP for surface water quality. Hazardous materials to be stored as per NSW EPA's Storing and Handling Liquids: Environmental Protection – Participants Handbook. Ongoing communication and transparency of Project information	Low
Decision-Making Systems	**Perceived inability to influence planning and decision-making in relation to the Project**	Community and stakeholder engagement activities	P	Broader Community	Medium	Possible	Minor	Medium	*Active community engagement throughout the lifecycle of the Project, providing clear information on next steps of Project development.*	Low
				Proximal landholder	High	Likely	Moderate	High		Medium
Decision Making Systems	**Lack of trust in the company and the landholder (University of Sydney) due to a perceived lack of information provision and transparency around bequeathment of the property**	Community and stakeholder engagement activities	P	Proximal landholder and broader Community	Medium	Possible	Minor	Medium	*Ongoing communication and transparency of Project information.* *Active community engagement throughout the lifecycle of the Project, providing clear information on next steps of Project development.*	Low
Accessibility **Livelihoods** **Way of Life** **Community**	**Reduced access to housing and accommodation due to influx of cumulative workforces**	Establishment and Construction of Project Infrastructure	C	Broader Community, Service Providers,	Low	Unlikely	Minor	Low	*Develop an Accommodation and Employment Strategy prior to construction (refer to* ***Section*** **6.2.1***).* *Implement the AES during construction and operation.*	Low
				Vulnerable groups	Unknown	Unlikely	Moderate	Medium		Low
Accessibility	**Reduced access to health and emergency services due to cumulative workforce project influx**	Establishment and Construction of Project Infrastructure	C	Broader community	Low	Possible	Moderate	Medium	Implement an onsite first aid post and ensure it is appropriately stocked and staffed. CEMP to detail onsite emergency response protocols. *Liaise with local service providers to develop a strategy for addressing increasing demand on services e.g., health, recreation etc.* *Ensure access to local emergency department and collaborate with local hospital to ensure there is no additional strain placed.*	Low
				Health service	Unknown	Possible	Moderate	Medium		Low
Accessibility	**Loss of access and connectivity to telecommunications (i.e**	Operation	O	Proximal landholder	Low	Unlikely	Minor	Low	*Demonstrate proactive, thorough and transparent community engagement, throughout the lifespan of the Project.*	Low

Social Impact Category	Potential Social Impact on People	Project Aspect/ Activity	Timing/ Duration[6]	Affected Stakeholder Group	Perceived Impact Significance	Likelihood	Magnitude	Preliminary Impact Significance	Project Refinements / Management Measures[28]	Residual Impact Significance
	television, internet and phone) due to operation of project infrastructure			Broader Community	Low	Very unlikely	Minimal		*Ongoing collaboration with local government to understand investment opportunities.*	
Accessibility	**Increased flood risk decreasing accessibility to properties**	Operation	O	Proximal landholders	High	Unlikely	Minor	Low	Implementation of an OEMP that addresses flooding management and mitigation.	Low
Health and Wellbeing	**Increased stress and anxiety due to uncertainty associated with project development and changes to way of life**	Public release of Project plans and documentation	P & C	Proximal landholders	High	Possible	Moderate	Medium	*Demonstrate proactive, thorough and transparent community engagement, throughout the lifespan of the Project.*	Low
Community	**Reduced community cohesion due to differing attitudes towards renewable energy development in the local community and broader region**	Project planning and implementation	P	Proximal landholders Broader community	Medium	Possible	Minor	Medium	*Demonstrate proactive, thorough and transparent community engagement, throughout the lifespan of the Project.*	Low
Community	**Reduced community cohesion due to incoming workforce resulting in changed community characteristics and composition**	Construction workforce	C	Broader community Proximal landholders	Medium	Possible	Minor	Medium	*On-going liaison with local councils and police to ensure open communication and identification of emerging issues.* *Demonstrate proactive, thorough and transparent community engagement, throughout the lifespan of the Project.*	Low
Culture	**Impact on Aboriginal cultural values due to land clearing associated with development of project infrastructure**	Establishment and construction of Project infrastructure	C	Aboriginal stakeholders	Unknown	Likely	Moderate	High	Project design changes have resulted in reduced impact to areas of high Aboriginal archaeological significance. Delivery of an ACHMP. Archaeological surface salvage conducted on the site prior to construction commencing. Implementation of unexpected finds protocol. Ongoing consultation with Indigenous groups and RAPs, providing clear information on next steps of Project construction and commissioning, and management of Aboriginal cultural heritage.	Low
Culture	**Impacts to European cultural values due to land clearing associated with the development of project infrastructure**	Establishment and construction of Project infrastructure	C	Special interest groups	Low	Unlikely	Minor	Low	Implementation of unexpected finds protocol.	Low

6.0 Social Impact Management

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 of moderate to high significance.

Social impact management planning is a key consideration of SIA and ensures that the impacts identified through the SIA process, and through community consultation activities, are managed effectively across the life cycle of the development (Franks & Vanclay, 2013). The selection of strategies has considered those proposed by the community and identified through consultation; industry benchmarking; strategies proposed in the environmental technical studies; and through the social team's experience and expertise in undertaking SIAs for similar projects across Australia.

SIA guidance (DPE, 2023) 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.

6.1 Design Refinements

Since its scoping phase, the Project has undergone a number of design refinements. Changes to the Development Footprint and internal Project layout has been undertaken as a direct response to address concerns from the community and advice from technical specialists based on outcomes of technical studies. In addition to the removal of the wind component of the Project, key design refinements by include;

- Reduction of the Development Footprint to address environmental constraints including relocation or removal of BESS components to avoid flood prone land and areas of high biodiversity value and high archaeological values.
- Relocation of key infrastructure to minimise impacts including the O&M facility to avoid flood prone land and the BESS to the east and ensure a 100 m vegetation buffer.
- Selection of the transmission corridor options that has reduced environmental impacts, in particular biodiversity.
- Public road upgrades to ensure appropriate road conditions and facilitate safe movement of vehicles.
- Inclusion of a 30 m biodiversity corridor on the northern boundary of the Project Area.

6.2 Preliminary Social Impact Management Framework

In addition to the Project refinements outlined above, a framework to guide social impact management for the Project, to be developed before construction commences, is presented in **Figure 6.1**. Guiding principles and key components of the social impact management strategies to be developed are outlined in the following sections to manage the social impacts associated with the Project.

Figure 6.1 Social Impact Management Framework

Source: Umwelt, 2024.

6.2.1 Accommodation and Employment Strategy

The main objective of the AES for the Project is to outline the measures to ensure that there is sufficient accommodation available for the construction and operational workforces associated with the Project, while managing the potential effects of workforce influx on the local community. The AES will build on the assessment undertaken in **Section 4.3.2**.

The AES should also consider measures to maximise benefits to the local economy and business community, whilst also considering the potential cumulative impacts associated with concurrent developments in the social locality. Building on the consultation and assessment outlined in **Section 4.2.2**.

The AES will be developed in consultation with key stakeholders including Upper Lachlan Shire Council, Goulburn-Mulwaree Council, Wingecarribee Shire Council, Marulan Region and Goulburn Chambers of Commerce, Destination NSW and tourism associations and employment and accommodation providers. The AES will consider:

- Maximising employment of local residents, with a focus on those with the requisite skills that are currently unemployed and requiring skills development.
- Providing education and training opportunities such as sponsoring positions at TAFE Moss Vale and UoS; working with Training NSW, NSW Skills Board, Regional NSW Council and Regional Development Australia to identify and maximise training opportunities; and ongoing sponsorship of university internships for undergraduates, and scholarships for First Nations tertiary education.
- Consideration of partnerships with existing accommodation providers, including temporary accommodation providers.

- Early engagement with the proposed EPC contractor to allow planning to occur across various projects to maximise local employment.
- Liaise and collaborate with other renewable energy proponents in the region to:
    - Identify relevant training opportunities that could be realised within the community across multiple projects.
    - Identify relevant accommodation options and reduce cumulative impacts associated with an influx of construction workforces within the region.
- In the selection of accommodation options, ensure as far as practicable that other industry sectors e.g., tourism, are not disadvantaged by the use of existing accommodation options in the region e.g., hotel/motel accommodation.
- Avoiding the use of additional accommodation during peak periods associated with community and tourism events.
- Consultation with housing providers to further understand how an incoming workforce may impact vulnerable groups (i.e. Aboriginal and Torres Strait Islander people, elderly residents and users of short-term accommodation).

6.2.2 Neighbour Agreements

Spark Renewables is offering benefits to three neighbouring properties located to the south of the Project Area. Additionally, construction disruption payments will be offered to residents living along Canyonleigh Road who may be affected by construction transport movements. These agreements are currently being discussed with the relevant landowners.

6.2.3 Community and Stakeholder Engagement Plan

Spark Renewables has developed a Community and Stakeholder Plan (CSEP) in the early stages of the EIS process.

Should the Project be approved, the Plan will outline how proximal neighbour and community members are to be engaged throughout the Project's planning, pre-construction, construction, and operations to appropriately mitigate and enhance impacts, developing strong local partnerships and achieving successful, and sustainable Project outcomes. **Appendix C** provides an initial plan throughout construction and operations, to be further refined as the Project progresses.

Fairness in the Project's 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 positive impacts of the Project.

Spark Renewables will continue to prioritise the implementation of the CSEP in the remaining development phase of the Project and throughout the pre-construction and construction phases, should the Project be approved.

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).
- NSW Government's Undertaking Engagement Guidelines for State Significant Projects (2024).
- Draft NSW Government Draft Benefit Sharing Guideline (2023).

The CSEP will be updated annually to identify new stakeholders and revise engagement mechanisms based on the effectiveness and suitability in line with stakeholder feedback.

6.2.4 Industry and Aboriginal Participation Plan

Spark Renewables will investigate the development of an IAPP in line with the NSW First Nations Guideline (Department of Planning Housing and Infrastructure , 2022).

The IAPP will be developed in consultation and collaboration with local groups, Traditional Owners, Aboriginal representative organisations, industry and Council. Spark Renewables will seek to develop a Memorandum of Understanding (MoU) with the relevant Aboriginal stakeholders to formalise their collaboration on maximising Aboriginal participation in the Project, in line with their practice on other Spark Renewables projects, e.g. Dinawan Energy Hub.

Measures to be incorporated within the development of the IAPP and MoU include:

- Ongoing collaboration with relevant Aboriginal stakeholders, including RAPs, LALCs and Aboriginal community to identify effective measures to promote / communicate opportunities for jobseekers.
- Require major works construction contractors who need to source labour to perform their obligations on the Project to consult Aboriginal stakeholders as soon as reasonably practicable on matters relating to labour hire.
- Identification of supply chain opportunities: register of local First Nations businesses to be established through early consultation and as part of a local supply study.
- Facilitate ongoing education and training opportunities for First Nations students with fees to pursue education or training (apprenticeship, TAFE, or university) and First Nations specific internships.
- Support training programs facilitated at venues agreed upon in collaboration with Aboriginal stakeholders.
- Explore opportunities to establish and build capacity in Indigenous-owned businesses providing vegetation management services, cultural competency training, and other Project needs to maximise local procurement opportunities.
- Proactively engage with Indigenous-owned businesses to ensure awareness of opportunities in the supply chain.
- Undertake First Nations-run cultural competency training for all staff, including requirement for contractors to include First Nations-run cultural competency and heritage training in worker induction processes.
- Consider the establishment of a First Nations Advisory Group.
- Use Supply Nation and Indigenous Chamber of Commerce business directories to facilitate procurement and require contractors to do the same when subcontracting.
- Assist local residents seeking to apply for Project roles through the employment application process.

6.3 Summary

Table 6.1 provides a summary of the social impact management strategies proposed above, further detailing timeframes, responsibilities and social impacts that would be addressed though the implementation of these strategies.

Table 6.1 SIMP Summary

Element	Details	Phase	Timeframe (commence)	Timeframe (complete)	Responsibility	Social impacts addressed
AES	• Outline measures to ensure sufficient accommodation is available for construction and operational workforces. • Consider measures to maximise benefits to the local economy and business community. • Developed in consultation with key stakeholders as outlined in **Section 6.2.1**.	Planning	Following submission of EIS	Prior to construction	**Development:** Spark Renewables and suitably qualified person **Implementation:** Spark Renewables & EPC Contractor	• Livelihood impacts – provision of local employment opportunities during construction and operation. • Capacity development – training and skills development of local residents. • Reduced access to housing and accommodation due to influx of cumulative workforces (this and other Projects).
Neighbour Agreements	• Implementation of neighbour agreements that ensure distributive equity to landholders/residents most impacted by the Project.	Construction and Operation	Developed prior to construction	Prior to construction and throughout operations	**Development & implementation:** Spark Renewables	• Inequitable distribution of costs and benefits associated with the project. • Social amenity impacts due to noise and vibration associated with constructions. • Impacts to visual and social amenity due to project siting. •
CSEP	• CSEP updated in line with government standards and frameworks.	Planning Construction Operation	Ongoing – First update complete prior	Ongoing throughout construction and operation (annually)	**Development:** Spark Renewables	• Lack of trust in the company and the landholder (University of Sydney) due to a perceived lack of information provision

Element	Details	Phase	Timeframe (commence)	Timeframe (complete)	Responsibility	Social impacts addressed
	• Annual updates.		to construction			and transparency around bequeathment of the property.
IAPP	• Developed in collaboration with relevant Aboriginal stakeholders. • Ensure ongoing education and training opportunities for First Nations people. • Facilitate procurement of Indigenous owned businesses.	Planning	Following submission of EIS	Prior to construction	**Development:** Spark Renewables and suitably qualified person **Implementation:** Spark Renewables and EPC Contractor	• Procurement of local suppliers, services and contractors. • Provision of local employment opportunities for First Nations people throughout construction and operation.

7.0 Conclusion

The SIA 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 has made recommendations regarding social impact ranking and management planning.

The social 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 for proximal landholders and communities within the social locality. The SIA found that the identified and assessed potential positive impacts of medium to high significance of the Project include:

- Provision of local employment opportunities during construction.
- Opportunity for the Project to increase training and skills of local residents.
- Procurement of local suppliers, services and contractors.
- Use of the site for ongoing research and education associated with renewable energy.
- Intergenerational equity given emphasis on renewable energy production and reduction in carbon emissions.

The identified and assessed potential negative impacts of high significance associated with the Project include:

- Loss of important environmental values on the site e.g. flora and fauna due to site clearing and Project construction.
- Perceived inequitable distribution of costs and benefits associated with the project.
- Increased travel time and safety issues associated with deterioration of local roads as a result of increased project-related traffic.
- Perceived inability to influence Project planning and decision-making
- Impact on Aboriginal cultural values due to land clearing associated with development of project infrastructure.

In response to identified impacts, a number of mitigation and enhancement strategies are proposed through which impacts can be managed effectively, and opportunities enhanced.

A social impact management planning framework has been outlined with proposed strategies relating to the management of social impacts. The strategies in the framework require further development and implementation and include:

- Accommodation and Employment Strategy.
- Neighbour Agreements.
- Community and Stakeholder Engagement Plan.
- Industry and Aboriginal Participation Plan.

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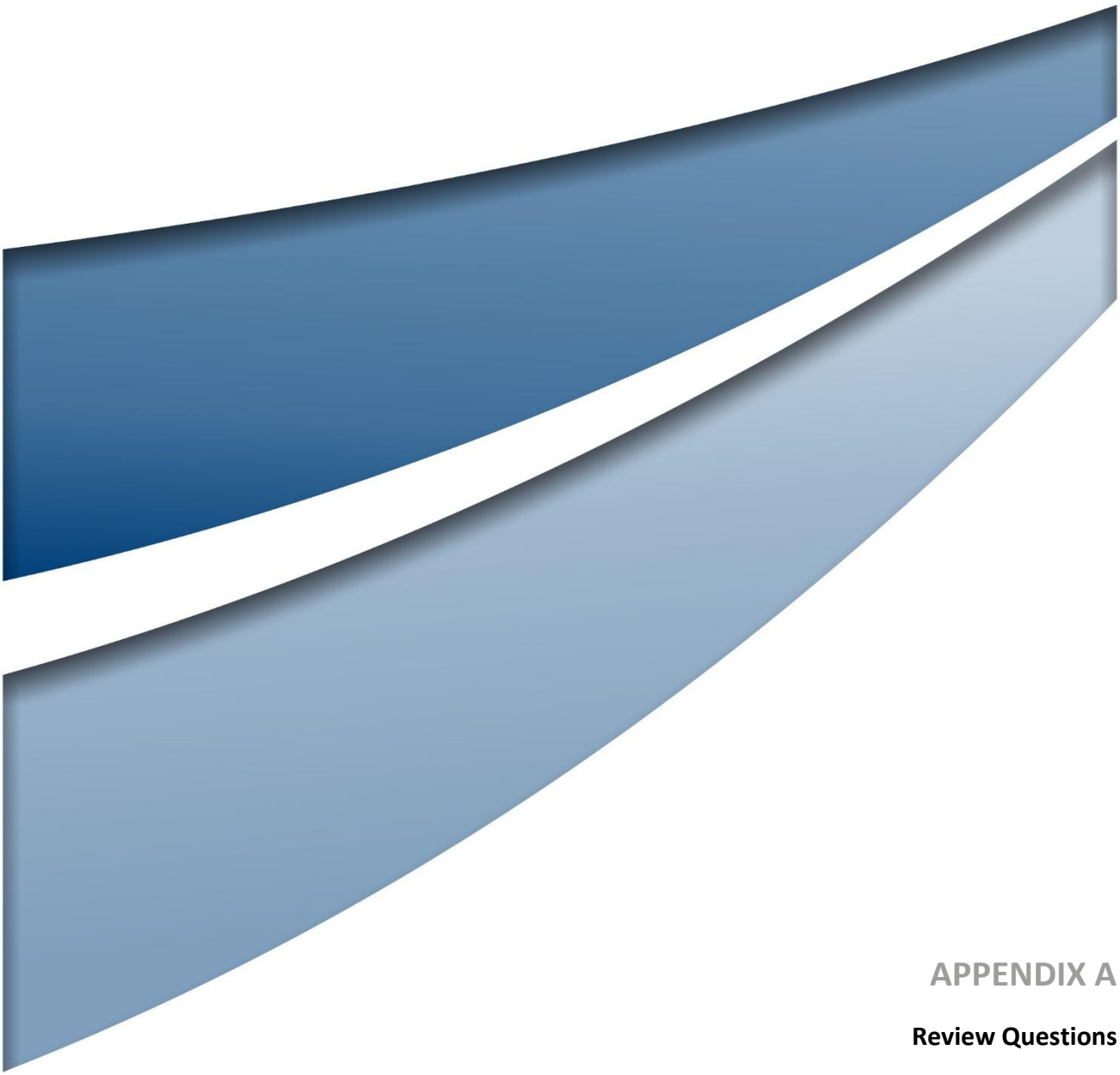


APPENDIX A

Review Questions

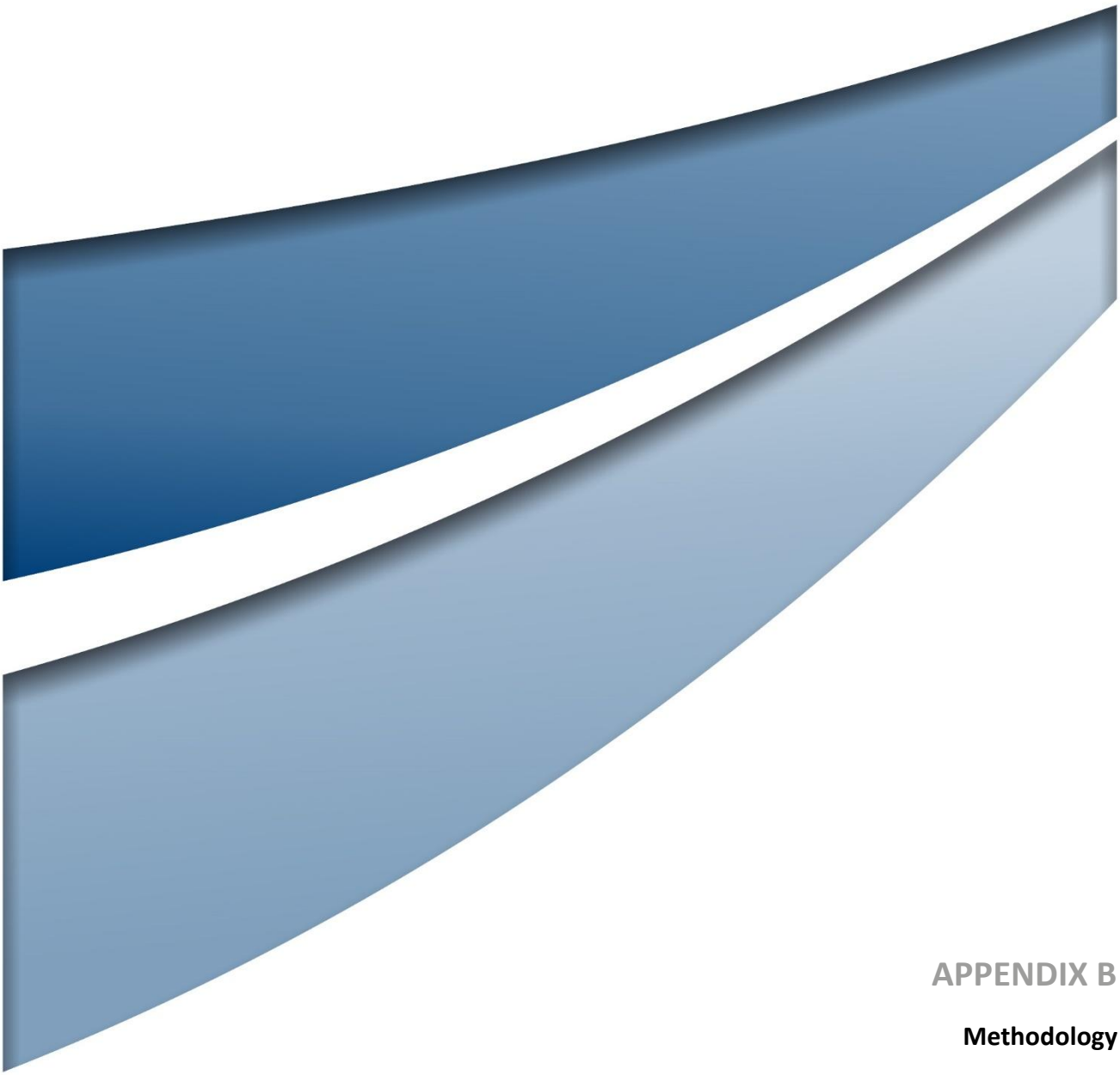
1.0 Appendix – SIA Review Questions

Table 1 outlines the responses to the review questions in Appendix C of the SIA Guideline, used to confirm the requirements of the SIA Guideline have been addressed.

Table 1 Review Questions

Review questions	Addressed in SIA (yes/no), relevant sections
General	
1. Does the lead author meet the qualification and experience requirements?	Yes
2. Has the lead author provided a signed declaration?	Yes, refer to **Author Declaration**
3. Would a reasonable person judge the SIA report to be impartial, transparent and suitably rigorous given the nature of the project?	Yes
Project's social locality and social baseline	
4. Does the SIA report identify and describe all the different social groups that may be affected by the project?	Yes, refer to Section 2.4.1
5. Does the SIA report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	Yes, refer to Section 3.0
6. Does the SIA report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects?	Yes, refer to Section 3.0
7. Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the diversity of views and likely experiences?	Yes, refer to Section 3.0
8. Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Yes, refer to Section 2.0
Identification and description of social impacts	
9. Does the SIA report adequately describe likely social impacts from the perspectives of how people may experience them, and explain the research used to identify them? When undertaken as a part of SIA scoping and initial assessment, has the plan for the SIA report been detailed?	Yes, refer to Section 4.0
10. Does the SIA report apply the precautionary principle to identifying social impacts, and consider how they may be experienced differently by different people and groups?	Yes, refer to Section 4.0 and Table 5.1
11. Does the SIA report describe how the preliminary analysis influenced project design and EIS engagement strategy?	Yes, throughout Section 4.0 where relevant
Community engagement	
12. Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	Yes. Refer to Section 2.4 for Assessment limitations
13. How have the views, concerns and insights of affected and interested people influenced both the project design and each element of the SIA report?	Yes, throughout Section 4.0 where relevant, and Section 6.1

Review questions	Addressed in SIA (yes/no), relevant sections
Predicting and analysing social impacts	
14. Does the SIA report impartially focus on the most important social impacts to people at all stages of the project, without any omissions or misrepresentations?	Yes, refer to Section 4 and Table 5.1
15. Does the SIA report analyse the distribution of both positive and negative social impacts, and identify who will benefit and who will lose from the project?	Yes, refer to Section 4 and Table 5.1
16. Does the SIA report identify its assumptions, and include sensitivity analysis and alternative scenarios? (including 'worst case' and 'no project' scenarios where relevant)	Yes
Evaluating significance	
17. Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the project, including any cumulative effects?	Yes, refer to Section 4 and Table 5.1
18. Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	Yes, refer to Section 4 and Table 5.1
Responses, monitoring and management	
19. Does the SIA report propose responses that are tangible, deliverable, likely to be durably effective, directly related to the respective impact(s) and adequately delegated and resourced?	Yes, refer to Table 5.1 and Section 6
20. Does the SIA report demonstrate how people can be confident that social impacts will be monitored and reported in ways that are reliable, effective and trustworthy	Yes, refer to Table 5.1 and Section 6
21. Does the SIA report demonstrate how the proponent will adaptively manage social impacts and respond to unanticipated events, breaches, grievances and non-compliance?	Yes, refer to Table 5.1 and Section 6



APPENDIX B

Methodology

1.0 Appendix B – Methodology

1.1 Social Locality and Baseline Development

The term 'social locality' or 'area of social influence' commonly used in SIA practice refers to the geographies and communities of interest relevant to the SIA. There is no fixed meaning or predefined geographic boundary in determining a social locality, instead, the scale of the social locality should be established on a case-by-case basis, having regard to the nature of the project, and its impacts (DPE, 2023).

The SIA Guideline suggests that the social locality should be defined with consideration of:

- The scale and nature of the project; its associated activities including ancillary works and infrastructure; potential direct and indirect impacts (for example, transport and logistics corridors or property acquisitions); and potential cumulative impacts.
- Who may be affected by the project and how they may be affected; their social, cultural and demographic characteristics; their relevant interests and values; the things that differentiate groups (such as cultural diversity) as well as things that they have in common; and the broader community and public interest.
- Whether any vulnerable or marginalised people may be affected by the project; including people on low incomes; people living with disabilities, chronic medical conditions or in poor health requiring access to services; culturally and linguistically diverse communities; people who are homeless or in insecure housing; people who are unable to represent themselves or other vulnerable people such as elderly people, children or single-parent households.
- Built or natural features on or near the project that could be affected, and the intangible values that people may associate with these features, such as a sense of place or belonging, rural character, community cohesion, connection to Country and value of stories within the cultural landscapes, and use of natural areas and resources.
- Relevant social, cultural, demographic trends or social change processes occurring now, or which have occurred in the past near the project site and in the broader region, including how people have felt or experienced these changes; community resilience; different trends and patterns around issues relating to key social issues including rental affordability, employment, changing land uses, population and demographic change; or experiences of extreme weather and natural hazards.
- The history of the proposed project and the area, and any similar experiences people near the project have had, including change prior to, or created by, the planning assessment process; how people have reacted to early discussions; and how these discussions and other experiences have affected the broader community; and the traditional Aboriginal use of the place, recent history of the place and people and any ongoing traumas.
- Other project developments occurring in the social locality that may result in cumulative impacts.

In defining the social locality for the Project, statistical areas prescribed by the Australian Bureau of Statistics (ABS), as well as the land tenure composition of properties in, or nearby the Project Area, have also been used as a proxy to assist in defining the characteristics of the Project's social locality. The primary communities of interest that comprise the social locality are outlined in **Table 2.1**, illustrated in **Figure 2.7** and are further described in the Social Baseline Profile (further details in **Section 3.0**).

Social locality definition has also been informed in collaboration with other multi-disciplinary specialists within the team, particularly those specialists working on the visual and economic assessment for the Project.

1.1.1 Data Sources

The social baseline has made use of a range of data sources to understand the socio-economic, cultural and demographic characteristics of the communities within the Project's social locality, and has included analysis of publicly available secondary datasets, including the most recent Australian Census (2021), as well as a thorough review of local media, government plans and strategies and other literature and data sets.

Statistical and comparative analysis using ABS data has been undertaken at the LGA level to capture key characteristics and trends across local communities. Suburb and Localities (SAL) and Urban Centres and Localities (UCL) level data has also been utilised, with key indicators compiled and data sources outlined themed by key contextual components.

Table 1.1 outlines the social indicators and datasets that have been used to inform the social baseline as well as additional detail on the community capitals analysis.

Table 1.1 Data Source

Capital	Questions	Social indicators	Data sources
Natural	What are the key landscape features in proximity to the Project. How important are these features to residents and their sense of place? How vulnerable/concerned are communities to extreme weather events? Are there key environmental strengths that support economic, community, or environmental activities that may be impacted by the Project? Are there any environmental indicators that are a key focus for preserving or improving?	Key landscape features. National Parks. Biodiversity. Cumulative impacts.	Government strategic plans CSIRO National Parks and Wildlife Landcare NSW
Economic	How diverse is the economy? What is the capacity of the existing workforce? i.e. what is the unemployment rate? How many people are employed in different industries of employment? What is the significance of agriculture for the local economy? How does the Project align with this significance? What are the key drivers of the economy?	Index of Economic Resource. Median household income. Index of Education and Occupation. Rates of unemployment. Top industries of employment. Median mortgage repayments. Median house prices.	ABS Census. Government strategic plans. Realestate investar SALM. .idcommunity SEIFA.
Human	What is the level of formal education in the community? What are people's qualifications? Are these qualifications transferrable to the Project? What is the health status of the community? Are there any key health concerns. What is the size of the Aboriginal and/or Torres Strait Islander population?	Educational Attainment. Age profile. Chronic diseases. Rate of mental health conditions. Proportion of Aboriginal and/or Torres Strait Islander population.	ABS Census Government strategic plans .idcommunity Socio-Economic Indexes for Areas (SEIFA) Social Health Atlas of Australia (PHIDU, 2023)

Capital	Questions	Social indicators	Data sources
Cultural	Are there tangible and intangible sites of cultural significance within the Project area? How will the Project impact these? Who are the Traditional Owners and how are they represented? What other groups exist that represent First Nations people? What are the values, histories and aspirations of First Nations peoples within the social locality? What is their ongoing connection to Country and language? Is the area culturally diverse? Is there a high proportion of people born overseas? What does the community value in the area?	Indigenous population. Aboriginal community. Proportion of people born overseas. Cultural heritage.	ABS Census Engagement outcomes Government Strategic Plans Tourism websites
Social	What is the socio-economic status of the community? What is the level of advantage / disadvantage in the community? What are the attitudes and perspectives of local and regional residents – are they likely to be supportive of the Project? What are the levels of community stability/ mobility? What are the area's key priority areas? Is the proposed Project aligned with the Council's strategic plan? Are community values, concerns and/or aspirations documented in the Community Strategic Plan?	Community values and aspirations. History of community and area. Rate of volunteerism. Index of socio-economic disadvantage. Proportion of the population speaking languages other than English. Proportion of the population who had the same address one/ five years ago.	Government strategic plans ABS Census SEIFA
Political	What is the degree to which communities are represented by individuals and groups, including levels of government? What local governance structures are in place? What is the socio-political context of the communities of interest? What level of influence / involvement in decision-making have communities had in other projects of a similar nature? What issues are being discussed in the public domain through various media channels? How are people hearing or receiving information about the project?	Levels of government support. LALCs and Traditional Owners. State election, political views. Political figures and relation to project.	ABC Elections NSW LALC Parliament of NSW Media Parliament of Australia Local Government websites

Capital	Questions	Social indicators	Data sources
Physical	What is the supply and demand for temporary / emergency accommodation? Is their existing capacity should demand increase associated with an influx of workers? What are the key social infrastructure and services that would support a construction workforce? Are there any service gaps that may be further exacerbated by an incoming construction workforce? Are there any focus areas for social infrastructure delivery and how can the Project support this? Is there an expectation that the Project will contribute to a decrease in electricity prices?	Housing tenure type. Housing and rental availability. Availability of short-erm accommodation. Availability of health care services. Rates of access to health care practitioners. Availability of education institutions. Regional connectivity and transport.	ABS Census Government strategic plans TAFE NSW Public Health Information Development Unit (PHIDU) .idcommunity Media Australian Tourism Data Warehouse 2024 AirDNA 2023 NSW Health

1.2 Social Impact Evaluation and Management

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. These are based on consideration of the social baseline, community consultation, social research and technical knowledge relating to social impacts of development. All of these are considered in providing an evidence base for the impact ranking. The residual impact is also assessed, following consideration of the mitigation or enhancement measures to be put in place (DPE, 2023) and outlined in **Figure 1.1.**

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

Figure 1.1 Dimensions of Social Magnitude

Source: (DPE, 2023).

Each project activity is assessed by its potential impacts on people, through consideration of whether previous investigation of the impact has been undertaken, the potential for cumulative impacts, and the consideration of possible mitigation or enhancement measures to reduce negative impacts and enhance positive impacts.

To prioritise the identified social impacts, a risk-based framework has been adopted. In this regard, stakeholder perception of impact is considered an independent and no less valid component of risk; with stakeholder perceptions often varying between individuals and groups. For 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, as determined through consultation.

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. This approach is reflected in the SIA Guideline, where level of concern/interest and intensity or importance are considered.

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.

The social significance matrix used to evaluate social impacts (refer to **Figure 1.2**) 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) to determine an overall evaluation of impact as 'low', 'medium', 'high' or 'very high'. **Figure 1.3** and **Figure 1.4** contain further details regarding magnitude and likelihood classifications. Proposed mitigation and enhancement strategies are also considered in determining the residual social impact.

	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 1.2 Social Impact Matrix

Source: (DPE, 2023).

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

Figure 1.3 Defining Magnitude Levels for Social Impact

Source: (DPE, 2023).

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

Figure 1.4 Defining Likelihood Levels for Social Impacts

Source: (DPE, 2023).

In impact evaluation, both positive and negative impacts are considered, with slight adjustments made to the approach to reflect positive impacts e.g., 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, etc.

1.3 Consultation Mechanisms

Table 1.2 includes the engagement mechanisms utilised throughout both rounds of engagement for the Wattle Creek Energy Hub[1].

[1] A coordinated approach to engagement for the Project with the Wattle Creek BESS was adopted in the second round of engagement due to the projects being proposed on the same property and to ensure engagement provided clear and consistent information on both projects. Furthermore, a coordinated approach to engagement with the Wattle Creek BESS and Wattle Creek Wind Farm was utilised in the first round of engagement.

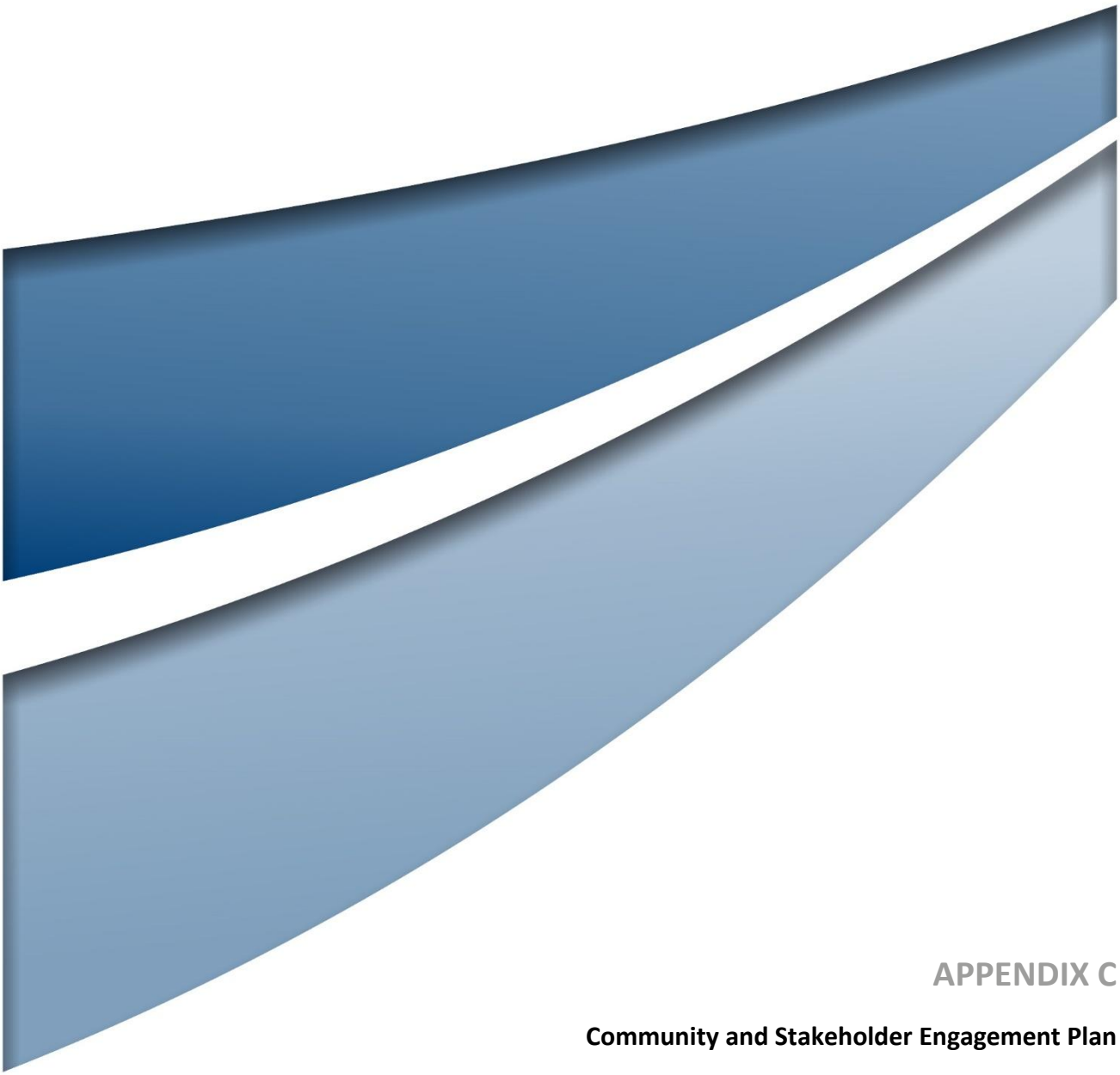
Table 1.2 Communication and engagement mechanisms

Mechanism	Targeted stakeholder	Engagement Objective	Description	First Round of Consultation	Second Round of Consultation
Website	Host landholders. Local businesses and service providers. Community groups. Traditional Owners. Broader community. Local media.	Inform	A website dedicated to the Project including a description and overview of the Project, development application process, company information, responses to key concerns, risk management plans, maps, media releases and contact; and subscription information.	A Project-dedicated website and email address were established in February 2023 introducing the Project. Updates have been made throughout the preparation period.	Website updated with posters, newsletters, and write-ups of news items when required to reflect the most up to date information throughout the planning process. The email address has also been monitored throughout the process. Pop-up link to survey prompt feedback included.
Media Release & Social Media	Local Government. Traditional Owners. Host landholders. Neighbouring/proximal landholders. Community groups. Wider community. Local businesses and service providers. Local media.	Inform	To introduce the Project to the broader community through local and regional media channels.	Advertising in the Goulburn Post and media features on ABC radio stations in March 2023 to advise of upcoming consultation opportunities and provide Project updates.	Notification of survey seeking input on the community benefit sharing program shared on community Facebook groups, Project Facebook channel, and the local media.
Community Newsletters & Updates	Broader community.	Inform	Project information sheets to distribute information about the Project to the broader community and targeted stakeholders.	Newsletter No. 1 – Project overview and invitation to drop-in session was hand delivered in March 2023 immediate project neighbours within 3 km of proposed infrastructure.	Newsletter No. 3 – Invitation to attend community drop in-session distributed in May 2024 distributed to residences within 4 km of the Project Area by Australia Post. Update No. 4 – Updated Project overview and link to survey distributed in September 2024 to the website subscribers and key stakeholders

Mechanism	Targeted stakeholder	Engagement Objective	Description	First Round of Consultation	Second Round of Consultation
				Newsletter No. 2 – Provided to proximal landholders in October 2023 to provide an update on the status of the Project and provide feedback received from the community during the scoping phase.	Newsletter No. 5 – Will provide a Project update and present the draft findings of EIS & SIA and inform the community of the exhibition process.
Drop-in Session	Broader community Community groups. Local businesses and service providers.	Consult	Multi-hour time periods when stakeholders can drop in to speak to the Project team and experts, view documents and plans and ask questions of the Project team.	One drop-in session held on 9 March 2023 at the Marulan War Memorial Hall.	Two drop-in sessions held: • 31 May, Marulan War Memorial Hall • 1 June, Canyonleigh Community Hall. The session summarised the draft results available draft technical studies and were used to gain feedback for the SIA.
Online Survey	Broader community.	Consult	Online or offline surveys to obtain input and feedback on Project decision-making, as well as specific information about the needs, desires and impacts on stakeholders related to the Project.	Established in Mach 2023, with all feedback until 28 April, to be considered in this SISR. A link to the survey was made available on newsletter no. 1 and at the drop-in session.	The survey was updated and distributed in the second phase to provide opportunity for the community to provide further feedback and validate impacts from the scoping phase. The survey was also utilised to understand potential mitigation and enhancement measures. A link to the survey was made available on newsletter No. 3 and at the drop-in sessions.
Personal Meetings or Interviews	Proximal landholders. Local Government. Community groups. Traditional Owners.	Involve	Introductions to the Project, semi-structured interview discussions to listen to individual concerns, interests,	One-on-one meetings held throughout the months of March and April 2023, with members of the Spark Renewables Project team.	Follow up interviews and meetings with proximal landholders and community groups.

Mechanism	Targeted stakeholder	Engagement Objective	Description	First Round of Consultation	Second Round of Consultation
			and issues to gather preliminary feedback, including sensitivities, understanding of information needs; and future engagement preferences.		Interviews held with local businesses and services providers to understand existing capacity and constraints.
Project Briefings	State Government. Local Government. Traditional Owners. Community groups.	Involve	Formal briefings to key stakeholders and government agencies, with Project Information Sheets and/or slide decks, to formally introduce the Projects.	Initial Project briefings undertaken in March and April 2023. Included a briefing at the Canyonleigh Community Association meeting on 22 March 2023.	Project briefing undertaken.

Spark Renewables has an ongoing CSEP (refer to **Appendix C**) that will continue to inform engagement undertaken throughout the assessment and development phases should the Project be approved.



APPENDIX C

Community and Stakeholder Engagement Plan

Wattle Creek Energy Hub

Community and Stakeholder Engagement Plan

We acknowledge the Traditional Custodians of the land on which this Project is located, being the traditional lands of several groups, including the Gundungarra, Wadi Wadi, Wiradjuri and Dharawal people and recognise their continuing connection to land, water and community.

Document Status

Rev No.	Reviewers		Approved for Issue	
	Name	Date	Name	Date
V01	Marju Tonisson	3 October 2024	Daniel Leahy	
V02	Marju Tonisson	24 October 2024	Daniel Leahy	
V03	Marju Tonisson	9 December 2024	Daniel Leahy	

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Abbreviations

Abbreviation	Definition
ABS	Australian Bureau of Statistics
BESS	Battery Energy Storage System
CEC	Clean Energy Council
CO_2	Carbon dioxide
CSEP	Community and Stakeholder Engagement Plan
CPI	Consumer price index
Department, DPHI	NSW Department of Planning, Housing & Infrastructure
EIS	Environmental Impact Statement
EMF	Electric and Magnetic Field
EPA	NSW Environmental Protection Authority
FAQ	Frequently Asked Questions
GW	Gigawatt(s)
ha	Hectare(s)
IAP2	International Association for Public Participation
IPP	Indigenous Participation Plan
km	Kilometre(s)
kV	Kilovolt(s)
LALC	Local Aboriginal Land Council
LGA	Local Government Area
LOTE	Language other than English
MP	Member of Parliament
MW	Megawatt(s)
N.a.	Not applicable
NBN	National Broadband Network
NEM	National Electricity Market
NSW	New South Wales
OEM	Original Equipment Manufacturer
PCU	Power conditioning unit
Project	Wattle Creek Energy Hub
Proponent	Spark Renewables
Q&A	Questions and answers
RFS	Rural Fire Service
SEAR	Secretary's Environmental Assessment Requirement
SIA	Social Impact Assessment
SSD	State Significant Development
TNB	Tenaga Nasional Berhad
Umwelt	Umwelt Environmental and Social Consultants

1. Introduction

Spark Renewables is one of Australia's leading developers and long-term owners of Australian renewable energy projects, proud of our commitment to community engagement and social licence. Since starting our journey in 2018, we made it a priority to deliver renewable energy projects that not only meet exceptional technical standards but exceed the expectations of local communities.

Central to Spark Renewables' development principles is our ability to gain social licence and provide genuine, meaningful community engagement. We recognise the importance of community acceptance to the success of our projects, and we are dedicated to making a positive impact in the communities where we operate. While our projects bring significant benefits, we acknowledge that the nature and scale of these developments can cause disruption to communities. Therefore, we remain committed to collaborating with stakeholders to co-design projects where the entire community can benefit. As long-term project owners and operators, we prioritise developing genuine relationships made to last 35+ years.

1.1 Established Presence: Bomen Solar Farm, Wagga Wagga, NSW

Our exemplary track record is demonstrated by Bomen Solar Farm, located in Wagga Wagga, NSW. Our outstanding reputation within the region has translated to best-in-class levels of engagement and strong support received for that project to date. The Bomen Solar Farm is highly regarded as one of the fastest-permitted large-scale renewable energy projects in NSW in the Clean Energy Council's Benefit Sharing Guide.

Positive outcomes include:

- Our commitment to First Nations communities, with more than 25 per cent of our mechanical workforce identifying as Aboriginal or Torres Strait Islanders.
- Building partnerships with industry and universities to support research that promotes sustainable land use outcomes for the renewables industry, such as:
  - Sponsoring an agrisolar research trial with Charles Sturt University to identify systems for maximising productivity from grazing on Bomen Solar Farm, the results of which will contribute to the success of agrisolar practices on other solar projects.
  - Partnering with the University of New South Wales, the University of Technology Sydney, and a leading solar panel recycling and resource recovery company PV Industries to drive the diversion of solar panel waste from landfill and find sustainable end-of-life solutions for solar panels.
- At Bomen Solar Farm, under an agreement with Westpac, we established a community benefit fund of over $1 million, the largest of any Australian Solar Farm at the time.

1.2 Industry best practice

Spark Renewables is committed to engaging respectfully and transparently with community stakeholders throughout the lifecycle of the Project. Spark Renewables is committed to addressing significant environmental, social, and cultural impacts and facilitating positive social and economic outcomes in the regions in which it operates.

As a member of the industry's peak body – the Clean Energy Council (CEC) – Spark Renewables is signatory to the voluntary set of commitments outlined in the Community Engagement Best Practice Charter for Renewable Energy Developments (CEC, 2018). In line with this Charter, when developing, constructing, and operating projects, Spark Renewables will:

1. Engage respectfully with the local community, including Traditional Owners of the land, to seek their views and input before submitting a development application and finalising the design of the project.

2. Provide timely information and be accessible and responsive in addressing the local community's feedback and concerns throughout the life of the project.
3. Be sensitive to areas of high biodiversity, cultural and landscape value in the design and operation of projects.
4. Minimise the impacts on highly productive agricultural land and explore opportunities to integrate agricultural production.
5. Consult the community on the potential visual, noise, traffic, and other impacts of the project, and on the mitigation options.
6. Support the local economy by providing local employment, training, and procurement opportunities.
7. Offer communities the opportunity to share in the benefits of the Project, and consult them on the options available, including the relevant governance arrangements.
8. Commit to using the Project to support educational and tourism opportunities where appropriate.
9. Demonstrate responsible land stewardship over the life of the project and welcome opportunities to enhance the ecological, cultural and/or agricultural value of the land.
10. During the life of the project, recycle waste materials where feasible and commit to responsible decommissioning or refurbishment/repowering of the site at the end of the Project's life.

Signatories to this Charter are required to prepare annual reports disclosing how they are engaging respectfully with the communities they operate in, being sensitive to environmental and cultural values, minimising impact on agriculture, prioritising co-land use, and making a positive contribution to the regions in which they operate. Spark Renewables disclosed its report for the 12 months ended 30 June 2024 to the CEC.

Further, the Charter addresses the Clean Energy Council's *Community Engagement Guideline (2018)*, which builds on the International Association for Public Participation's (IAP2) participation spectrum. The spectrum outlines levels of participation that define the public's role in public participation processes, from the provision of information ("inform") through to increasing levels of collaboration and empowerment, as outlined below.

Inform – the public has access to the information about the Project and potential impacts on them.

Consult – the public can provide suggestions and feedback about the Project.

Involve – their material concerns relating to the Project are directly addressed in risk mitigation plan.

Collaborate – their advice and suggested alternatives are incorporated in the Project to the maximum extent possible.

Empower – they make the final decision that will be implemented in the Project.

1.3 Governance

The Project is State Significant Development (SSD) and requires development consent under the *NSW Environmental Planning and Assessment Act* (EP&A Act 1979). The Project will involve the submission of two development applications, one for both components of the Project – the hybrid solar farm with a battery energy storage capability and a battery energy storage system (BESS) – which are to be accompanied by a detailed Environmental Impact Statement (EIS), that will identify relevant Project impacts and management strategies.

A detailed Social Impact Assessment (SIA) has also been prepared for both components of the Wattle Creek Energy Hub as part of each of the EISs, and the SIA will be informed by a comprehensive community engagement program, outlined within this CSEP, and be prepared in accordance with the Department's *Social Impact Assessment Guideline for State Significant Projects (2023)* and *Undertaking Engagement – Guidelines for State Significant Projects (2024)*.

The Project may also require approval under the federal *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act).

1.4 Purpose

This Community and Stakeholder Engagement Plan (CSEP) outlines the methods and tools for effective engagement with stakeholders through the project assessment phases (up to construction commencement) of the proposed Wattle Creek Energy Hub (or "the **Project**"), which comprises a hybrid solar farm with a battery capability; and a battery energy storage system development proposed by Spark Renewables Pty Limited ("**Spark Renewables**" or "the **Proponent**"). This is a live document to be updated and revised as the Project progresses.

This CSEP was first established at the Project's inception in 2022 and has been updated and revised throughout the life of the Project. All engagement to date is documented within the CSEP, highlighting feedback received and how these perspectives shape the Project. Additional engagement is conducted and captured as part of the SIA in order to propose strategies relating to the management of key social impacts. As the Project progresses through the planning process, the CSEP also delineates our prospective engagement activities, which will ensure the Project is not only successful but mutually beneficial for all stakeholders associated. Key measures for minimising the impact of the Project are addressed, along with shared benefit commitments, which, once implemented, will set a new industry standard for community funding in NSW.

1.5 Engagement objectives

Spark Renewables aims to increase community acceptance of the Project (the social licence to operate) by undertaking effective and ongoing community engagement throughout the Project assessment phases.

The CSEP has the following key objectives:

- To utilise appropriate methods to inform the community about the Project and provide updates on Project progress.
- To develop trusted relationships with stakeholders through open and transparent communication and engagement.
- To ensure the community has a voice in the process and their input is used to inform the social and environmental assessment for the Project and ongoing project design and planning, including the development of community benefit sharing programs.
- To ensure the broader community and stakeholders are kept informed about potential impacts, benefits, and activities associated with the Project.
- To ensure that commitments made to the community in the Project development stage are met.

The above objectives are in line with the NSW Department of Planning, Housing and Infrastructure's (DPHI) *Undertaking Engagement – Guidelines for State Significant Projects (2024)* community participation objectives for engaging on State Significant Development projects (refer to Figure 1 below).

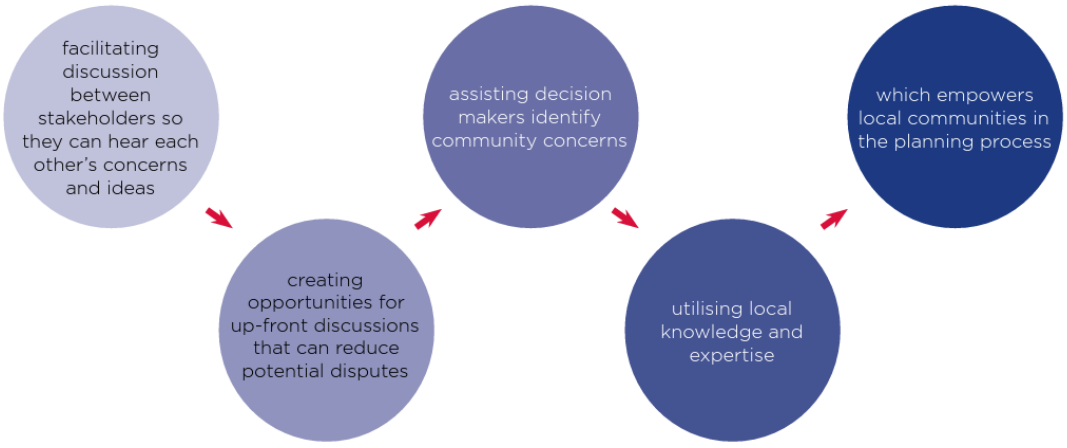


Figure 1 Commitment to public participation (CPP, 2019)

This CSEP identifies:

- Relevant local community and regulatory stakeholders to be engaged,
- Perceived and real Project impacts (positive and negative) related to each stakeholder group,
- Engagement mechanisms to meaningfully involve different stakeholder groups,
- Key Project messages,
- Engagement timing,
- Roles and Responsibilities, and
- Protocols for ongoing engagement and evaluation.

1.6 Planning process

There are eight phases within the planning process. Community and other stakeholder engagement outcomes during this process will inform the ongoing project design and assessment processes in the preparation of the Scoping Report, Social Impact Assessment, and in the preparation and exhibition of the Environmental Impact Statement. This CSEP also outlines the consultation to be undertaken in the construction and operational phases should the Project proceed.

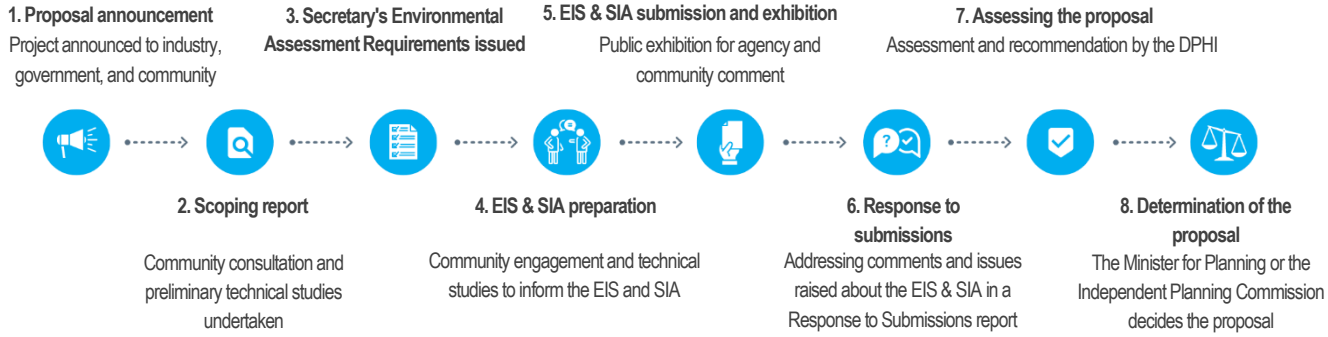


Figure 2 Planning and assessment process for state significant development in NSW

1.7 Distribution

The document is internal for use by Spark Renewables and any consulting parties that have been engaged to work on the Project.

1.8 Roles and responsibilities

Spark Renewables has ultimate responsibility and accountability to ensure that the Project is developed, designed, built, operated, and decommissioned in accordance with the Project's Development Consent. Other organisations involved in delivering the Project including delivery partners, Original Equipment Manufacturers and environmental consultants, will also be responsible for supporting the implementation of this Plan.

Spark Renewables has engaged Umwelt Environmental and Social Consultants ("Umwelt") to develop the EIS and SIA for the Project, and thus, Umwelt also have responsibilities related to the implementation of the stakeholder engagement program within this CSEP. Table 1 provides a summary of how Spark Renewables and our partner organisations will implement the stakeholder engagement program in line with this CSEP.

Table 1 Key roles related to communication and stakeholder engagement

Organisation	Role	Responsibilities and authorities
Spark Renewables	Senior Development Manager	– Overall management of community and public relations during development. – Face-to-face consultation, meetings, phone calls and correspondence with community members and stakeholders. – Run public information drop-in sessions. – Ensuring that issues are responded to quickly and mitigated where possible. – Local media interviews.
	Development Manager	– Assistance with research and management of stakeholder database.
	Senior Development Engineer	– Provide figures and maps to assist with stakeholder communication.
	Communications Manager	– Maintenance and updating of the Project website. – Prepare and distribute public information materials (e.g. newsletters and media releases.
	Head of Development	– Provide oversight to community engagement activities.
	Chief Legal Officer	– Provide community engagement support and compliance oversight on engagement activities.
	Chief Executive Officer	– Overall accountability for obtaining and maintaining the social licence to operate, and reputation. – High profile/national media interviews.
Environmental Consultants (Umwelt)	Environmental assessment	– Provide technical information to assist Spark Renewables to prepare communication collateral, project updates, respond to stakeholder enquiries and review key messages as appropriate to ensure they meet technical requirements. – Assistance with figures and maps to assist with stakeholder communication.
Social Impact Consultants (Umwelt)	Social impact assessment and associated engagement	– Assist Spark Renewables with the preparation and delivery of engagement materials. – Collaborate with Spark Renewables to deliver targeted engagement to support the development and delivery of a social impact assessment and associated inputs.

2. Project overview

2.1 Project scope

Key aspects of the Project are provided below.

Table 2 Project scope

Proponent	Spark Renewables is one of Australia's leading developers and long-term owners of renewable energy generation assets. Starting in 2018 with a single 120 MW_{dc} solar farm, the potential generation capacity of our development portfolio has grown rapidly to span solar, wind and battery storage projects. Our goal is to develop and build projects leading the renewable energy transition in Australia. We work with industry innovators and tertiary institutions to provide sustainable, socially acceptable solutions for the generation of electricity. Spark Renewables is a member of the Clean Energy Council, and a sponsoring donor of RE-Alliance. Spark Renewables is part of the leading Malaysian energy utility, Tenaga Nasional Berhad (TNB), a group of companies owning and operating renewable energy projects in Malaysia, Türkiye, Ireland, the United Kingdom and Australia. Backed by the ~A$29 billion energy giant TNB, we are expanding our influence across Australia's renewable energy generation market, while maintaining the culture and local expertise that has always energised us. Spark Renewables' knowledge of the Australian sector has further been enabled by TNB's global connectivity, 75-year operating history with a proven track record and resources, underpinning our commitment to Australia's clean energy future. TNB currently has a total of 10.5GW renewable energy assets at various stages including operational, in construction and under development. The company is leading towards a more resilient and sustainable energy landscape, aiming to be a leading provider of sustainable energy solutions.
Landholder	The University of Sydney is the landholder of the Arthursleigh property, a commercially operating farm producing Merino wool, and Angus cattle. In August 2021, following a rigorous tender process, Spark Renewables was awarded preferred status by the University of Sydney in respect of its Request for Proposal – Ground Lease for the Arthursleigh REGP.
Project generation capacity	The Wattle Creek Energy Hub includes two projects on 6,200 hectares (ha): 1) A hybrid solar farm with a proposed solar generation capacity of 265 MW(ac) and battery energy storage system (BESS) with a 100 MW (2 hours storage) capability; and 2) A battery energy storage system (BESS) with a 350 MW (4 hours storage) capability.
Components	– Solar farm: up to 490,000 modules covering 517 ha – A hybrid solar battery energy storage system (lithium-iron): housed in a series of outdoor "shipping" containers – Within the solar farm power conversion units, a cable network and internal access tracks – Battery energy storage systems – Substation connecting the solar farm to the electricity transmission network via Marulan Substation – Communication mast (80 metres) at the proposed substation location – A transmission line – Internal electrical reticulation network including underground cables and overhead powerlines to connect the panels and collector substation – Operation and maintenance facility – including a site office, buildings, amenities, equipment sheds, storage, and parking areas

	– Other associated permanent infrastructure including hardstands, new access tracks, static water tanks, upgrades to existing access tracks, (e.g. access point from Canyonleigh Road), and site entrance signage – Targeted road network upgrades to facilitate delivery of solar farm components – A research Test-Bed Facility – comprising of a 2-acre hard standing area, demountable buildings, security fencing, parking, 200kVa power supply and 100kVA dummy load (simulated electrical load for testing purposes). – Temporary construction facilities including construction compounds with site office buildings; on-site concrete batching plants for use during the construction phase; and laydown areas used for installation and storage of solar farm components.
Annual power	Up to 63,000 houses powered annually[1] and offsetting ~300,000 tonnes of CO_2 emissions annually[2].
Grid connection	The site is located adjacent to the substation, and the planned Sydney Ring – a proposed high-capacity 500 kilovolt (kV) transmission network designed to increase the supply capacity to Sydney, Wollongong, and Newcastle. Direct connection from the Project would be via the Marulan 300 kV/132kV substation owned by Transgrid.
Community	Proposed establishment of a Community Benefit Sharing Program designed to support causes that matter locally and to First Nations communities; delivering long-lasting social, economic and environmental benefits. Based on the proposed solar farm size of 265 MW, the fund would provide over ~$7 million over the 30-year construction and operation period.
Contact & receiving information	Project website www.wattlecreekenergyhub.com Project email info@wattlecreekenergyhub.com Facebook page https://www.facebook.com/wattlecreekenergyhub Phone 1300 271 419

The Project is strategically located to take advantage of the existing electricity transmission network.

The Project Site is located within a rural setting, with the site itself, adjacent properties and the broader locality currently used for agriculture and research by the University of Sydney. Agricultural land use will continue as an agrisolar system, through the integration of grazing during operation and agricultural rehabilitation following decommissioning. The site is in proximity to the Hume Highway and there are a number of potential sensitive receivers located proximal to the Project site.

[1] Based on household consumption of 6700kWh/year.
[2] National Greenhouse Accounts Factors (DCCEEW, 2021).

Figure 3 Typical photovoltaic module layout in 2P configuration

Figure 4 Typical battery energy storage system layout configuration

2.2 Project location

The Project is proposed to be located east of Big Hill, which is approximately 25 kilometres (km) south-east of the Taralga township, 12km to the north east of the Marulan township, 30km north-east of the rural city of Goulburn and 7km north of the M31 Hume Highway. The Hume Highway is an important national highway, connecting Melbourne and Sydney. The Wattle Creek Energy Hub is within the Upper Lachlan Local Government Area (LGA), with the bordering LGAs including Wingecarribee LGA to the east and Goulburn-Mulwaree LGA to the south.

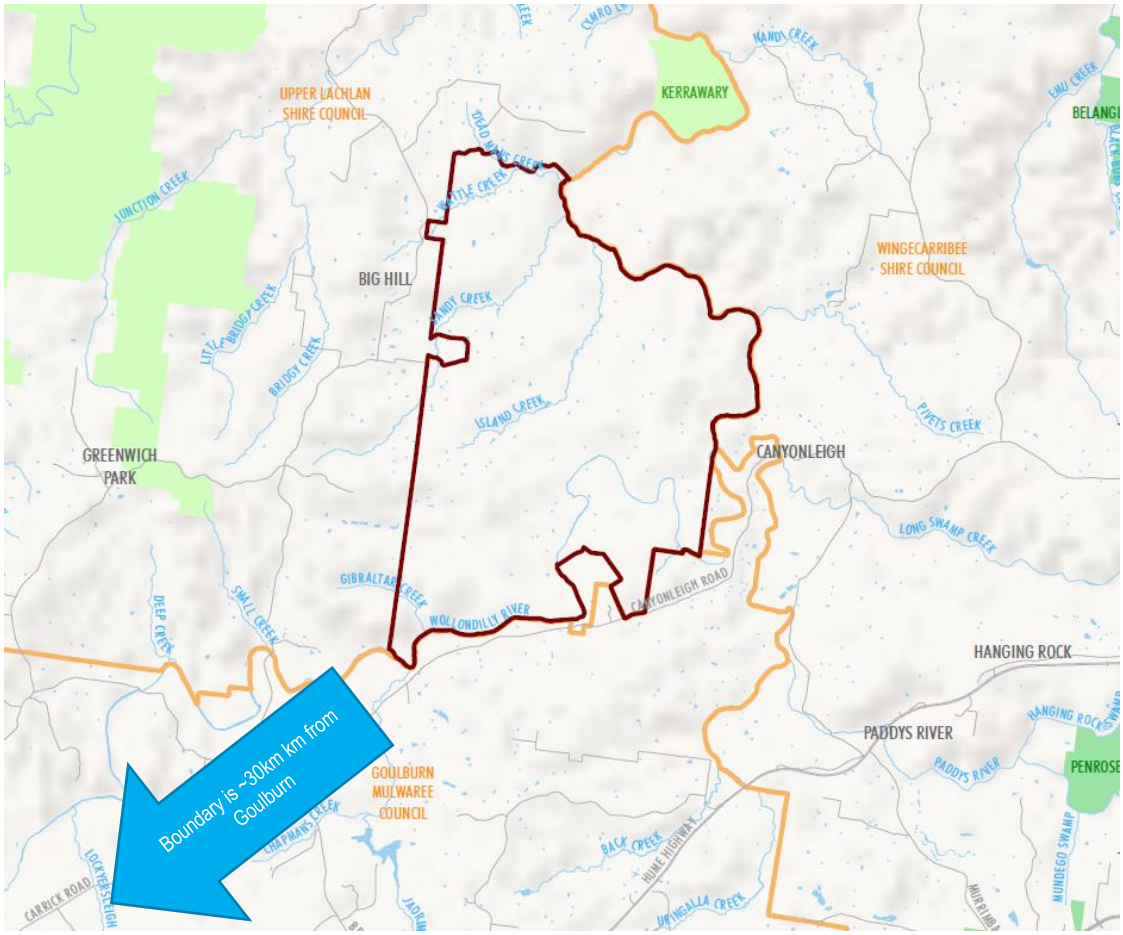


Figure 5 The project site is located in the Upper Lachlan LGA

2.3 Community context

Upper Lachlan Shire is an LGA in the Southern Tablelands region of NSW. The Shire was formed in February 2004 from Crookwell Shire and parts of Mulwaree, Gunning and Yass Shires. The Shire has a population of 8,706 (ABS, 2023) and covers an area of approximately 7,200km^2. Upper Lachlan is a regional area that is known for its quaint villages, fine wool and potato production, wind farms, local history and its picturesque countryside.

Goulburn Mulwaree LGA, bordering the Project boundary to the south, is more populous than Upper Lachlan Shire with a current population of 32,394 but covering a smaller area (approximately 3,220km^2). The township of Goulburn is the largest town in the LGA, accounting for 24,565 of the total population (Agency, 2024). Goulburn was historically a regional centre dependent on a large railway workshop, wool stores, and textile mills. Today, Goulburn hosts a diverse range of industries that include IT, communications, retail, distribution and logistics, engineering, mines, renewable energy and commercial precincts.

Big Hill and Taralga have significantly smaller populations than Goulburn (78 and 403 respectively). Marulan, located to the south of the Project area, has a slightly larger population (currently 1,428) and is home to four quarries (with further quarries proposed). Given the nature of this industry road freight transport, construction material extraction and site preparation services are the top three industries of employment, accounting for a total of 11.1%.

Wingecarribee LGA, bordering the Project to the east, is the most populous LGA with a population of 52,779. The major townships within the LGA include Bowral, Moss Vale, Mittagong, and Bundanoon. The LGA also has a semi-rural landscape, characterised by small towns and villages (Wingecarribee Shire Council, 2023).

The site is located within the geographic region of Pejar Local Aboriginal Land Council (LALC) for engagement purposes, but it is acknowledged that there are other groups, which are connected to the region and potentially the Project site.

Renewable energy has been recognised within both local and regional plans as an area for future investment, with the Upper Lachlan Shire LGA Regional Economic Development Strategy 2018-2022 and Wingecarribee Regional Economic Development Strategy, the issued update in 2023, identifying the need for a plan for renewable energy that benefits the community. Similarly, the draft Southeast and Tablelands Regional Plan 2041 (NSW Planning and Environment, 2022), which includes the three LGAs, has a clear investment direction to position the region as a hub for renewable energy generation, and sustainable agriculture, to ensure a connected and prosperous economy.

Table 3 Comparative characteristics by LGA and considerations for engagement

Characteristics of Upper Lachlan Shire LGA	Characteristics of Goulburn-Mulwaree LGA	Characteristics of Wingecarribee LGA	Considerations for engagement
Median age 49 years	Median age 41 years	Median age 48 years	A higher than state average median age suggests more personal face-to-face mechanisms may be more suitable to facilitate engagement e.g., telephone surveys, personal meetings. Likely to have an interest in the Project.
81.2% of housing owned outright/with a mortgage compared to 64.0% in NSW	67.5 of housing owned outright/with a mortgage	77.1% of housing owned outright/with a mortgage	Landholders are likely to be more invested in outcomes of the Project/concerned about the impacts on their property and livelihoods
Significantly low rate (2.5%) of Languages other than English (LOTE) spoken in the home, compared to 29.5% in NSW.	8.0% of households speak a LOTE in Goulburn Mulwaree	9.5% of households speak a LOTE in Wingecarribee	Low proportion of culturally and linguistically diverse communities suggests it is unlikely to require translation of materials into other languages.
The site is located near multiples other proposed renewable projects.			There may be a chance of consultation fatigue, as well as high levels of interest in renewable energy development projects.
Upper Lachlan Shire (21.9%) and Wingecarribee (18%) have significantly higher rates of volunteering than the state average (13%) and Goulburn-Mulwaree (13.8%).			Volunteering rates are used as an indicator of how well connected and cohesive a community is. High rates suggest that there may be a fast spread of information throughout the community and investment in the sense of community in the local area.

Characteristics of Upper Lachlan Shire LGA	Characteristics of Goulburn-Mulwaree LGA	Characteristics of Wingecarribee LGA	Considerations for engagement
80.1% had the same address one year ago, and 60.7% had the same address five years ago.	77.4% one year prior and 53.4% five years prior to the census	79.7% one year prior and 53.5% five years prior	Low household mobility rates are indicators of how established and invested people are in their local community.
Upper Lachlan Shire has an unemployment rate of 3.9%, slightly lower than the state average. Sheep and beef cattle farming accounts for 18% of total employment in the LGA.	Goulburn Mulwaree has a higher unemployment rate (7.9%) than the other LGAs and the State (4.1%). Top industries of employment are largely focused on the provision of healthcare / social assistance (accounting for 10.2%). However quarries local to Marulan and the project site have made significant local area employment contributions.	In contrast to the other LGAs, Wingecarribee has recently seen a decline in unemployment, currently sitting at 2.7%. The largest industry of employment Aged care and residential services (3%), hospitals (3%), followed by cafes and restaurants (2.9%).	Opportunities for the Project to provide employment and/or contractor/supplier opportunities may be limited due to the existing skills profile and a limited labour pool. Collaboration with local Council, secondary and tertiary education institutions, employment services and business groups will be key to maximise opportunities.

Source: ABS, 2021

2.4 Potential Concerns

Proposed renewable energy projects across NSW have had diverse responses from local communities in relation to their perceived environmental and social impacts. Following a preliminary review of submission reports and other publicly available documentation on nearby renewable energy projects within the region, we understand the following key local issues to be of importance in the planning and potential development of the Project:

- Visual impact on social amenity due to view lines, solar panel glare.
- Land use conflict due to renewables development in productive agricultural areas, with land primarily used for grazing.
- Public health and safety concerns of neighbouring residents associated with Electric and Magnetic Fields (EMFs), radiation, hazardous materials, sleep disturbance from noise impacts and heat generation and flow-on effects on livestock e.g., cattle and sheep.
- Impact on property values.
- Risk of bushfire and lack of capability for local authorities to manage fire outbreaks.
- Concern regarding the management of project land and the potential spread of noxious weeds to surrounding properties.

There are several key aspects of the Project that would benefit from the input of community members and key stakeholders, namely:

- Design of the hybrid solar farm and BESS
- Identification of potential Project impacts to inform investigations for the EIS and SIA
- Suggestions for mitigation and enhancement measures to manage the Project's potential impacts
- Preferred methods and tools for ongoing engagement with the community and key stakeholders
- Community and stakeholder benefit-sharing programs and initiatives.

A detailed analysis of potential concerns is provided in the Project SIA.

3. Stakeholders

Spark Renewables' approach to stakeholder mapping is a cornerstone of our engagement strategy. By carefully considering the diverse stakeholders and communities associated with the Project, we can ensure that every voice in the community is heard. As specialists in NSW, we built longstanding relationships in the community through our Bomen Solar Farm, which enabled us to advance connections with stakeholders across the region. We have captured a wide range of perspectives and continue to address the unique needs and concerns of different groups.

To date, we have undertaken several rounds of engagement and outreach in the community for the Project, including three community drop-in sessions since March 2023, >30 interviews, and four newsletters or updates. We recognise that Spark Renewables will continue to operate in this community for generations to come and understand the importance of co-designing a Project where all layers of the community can benefit. To truly deliver this lasting impact, it remains imperative that all stakeholders are identified and included throughout the full project lifecycle.

Spark Renewables have consulted and will continue to engage with all stakeholder groups across the community as part of the planning, construction, operation and decommissioning of the Project. Stakeholder groups include but are not limited those found in Figure 6.

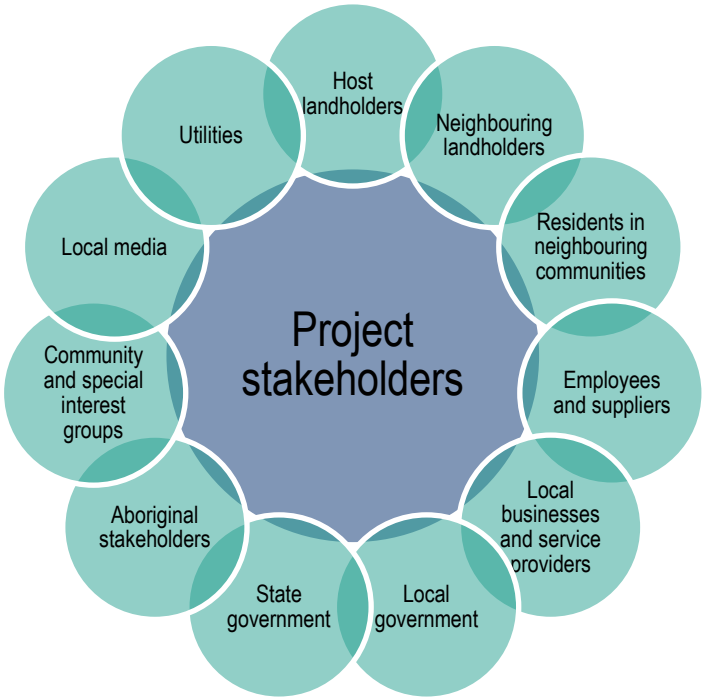


Figure 6 Stakeholder engagement mapping

3.1 Engagement tools and methods

Spark Renewables is committed to a wide range of engagement and communication techniques to reach all stakeholders. Unlike the typical one-size-fits-all approach that is often used in our industry, Spark Renewables is committed a flexible and responsive engagement strategy. We have carefully designed our engagement methods to ensure inclusivity is maintained throughout, allowing us to address the unique needs of each stakeholder group.

A range of online, in-person and offline tools and methods may be used to communicate with and engage the community and other stakeholders during the Project, see Table 4. Face-to-face activities will be subject to any public health orders in effect at the scheduled time of delivery. Tools and methods utilised will, where possible, reflect the preferences of the community and may be modified in response to stakeholder feedback and to ensure that the engagement program is meeting its objectives.

We use software named Simply Stakeholders to record our engagement activities, a secure online platform that tracks commitments and feedback. This system ensures a transparent and organised approach to stakeholder engagement, enabling us to monitor progress and maintain accountability throughout the project lifecycle. Table 10 in 'Appendix A' of this document outlines the stakeholders of relevance to the Project, their potential issues of concern or interest in the proposed Project, and the primary responsibility holder for stakeholder relationships.

Table 4 Tools for engagement and indicative participation level

Tool/Method	Detail	Participation level
Advertising	Advertising in local newspapers and radio stations to advise of upcoming consultation opportunities and provide Project updates.	Inform
Briefings	Formal letters, phone calls, and face-to-face or virtual meetings with key stakeholders including Members of Parliament, Councillors, and Council staff to provide updates on the Project.	Inform
Community contact cards	Business card provided to specialists and contractors to give to community stakeholders if approached.	Inform
Community newsletters	Project information distributed digitally by email or in hard copy to all stakeholders.	Inform
Doorknocks	Project representatives go door-to-door to speak with impacted landholders and neighbours and/or provide them with Project materials.	Inform Consult
Drop-in sessions	Multi-hour time periods when stakeholders can drop in to speak to the Project team and experts, view documents and plans and ask questions.	Inform Consult
Email inbox	A dedicated Project email address (info@wattlecreekenergyhub.com) for managing community and stakeholder correspondence.	Inform
Frequently Asked Questions (FAQs)	A generalised brochure (both online, sent to emails, and handed out at information sessions) responding to common questions from the community regarding project impacts, benefits, mitigation efforts, and technology.	Inform
Letterbox drops or unaddressed mail	Unaddressed collateral containing information about the Project delivered by the Project team or Australia Post.	Inform
Letters	Addressed mail containing information, clarification, response or request to a particular household, business or individual.	Inform
Media releases/statements	Proactive or responsive media announcements published on the Project website and distributed to the media outlets and other key stakeholders to provide updates on the development application process, reaching Project milestones, address concerns, and clarify information.	Inform
Meetings	One-on-one or small group meetings to discuss Project issues and concerns in more detail.	Inform Consult Involve Collaborate
Phone line	A dedicated number for stakeholders to contact Spark Renewables. The number is 1300 271 419.	Inform Consult

Tool/Method	Detail	Participation level
Photography and/or animation/videography	Photos, composites, concept, and artist imagery can help illustrate processes and make technical information more accessible.	Inform
Pop-up stalls	An engagement booth/stall set up at community events and centres to engage and consult with stakeholders.	Inform Consult
Posters	Printed material visualising Project information such as location of the proposed site, background information of the proponent, technology overview, approximate timeline, steps in the planning process, milestones, potential studies required to address impacts to the environment, construction activities, benefit-sharing options, and mitigation of impacts on the community.	Inform Consult
Presentations/Project briefings	A presentation about the Project delivered to a group of interested persons, club or committee on request or by invitation, provided in digital and written form.	Inform
Project overview	A high-level summary of the Project that includes the Project scope, location (including regional and locality maps), the strategic context and rationale for the Project, the Project's potential impacts and benefits, contact information for the Project team and information on the consultation process.	Inform
Signage	Identification, directional, informational, and regulatory signs, boards, and banners used to inform and direct people around the Project site.	Inform
Site visits/tours	On-site meetings with community or other stakeholders to inspect or tour the Project site.	Inform Consult
Social media	Social media presence (Wattle Creek Energy Hub Facebook page dedicated to the Project and Spark Renewables' Facebook, Instagram, and LinkedIn pages) as an information sharing and instantaneous response mechanism.	Inform
Stakeholder database	A distribution list of contacts of individuals and/or organisations considered to be a relevant stakeholder to the Project.	Inform
Surveys	Questionnaires to obtain input and feedback on Project decision-making.	Consult
Website	A website dedicated to the Project (www.wattlecreekenergyhub.com) including a description and overview of the Project, development application process, company information, responses to key concerns, risk management plans, maps, media releases and contact information.	Inform
Workshops	A structured method of working with groups of stakeholders to identify and suggest solutions for Project issues and concerns.	Inform Consult Involve

4. Engagement framework

The Spark Renewables team prides itself on an industry-leading approach to engagement, and as development specialists in NSW. We are committed to building long-term partnerships with local stakeholders, which have been fundamental to the success of our Bomen Solar Farm in Wagga Wagga. Spark Renewables recognises that the relationships formed with the local community in the development phase are essential to the long-term success of the Project as it progresses through to construction and operation. Our engagement framework reflects this commitment to building high quality relationships over an extended period.

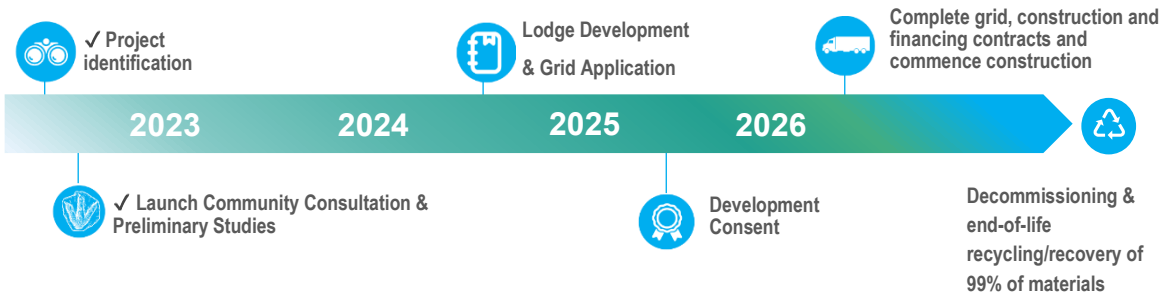
We have actively engaged with the community since the Project announcement in 2023, which helped us refine our approach to future engagement. A survey on benefit sharing options indicated support amongst local community members of the Project's potential contribution to the local economy, including by providing opportunities for local employment and sourcing materials, equipment and services from local business.

The following sections outline our approach to engagement for the Project including delivery timeline, our guiding principles for engagement, our engagement program to date, key feedback received and our plans for future engagement.

4.1 Delivery timeline

There is a rigorous process for assessing State Significant Developments (SSD) under NSW planning legislation, shown in Figure 3. Community and stakeholder engagement is a critical component of this process; with opportunities for community and stakeholder input during preparation of the Scoping Report, preparation of the Environmental Impact Statement (EIS), in the public exhibition phase and, if approved, during construction, operation and decommissioning of the Project.

Figure 3 Indicative milestones for the Project



4.2 Principles of Engagement

Our principles of engagement are the cornerstone that guides our engagement with stakeholders and the community through the Project. The principles in Table 5 informed our approach to planning a comprehensive and responsive program of community engagement as well as guiding the approach of our staff during all engagement activities. The principles of engagement were developed based on Spark Renewables' development experience in NSW together with our engagement objectives and commitment to leading practice as described in Section 1.2.

Table 5 Principles of Engagement

Key Principles	Description
Open	• Use a range of communications methods to reach different audiences through their preferred communication channels (online, newspapers, letterbox drops, signage, community drop-in sessions and social media). • Share insights, data and information with the community and stakeholders in a timely and respectful way. • Use established local networks and groups to ensure we reach members of the community and keep people informed.
Collaboration	• Ensure our engagement approach is thoughtful and considers strategic alignment through collaborative activities, where these may be appropriate, relevant, and effective. • Clearly communicate where opportunities for collaboration should be focused with stakeholders. • Partner with stakeholders and incorporate their advice/recommendations in the decision-making process to develop alternatives where feasible to deliver a mutually preferred solution.
Responsive	• Be prompt with our acknowledgement of community or stakeholder queries, concerns, feedback and complaints. • Provide our response transparently and with the best information we have available at the time. • Respond respectfully to all issues raised. • Keep a record of interactions and track responses in our stakeholder management database.
Flexible	• Be flexible, attempting to avoid issues that cause distress or mitigate them where possible (i.e., reviewing timing and location of proposed project activities). • Seek feedback from stakeholders on our engagement approach and, where feasible, adjust our work plans to accommodate feedback.
Inclusive	• Ensure documents and other collateral are provided in an accessible format, and that any face-to-face activities considers all aspects of a diverse community's accessibility needs, to enable and encourage a wide range of community members to participate. • Work closely with local authorities such as Council and First Nations groups as well as local charity organisations to shape our approach to engaging with their communities.
Acting with transparency and integrity	• Act respectfully and honestly in our interactions with all segments and groups of communities and stakeholders. • Where possible and relevant, keep the community and stakeholders informed on project progress and updates. • Adhere to required obligations under the *Privacy Act 1988* with respect to personal information.
Accountable	• Provide relevant contact details for key people within the Project Team for community queries or concerns. • Have senior team members and subject matter experts, who can answer complex questions in relation to the project, present at engagement sessions. • Take ownership of any issues that arise, particularly those that have an impact on communities or stakeholders.

4.3 Community and stakeholder engagement to date

Since February 2023, Spark Renewables with assistance from Umwelt has been actively engaging with the local community. A webpage dedicated to the Project was launched at www.wattlecreekenergyhub.com and Facebook page created for the Project announcements at https://www.facebook.com/wattlecreekenergyhub/.

During the preparation of the Scoping Report, the EIS and SIA, the Project team engaged in a range of activities, including hosting community drop-in sessions, meeting with neighbouring landholders in one-on-one meetings, hand-delivering letters and newsletters, distributing news updates to ~120 subscribers and social media, presenting to local stakeholders in-person and online, conducting interviews with landholders and community groups, and undertaking online surveys to build and maintain genuine, trusting relationships.

4.3.1 Scoping phase

The Project was launched in February 2023, and in the following weeks letters and newsletters were hand-delivered to 38 residences within a 5 km radius of the investigation area for the Project. Phone calls were made and emails were sent to those residences, a media release was issued, advertisements were published in the newspaper and a campaign was run via the national radio station. Two drop-in sessions were held in Marulan and Canyonleigh, attracting ~110 attendees.

Spark Renewables engaged with NSW State government agencies, including the Biodiversity and Conservation Department (BCD) and the Department of Planning, Housing and Infrastructure (DPHI), as well as the Upper Lachlan Council, Wingecarribee Council, Goulburn-Mulwaree Council, local Members of Parliament (MPs), and Marulan and Big Hill Rural Fire Services (RFS). Project briefing meetings and interviews were held with First Nations people, business groups and landholders.

Following the submission of the Scoping Report, the DPHI issued the Secretary's Environmental Assessment Requirements (SEARs) in December 2023.

4.3.2 EIS preparation phase

The engagement program continued during the preparation of the EIS in 2024. This included continued engagement with three above-mentioned councils, the BCD and DPHI, delivering letters and newsletters to 48 neighbours, presenting to service providers such as Transgrid, local businesses and the broader community. At the recommendation of the community, Spark Renewables presented the Project at various community groups, including the Canyonleigh Community Group. A drop-in session in Marulan and Canyonleigh in May and June 2024 attracted 30 attendees, suggesting that interest in the Project had dropped noticeably since the development of a wind farm was no longer considered as part of the Wattle Creek Energy Hub.

An online survey seeking feedback on benefit sharing programs received >20 responses. Feedback indicated support for the Community Benefit Sharing Program, as well as interest in understanding the risk and mitigation strategies during the construction and operation of the solar farm and the BESS. There has been enthusiasm for the economic opportunities the Project would create for the local area particularly local employment. One of the main concerns raised by the community during consultation has been the bushfire risk and ensuring there are proper mitigation methods in place.

The feedback received on the Project has been constructive and key stakeholders have responded positively to early engagement, albeit there are those who have voiced opposition to any renewable energy developments in the area. The main areas of interest raised by the community and stakeholders were outlined in Section 2.4.

These keys issues were considered and addressed through consultations and preparation of the Project's development application. A detailed summary of the community and stakeholder interactions and feedback is provided in the Project's Social Impact Assessment.

Spark Renewables has engaged closely with key stakeholders to ensure that key issues raised by the community are well understood and impacts can be avoided. The following section describes the engagement with key stakeholders and steps taken to create social acceptance of the Project.

Figure 7 EIS community consultation

4.4 Delivery approach for future engagement

Spark Renewables has a high-level framework for the delivery of communication and engagement through the planning and assessment process for each stage of the Project, developed in line with the Social Impact Assessment Guideline (DPE, 2023) and Undertaking Engagement Guidelines for State Significant Projects (DPHI, 2024).

However, as the Project evolves, and based on stakeholder and community feedback, the delivery plans for the Project and/or stages may be updated. Therefore, all dates in the delivery plans are indicative and subject to change.

Engagement during the exhibition of the EIS builds on the communication and stakeholder relationships formed during the Scoping and EIS preparation phases and seeks feedback from the community and stakeholders on the impacts and proposed mitigation measures in the EIS. The EIS will be placed on public exhibition for a period of at least 28 days, or as per any requirements outlined in the SEARs, and may be extended on request and with the agreement of Spark Renewables. During the exhibition period, any stakeholder may make a written submission on the EIS and lodge this with the Department through the NSW Government Major Projects website. The formal feedback process in this phase will be managed by the Department in line with their Community Participation Plan (2019). The EIS is typically a very large and technical document comprising several hundred pages, supporting reports and appendices. A community-friendly, plain English summary document will be prepared to support the more substantive EIS document.

Engagement following receipt of Development Consent will initially focus on the announcement of the determination on the Project, followed by targeted engagement with a range of stakeholders to inform the development of management plans, with ongoing project updates provided when relevant.

Should the Project be approved and proceed to construction, additional delivery plans to support communication and engagement during this and later phases will be developed.

Table 6 Delivery framework by phase and objectives

Phase	Timing	Objectives
EIS exhibition phase: *Lodgement of the EIS*	2024	• Community newsletter updates, letters and information sessions to advise key stakeholders about public exhibition process, making a formal submission, answer questions, and offer meeting opportunities. • Updates on the Project website and social media channels to maintain a public information source and point to the formal Project documentation. • Continued consultation with Councils, community groups and First Nations stakeholders to contribute to development of management plans, including but not limited to the Accommodation and Employment Strategy, the Industry and Aboriginal Participation Plan, the Cultural Heritage Management Plan, and the Community Benefit Sharing Program.
Response to Submissions: *Engagement following exhibition of the EIS*	2025	• Following the exhibition period, Spark Renewables will formally respond to submissions received during exhibition by providing relevant documentation to the Department. • Community newsletter updates, letters and information sessions to summarise themes of feedback and issues raised via formal submissions, along with management strategies to each theme. • Updates on the Project website and social media channels to maintain a public information source.
Pre-construction phase: *Project Approvals and Procurement*	2025	• Engagement following receipt of Development Consent, if issued, will initially focus on the announcement of the determination on the Project, followed by targeted engagement with a range of stakeholders to inform the development of management plans, with ongoing project updates provided when relevant. • If required as a condition of consent, Spark Renewables will establish a Community Consultative Committee for the Project as per the 'Community Consultative Committee Guidelines for State Significant Projects' (DPHI, 2019) that will be utilised as a mechanism throughout construction, operations and decommissioning. • A communication campaign involving community newsletters, posters, media engagement, newspaper advertising, hand-delivered letters, and social media series, will be executed to advise Project stakeholders about the Development Consent, details of construction timeline and offer a meeting. • Project website will be updated to maintain an up-to-date source of information with details of development consent and anticipated timing of construction, and any ongoing updates. • Face-to-face presentations, and public drop-in sessions will be held to provide a forum for discussion between Spark Renewables and representatives of the community and other stakeholders. • Materials such as newsletters and posters will be developed to relay content included in other collateral about the Project, and to assist with explanation/management of issues identified to date through the EIS compilation process. • Personal meetings, letters and calls will be undertaken to advise landholders of development consent and next steps for Neighbour Agreements and get their input into management plan development.

Phase	Timing	Objectives
Construction phase: Engagement throughout construction and testing stages of the Project	2026	• A communication campaign involving community newsletters, posters, media engagement, newspaper advertising, hand-delivered letters, and social media series, will be executed to advise Project stakeholders, including Project host and proximal landholders and residents, about Update on the construction commencement, outlining construction timeframes, and mechanisms for making enquiries, complaints and grievances. • Keep Project website updated and advise the community about construction timeframes and key activities. • Keep the Project host and proximal landholders and residents informed on construction commencement and ongoing progress. Information is to be provided to include construction hours, traffic movements and anticipated timeline. Newsletters will also outline enquiries, complaints and grievances mechanisms. • Advise of planned construction activities and key milestones throughout the construction period to the broader public (eg via media, social media). • Capture and respond to community enquiries, complaints, and grievances in a timely manner, and to make required changes to the Project activities to address any issues raised.
Operation phase: *Engagement from commercial operation*	2027	• A communication campaign involving community newsletters, posters, media engagement, newspaper advertising, hand-delivered letters, and social media series, will be executed to announce commissioning of Project and organise a site tour at the opening of the Project to visit site and learn about Project technology and research initiatives, including agrisolar. • Keep Project website updated with details on operations, including but not limited to: – Publishing of environmental monitoring data – Updates on Community Benefit Sharing Program and outcomes of funding – Updates on, and findings of research that has occurred on site
Decommissioning *Engagement leading to and at decommissioning deadline of the Project*	2030 2050	• A Decommissioning and Rehabilitation Plan will be developed within five years of operations, and will be updated at least two years prior to anticipated decommissioning. • Detailed planning for engagement during the decommissioning phase will occur a minimum two years before the Project is due to be decommissioned, and this plan will be updated accordingly. If it is decided to repower the Project, a detailed engagement plan will be prepared to communicate this and ongoing operational engagement planning will be undertaken. • Meetings with will be held from a minimum of two years prior to decommissioning. • Key target audiences of engagement are: the councils, proximal landholders, community and environmental groups (as it relates to final landform and concerns related to infrastructure removal), and key service providers (as it relates to workforce employment and accommodation).

4.5 Delivery plans

A Delivery Plan will be developed for each Project phase, as outlined in Table 7. Planning will occur prior to commencement of each phase to confirm engagement mechanisms, timeframes, and to define detailed tasks and responsibilities and this plan will be updated accordingly. During the operational phase, the Delivery Plan will be updated annually throughout operation of the Project in line with feedback from key stakeholders on preferred engagement mechanisms and timing.

Table 7 Delivery Plan – activities, target stakeholder groups and objectives

Delivery method	Targeted stakeholder group	Objectives
Briefing letters	Upper Lachlan Shire Council Goulburn Mulwaree Council Wingecarribee Council State MP Federal MP Traditional Owners	• Advise key stakeholders about the Development Consent, details of construction timeline and offer a meeting. • Provide update on the construction commencement, outlining construction timeframes. • Announce commissioning of Project. • Ongoing collaboration to inform the CBSP.
Project website	All	• Maintain an up-to-date source of information with latest Project details. • Advise the community of development consent and anticipated timing of construction. • Advise the community about construction timeframes and key activities. • Outline the enquiries, complaints and grievance mechanisms. • Provide updates on Project operations, including but not limited to: – Publishing of environmental monitoring data – Updates on the Community Benefit Sharing Program and outcomes of funding – Updates on, and findings of research that has occurred on site Project update to inform community of decommissioning.
Establish a Community Consultation Committee	Councils Broader community Community and interest groups	• Provide a forum for discussion between Spark Renewables and representatives of the community and other stakeholders.
Information sheets and newsletters	Proximal landholders	• Advise proximal landholders of development consent and provide an update on Community Benefit Sharing Program. • Advise the Project landholders and residents on construction commencement and ongoing progress, including construction hours, traffic movements and anticipated timeline. • Outline enquiries, complaints and grievances mechanisms. • Announce commissioning of Project.

Delivery method	Targeted stakeholder group	Objectives
		• Provide operational updates. • Provide updates on CBSP and outcomes of funding • Provide updates on, and findings of research that has occurred on site. • Inform community of decommissioning.
Media updates	Broader community	• Provide an update on the status of the Project and advise of planned construction activities.
Social media updates	Broader community (limited to users of social media platform)	• To relay content included in other collateral about the Project, and to assist with explanation / management of issues identified to date through the EIS compilation process. • To provide updates at key milestones throughout the construction period.
Dedicated enquiries, complaints, and grievance mechanism	Broader community Proximal landholders	• To capture and respond to community enquiries, complaints, and grievances in a timely manner, and to make required changes to the Project activities to address any issues raised.
Site tour	Proximal landholders Local Media outlets Community groups	• Provide an opportunity within six months of commissioning to the public to visit site and learn about Project technology and research initiatives, including agrisolar.
One-on-one meetings	Proximal landholders with Neighbour Agreement	• Advise landholders of development consent and next steps for Neighbour Agreements and get their input into management plan development.
Meetings and presentations	Traditional owners	• Contribute to development of Industry and Aboriginal Participation Plan and Cultural Heritage Management Plan.
	Upper Lachlan Shire Council Goulburn Mulwaree Council Wingecarribee Shire Council	• Contribute to development of management plans, including but not limited to Accommodation and Employment Strategy and Community Benefit Sharing Program. • Inform the Decommissioning and Rehabilitation Plan.
	EPC Contractor	• Contribute to development of the Accommodation and Employment Strategy to ensure planning for construction occurs across various projects to maximise local employment.
	Housing and accommodation service providers	• To contribute to development of the Accommodation and Employment Strategy and to provide further understanding of how an incoming workforce may impact vulnerable groups (i.e. Aboriginal and Torres Strait Islander people, elderly residents and users of short-term accommodation).

Delivery method	Targeted stakeholder group	Objectives
	Chamber of Commerce, Destination NSW, tourism associations, employment providers	• To contribute to development of the Accommodation and Employment Strategy and of Industry and Aboriginal Participation Plan.
	Education providers	• To contribute to development of the of Industry and Aboriginal Participation Plan.

5. Benefit-sharing

Spark Renewables is committed to ensuring that communities in the region benefit from the Project, and following the principles and guidelines of the Clean Energy Council's 'A Guide to Benefit Sharing Options for Renewable Energy Projects' (2019) and the NSW Department of Planning, Housing and Infrastructure's 'Benefit-Sharing Guideline' (November 2024).

Spark Renewables is working with the community to co-design a program that meets the unique needs of the wider community, and delivers long-lasting social, economic, and environmental benefits for decades to come, Table 8 and Table 9 outline preliminary commitments to the initiatives that will be further refined throughout the planning and assessment process.

Spark Renewables has actively sought input from the council and community to develop a program in support of causes that matter locally. It is Spark Renewables' intent to develop an annual community benefit sharing program that would deliver long-lasting social, economic and environmental benefits to the local communities.

Based on the proposed solar farm size of 265 MW, the funding available would be over $200,000[3] per year, amounting to around $7 million over the 30+ year construction and operation period of the Wattle Creek Energy Hub.

Following the initial annual payments, all subsequent payments will be adjusted in accordance with the Consumer Price Index, as determined by the Australian Bureau of Statistics, to mitigate the effects of inflation.

The funding would be provided on an annual basis, commencing at the start of construction and linked to the size of the project. The ultimate size of the Project will depend on several factors including outcomes of the planning assessment process and subsequent conditions of consent, grid connection approval, detailed design, and project finance.

There are 94 houses within a 5-kilometre radius of the project area, including 20 houses within a 3-kilometre buffer zone, 26 houses between 3-4 kilometres, and 48 houses within 4-5-kilometres.

Neighbour benefit sharing initiatives could include payments that serve as electricity subsidies. A similar program is proposed at Dinawan Energy Hub (another project developed by Spark Renewables) to fund electricity subsidies to all qualifying neighbours within 10 kilometres of the project. The program is intended to serve as an energy rebate scheme and is additional to funding in support of solar and battery systems, energy and carbon emission audits.

Table 8 Cash commitments

Criteria	Per annum	Project life[4]
Council, community and neighbours (excludes neighbour payments negotiated on an individual basis)	$850 per MW installed	~$7 million
Research and education	$125,000 per annum	~$3.75 million
Enhanced access, bushfire management and stock-proofing security	N.A.	~$23 million

Table 9 Research and education in-kind commitments

Criteria	Research and education commitments
Other in-kind commitments	– Spark Renewables Project Manager to participate as a member of the University of Sydney steering body.

[3] This distribution aligns with the recommended contribution outlined in the Benefit-Sharing Guideline, which suggests $850 per installed MW within a generation facility. This amount is additional to neighbour payments negotiated on an individual basis.

[4] Calculated using assumptions of 33 years and CPI average rate of 2%.

Criteria	Research and education commitments
	– Extensive sharing of data. – A ‘test bed’ constructed for research purposes.
Hosting Interns and Researchers	– Students and researchers could be hosted at the Project, or at the Spark Renewables’ office. – Educational opportunities.
Sharing data	– Meteorological, plant performance and monitoring data. – Historical and ongoing survey data from bird, bat, and environmental monitoring. – Construction contract information. – All environmental studies and management plans. – Graphic mapping and plant design data, including site infrastructure and environmental constraints.

6. Key messages

Key messages (for external purposes) and quotes will be developed and refined throughout the process, around the following critical message categories and will be used to inform the development of communication materials:

- Top message – the headline message that characterises the Project in one sentence and provides a memorable feature for the audience.
- Proponent – details on Spark Renewables, its background and development, activities in NSW, Australia and internationally.
- Project – details on the site and plans, quick facts, and profile.
- Process – the development planning and assessment process, including community consultation and key EIS milestones including submission, public exhibition, and determination.
- Impacts and benefits – key issues in relation to the Project i.e., social, and environmental issues, interests, or concerns.

6.1 Top Message

An Australia-first renewable energy hub that is hosted on a university property, and incorporates a research test bed within the project.

Spark Renewables was selected by the University of Sydney to investigate and develop a hybrid renewable energy facility on the University's Arthursleigh property, which is conveniently located near the "Sydney Ring" – a proposed high-capacity 500 kilovolt transmission network designed to increase the supply capacity to Sydney, Wollongong, and Newcastle.

Spark Renewables developed the Wattle Creek Energy Hub comprising two projects that would deliver strength and stability support for the Sydney Ring:

1) A hybrid solar farm with a generation capacity of up to 265 megawatts (MW) combined with a 100 MW battery energy storage system (BESS).

2) A standalone BESS with a 350 MW capacity.

6.2 Proposed Project

- The hybrid solar farm will have the capacity up to 265 MW generating enough clean energy each year to supply electricity to approximately 63,000 homes, which is equivalent to offsetting the emission of 300,000 tonnes of carbon dioxide from electricity generation. As part of the solar farm, the hybrid battery energy storage system will include a capacity of up to 100 MW will have energy storage capacity of up to 2 hours. Additionally, a 350 MW battery energy storage system will co-locate the hybrid solar farm.
- Host landholder is the University of Sydney.
- Temporary infrastructure would also be developed to support the construction of the Project, including site office buildings, storage areas and concrete batching plants.
- The project would generate approximately 250 jobs during construction and up to 20 direct jobs during its operational life span of up to 35 years.
- Construction would commence as soon as possible after all environmental and regulatory assessments and approvals are received. Construction would take approximately 18 months.

6.3 Infrastructure

- The location of the project is in the Upper Lachlan Shire Council area, however, access roads for construction and ongoing maintenance would utilise the road network in the Goulburn Mulwaree Shire Council.
- The Project will result in enhanced access roads that will also benefit bushfire management, river crossing, landscaping and stock-proofing security for local residents and property owners.
- The location is in proximity to the critical infrastructure known as "Sydney Ring" – a proposed high-capacity 500 kilovolt transmission network designed to increase the supply capacity to Sydney, Wollongong, and Newcastle. The Project will provides the necessary system strength and security for a modernised energy transition coping with closure of coal plants and replacement with renewables.

6.4 Partnership with the University of Sydney

- Spark Renewables is committed to supporting educational opportunities through our projects by fostering partnerships with local universities, investing in research initiatives, and collaborating with local schools. This is typically done by formal agreements and letters of support, which can involve offering graduate placements and internships, in-kind employee and data sharing contributions, and funding support.
- The Project will be situated on the University of Sydney's Arthursleigh property, and will be utilised as a training and research facility for interns and researchers at the University of Sydney, with the active sharing of data between Spark Renewables and the University during its operational period.
- A research collaboration will be set up between Spark Renewables and the University of Sydney with a supporting fund for research initiatives focused on supporting the energy transition. This will include the development of a new research facility (or 'test-bed'), which could be used to test innovative technologies, such as Gelion batteries, a spin-out company from the University of Sydney.
- The Project area is currently operated commercially and is used for a range of research initiatives including animal science, pasture agronomy and unmanned aerial vehicle applications.
- Agricultural land use will continue with the operation of the project, with sheep grazing within the solar farm area.
- Research initiatives will be in line with the Office of the NSW Chief Scientist & Engineer 20-year R&D road map titled: Shaping the future of NSW in science and technology (May 2022).
- The areas within the project area associated with solar will continue as an agrisolar system through the integration of grazing during operation and agricultural rehabilitation following decommissioning.

6.5 About Spark Renewables

- A leading developer, long-term owner, and operator of renewable energy projects in Australia. The Spark Renewables portfolio comprises the Bomen Solar Farm, operational since 2020, and is currently developing a large portfolio of solar, wind, and renewable storage projects across the National Electricity Market, including the Dinawan Energy Hub and Mallee Energy Hub.
- Committed to energy system stability, reliability and minimising costs to customers as well as contributing to long-term sustainability and adding value to communities by investing in renewable energy infrastructure.
- A NSW-based company, primarily operating in NSW, South Australia and Queensland.
- Part of the leading Malaysian energy utility, Tenaga Nasional Berhad (TNB), a group of companies owning and operating renewable energy projects in Malaysia, Türkiye, Ireland, the United Kingdom and Australia.
- Member of the Clean Energy Council (CEC) and a signatory to the CEC's Best Practice Charter for Renewable Energy Developments, and supports the Australian Renewable Alliance Association.

- Has in place a 'Reflect' Reconciliation Action Plan and appointed a local Wiradjuri and Yorta Yorta woman as Aboriginal Community Engagement Coordinator, to build connections with community stakeholders, Traditional Owners and Registered Aboriginal Parties, and to guide the development of its First Nations Engagement Strategy.
- Focussed on providing local employment opportunities and giving back to the local community by establishing community funds to provide long-term, distributed benefits equitably across the community.

6.6 Impacts and Benefits

Spark Renewables recognises that every local community is different, which is why it takes a location-based approach, working with each community to co-design a benefit sharing program that meets the unique needs of that particular location. Spark Renewables is committed to sharing the benefits of the Wattle Creek Energy Hub with the community several ways.

Employment and training

- The Project is expected to employ a construction workforce of approximately 250 people and generate an estimated 20 direct jobs during the operation phase of the solar farm.
- Spark Renewables will endeavour to provide employment and training opportunities for Aboriginal and Torres Strait Islander residents of areas nearby the Project.
- Spark Renewables supports efforts to combat traditional barriers to roles in the industry for those typically underrepresented. During the construction of our Bomen Solar Farm, Beon Energy Solutions, and Bomen Solar Farm's engineering, procurement, and construction contractor, partnered with Chandler Macleod to implement the "Women in Solar" program to encourage women to work in the construction of large-scale solar farms, as a result of which 12 local women from a range of diverse backgrounds undertook a four-week electrical training course, finishing the program qualified to install solar panels. The program targeted those facing known barriers to employment, including lack of formal education, or sole child-caring responsibilities. The majority of participants continue to work for the company or in the wider solar industry and Beon is continuing its community employment program.

6.6.2 Community Benefit Sharing Program

- In co-designing its community benefit sharing schemes, Spark Renewables provides funding in line with the NSW Benefit-Sharing Guideline (November 2024) recommended amount of $850 per MW for solar capacity built.
- Spark Renewables has actively sought input from the council and community to develop a program in support of causes that matter locally. It is Spark Renewables' intent to develop an annual community benefit sharing program that would deliver long-lasting social, economic and environmental benefits to the local communities.
- Based on the proposed solar farm size of 265 MW, the funding available would be over $200,000 per year, amounting to around $7 million over the 30+ year construction and operation period of the Wattle Creek Energy Hub.
- The funding would be provided on an annual basis, commencing at the start of construction, and linked to the size of the project.
- Neighbour benefit sharing initiatives could include payments that serve as electricity subsidies. A similar program is proposed at Dinawan Energy Hub (another project developed by Spark Renewables) to fund electricity subsidies to all qualifying neighbours within 10 kilometres of the project. The program is intended to serve as an energy rebate scheme and is additional to funding in support of solar and battery systems, energy and carbon emission audits.

6.6.3 Supporting the economy

- Spark Renewables aims to keep to 100% Australia-sourced and made.
- Where possible, Spark Renewables aims to source the construction workforce from the local area. Local service providers and suppliers will also have opportunities to contract services during the construction period, for example,

taking advantage of the local extractive industries and quarries such as Holcims's Lynwood, Boral, Gunlake and Global quarries, all operating near the township of Marulan.

- Accommodation for the construction workforce is expected to be provided in the Goulburn Mulwaree and surrounding areas.

6.6.4 Sustainable farming and agrivoltaics

- The Project will include agrivoltaics (also known as 'agrisolar') initiatives as part of the research component of the Project, in conjunction with the University of Sydney, and consider design measures to enable the efficient movement of sheep between the solar farm areas and other paddocks, as well as other biodiversity initiatives such as potential wildflowers for the benefit of beekeeping activities.
- The currently operating farm plays a major role in restoring native flora and fauna in the area and has been recognised as one of the first farms to be involved with the Greening Australia-led seeding trial using pelletised eucalypt seeds and was an early adopted of the Whole of Paddock Rehabilitation program.
- The proposed Project area is in a highly weed-ridden area unsuited for farming and that unlikely to provide suitable habitat for threatened flora and fauna species.
- Avoiding vegetation removal preserves ecosystems and aligns with sustainable development goals.
- During preliminary studies of the Project, it was discovered that the area is covered by an invasive Serrated Tussock grass, which is spreading to neighbours' farms. By improved weed control during construction, the project will have a positive agricultural benefit to its neighbours.

6.6.5 Maximising opportunities for recycling

- Spark Renewables has established several university collaborations and industry partnerships to drive the diversion of solar panel waste from landfill and find sustainable end-of-life solutions for solar panels:
  - Collaborating with researchers at the University of New South Wales (UNSW) from December 2022 to January 2028 to provide solar panel testing data as part of a machine learning project, which was awarded funding by the Australian Renewable Energy Agency.
  - Partnered with a specialist solar panel recycling and resource recovery company, PV Industries, to responsible recycling and decommissioning at end of project life. Spark Renewables provides solar panels from Bomen Solar Farm for solar panel processing and recycling at the PV Industries facility, where our staff has also toured.
  - Since 2021, participating in PV Industries' Circular Solar Trial involving UNSW, to develop solar panel recycling and end-of-life solutions for the solar and lithium-ion battery economies. This project allows UNSW to use Bomen Solar Farm as a testing ground for its Solar Panel Triage Unit technology, and received funding under the NSW Environment Protection Authority's Circular Solar grants program (April 2022).
  - Provides data to the University of Technology Sydney at its Bomen Solar Farm to understand decommissioning practices and gather data on project end-of-life.
  - The Project will advance resource recovery solutions for end-of-life solar panels and other associated waste through research opportunities.

6.7 Process overview

- The proposed Wattle Creek Energy Hub is in the early stage of planning. The components of the Project – the hybrid solar farm and the battery energy storage system – will be assessed as separate State Significant Developments (SSDs) under Part 4 of the *NSW Environmental Planning and Assessment Act 1979* (the EP&A Act).
- The NSW Department of Planning, Housing and Infrastructure (DPHI) is the State planning authority for the Project.

- The EP&A Act requires preliminary Scoping Reports to be prepared for each component and be submitted to the Department. The Department will then prepare and issue the Secretary's Environmental Assessment Requirements (SEARs) to guide the development of each Environmental Impact Statement (EIS).
- As part of Spark Renewables' applications to the Department, Umwelt was engaged to develop Scoping Reports to inform the assessment, that included several technical studies to assess the potential impacts of the Project. These technical studies included impact assessments from acoustic, landscape and visual, agricultural, economic, flooding and hydrology, hazards, biodiversity, Aboriginal cultural heritage, historical heritage, traffic and access, contamination, soils, hazards (electromagnetic fields and interference, bushfire and preliminary hazard analysis), waste, air quality, land use and social impact.
- Once complete, the Department will assess the EIS for both Project components, considering all potential impacts across each assessment.
- A determination on each component of the Project will be made by the Commonwealth Minister for the Environment and Water or their authorised delegate.
- Spark Renewables works closely with independent archaeologists and the respective projects' Registered Aboriginal Parties (RAPs) to safeguard cultural heritage across each site. Aboriginal cultural heritage assessments for the Wattle Creek Energy Hub are being prepared in consultation with RAPs and other First Nations stakeholders.
- The Environmental Impact Statements 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 further contribute to the Project's assessment.

6.8 Commitment to responsible decommissioning

- At the beginning of the planning process of each project, Spark Renewables identifies the anticipated waste amounts and how we can maximise recycling waste. At the end of the project lifecycle, the facility will either be re-energised through a new permitting process or decommissioned.
- As part of mitigation measures, Spark Renewables commits to project-specific measures to be completed at decommissioning to return the land back to the original state and industry as much as reasonably possible, decommissioning and removing infrastructure, and revegetation.

7. Communication management protocols

7.1 Communication and stakeholder management system

An integrated communication and stakeholder management system has been established for the Project, including a dedicated software platform Simply Stakeholders. This platform supports a best-in-class approach to engagement, providing an accessible way to track, monitor and improve engagement continuously.

The communication and stakeholder management system ensures all stakeholder interactions are captured and managed effectively. The system allows us to:

- Record all contacts with stakeholders and the community, and the actions resulting from this engagement.
- Track the progress and closeout of enquiries and complaints.
- Identify trending issues and opportunities.
- Implement mitigation strategies.
- Maintain accurate contact details of stakeholders.
- Prepare regular reports for Spark Renewables on communication and engagement activities.

7.2 Enquiries and complaints

Enquiries and complaints to Spark Renewables in relation to the Wattle Creek Energy Hub may be received via email, phone, post or in person. An enquiry is defined as a question or request for information, and a complaint is defined as a statement that something is unsatisfactory or unacceptable. Spark Renewables will acknowledge enquiries and complaints within a reasonable timeframe:

- No later than within three business days for enquiries.
- No later than the end of the following business day for complaints.

The project team will provide a response to the enquiry or complaint, depending on the input required, within five business days for emails and phone calls, or 10 business days for letters.

It is the responsibility of the Project Development Manager in the development phase or a dedicated person in the forthcoming phases, to track the process of complaint, to have an overview of which complaints are ongoing and which ones are closed. For this purpose, a complaint logging sheet will be updated every month or as needed.

To monitor the success of a solution, the person responsible of complaint management is required to keep track of the implementation results. If the solution does not work out or cannot satisfy the complainant in a reasonable way, an adjusted solution or a new solution needs to be provided to the grievant and new discussion/communication round starts again. The process continues until the complaint is solved.

A review meeting of the effectiveness of complaints management is held yearly (quarterly in construction phase) or as needed, and a register of all complaints submitted in the duration of time is reported in the review meeting. The development manager and community engagement team are responsible for reviewing the success of solution and prevention of complaints together with the stakeholder's responsible person. A de-identified public record summarising the complaints and solutions will also be made available and updated periodically.

7.3 Spark Renewables Privacy Policy

Spark Renewables has in place a Privacy Policy (published on the website), by which it is committed to providing quality services to its stakeholders. The Spark Renewables Privacy Policy outlines our ongoing obligations in respect of how we manage Personal Information. Spark Renewables has adopted the Australian Privacy Principles contained in the Privacy Act 1988 (Cth) (the Privacy Act). These Principles govern the way in which we collect, use, disclose, store, secure and dispose of your Personal Information.

7.4 Government relations

State and Federal MPs for the area, relevant government ministers and councils will be offered the opportunity for face-to-face Project briefings at Project announcement, at lodgement of each of the Scoping Reports, on completion of each EIS and during the Response to Submissions phases.

Ongoing communication will be maintained during Project construction and operation and additional briefings and meetings provided at any time by request.

7.5 Media relations

From time to time, Spark Renewables may choose to issue media announcements to provide an update on the Wattle Creek Energy Hub for the benefit of the community, council, government and other stakeholders. Spark Renewables' Chief Executive Officer and Head of Development are the approved spokespeople for the Project. They may delegate this authority to others working on the Project.

8. Reporting, evaluation, and monitoring

8.1 Reporting

Effective reporting and monitoring are integral to Spark Renewables' engagement strategy, ensuring transparency, accountability and continuous improvement throughout the Project. Our robust reporting and monitoring processes allow us to track engagement activities, measure progress against objectives and respond proactively to community feedback.

This CSEP serves to build partnerships with our community stakeholders, and it is therefore imperative that Spark Renewables continuously update stakeholders on the progress of the Project. Spark Renewables is committed to maintaining open communication with stakeholders by providing regular updates. Our reporting practices include:

- **Project Updates**: Regular updates are shared via the Spark Renewables website, digital newsletters and postal notifications. This provides stakeholders with timely information on project milestones, upcoming activities and key decisions.
- **Formal Reports**: Detailed reports are prepared at key stages of the project development. These reports are made available to the public and relevant authorities, ensuring transparency and regulatory compliance.

8.2 Monitoring

Regular monitoring of engagement and communication activities will ensure the Plan is delivering on the engagement objectives. Our monitoring efforts include:

- **Community check-ins:** Regular pulse checks are conducted to gauge community sentiment and identify emerging issues. This can include surveys, focus groups and informal feedback mechanisms.
- **Environmental scanning:** Continuous monitoring of media and social media channels to track public perception and respond promptly to any concerns or misinformation.
- **Feedback analysis:** Systematic analysis of feedback received through formal and informal channels, including community meetings and surveys.

Implementing comprehensive reporting and monitoring processes ensures our engagement efforts are transparent, responsive and continuously improving. This commitment exemplifies our dedication to building strong, trusting relationships with the community and all stakeholders involved.

8.3 Evaluation

Community and other stakeholder engagement will be evaluated against the engagement outcomes identified in the Scoping phase, the EIS phase and referenced in the Response to Submissions. Spark Renewables shall identify measures and evidence of engagement success and report on engagement outcomes.

Table 12 Example of evaluation methodology

Engagement outcome	Methods used to achieve the outcome	Results to measure the outcome	Evaluating the success of the outcome
Work with the community and other stakeholders to understand their values and opinions of the Project and the opportunities to reflect these values and opinions in decision-making.	Community drop-in sessions to identify the values and opinions of the community and other stakeholders and the perceived impacts of the Project on these. Surveys to establish a baseline for awareness, sentiment and levels of	Number of people attending drop-in sessions. Number of people surveyed. Satisfaction with the engagement process by those surveyed or attending the drop-in sessions.	Responses to address the Project's impact on the values and opinions of the community can be determined (e.g. the community has concerns about visual amenity). Mitigation measures to address the Project's impact

Engagement outcome	Methods used to achieve the outcome	Results to measure the outcome	Evaluating the success of the outcome
	acceptance towards the Project and renewables in general.	Community perspectives accurately detailed in the SIA and EIS reports.	on the values and opinions of the community and other stakeholders can be finalised (e.g. landscaping options are negotiated with the community). Future engagement to address issues identified can be planned (e.g. complaints protocol established). Ongoing engagement to provide updates on decision-making can be established (e.g. regular project updates and photography to show change over time).

Appendix A: Stakeholder Groups

Table 10 List of stakeholders and potential issue, interest, or concerns

Stakeholder group	Stakeholder	Description of Issue/Interest/Concern
Community and interest groups	Landholder(s) within the Project site	– Lease arrangements and land acquisition – Impacts to dwelling – Impacts to land use – Water use – Bushfire risk – Property values and insurance premium – Biosecurity
	Neighbours to the Project site	– Access and use of existing, and potentially limited, water supply – Changes in bushfire risk associated with the Project – Changes or limitations to existing land use potentially limiting livelihoods or property access – Cumulative changes to community way of life and character – Health and wellbeing impacts associated with construction/operation noise and vibration and increased dust pollution during construction – Impacts on availability of temporary accommodation and rental properties due to workforce needs during construction – Impacts on local environmental values such as local fauna and flora, local ecosystems and/or ecosystem services – Impacts on local labour force availability due to construction workforce needs – Increased traffic on/changes to local roads resulting in changes to road use and potential safety concerns – Perceived negative impacts on property values and insurance premiums – Potential land use conflicts impacting agricultural/commercial livelihoods – Visual amenity impacts on the local area, views from dwellings and landscape character
	Wider community of Project and nearby LGAs: – Upper Lachlan Council – Wingecarribee Council – Goulburn-Mulwaree Council	– Cumulative changes to community way of life and character – Impacts on availability of temporary accommodation and rental properties due to workforce needs during construction – Impacts on local environmental values such as local fauna and flora, local ecosystems and/or ecosystem services – Impacts on local labour force availability due to construction workforce needs – Increased traffic on/changes to local roads resulting in changes to road use and potential safety concerns – Increase in direct and indirect economic benefits including workforce, project expenditure and local procurement – Increase in local employment opportunities – Temporary increase in demand for rental properties associated with construction workforce needs – Visual amenity impacts on the local area, views from dwellings and landscape character
	Other community organisations: – Landcare branches – Progress Associations – Lion's Club branches	– Cumulative changes to community way of life and character – Diversification of farming livelihoods and incomes creating an economic benefit – Grants and funding opportunities to support community development – Impacts on availability of temporary accommodation and rental properties due to workforce needs during construction – Impacts on local environmental values such as local fauna and flora, local ecosystems and/or ecosystem services

Stakeholder group	Stakeholder	Description of Issue/Interest/Concern
	– Rotary branches – Local action groups – Farmers for Climate Action – Energy Grid Alliance – RE-Alliance	– Impacts on local labour force availability due to construction workforce needs – Increase in direct and indirect economic benefits including workforce, project expenditure and local procurement – Increase in local employment opportunities – Increased employment, supply, and procurement opportunities for vulnerable members/groups of the community – Increased traffic on/changes to local roads resulting in changes to road use and potential safety concerns – Potential land use changes – Temporary increase in demand for rental properties associated with construction workforce needs – Visual amenity impacts on the local area, views from dwellings and landscape character
Traditional Owners	Pejar Local Aboriginal Land Council representative of Gundungurra Traditional Owners Other Aboriginal corporations: – Gundungurra Aboriginal Group – Mulwaree Aboriginal Community Inc.	– Impacts on local environmental values such as local fauna and flora, local ecosystems and/or ecosystem services – Grants and funding opportunities to support Aboriginal communities in the local area – Identification and protection of sites of significance or items of Aboriginal cultural heritage value, including intangible values – Increased employment, supply, and procurement opportunities for the local Aboriginal community – Land access and use over Native Title land – Local knowledge-sharing – Recognition and consideration of Country in design process to reduce cultural impacts for the local Aboriginal community
Industry	Clean Energy Council	– Industry body and advocate for clean energy
	Australian Energy Market Operator	– Energy retail market
	Australian Energy Market Commission	– Rule maker for the National Electricity Market
	NSW Farmers Association	– State industry body and advocate for farmers – Changes or limitations to existing land use potentially limiting livelihoods – Access and use of existing, and potentially limited, water supply – Diversification of farmers' income and livelihoods – Cumulative impacts on availability of local workforce – Cumulative changes to community way of life and character
	National Farmers Federation	– National industry body and advocate for farmers – Energy generation – Climate change – Access, supply, and use of water – Sustainable development and livelihood diversification – Cumulative changes to community way of life and character
	First Nations Clean Energy Network	– National industry body and advocate for First Nations people – Increased employment, supply, and procurement opportunities for First Nations people – Partnerships
	PV Industries	– Recycling and end-of-life cycle services for solar panels
Business and Service providers	Marulan Chamber of Commerce	– Local employment and training opportunities – Opportunities for local supply and procurement – Grants and sponsorship opportunities to support community development

Stakeholder group	Stakeholder	Description of Issue/Interest/Concern
	Regional Development Australia and Industry Capability Network	– Increase in regional employment opportunities – Increase opportunities for regional supply and procurement
	Accommodation and housing providers	– Increased demand for accommodation services due to incoming construction workforce – Strain on accommodation services – Decreased capacity for tourism related accommodation
	Education providers	– Potential for collaboration regarding learning workers and apprentices
	Health care providers	– Demand for health services due to incoming construction workforce
Federal government	Clean Energy Regulator	– Economic and clean energy regulation
	Australian Energy Regulator	– Electricity network regulation
	Minister for Climate Change and Energy: Chris Bowen MP	– Federal government agency for energy – Investment in network infrastructure – Network reliability – Network connectivity between states
	Minister for the Environment and Water: Tanya Plibersek MP	– Water – National parks
	Member for Hume: Angus Taylor MP	– Community impacts and benefits – Environmental impacts – Increased employment opportunities
	Member for Goulburn: Wendy Tuckerman MP	– Community impacts and benefits – Environmental impacts – Increased employment opportunities – Increase in local supply and procurement opportunities – Media opportunities
NSW State government	Minister for Planning, Housing and Infrastructure: Paul Scully MP	– Planning and assessment process – Consent authority
	Minister for Climate Change, Energy, the Environment and Heritage: Penny Sharpe MLC	– Planning and assessment process – Environmental impacts – Aboriginal and non-Aboriginal heritage
	NSW Environmental Protection Agency	– Environmental impacts – Recycling of Project infrastructure, including solar panels
	NSW Treasurer	– Investment in network infrastructure
	NSW Department of Planning, Housing and Infrastructure	– Planning and assessment process – Proximity to Tarlo River National Park and Kerrawary Nature Reserve – Aboriginal and non-Aboriginal heritage
	NSW Environment and Heritage	– Aboriginal and non-Aboriginal heritage
	NSW Crown Lands	– Crown land
	NSW Natural Resources Access Regulator	– Water laws
	NSW Department of Primary Industries	– Agriculture

Stakeholder group	Stakeholder	Description of Issue/Interest/Concern
	Regional NSW	– Primary industries, local land services, mining, exploration, and geoscience
	Transport for NSW	– Traffic and roads
	Fire and Rescue NSW	– Fire safety
	SafeWork NSW	– Construction and operations workforce safety
	Independent Planning Commission	– Planning and assessment process – Alternate consent authority
	NSW National Parks	– Environmental impacts on surrounding national parks
	NSW Biodiversity and Conservation Trust	– Environmental impacts on surrounding national parks
Local government	Upper Lachlan Council: Mayor Pam Kensit Wingecarribee Council: Council Administrator, Mr Viv May Goulburn-Mulwaree Council: Mayor Peter Walker	– Planning and assessment process – Community impacts and benefits – Environmental impacts – Employment opportunities – Local supply and procurement opportunities – Combined Community Strategic Plan – Upper Lachlan and Goulburn Mulwaree – Council rates – Changes to road conditions and usage – Land use changes – Cumulative impacts caused by the incoming construction workforce
	Canberra Region Joint Organisation	– Cumulative impacts of major projects in the region
Utilities	Transgrid	– Network provider
	Essential Energy	– Network distributor
	Telstra	– Telecommunications services
	National Broadband Network (NBN)	– Broadband services
	Water NSW	– Impacts on surface and groundwater
Emergency services	NSW Rural Fire Service Fire and Rescue NSW Marulan RFS Big Hill RFS	– Bushfire risk – Access to site – Emergency protocols
	NSW Police	– Hazards and risks – Traffic and roads – Safety and security
	NSW Ambulance	– Hazards and risks – Safety
	NSW State Emergency Service (Goulburn Unit)	– Hazards and risks
	University of Sydney TAFE NSW Goulburn Charles Sturt University	– Research partnership Scholarships and training opportunities to upskill current and future workforce
Health	General Practitioners	– Health and safety – Emergency protocols
Education	Big Hill Public School Marulan Public School	– Grants and sponsorship opportunities to provide community benefit to the local area
	Local and regional radio and TV stations: ABC Canberra	– Project updates – Promote community engagement activities – Community impacts and benefits
Media	Social media groups: – Marulan & District	– Communicate community impacts and benefits – Advertise local supplier and procurement opportunities

Stakeholder group	Stakeholder	Description of Issue/Interest/Concern
	Community Noticeboard (Facebook)	
	Regional newspapers and magazines: – Marulan Messenger – Goulburn Post – Southern Highlands News – Crookwell Gazette	– Project updates – Promote community engagement activities – Community impacts and benefits
	Metropolitan newspapers: – The Guardian Australia	– Investment in renewables
	Industry online news: – Renew Economy – PV Magazine Australia – Smart Energy Magazine – The Fifth Estate	– Project updates – Investment in renewables
	National and financial publications: – Australian Financial Review	– Project updates (major milestones) – Investment in renewables

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