Winterbourne Wind Farm Social Impact Assessment

Prepared for WinterbourneWind Pty Ltd November 2022



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# Contents

Conten	ts	.3
Acrony	ms and Abbreviations	.5
1.	Introduction	.1
1.1.	The Proponent	.1
1.2.	Project Description	.1
1.3.	Legislative and Regulatory Context	.4
1.3.1.	Commonwealth Legislation	.4
1.3.1.	NSW Legislation	.4
1.3.2.	NSW SIA Guidelines	.6
1.3.3.	State, Regional and Community Planning	.6
1.4.	Purpose and Outline	.9
1.5.	Authorship	.9
2.	Social Impact Assessment Methodology	10
2.1.	Phase 1: Scoping	10
2.2.	Phase 2: Social Baseline Data Collection and Analysis	11
2.3.	Phase 3: Impact Assessment	12
2.4.	Phase 4: Enhancement, Mitigation and Residual Impacts	13
2.5.	Phase 5: Monitoring and Management Framework	14
3.	Scoping	15
3.1.	Approach to Determining the Social Locality	15
3.2.	Description of the Social Locality	15
3.2.1.	ABS Datasets	17
3.3.	Scoping of Social Issues and Potential Impacts	18
4.	Stakeholder Engagement Activities for the SIA	23
4.1.	Identification of Key Stakeholder Groups	23
4.2.	Consultation Activities relevant to the SIA	24
4.3.	Summary of Themes and Issues Raised during Consultation	25
4.3.1.	Community Consultative Committees (CCCs)	25
4.3.2.	Local Residents	26
4.3.3.	Local Businesses and Chambers of Commerce	28
4.3.4.	Local Community Organisations	28
5.	Social Baseline	30
5.1	Land Use Context	30

5.2	Population Demographics
5.2.1.	SEIFA
5.3	Housing and Accommodation
5.4	Economic Profile
5.5	Access and Connectivity
5.6	Social Infrastructure and Community Wellbeing
5.7	Aboriginal Cultural Heritage
5.8	Community Values
6.	Social Impact Assessment
7.	Social Impact Management, Mitigation and Residual Impact Ratings 44
8.	Monitoring Framework and Reporting 49
5.3.	Reporting and Auditing
5.4.	Roles & Responsibilities
9.	References
Append	dix A – SGS' Winterbourne Wind Farm - Socio Economic Assessment, July 2021

# List of Tables

Table 1.1 SEARs relevant to the SIA	4
Table 2.1 Adapted DPE Social Impact Significance Matrix (2021b)	
Table 3.1 Distances from the approximate centre of the Project Area	
Table 3.2 Summary of relevant ABS datasets	
Table 3.3 Scoping of Social Impacts	
Table 4.1 Key Stakeholder Groups	
Table 4.2 Summary of Consultation Activities, Interview Topics and Supplemental Data Sources used in the SIA	
Table 5.1 Key Demographic Indicators for all ABS Datasets across the Project's Social Locality	32
Table 5.2 Key Industries for Select ABS Statistical Areas (2016 Census Data)	
Table 6.1 Impact Issues	
Table 6.2 Social Impact Assessment	
Table 7.1 Proposed Social Impact Mitigations and Revised Impact Significances	
Table 8.1 Proposed Monitoring Framework	

# List of Figures

Figure 1-1 Project Locality	2
Figure 1-2 Project Overview	3
Figure 1-3 New England Renewable Energy Zone Geographical Area	7
Figure 2.1 SIA Process	8
Figure 3-1 Project Social Locality	16

ABS	Australian Bureau of Statistics
CBF	Community Benefit Fund
ССС	Community Consultative Committee
DPE	NSW Department of Planning and Environment (formerly Department of Planning, Industry and Environment)
EIS	Environmental Impact Statement
EMS	Environmental Management System
ha	Hectares
km	Kilometres
kV	Kilovolts
LGA	Local Government Area
m	Metres
MW	Megawatts
NSW	New South Wales
RAI	Rental Affordability Index
SA1	ABS Statistical Area 1
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	ABS Socio-Economic Index for Areas
SEP	Stakeholder Engagement Plan
SIMP	Social Impact Management Plan
SSD	State Significant Development
WWPL	WinterbourneWind Pty Ltd

# 1. Introduction

WinterbourneWind Pty Ltd (WWPL) is developing the proposed 700 megawatt (MW) Winterbourne Wind Farm Project ('the Project'), located near Walcha in the New England Tablelands of New South Wales (NSW).

The Project is State Significant Development (SSD) and requires consent under Division 4.7 of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). To support the SSD application, an Environmental Impact Statement (EIS) is required. As part of the EIS process, and in response to the Secretary's Environmental Assessment Requirements (SEARs), issued by the Department of Planning and Environment (DPE), a Social Impact Assessment (SIA) is to be prepared.

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged by WWPL to conduct an SIA for the Project.

# 1.1. The Proponent

The Proponent is WinterbourneWind Pty Ltd (ABN: 59 113 000 150). In June 2019, Wind Power Invest (WPI), a wholly owned subsidiary of global wind energy giant Vestas, acquired a 95% stake in WWPL from MirusWind Pty Ltd, which began developing concepts for the Project in 2004.

In December 2021, Copenhagen Infrastructure IV (CI IV), a fund managed by Copenhagen Infrastructure Partners (CIP), entered into an agreement with Vestas to acquire Vestas' shareholding in the Winterbourne Wind Farm. The agreement will enable funding to be available to construct the wind farm project once all key development activities for the wind farm have been completed.

Since 1979, over 151GW of Vestas wind turbines have been installed in 86 countries, making Vestas one of the wind industry's largest and most successful companies. Since 2001, Vestas has been involved in the sales, development, construction and maintenance of wind farms in Australia and New Zealand and currently employs over 500 staff in this region.

# 1.2. Project Description

The Project is located within the Walcha and Uralla Local Government Areas (LGAs), approximately 6.5 km northeast of Walcha, 25 km southeast of Uralla, and 32 km south of Armidale.

The wind farm site comprises 315 freehold landholdings, one Crown land parcel, and Crown land paper roads covering approximately 22,285 hectares (ha) ('Project Area'). The Project Area is at an elevation of approximately 1,100 metres (m) to 1,300 m (above sea level), comprised of hills and ridgelines rising out of the Walcha Plateau. The Project location is identified in **Figure 1-1**, and Project layout in **Figure 1-2**.

The Project is proposed to consist of up to 119 wind turbine generator (turbine) locations with a combined maximum installed capacity of approximately 700 MW and an expected operating life of up to 30 years. A maximum tip height of 230 m is proposed.

The Project includes an internal electrical reticulation network (both overhead and underground), two on-site substations, new and upgraded access roads, temporary construction facilities (including concrete batching plants), and operation and maintenance buildings. A large-scale battery storage is also proposed for the Project to support stabilising the supply of electricity to the National Electricity Market (NEM).

The Project is also proposed to include approximately 50 km of new 330 kilovolt (kV) overhead transmission line running through the wind farm and continuing northwest from the Project Area. This new transmission line will connect to the existing grid network operated by TransGrid at a new switchyard which would be constructed approximately 7 km south of Uralla, NSW.

As part of the Project, a number of landowners have entered into commercial agreements with WWPL for hosting wind turbines and associated infrastructure over the life of the wind farm. Neighbours and the wider community will also receive financial benefits from the project through establishment of the Community Benefit Fund (CBF).





not warrant its accuracy.

# 1.3. Legislative and Regulatory Context

# 1.3.1. Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides for the protection of nationally significant environments, including the implementation of measures consistent with Australia's international environmental responsibilities. To this end, the EPBC Act establishes a legal framework to protect and manage prescribed Matters of National Environmental Significance (MNES).

Under the EPBC Act, an action will need approval from the Minister for the Environment if the action has, will have, or is likely to have a significant impact on MNES. Preliminary field surveys have identified the known or likely presence of some species listed as threatened under the EPBC Act, including the Spotted Quoll and the Koala. WWPL has referred the proposed action to the Australian Government Department of Agriculture, Water and the Environment (DAWE), and the Project has been determined to be a 'Controlled Action'. The Project will therefore require assessment and approval under the EPBC Act, and this will occur under the NSW Assessment Bilateral Agreement<sup>1</sup>.

Commonwealth legislation does not include requirements or guidelines specific to conducting a SIA, rather such guidelines are provided under NSW legislation.

### 1.3.1. NSW Legislation

The Project is an SSD under Division 4.7 of Part 4 of the EP&A Act. Project SEARs were issued on 17 September 2020. **Table 1.1** summarises the SEARs relevant to the SIA.

Issue	SEARs	Relevance to the SIA
General Requirements	<ul> <li>An assessment of the likely impacts of the development on the environment, focusing on the specific issues identified below, including:</li> <li>a description of the existing environment likely to be affected by the development using sufficient baseline data;</li> <li>an assessment of the likely impacts of all stages of the development (including cumulative impacts of the development with existing and proposed developments in the region), taking into consideration any relevant State and Commonwealth legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice and including the NSW Wind Energy Guideline for State Significant Wind Energy Development (2016);</li> <li>a description of the measures that would be implemented to avoid, mitigate and/or offset residual impacts of the development and the likely effectiveness of these measures, including details of consultation with any affected non-associated landowners in relation to the development of mitigation measures, and any negotiated agreements with these landowners; and</li> </ul>	Outlines the requirements for consideration in the SIA of the social baseline (Section 5); Project phases and cumulative impacts (Section 6); avoidance, mitigation and offset measures (Section 7); and monitoring measures (Section 8).

#### Table 1.1 SEARs relevant to the SIA

<sup>&</sup>lt;sup>1</sup> Refer to Appendix A of the Project SEARs:

https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-10471%2120200917T055518.134%20GMT

Issue	SEARs	Relevance to the SIA
	• a description of the measures that would be implemented to monitor and report on the environmental performance of the development, including adaptive management strategies and contingency measures to address residual impacts.	
Social and Economic	The EIS must include an assessment of the social and economic impacts and benefits of the Project for the region and the State as a whole, including consideration of any increase in demand for community infrastructure services.	This standalone SIA addresses this SEAR.
Plans and Documents	<ul> <li>The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. A list of some of the legislation, policies and guidelines that may be relevant to the assessment of the Project can be found at:</li> <li><u>https://www.planningportal.nsw.gov.au/majorprojects/assessments/policies-andguidelines;</u> and</li> <li><u>http://www.environment.gov.au/epbc/publications#assessments</u></li> </ul>	DPE's (2021) SIA Guidelines are discussed below ( <b>Section</b> <b>1.2.2</b> ).
Consultation	<ul> <li>During the preparation of the EIS, you must:</li> <li>consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, affected landowners, exploration licence holders, quarry operators and mineral title holders;</li> <li>establish a Community Consultative Committee for the Project in accordance with the Community Consultative Committee Guidelines for State Significant Projects, and consult with the committee during the preparation of the EIS, and</li> <li>carry out detailed consultation with the following: <ul> <li>Uralla Shire Council;</li> <li>Walcha Shire Council;</li> <li>DPE's Biodiversity and Conservation Division;</li> <li>Department of Premier and Cabinet – Heritage</li> <li>National Parks and Wildlife Service;</li> <li>DPE Water Group;</li> <li>Environment Protection Authority;</li> <li>Crown Lands;</li> <li>Regional NSW – Mining, Exploration &amp; Geoscience (MEG);</li> <li>Department of Primary Industries – Agriculture and Fisheries divisions;</li> <li>Transport for New South Wales;</li> <li>TransGrid;</li> <li>Department of Finance, Services and Innovation – Telco Authority;</li> <li>Northern Tablelands Local Land Services;</li> <li>Forestry Corporation:</li> </ul> </li> </ul>	Outlines the broader consultation requirements for the EIS. Section 4 summarises consultation relevant to the SIA.

Issue	SEARs	Relevance to the SIA
	<ul> <li>Fire &amp; Rescue NSW;</li> <li>NSW Rural Fire Service;</li> <li>Department of Defence;</li> <li>Civil Aviation Safety Authority; and</li> <li>Airservices Australia.</li> <li>The EIS must include a description of what consultation was carried out during the preparation of the EIS, identify the</li> </ul>	
	issues raised during this consultation, and explain how these issues have been addressed in the EIS.	

#### 1.3.2. NSW SIA Guidelines

DPE's Social Impact Assessment Guideline: For State Significant Projects ('the Guideline') (DPE 2021a) and Technical Supplement: Social Impact Assessment Guideline for State Significant Projects ('Technical Supplement') (DPE 2021b) provide the most up to date guidance for undertaking SIAs in NSW. Together they update the 2020 draft versions of the same documents and supersede the 2017 Social Impact Assessment Guideline for State Significant Mining, Petroleum, and Extractive Industry Development (DPE 2017a) which had become the de facto guideline for all SSDs.

The Guideline intends to provide a rigorous framework to identify, evaluate, and respond to social impacts, guide meaningful stakeholder and community consultation on social impacts throughout project phases, and advise on ongoing project development, monitoring, and adaptive management. The Technical Supplement provides additional specific advice including how SIA reports are preferably structured, how to define likelihood and magnitude levels of social impacts, and how to determine impact significance (DPE 2021b, pp 12-13). This SIA has been prepared in accordance with the Guideline and Technical Supplement.

# 1.3.3. State, Regional and Community Planning

#### NSW Electricity Infrastructure Roadmap

The NSW *Electricity Infrastructure Roadmap* is a framework to transition NSW to more clean energy as existing fossil fuel power generation capacity is decommissioned over the coming years (NSW Government 2021a). It is underpinned by the NSW Electricity Strategy (NSW Government 2019) and the *Electricity Infrastructure Investment Act 2020* (NSW). The Roadmap commits the NSW Government to establishing five Renewable Energy Zones (REZs), including one in the New England Region.

REZs are intended to be modern day power stations, combining multiple projects (e.g. wind and solar) and achieving economies of scale supporting infrastructure such as high-voltage transmission infrastructure required to deliver energy to market (NSW Government 2021b).

The New England REZ was formally declared on the 17 December 2021. The REZ is expected to deliver up to 8,000 MW of new network capacity. It is located close to an existing transmission corridor connecting NSW with Queensland (QLD) and to the proposed Oven Mountain Pumped Hydro Project, deemed Critical State Significant Infrastructure. **Figure 1.3** provides an overview of the New England REZ.



### Figure 1-3 New England Renewable Energy Zone Geographical Area

(Source: Energy NSW 2022)

#### New England North West Regional Plan 2036

The New England North West Regional Plan 2036 (DPE 2017b) outlines the vision for the region, which is *"nationally valued landscapes and strong successful communities from the Great Dividing Range to the rich black soil plains"*.

To achieve this vision the Government has acknowledged the opportunities provided by the region's rich natural resources and strong communities, and set the following regionally focused goals:

- a strong and dynamic regional economy;
- a healthy environment with pristine waterways;
- strong infrastructure and transport networks for a connected future; and
- attractive and thriving communities.

*Direction 5: Grow New England North West as the renewable energy hub of NSW* within the regional plan recognises the renewable energy potential of the region and seeks to facilitate renewable projects including wind power.

#### Walcha LGA Local Strategic Planning Statement 2036

The *Walcha Local Strategic Planning Statement 2036* (LSPS) (Walcha Council 2019) highlights environmental sustainability as a planning priority. Within this, priority no. 8 seeks to identify and promote wind, solar and other renewable energy production opportunities and manage and support the transition to renewable energy. The strategic direction commits to exploring options for renewable energy generation to encourage a diversified economy. The action listed against this priority is to encourage the development of wind and solar farms in appropriate areas that:

- avoid/manage impacts to the scenic rural landscape and visitor attractions;
- have available access to essential infrastructure, such as substations;
- preserve valuable farming land; and
- facilitate appropriate smaller-scale renewable energy projects using biowaste, solar, wind, hydro, geothermal or other innovative storage technologies.

Related to this, this Walcha LSPS Vision is stated as follows:

To utilise our strategic location at the crossroads of the Oxley Highway and Thunderbolts Way to develop our diverse and productive agricultural activities, support the growth of Walcha township and connected villages and captivate visitors with our vibrant natural and cultural tourist attractions. (Walcha Council 2019, p. 9)

#### Walcha LGA Development Control Plan 2019 (amended 2021)

Development control plans do not apply to SSD under the provisions of Clause 2.10 of State Environmental Planning Policy (Planning Systems) 2021. Nevertheless, in the interests of completeness, the specific wind farm provisions of the *Walcha Development Control Plan 2019* have been considered.

The *Walcha Development Control Plan 2019* (DCP) (Walcha Council 2019b) was amended during October 2021. Within the NSW planning framework, DCPs complement other local environment planning instruments to provide more detailed planning and design guidance. The DCP amendment added a chapter specific to wind farm developments. The objectives of the amendment are:

- to provide a stated position upon which Walcha Shire Council will provide comment in relation to SSD for wind power generation;
- to provide development controls and guidelines that assist in achieving the objectives of the *Walcha Local Environmental Plan 2012*;
- provide information to be included and assessed with each development application for commercial wind power generation;
- to minimise potential land use conflicts;
- ensure road and access issues are identified as significant aspects of gaining consent for a wind farm; and
- to ensure that adequate provisions are made to restore developed land at the end of the Project's useful life.

The community values and aspirations of the Walcha LGA are further described in Section 5.

#### Uralla LGA Local Strategic Planning Statement

The *Uralla Local Strategic Planning Statement* (LSPS) (Uralla Council 2020) similarly notes the importance of sustainability, protecting and restoring natural habitats, and adapting to climate change as key planning priorities. In supporting and managing rural landscapes, the Uralla LSPS recognises the high solar and wind energy potential of the LGA and the opportunities this presents for growth and development in the region. However, the Uralla LSPS notes that this needs to be managed to minimise adverse impacts to the local environment and to agricultural productivity. Locational requirements for power generation projects within the Uralla Shire include:

- Proximity to the energy source and to parts of the electricity grid with spare capacity;
- The ability to create buffers to sensitive land uses;
- Access to appropriate transport infrastructure; and
- Limited impacts on existing land uses and prominent vistas.

The actions connected to this emphasise the protection of productive agricultural land for primary production uses, and the maintenance of the rural and agricultural character of the area. Relatedly, the Uralla LSPS Vision notes that Uralla is:

An integrated community developing a vibrant and sustainable future that is built upon the foundations of our past. A growing community of small-town values connected closely with our citizens which continues to foster quality residential and commercial development. A community in which the rural New England character is preserved, and lifestyle choices are provided with sustainably planned, well serviced development within safe and friendly neighbourhoods. An inviting and creative destination that excites the senses and celebrates its rural heritage. A community dedicated to minimising its ecological footprint, and an environment that is nurtured, healthy, protected and provides opportunities for its sustainable use. New and existing industries which provide opportunities for a range of local employment and training options, complemented by thriving town centres. Innovation with imagination will guide Uralla Shire to a progressive and exciting tomorrow, instilling pride and spirit in our citizen centred community. An independent, strong and engaged community, with a respected leadership which provides for the future needs of its people in a sustainable and financially responsible manner. (Uralla Council 2020, p. 16)

The community values and aspirations of the Uralla LGA are further described in Section 5.

These planning documents have been taken into consideration in the preparation of this SIA.

# 1.4. Purpose and Outline

This SIA has been prepared in accordance with the provisions of the Guideline (DPE 2021a) and Technical Supplement (DPE 2021b). The purpose of this SIA is to provide the DPE with an understanding of the Project's potential social impacts, and how these social impacts are identified, assessed, managed, and monitored.

As such, this SIA identifies Project specific complexities, considering the locational, construction and operational aspects of the Project to define a Social Locality for the Project (refer to **Section 3**). The defined Social Locality provides the context wherein an initial social baseline can be developed (refer to **Section 5**), and social impacts can be identified (refer to **Section 6**).

The SIA is structured as follows:

- Section 2 provides an overview of the assessment methodology;
- **Section 3** describes the scoping for the Project's Social Locality;
- Section 4 provides an overview of stakeholder engagement undertaken for the Project to date, including engagement relevant to the SIA;
- Section 5 describes the existing baseline conditions in the Project's Social Locality;
- Section 6 assesses the social impacts that may result from the Project;
- Section 7 provides an overview of social impact enhancement and mitigation measures, and an assessment of residual impacts; and
- Section 8 outlines and approach that will be followed in monitoring and managing social impacts into the construction and operation phases of the Project.

# 1.5. Authorship

The SIA Report was completed on 10 October 2022 by Dr Rene Provis, lead author, and contains all relevant information. The lead author holds a PhD in development anthropology from the University of New South Wales, and is a member of the International Association for Impact Assessment (IAIA) and the Australian Anthropological Society (AAS). The Report was completed in good faith in accordance with the relevant ethical frameworks, and to the lead author's knowledge does not contain any false or misleading information.

# 2. Social Impact Assessment Methodology

This section describes the methodology utilised to conduct this SIA. The methodology typically applied to the assessment of social impacts originated in the 1970s and initially emulated the approach of an EIS. The practice of SIA has, however, evolved significantly over time in recognition that social issues differ fundamentally from biophysical issues, and that the primary task of SIA is the proper management of social impacts throughout the project lifecycle. This has led to a focus on the enhancement of benefits from the project for impacted communities, alongside ensuring that negative impacts are identified and effectively managed. This is necessary for the project to earn its 'social licence to operate'; and because attempting to minimise harm (the traditional approach in SIA) does not ensure that the project will be considered acceptable by local stakeholders, or that a project does not actually cause significant harm.

Recognising this, the Guideline and Technical Supplement (DPE 2021a, 2021b) aim to enhance the rigour applied to SIAs with a view to minimising impacts and enhancing benefits in line with good international industry practice. The assessment has been undertaken in accordance with the Guidelines and the Project SEARs (outlined in **Section 1.3.1**). **Figure 2.1** outlines the steps taken to complete the SIA, which are described in the following sections.



Stakeholder & Community Consultation

#### Figure 2.1 SIA Process

# 2.1. Phase 1: Scoping

Following good international industry practice (Vanclay et al 2015) and the NSW Guideline and Technical Supplement (DPE 2021a, 2021b), the scoping undertaken for this SIA aimed to:

- capture and characterise the likely social impacts to inform Project planning before social impacts start occurring;
- enable a consistent but scalable approach to SIA where the level of assessment is proportionate to the scale and nature of the likely social impacts;
- consider the information to be assessed during the SIA scoping and initial assessment and the approach to community engagement;
- identify potential Project refinements and possible mitigation and enhancement measures; and
- identify the impacts that may require further assessment in the EIS and the possible level of assessment for each impact.

The SIA also made use of DPE's *Social Impact Assessment Worksheet* (scoping worksheet) (DPE 2021c), which helped to identify potential social impacts through the following steps:

- identification of Project activities that may cause impacts;
- categorisation of impacts according to their effects to way of life, community, accessibility, culture, health and wellbeing, surroundings, livelihoods, decision making systems and whether the impacts are positive or negative and tangible or intangible;
- determination as to which prior investigations are relevant to the Project;
- identification of cumulative and combined impacts, including spatial, temporal, and linked

impacts;

- definition of material impact, including the extent of people affected, duration of impacts, intensity/scale of impacts, sensitivity of the people affected, and their level of concern or interest, and
- assignment of assessment levels, such as detailed, standard, minor, or not relevant, for each identified impact.

# 2.2. Phase 2: Social Baseline Data Collection and Analysis

The social baseline describes the social context in the absence of the Project. It documents the existing social environment, conditions and trends relevant to the impacts identified. The social baseline is the benchmark against which direct, indirect and cumulative impacts are predicted and analysed.

The scope and content of the social baseline has been tailored to the Project context and the level of assessment of social impacts using meaningful indicators and information, including stakeholder engagement activities relevant to the SIA (**Section 4**). Where scoping identified that primary data was required for the assessment, stakeholder engagement activities for the EIS were adapted to provide this information (**Section 3**).

The data collected and presented in this SIA is based on a review of available data from a range of primary and secondary sources. This includes, but is not limited to:

- Australian Bureau of Statistics (ABS) Census (Community Profile), Socio-Economic Index for Areas (SEIFA), etc.;
- NSW Government Department data (e.g. NSW Health, Transport for NSW, and NSW Police Force);
- Local Government data;
- Stakeholder engagement outcomes community insights, including issues and concerns, gathered through the stakeholder consultation process (refer to Section 4);
- Local and State government planning, policy, and strategy documentation;
- Plans, policies and other documents provided by WWPL, and
- The Winterbourne Wind Farm Socio-Economic Impact Assessment (SGS 2021a), which is included at Appendix A.<sup>2</sup>

Combined, this data seeks to portray community values, and how people and the things they value may be impacted by the Project. This includes consideration of:

- the features of the community, the social locality, and/or the landscape that people value from urban areas, the sense of community or the accessibility of services, to natural and diverse environments or quiet/vibrant neighbourhoods;
- how these features influence local people's way of life, health or wellbeing;
- how the Project might affect these features, and for which groups;
- how the Project could be modified to enhance these features and how they affect people's wellbeing; and
- how might the Project be designed to avoid and minimise any short-term adverse impacts.

In considering the above, the social baseline identifies and describes:

- the different social groups who may be affected by the Project;
- the built and natural features that local people value and why they value them;

<sup>&</sup>lt;sup>2</sup> SGS' (2021a) Winterbourne Wind Farm – Socio Economic Assessment provides an earlier economic assessment of the Project. Its key limitations are changes to the Project design that have occurred since its publication, and changes to the NSW SIA Guidelines (DPE 2021a, DPE 2021b) that have occurred subsquent to commissioning of the report.

- the historical, current and expected social trends which may be influenced by this Project and other projects in the area;
- the various social elements of value, and interpretations of them; and
- demonstration of appropriate social-science research methods and data limitations.

# 2.3. Phase 3: Impact Assessment

The impact assessment undertaken in the SIA places people at the centre and considers the impacts from their perspective. The primary and secondary data collected and compiled for the social baseline, including community voices, is then assessed with the rigorous impact significance methodology, as outlined in the Technical Supplement (2021b).

In this approach, impact significance is understood as the likelihood of an impact occurring combined with the magnitude of impacts, both positive and negative, and prior to the application of any mitigation or management measures. The likelihood level refers to the probability of a social impact occurring because of the Project, while the magnitude is considered in terms of the following characteristics:

- Extent: Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any potential vulnerable people? Which location(s) and people are affected? (e.g. near neighbours, local, regional).
- 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 severity. Concern itself can lead to negative impacts, while interest can lead to expectations of positive impacts.

Qualitative and quantitative indicators described in the social baseline are used to inform an understanding of the social impacts identified in the scoping phase across each of these five characteristics. The magnitude for each impact from the following five levels can then be defined:

- 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.

The likelihood of an impact occurring along with its magnitude of impact as assessed above combine to yield a rating of social impact significance, as described in **Table 2.1.** Negative impacts are indicated in shades of green while positive impacts are indicated in corresponding shades of blue.

		Magnitude level				
		1 Minimal	2 Minor	3 Moderate	4 Major	5 Transformational
	A Almost Certain	Medium	Medium	High	Very High	Very High
level	<b>B</b> Likely	Low	Medium	High	High	Very High
poou	<b>C</b> Possible	Low	Medium	Medium	High	High
Likelil	<b>D</b> Unlikely	Low	Low	Medium	Medium	High
-	E Very Unlikely	Low	Low	Low	Medium	Medium

# Table 2.1 Adapted DPE Social Impact Significance Matrix (2021b)

\*Where impacts are positive the following colour scale is used:

Positive	Low	Medium	High	Very High
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# 2.4. Phase 4: Enhancement, Mitigation and Residual Impacts

Following the assessment of impacts, measures to avoid and/or minimise negative impacts are considered, including those implemented in earlier stages of Project planning and development. Where avoidance or minimisation is not possible, management strategies are identified. Where an impact is predicted to be positive, measures to enhance positive impacts are identified to ensure the maximum benefit to the community across all impact significance ratings.

The following factors (DPE 2021b, p.15) are considered in the development of mitigation measures:

- ensuring a clear connection between the mitigation measure and the negative social impact being mitigated;
- whether there is an applicable standard that defines what is acceptable;
- whether the Project is the sole or primary cause of the negative social impact, and the scale
  of its relative contribution to the overall or cumulative impact;
- whether the mitigation measure requires action by another party that the proponent does not fund or manage;
- whether the mitigation measure itself is likely to cause secondary social impacts;
- whether the mitigation measure is reasonable or practicable;
- whether and in what ways the mitigation measure is acceptable to affected people;
- whether the mitigation measure will address all reasonably foreseeable scenarios; and
- whether the mitigation approach is prescribed in a government policy, or if alternative formalised arrangements are required.

Social impact significance, as outlined in **Table 2.1**, is used to determine the level of management required with a proportional focus on impacts with a higher impact significance (i.e. medium, high and very high). The impact assessment and impact significance ratings derived in **Section 6** are revised after the application of management and mitigation strategies had been applied to derive a rating of residual impact significance for each impact (**Section 7**).

These management measures and strategies are arranged according to Project phase (Preconstruction, Construction, and Operation) and into the following categories: stakeholder and community; employment and procurement; local disruptions during construction; accommodation and worker influx; and land use and landscape. The findings are summarised in the preliminary Social Impact Management Plan (SIMP) included in **Section 7**. The preliminary SIMP focuses on effective, adaptive, and actionable measures and includes consideration of the likelihood of their implementation and sustainability from the community's perspective.

# 2.5. Phase 5: Monitoring and Management Framework

The accuracy of the impact assessment, progress towards implementation of the SIMP, and the effectiveness of measures it contains is understood through implementation of a monitoring and management framework. The framework (and subsequent plan) includes a program for monitoring the predicted social impacts against actual impacts and describes the:

- desired outcomes in social terms, including measures and strategies detailed in the SIMP;
- indicator(s) that will be used to monitor change;
- targets against which performance will be assessed;
- methods that will be used to monitor the social impact;
- frequency of monitoring;
- roles and responsibilities involved in the monitoring framework (and subsequent plan) and
- process for responding to monitoring results, including the process and roles and responsibilities for identifying and implementing adaptive management strategies as required.

The framework also outlines a social incident notification and reporting process, a program for ongoing analysis of social impacts (both positive and negative), identification of any data gaps and how they might be addressed, and processes for reviewing and reporting on the results of monitoring. Monitoring and evaluation plans are conditions typically applied during the Project's state assessment and approvals process. The framework outlined in **Section 8** provides the basis for developing a more detailed plan that will be required to meet this likely condition of approval and will be consistent with any additional SIMP development that may be required as conditions of approval.

# 3. Scoping

# 3.1. Approach to Determining the Social Locality

The first step in a SIA is the scoping process, which helps to define the social area of influence, or Social Locality, as well as the potential interactions between the Project and people surrounding the Project who may experience impacts. For the purposes of the SIA, this includes individuals, households, groups, communities, businesses, and other types of organisations.

In determining the Project's Social Locality, the following aspects were taken into consideration:

- The number of wind turbines and their locations across the Project Area, and the layout of the access tracks, the substation, and transmission line;
- The location of these components within the overall Project Area relative to sensitive land uses. This included proximity to environmental values and topographical features;
- Construction and operation phase activities, such as:
  - Land clearing and ongoing access for maintenance;
  - Workforce requirements, including skills required and accommodation arrangements;
  - Goods and services required by the Project; and
  - Haulage routes to and from the Project Area;

When considering these aspects, it was determined that the Project's Social Locality should include the Project Area, the area surrounding the Project Area wherein noise, visual and other amenity impacts may occur, the haulage routes where similar amenity impacts may be experienced, and the communities in larger centres that may provide workers or goods and services to the Project.

# 3.2. Description of the Social Locality

As described in **Section 1.1**, the Project is located within the Walcha and Uralla LGAs. The Project Area is primarily accessed from Thunderbolts Way via Jamieson Street, Ohio Road, and Emu Creek Road on the northern edge of Walcha Township. The adjacent regional centres of Armidale and Tamworth will likely provide goods and services to support the construction phase of the Project.

The Social Locality comprises the following three components:

- The Project Area and immediate surrounding areas, located within the ABS LGA level data for the Walcha and Uralla LGAs. State level data for NSW and national level data for Australia are used to provide an understanding of the broader and comparative social context within which the Project sits.
- The transportation and haulage routes: It is anticipated that major turbine components will be delivered to the Port of Newcastle and transported to the Project Area via the New England Highway. This route will exit the New England Highway near Bendemeer onto the Oxley Highway (B56) to the west of Walcha, then follow Saleyards Road and Darjeeling Road bypassing central Walcha to Thunderbolts Way, and subsequently south to Jamieson Street and onto Ohio Road and Emu Creek Road to access the Project Area.
- The nearby regional centres of Armidale and Tamworth, which may provide goods and services to support the construction phase of the Project. ABS Urban Centres and Localities (UCLs) provide baseline data for these regional centres.

The Project Social Area and immediate surrounding areas, Uralla and Walcha LGAs, transportation and haulage routes, and UCLs for Armidale and Tamworth are depicted in **Figure 2.1**. Indicative travel distances to the Project Area are provided in **Table 3.1**.



Town/Regional Centre	Distance
Walcha	~6.5 km to the closest wind turbine
Uralla	25 km
Armidale	32 km
Tamworth	90 km
Port Macquarie	180 km

#### Table 3.1 Distances from the approximate centre of the Project Area

### 3.2.1. ABS Datasets

The data presented in the baseline provides an understanding of the communities within the Social Locality, including the Project Area and immediate surrounding areas, local transportation and haulage routes, and nearby regional centres. It is noted that not all data sets (e.g. health, crime, transport) are readily available at a Statistical Area 1 (SA1) level. Where this is the case, the most appropriate data is presented, which may be at a LGA or regional level.

The focus has been on data from 2011 and 2016. Prior to 2011, the statistical area distributions were substantially different, making trend analysis problematic. For this reason, data from the 2006 Census has not been incorporated into this assessment.

Location	2011		2016		
	Approx. area	ABS Data Reference	Approx. area	ABS Data Reference	
Walcha LGA	6261 km <sup>2</sup>	17850 (LGA)	6261 km <sup>2</sup>	17850 (LGA)	
Walcha Urban Centre/Locality	3.9 km <sup>2</sup>	115146 (UCL)	3.7 km <sup>2</sup>	115143 (UCL)	
SA1 (southern Project footprint excluding Walcha township)	1569 km²	1118907 (SA1)	-	1118907 (SA1)	
SA1 (northern Project footprint)	641 km <sup>2</sup>	1118811 (SA1)	-	1118811 (SA1)	
SA1 (transmission line corridor)	102 km <sup>2</sup>	1118813 (SA1)	-	1118813 (SA1)	
Uralla LGA	3227 km <sup>2</sup>	17650 (LGA)	3227 km <sup>2</sup>	17650 (LGA)	
Uralla Urban Centre/Locality	8.2 km <sup>2</sup>	115142 (UCL)	8.2 km <sup>2</sup>	115139 (UCL)	
Armidale Urban Centre/Locality	31 km <sup>2</sup>	113001 (UCL)	31 km <sup>2</sup>	112001 (UCL)	
Tamworth Urban Centre/Locality	72 km <sup>2</sup>	112012 (UCL)	38.2 km <sup>2</sup>	112014 (UCL)	
NSW	-	-	-	Code 1 (STE)	

#### Table 3.2 Summary of relevant ABS datasets

# 3.3. Scoping of Social Issues and Potential Impacts

The potential social issues and areas for investigation in this SIA were identified based on information gathered from the following:

- a review of publicly available assessment documentation prepared for other proposed renewable energy projects in the surrounding region, including the Thunderbolt Energy Hub and the New England Solar Farm;
- strategic plans and community plans for the region (Section 1.2.3);
- outcomes of community engagement undertaken for the Project, including inputs from the Community Consultative Committee (CCC) (Section 4.4.1), and engagement conducted for the SIA (Section 4.3);
- comments from agencies and stakeholders provided to DPE to inform the SEARs; and
- findings of other technical studies prepared for the EIS (Section 6).

The scoping of issues and potential impacts was initially facilitated through completion of the updated SIA Scoping Tool which complements the Guideline (DPE 2021a, 2021c). The scoping tool aids identification of the social impacts that are considered likely to occur, and the corresponding level of assessment for each social impact.

The assessment categories which were considered in the scoping of potential social impacts follows the SIA Guideline (DPE 2021a), as follows:

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

Table 3.3 provides a summary of the scoping process for this Social Assessment, which shows:

- a description of the Project activity and potential social impacts that are expected to occur as a result;
- the corresponding social impact categories as described in the Guideline (and above); and
- a preliminary assessment of impacts.

# Table 3.3 Scoping of Social Impacts

Project Activity	Impact Categories	Description of Likely Impact	Positive/ Negative		
Pre-Construction					
Project engagement is not transparent and inclusiveDecision-makin systems		Stakeholders do not feel they have been heard and are unable to influence Project decisions	Negative		
Construction			1		
Increased demand for labour creates direct and indirect employment opportunities for the local community	Livelihoods	During stakeholder engagement activities and interviews local residents expressed interest in the employment opportunities associated with the Project, frequently noting local jobs as one of the key Project benefits.	Positive		
Increased demand for labour for the Project creates skills shortages.	Livelihoods	Other businesses in the region cannot find the relevant skilled and unskilled employees they need to operate their businesses due to the presence of the Project.	Negative		
Increased demand for goods and services stimulates local economies	Livelihoods	Businesses within the Social Locality benefit from increased economic activity associated with the construction workforce and Project material requirements.	Positive		
Increased demand for goods and services creates shortages	Livelihoods	The increased demand for goods and services due to the Project leads to local supply shortages and price increases which may affect the ability for the wider community to access and/or procure necessary goods and/or services. This is particularly pertinent following recent disruptions to supply chains related to Covid-19.	Negative		
Disruptions to farming practices because of Project construction	Livelihoods	Construction activities may limit access and cause temporary inconveniences for the operation of rural properties, such as stock movements, paddock access, etc.	Negative		
Transportation of materials and equipment to the Project Area	Health and wellbeing	Has the potential to cause road traffic inconvenience and safety impacts for road users along the haulage routes to site from the Port of Newcastle and on local roads. Risk of traffic injury or in the worst case a fatality, resulting from increased vehicle movements during the transportation of goods and workers to and from the site.	Negative		

Project Activity	Impact Categories	Description of Likely Impact	Positive/ Negative
Interruptions to daily life because of Project construction	Way of life	Daily life impacts, such as traffic changes, school buses, mail deliveries, utilities interruptions, etc. arising from increased construction traffic and local road upgrades. Increased disruption, congestion and wear and tear on local roads, leading to frustration by road users and requirement for more frequent repairs.	Negative
Construction environmental impacts, including noise, vibration, dust, visual amenity	Health and wellbeing	Various impacts resulting from construction activities, generally felt by people living in proximity to construction activities, such as degradation of air quality and health impacts as a result of increased generation of dust and particles from land clearing, and the use of heavy vehicles and equipment.	Negative
Increase in the demand for short and long-term accommodation because of the construction phase workforce	Way of life	Considering the accommodation shortages and low vacancy rates reported in the region, the Project has the potential to create accommodation shortages and increase cost of living pressures through increased rents for local accommodation. Additional potential to impact availability of short term and tourist accommodation was raised during stakeholder engagement.	Negative
Increased demand for social and emergency services and recreational facilities based on the temporary increase in local population due to the construction phase workforce	Accessibility	Pressure / availability of community services to absorb the influx of workers (such as clinics, hospitals, police, emergency services).	Negative
Community concerns about behaviour of non-local workforce	nunity concerns about Health and viour of non-local workforce Wellbeing Perceived community safety concerns or community friction due to the influx of temporary out of town workers.		Negative
Operation			
A small number of jobs created during the operation phase of the Project	Livelihoods	There is the potential for positive local economic impacts, including indirect jobs and an expansion of tourism once the Project is complete.	Positive
Demand for locally procured goods and services during the operation phase of the Project	Livelihoods	There is strong interest in the local economic opportunities associated with Project procurement.	Positive

Project Activity	Impact Categories	Description of Likely Impact	Positive/ Negative
Diversification of income streams for rural businesses (host landowners)	Livelihoods	Landowners will receive payments for hosting wind turbine infrastructure, diversifying the income streams that are available to them.	Positive
Establishment of the Community Benefit Fund	Community	A Community Benefit Fund will be established to share the financial benefits of the Project with Project neighbours and the wider community.	Positive
Community wellbeing enhanced by perceived environmental benefits of renewable energy development	Health and wellbeing	There is a strong community interest in the development of renewable energy projects to reduce reliance on fossil fuel power generation and address climate change	Positive
Perceived impacts on land values	Livelihoods	Perceived potential impacts to neighbouring land values is common with opposition to wind farms and was mentioned during stakeholder engagement.	Negative
Perceived health impacts associated with operational noise	Health and wellbeing	Perceived health impacts associated with operational noise.	Negative
Altered rural character, including visual amenity impacts	Surroundings	Changes to rural landscape character through installation of industrial infrastructure.	Negative
Improved vehicular access for fire-fighting in the vicinity of Project	Accessibility	Road improvements will improve access required for fire-fighting vehicles and equipment in the event of a bushfire, and for individual property owners and local residents.	Positive
Altered landscapes have the potential to impact tangible and intangible Aboriginal heritage	Culture	The Aboriginal Cultural Heritage and Historic Heritage Assessment Report has identified seven potential sites which may be disturbed by the Project (OzArk 2021).	Negative
Impacts to community cohesion through divided opinions about the desirability of the Project in the community	Community	Community cohesion is likely to be impacted at the level of relationships between individuals who support the Project and those who do not support the Project.	Negative
Cumulative socio-economic impacts from an additional	Accessibility	Cumulative impacts affecting access to services are possible, particularly trades and accommodation arising from this Project combined with nearby proposed renewable development projects associated with the New England REZ.	Negative

Project Activity Impact Categories Desc		Description of Likely Impact	Positive/ Negative
project associated with the New England REZ			
Cumulative visual amenity impacts from an additional project associated with the New England REZ	Surroundings	Cumulative impacts to surroundings are likely, particularly visual amenity across the wider area arising from this Project combined with nearby proposed renewable development projects associated with the New England REZ.	Negative

# 4. Stakeholder Engagement Activities for the SIA

WWPL commenced community and stakeholder engagement for the Project in January 2020. This section summarises the community and stakeholder engagement activities relevant to the SIA and summarises the engagement outcomes that have been incorporated into the impact assessment (detailed in **Section 6**).

# 4.1. Identification of Key Stakeholder Groups

The *Winterbourne Wind Farm Engagement and Consultation Strategy* (ERM-KJA 2020) provides an overview of communication and engagement activities and timing, including identifying key stakeholder groups. Based on this and the Scoping of the Project's Social Locality outlined in **Section 3**, the stakeholder groups identified as potentially impacted by the Project, and their potential issues and concerns, are outlined in **Table 4.1**.

Stakeholder	Specific Parties	Potential Interests / Concerns
Community Consultative Committee (CCC)	CCC established by WWPL	Individual consultation, noise, visual amenity, health and safety, construction disruption, public benefit, community sentiment.
Host Landowners	Landowners with the potential to host infrastructure or have already agreed to host infrastructure.	Individual consultation, access to private land, noise, impacts on livestock, visual amenity, health and safety, construction disruption, remuneration.
Immediate Neighbours	Neighbouring dwellings within 5 km of the proposed site and along the transmission corridor.	Individual consultation, access to private land, local character, noise and other operational impacts, visual amenity, property values, health and safety, security and privacy, construction disruption, impacts of construction traffic.
Surrounding Communities	Community members who live outside of a 5 km radius of the proposed site and the transmission corridor.	Community consultation, community wellbeing, economic benefits / impacts, impacts of construction traffic, visual impacts, property values.
Indigenous Communities	Traditional Owners (TOs), Registered Aboriginal Parties (RAPs) and Aboriginal groups, Summervale Village community (Walcha), Amaroo Local Aboriginal Land Council, Armidale Local Aboriginal Land Council.	Impacts to and ongoing management of cultural heritage values.
Government Agencies	Northern Tablelands Local Land Services, National Parks & Wildlife Service, Office of Environment & Heritage (Walcha Office).	Impacts on agricultural activities, visual amenity, health and safety, construction disruption, impacts to and ongoing management of environmental and cultural heritage values.

#### Table 4.1 Key Stakeholder Groups

Stakeholder	Specific Parties	Potential Interests / Concerns
Local Council	Walcha and Uralla Councils, via their representation on the CCC.	Jobs, economic impacts, opportunities for tourism and other industry benefits. Community consultation, community wellbeing, impact on local residents and businesses, economic benefits, impacts on local roads and infrastructure.
Local Businesses	Local businesses, especially in services which may be required by the Project	Jobs, economic impacts, opportunities for tourism and other industry benefits.
Local Organisations	New England North West NSW Business Chamber, Uralla Shire Business Chamber, Rotary Club.	Community consultation, community wellbeing, business opportunities, social and economic impacts, environmental impacts.

# 4.2. Consultation Activities relevant to the SIA

A wide variety of consultation activities have been utilised to inform the SIA. Regular and ongoing stakeholder engagement activities provided Project feedback and sentiment from Project neighbours, the wider community, and the Community Consultative Committee (CCC).

Targeted stakeholder interviews for the SIA were conducted during November 2021 to supplement the regular and ongoing stakeholder engagement activities, capturing a diverse range of views from host landowners, Project neighbours, local businesses and chambers of commerce, and community groups. The Aboriginal Cultural Heritage Assessment for the Project was utilised to capture key Traditional Owner stakeholder information.

Table 4.2 provides a summary of these engagement activities.

Table 4.2	Summary of Consultation Activities, Interview Topics and Supplemental Data
Sources used i	n the SIA

Stakeholders	Interview Topics, Questions and Supplemental Data Sources
Community Consultative Committee	To date, six CCC meetings have been held since March 2021. As per DPE's CCC Guideline (DPE 2019), the minutes from CCC meetings are published on the Project website. Issues and concerns relevant to the SIA raised in this forum have informed the SIA.
Local Residents, including: – Host Landowners – Immediate Neighbours – Surrounding Communities	<ul> <li>General and ongoing engagement activities have registered questions, concerns and comments from these stakeholders. Specific targeted discussions with these stakeholders undertaken for the SIA canvassed the following questions:</li> <li>What do you like about living in this area?</li> <li>How would you describe the local community?</li> <li>How much do you currently know about the proposed Project?</li> <li>What is the current community perception of the Project that we should be aware of? If so, what are these issues/concerns?</li> <li>How do you believe these issues/concerns can be dealt with effectively?</li> <li>What do you see as the benefits of the Project?</li> <li>Do you have any suggestions as to how to enhance these benefits?</li> </ul>

Stakeholders	Interview Topics, Questions and Supplemental Data Sources
<ul> <li>Indigenous Communities, including:</li> <li>Local Residents</li> <li>Traditional Owners (TOs)</li> <li>Local Aboriginal Land Councils (LALCs)</li> </ul>	Extensive discussions with these stakeholders were conducted during OzArk Environment and Heritage's <i>Aboriginal Cultural</i> <i>Heritage and Historic Heritage Assessment</i> Report (OzArk 2021). Discussions focussed on perceptions and understandings of historical and ongoing land use practices, including the cultural significance of particular sites and the general vicinity of the Project Area. During these discussions OzArk were also directed to the heritage study for the New England Solar Farm project as containing rich information on the tangible and intangible cultural heritage values of the area. Both studies have been used to inform the SIA.
Walcha Council Local Government	Council declined an invitation to participate in the SIA interviews, instead noting that Council's position is set out in the recently adopted revised <i>Walcha Council Development Control Plan</i> which was adopted on 27 October 2021 (Walcha Council 2019b). Council representatives also participate in the CCC.
<ul> <li>Local businesses, including:</li> <li>Accommodation Providers</li> <li>Contractors and Trades Potentially Employable by the Project</li> <li>Chambers of Commerce</li> </ul>	<ul> <li>In addition to the interview topics and questions posed to local residents (refer to above), the following topics were discussed with local businesses:</li> <li>Accommodation providers: vacancy rates and general availability of short-term accommodation in the Project Area.</li> <li>Real estate agents: vacancy rates and general availability of medium-long-term accommodation in the Project Area.</li> <li>Chambers of Commerce: local programs for matching small business trades and other skills and services with large Project needs, including skills planning, tender writing, etc.</li> </ul>
Local Community Organisations, Religious Organisations, Clubs	In addition to the interview topics and questions posed to local residents (refer to above), the following topics were discussed with local community organisations: Membership trends, sense of community, perceptions of positive and negative impacts of the Project on the local community.

# 4.3. Summary of Themes and Issues Raised during Consultation

This section summarises the key themes, including benefits, issues and concerns raised throughout stakeholder engagement activities across all stakeholder groups. It further informs the scoping of social issues and potential impacts outlined above to ensure that these concerns are adequately captured in the impact assessment contained in **Section 6**, below.

# 4.3.1. Community Consultative Committees (CCCs)

Six CCC meetings have been held to date. The first CCC was held on 18 March 2021, with subsequent meetings were held on 07 June 2021, 06 September 2021, 01 November 2021, 02 February 2022 and 02 May 2022. The key concerns and issues raised during the CCCs have included:

- the nature, operation and value of the community benefit fund, whether there will be real benefits, how they will be distributed, and how this compares to similar schemes on other projects;
- Availability of local accommodation;
- local training, employment and contractor opportunities, including in civil works and experience in previous projects where local jobs promised were not delivered due to contracting arrangements; Vestas' approach to local contracting;

- depth of understanding of the local community values and way of life;
- adequacy and inclusiveness of stakeholder engagement, including the approach to engaging opposition groups and the necessity of more frequent project engagement events (such as community drop-in sessions) noting the obstacles that Covid-19 has posed;
- construction traffic impacts, including as transporting oversized blade components to site;
- visual amenity impacts, such as along Thunderbolts Way;
- amenity impacts from inadequate decommissioning, and the potential need for security of funding for decommissioning via a reserve fund/bond noting legacy impacts from other projects in the area;
- the issue of managing cycles of project development, particularly in terms of workers' accommodation arrangements; and
- local solutions and community participation in environmental offsetting programs.

#### 4.3.2. Local Residents

#### Host Landowners

Host landowners are among the main beneficiaries of the Project and during interviews spoke of many benefits as well as expressing some balanced views about issues and concerns experienced in the wider community. The overall sentiment from this stakeholder group is positive.

The key benefits raised during engagement with this stakeholder group included:

- benefits to the community from the development, such as employment benefits from jobs flowing into the area, and the community benefit fund; diversification of income for host landowners and beneficiaries of the community benefit fund, contributing to financial security;
- stimulation of the local Walcha economy during construction in particular, and general increase in local spending;
- bringing people to live and work in the area; and
- boost to local tourism.

The key concerns and issues raised during engagement with this stakeholder group included:

- potential for community division over the Project;
- construction traffic impacts, such as on local school bus schedules;
- local business future planning, in the context of changes brought by the Project;
- damage to local infrastructure, such as roads;
- interruptions to "everyday life", especially during construction; and
- companies and/or investors having insufficient financial resources to complete the Project, and the impact this could have on decommissioning.

#### **Project Neighbours**

Project neighbours experience more of the Project impacts whilst not benefiting from the direct economic benefits that host landowners experience. The overall sentiment from the stakeholder group is negative, though opinions were mixed with some in favour of the Project.

The key benefits raised during engagement with this stakeholder group included:

- local employment opportunities, particularly during construction;
- diversification of income streams for host landowners, and therefore for the local economy;
- environmental benefits through clean, sustainable energy generation, and positive sentiment that Walcha was selected as a location for this development;
- boost the town's economy, benefits for local businesses and real estate;
- the wind farms are aesthetically pleasing;
- potential for infrastructure upgrades, such as roads; and

enhanced tourism opportunities.

The key concerns and issues raised during engagement with this stakeholder group included:

- the benefits not being evenly spread throughout the community;
- energy intensity of construction materials;
- amenity and perceived health impacts due to noise during operation;
- visual amenity impacts;
- cumulative impacts, considering similar projects in the region;
- companies and/or investors having insufficient financial resources to complete the Project, and the impact this could have on decommissioning and that the turbines may be left behind for landowners to dispose of;
- location of transmission lines, and whether they will be aboveground or underground;
- lack of stakeholder engagement activities to date, mainly due to Covid-19;
- traffic impacts, including road deterioration and roadworks/upgrades during construction;
- local environmental impacts, including removal of eucalypt trees, and impact to the nearby national park;
- potentially negative effects on the value of local produce such as cattle, sheep and wool products; and
- perceived negative impacts to property values.

#### Wider Community

Due to the impact of Covid-19, the opportunities for face-to-face community information sessions were limited. However, face-to-face community information events were held in Walcha in March 2020, March 2021, May 2021, December 2021 and March 2022. The primary engagement tool used with this stakeholder group during these events relevant to the SIA was community feedback surveys.

The community survey conducted during March 2022 received 17 responses with a mixture of local residents (15 respondents) and visitors to Walcha (two respondents). The key benefits and concerns registered were:

- Benefits: local economic opportunities jobs, tourism, economic stimulus; upgrading local roads; clean energy for future generations; funding local projects; and supporting farmers were considered the most important.
- Concerns: of the 17 respondents, four respondents selected from the survey options presented that they had no concerns. The most commonly selected issues (in order of decreasing significance) were: traffic during construction and operation; effects on land use or land values; impacts on community identity; and visual amenity. Noise during construction and operation; effects on natural areas and habitats; impacts on tourism; proximity to homes; natural heritage; and decommissioning were also mentioned by stakeholders.

The community survey conducted during December 2021 received 25 responses, 23 of whom were local residents. The key benefits and concerns registered were:

 Benefits: local economic opportunities – jobs, tourism, economic stimulus; clean energy for future generations; funding of local projects through a community fund; supporting farmers and families to stay on the land; diversification of local economy; fight against climate change; and upgrading local roads.

**Concerns:** of the 25 respondents, 12 selected from the survey options that they had no concerns. The most commonly selected issues (in order of decreasing significance) were: visual amenity; traffic during construction and operation; noise during construction and operation; effects on land use or land values; and proximity to home/property.

The community survey conducted during March 2021 received 33 responses with a mixture of local residents (20 respondents), visitors to Walcha (12 respondents), and one non-disclosed. The key benefits and concerns registered were:

- Benefits: local economic opportunities jobs, tourism, economic stimulus; clean energy for future generations; diversification of local economy; fight against climate change; supporting farmers and families to stay on the land; and funding of local projects through a community fund; and access to cheap and reliable energy were considered the most important.
- Concerns: of the 33 respondents, the majority (20 respondents) selected from the survey options presented that they had no concerns. The most commonly selected issues (in order of decreasing significance) were: noise during construction and operation; visual amenity impacts; and impacts on community identity. Traffic during construction and operation; effects on natural areas and habitats; negative social influences moving to town with construction workforce; and impacts to community cohesion were also mentioned by stakeholders.

#### 4.3.3. Local Businesses and Chambers of Commerce

The New England North West Business Chamber and Uralla Business Chamber were consulted for the SIA during November 2021. Both business chambers were very supportive of the Project and perceived that a large proportion of local residents in this region are supportive of renewable energy.

The business chambers have been satisfied with engagement undertaken to date, including how their members can register to be involved in local contracting opportunities. Key benefits, challenges and issues raised by the business chambers were:

- the importance of engagement to counter the vocal opposition of small groups and help limit potential division in the community;
- the importance of high quality engagement described as "engagement with integrity" to address legacy issues stemming from time-consuming and costly engagement on past projects that is not perceived to yield desired outcomes;
- the need to manage boom-bust cycles and the negative impacts these can have on small towns throughout all stages of project planning and development;
- the importance of working hard to capitalise on local skills through coordination with business chambers to pull together consortiums of local tradespeople, citing the Armidale School Project as an example of how this was done well;
- challenges with ensuring the benefits are realised locally and not in high value roles created elsewhere, such as in Sydney. Contractors should not be brought in from too far away;
- challenges with maximizing the local spend, particularly if contractors can be accommodated in Walcha but noting present accommodation shortages; and
- the importance of primary contractor responsiveness to neighbour and community complaints during construction, quickly responding to any issues and incidents raised.

One interviewee also noted the significant challenge that Walcha has faced since the floods of early 2021 which caused the closure of the Oxley Highway, the main route connecting the larger regional centres of Armidale and Tamworth with the coast and the Pacific Highway. It was considered that this has likely had a greater local negative impact than Covid-19 on limiting traffic through the town and local economic activity. The Project is seen as an important economic stimulus to help promote recovery from the economic impact and isolation created by both events, noting business chamber modelling which suggests that for every dollar spent in the community there is a three-fold benefit felt locally via the circular economy.

#### 4.3.4. Local Community Organisations

Interviewees representing community organisations stressed the tremendous support that their organisations receive in Walcha, noting the presence of several such community organisations including Rotary, Country Women's Association, and Quota. This sentiment is reflective of the strong and close-knit sense of community in the area.

While supportive of the Project, the interviewee did note that a minority of organisation members are not supportive of the Project but otherwise their understanding of opposition was mostly from letters to the editor published in the local newspaper, the Aspley Advocate. These community concerns include:

- aesthetic changes (visual amenity);
- fears about future land ownership changes not carrying forward the spirit of the original infrastructure agreements (decommissioning);
- community division caused by the Project, which featured as an election issue in the local government elections of December 2021; and
- accommodation shortages already experienced in the Walcha.

As for Project benefits, the interviewee was pleased that the locality was able to contribute to climate change mitigation. Local spending from the Project and the dollars flowing into the local economy are much needed in a general sense but also to strengthen the community's financial resilience. This is seen as beneficial for retaining independence and continuing to successfully oppose challenges such as council amalgamations, as they have done in the past.

### Box 1. Community Support for Renewable Energy Projects

While a the variety of potential social impacts described above were noted during interviews conducted for the SIA, several interviewees commented that renewable energy projects enjoy broad community support.

The quotes below extracted from stankeholder engagement capture some of this sentiment as it applies to the Winterbourne Wind Farm Project:

This is part of the future, the future of our energy. I'm really pleased that Walcha can be involved in in this future, because it's essential. I think it's also a really positive opportunity for Walcha to diversify and have another industry. – Walcha community member and Project neighbour

Well, now we've got an issue with climate change; we need to transition away from coal as we have some serious issues with emissions. We've got to move on. – Business representative

Looking at the Project in a global sense, I think that it's a little community doing their bit to address global warming. – Host landowner

*It's got to happen somewhere because of climate change, and the community stands to benefit.* – Walcha community member and Project neighbour

# 5. Social Baseline

# 5.1 Land Use Context

The Project Area's immediate surroundings comprise sparsely populated rural farm properties. The Project Area contains little to no social infrastructure and commerce with the closest such services available at Walcha, approximately 20km away from the approximate centre of the Project, or ~6.5km from the closest turbine.

The main employment industry (41.1%) within the locality is primary production comprised of agriculture and forestry. The locality is also suited to grazing operations where wool and prime lamb production together with cattle breeding and fattening are the main activities. The Project Area is generally used for grazing operations. The locality is further known as a producer of high-quality native hardwoods and softwood production is increasing (Walcha Council 2019). The Project Area and associated infrastructure including the transmission line are spread over rural properties zoned RU1: *Primary Production* under the Walcha Local Environmental Plan, 2012 and Uralla Local Environment Plan 2012. Much of the eastern boundary of the Project Area is adjacent to the Oxley Wild Rivers National Park, zoned E1: *National Parks and Nature Reserves*.

# 5.2 **Population Demographics**

**Table 5.1** summarises the primary ABS datasets used to provide key demographic data across the Project's Social Locality. **Table 5.1** draws on the ABS datasets listed in **Table 3.2** to provide a demographic overview of the Social Locality.

As outlined in **Section 3.2**, the Project area is located within ABS Statistical Area 1, numbers 1118907, 1118811, 1118813. These Statistical Areas are the primary source providing details of the impacted community's defining characteristics and provides an understanding of vulnerable groups within the Project's Social Locality. The table also includes the SEIFA to provide an indication of comparative socio-economic advantage and disadvantage, alongside details of unoccupied dwellings, dwelling tenure, and household composition. The Social Locality is characterised by aging populations in the town centres and above average aged populations in the ABS SA1 areas within which the Project is located.

# 5.2.1. SEIFA

SEIFA is a product developed by the ABS that ranks areas in Australia according to relative socioeconomic advantage and disadvantage. The indexes are based on information from the five-yearly Census, with SEIFA 2016 based on Census 2016 data. The SEIFA is commonly used to determine areas that require funding and services, identify new business opportunities, and assist research into the relationship between socio-economic disadvantage and various social outcomes. A relative measure of socio-economic disadvantage was first produced by the ABS following the 1971 Census while the SEIFA in its present form was first produced from the 1986 Census data (ABS 2018b).

The concept of relative socio-economic advantage and disadvantage used in the SEIFA 2016 is the same as that used for the previous two censuses (2006 and 2011). The ABS broadly defines relative socio-economic advantage and disadvantage in terms of people's access to material and social resources, and their ability to participate in society. This is broadly defined in recognition of the many concepts that have emerged in the literature to describe advantage and disadvantage.

The dimensions included in SEIFA are guided by international research, given the constraints of Census data. The Census does collect information about the key dimensions of income, education, employment, occupation, housing, and some other miscellaneous indicators of advantage and disadvantage; these are the candidate variables used to construct the SEIFA (ABS 2018b).

Pop.	Median Age	Indigenous Pop., %	Pop. over Age 65, %	Median Weekly Household Income, \$	Unemploy -ment, %	<b>SEIFA</b> (percentile in NSW)	Dwelling count (occupied / unoccupied / (%))	Dwelling tenure (owned / mortgaged / rented, %)	Household composition (families / singles / group, %)
Walcha L	<b>GA</b> 17850	(LGA)	I	I		1	· · · · · · · · · · · · · · · · · · ·		
3,092	48	5.9%	25.9%	\$1,054	3.2%	59	1,190 / 257 (18.0%)	49.6% / 20.5% / 24.3%	67.9% / 30.0% / 2.0%
Walcha U	Irban Cent	re/Locality 115	143 (UCL)	I		1			
1,451	53	7.4%	32.0%	\$1,083	3.5%	-	586 / 98 (14.3%)	49.5% / 22.2% / 24.9%	60.5% / 37.0% / 2.4%
SA1 (Sou	ithern Proj	ect Footprint e	xcluding Wa	Icha Township	<b>)</b> 1118907 (S/	A1)			
403	43	5.5%	20.0%	\$1,230	5.3%	51	133 / 37 (21.8%)	46.0% / 19.7% / 32.1%	78.0% / 22.0% / 0.0%
SA1 (Nor	thern Proje	ect Footprint) 1	118811 (SA1	)					
203	52	0.0%	25.6%	\$1,187	2.5%	65	78 / 13 (14.3%)	41.9% / 24.3% / 28.4%	77.8% / 22.2% / 0.0%
SA1 (Transmission Line Corridor) 1118813 (SA1)									
177	49	4.5%	14.4%	\$1,281	7.4%	53	70 / 3 (4.1%)	39.7% / 38.1% / 17.5%	80.6% / 19.4% / 0.0%

 Table 5.1
 Key Demographic Indicators for all ABS Datasets across the Project's Social Locality<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> Table compiled with data obtained from ABS' *QuickStats*: <u>https://www.abs.gov.au/websitedbs/D3310114.nsf/Home/2016%20QuickStats</u> (ABS 2021), and ABS' *Socio-Economic Indexes for Australia* (*SEIFA*), 2016: <u>https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/2033.0.55.001Main+Features12016?OpenDocument</u> (ABS 2018a).
Pop.	Median Age	Indigenous Pop., %	Pop. over Age 65, %	Median Weekly Household Income, \$	Unemploy -ment, %	<b>SEIFA</b> (percentile in NSW)	Dwelling count (occupied / unoccupied / (%))	Dwelling tenure (owned / mortgaged / rented, %)	Household composition (families / singles / group, %)
Uralla LG	<b>A</b> 17650 (L	GA)				•			
6,048	46	6.9%	20.4%	\$1,058	5.2%	61	2,275 / 297 (11.5%)	41.7% / 33.3% / 20.9%	70.6% / 27.0% / 2.4%
Uralla Ur	ban Centre	/Locality 1151	39 (UCL)						
2,421	44	117%	23.1%	\$1,200	6.5%	-	963 / 133 (12.1%)	39.9% / 29.3% / 26.7%	64.5% / 32.7% / 2.8%
Armidale	Urban Cei	ntre/Locality 11	2001 (UCL)			1			
20,386	33	8.0%	16.1%	\$1,132	9.3%	-	7,096 / 1,056 (13.0%)	30.0% / 24.3% / 42.2%	61.7% / 32.6% / 5.7%
Tamwort	h Urban Ce	entre/Locality 1	12014 (UCL)						
33,885	38	12.4%	18.5%	\$1,121	7.0%	-	12,675 / 1,541 (10.8%)	29.8% / 26.8% / 39.1%	65.4% / 30.9% / 3.7%
NSW Cod	le 1 (STE)			·		·			
7,480,2 28	38	2.9%	16.2%	\$1,486	6.3%	-	2,604,320 / 284,741 (10%)	32.2% / 32.3% / 31.8%	72% / 23.8% / 4.2%

#### 5.3 Housing and Accommodation

Rental affordability and availability are the most likely aspects of the housing market to respond to change in population prompted by large projects and are key components of the economic vitality of communities and the wellbeing of individuals (Lawrie et al. 2011). Generally, housing stress can occur when rent exceeds 30% of a low-income household gross income. A review of rental properties within the SA1s of the Project Area identifies that a large proportion (89% and above) of the population who pay rent are paying less than 30% of household income for that rent. Additionally, SGS in partnership with National Shelter, Beyond Bank, and Brotherhood of St Laurence have published the Rental Affordability Index (RAI) since 2015 (SGS 2021b). The findings identify that in Quarter 2, 2021 Walcha was considered 'Very Affordable' (despite low vacancy rates described below), Uralla and Armidale were considered 'Affordable', while the Tamworth region ranges from 'Acceptable' to 'Affordable' (SGS 2021b).

Overall, housing vacancy for Walcha and Uralla is low (between 0.66% and 0.06%) in comparison to New England and North West Region (between 2.4% and 3.9%) (REINSW 2021). A review of housing vacancy data (SQM Research 2021) exhibits that in the last decade housing vacancy in Walcha increased to 2.5% at the beginning of the decade, however, half way through the decade there was a decrease to effectively zero vacancies, with rates fluctuating but remaining low. Uralla's housing vacancy rates also started high at 7.5%, however, as time progressed the rates decreased to 0.6% and continued to fluctuate at a lower rate through the rest of the decade. Armidale and Tamworth both have had an increasing housing vacancy rate since the beginning of the decade. Regarding rental availability in the social locality, at the time of writing Walcha had one rental property available, and Uralla had nine rental properties available (Real Estate Investar 2021).

Short-term tourist accommodation such as hotels/motels/cabins and caravan parks are important in regional areas to provide accommodation for visitors and to support regional tourism and economic activity. The LGA's of the Social Locality are included in the New England North West tourism region which had an occupancy rate of 55.1% in 2018/19.

#### 5.4 Economic Profile

**Table 5.2** outlines the key industries and areas of employment for Walcha LGA, Uralla LGA, Armidale Urban Centre/Locality, Tamworth Urban Centre/Locality included in the Project's Social Locality, and NSW as a whole.

Location	Key Occupations and Industries
Walcha LGA 17850 (LGA)	<ul> <li>The most common occupations in the Walcha LGA included Managers (34.6%), Labourers (14.9%), Professionals (11.0%), Technicians and Trades Workers (10.4%), and Clerical and Administrative Workers (9.1%).</li> <li>Of the employed people in Walcha LGA, 20.7% worked in Beef Cattle Farming (Specialised). Other major industries of employment included Sheep-Beef Cattle Farming (7.4%), Sheep Farming (Specialised) (6.0%), Local Government Administration (3.5%) and Supermarket and Grocery Stores (3.2%).</li> </ul>

Table 5.2	Key Industries for Select ABS Statistical Areas	2016 Census Data
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Location	Key Occupations and Industries
<b>Uralla LGA</b> 17650 (LGA)	<ul> <li>The most common occupations in the Uralla LGA included Managers (19.0%), Professionals (16.1%), Technicians and Trades Workers (14.2%), Labourers (14.0%), and Clerical and Administrative Workers (12.5%).</li> <li>Of the employed people in Uralla LGA, 5.4% worked in Beef Cattle Farming (Specialised). Other major industries of employment included Higher Education (5.0%), Sheep-Beef Cattle Farming (4.5%), Local Government Administration (3.9%) and Sheep Farming (Specialised) (2.9%).</li> </ul>
Armidale Urban Centre/Locality 112001 (UCL)	<ul> <li>The most common occupations in Armidale (Urban Centres and Localities) included Professionals (26.0%), Community and Personal Service Workers (13.4%), Clerical and Administrative Workers (12.5%), Labourers (11.5%), and Technicians and Trades Workers (11.0%).</li> <li>Of the employed people in Armidale (Urban Centres and Localities), 12.6% worked in Higher Education. Other major industries of employment included Hospitals (except Psychiatric Hospitals) (3.6%), Other Social Assistance Services (3.4%), Supermarket and Grocery Stores (3.2%) and Combined Primary and Secondary Education (3.1%).</li> </ul>
Tamworth Urban Centre/Locality 112014 (UCL)	<ul> <li>The most common occupations in Tamworth (Urban Centres and Localities) included Professionals (18.2%), Labourers (16.0%), Technicians and Trades Workers (14.1%), Clerical and Administrative Workers (11.8%), and Community and Personal Service Workers (11.4%).</li> <li>Of the employed people in Tamworth (Urban Centres and Localities), 6.0% worked in Hospitals (except Psychiatric Hospitals). Other major industries of employment included Supermarket and Grocery Stores (3.0%), Secondary Education (2.8%), Meat Processing (2.7%) and Takeaway Food Services (2.7%).</li> </ul>
<b>NSW</b> Code 1 (STE)	<ul> <li>The most common occupations in NSW included Professionals (23.6%), Clerical and Administrative Workers (13.8%), Managers (13.5%), Technicians and Trades Workers (12.7%), and Community and Personal Service Workers (10.4%).</li> <li>Of the employed people in New South Wales, 3.5% worked in Hospitals (except Psychiatric Hospitals). Other major industries of employment included Cafes and Restaurants (2.4%), Supermarket and Grocery Stores (2.2%), Aged Care Residential Services (2.0%) and Primary Education (1.9%).</li> </ul>

#### 5.5 Access and Connectivity

Walcha is located at a natural crossroad between the New England Tableland areas and the coast, connecting the regional centres of Tamworth and Armidale with Port Macquarie and the Pacific Highway via the Oxley Highway. This route makes Walcha a popular stop for tourists, transport workers and other travellers bringing economic activity into the town. According to information obtained during stakeholder interviews, Walcha has faced a significant challenge since the floods of early 2021 which caused the closure of the Oxley Highway. This has likely had a greater local negative impact than Covid-19 on limiting traffic through the town and local economic activity.

Walcha is serviced by Tamworth and Armidale regional airports for aviation services. In addition, Walcha is also serviced by the Walcha Road Train Station, located around 20km west of the town, and the NSW Trainlink coach services connect Walcha to Tamworth and Port Macquarie.

The Walcha Council Community Care Transport Service provides additional coach services to Armidale and Tamworth, while the Walcha Access Bus provides wheelchair accessible public transportation within Walcha. A taxi service is also available.

#### 5.6 Social Infrastructure and Community Wellbeing

Social infrastructure comprises schools and other education institutions, medical services, emergency services, recreational facilities and community organisations. Some commercial services are also listed under social infrastructure, such as childcare facilities.

There is no social infrastructure located in the immediate vicinity of the Project Area. The nearest town is Walcha (population: 3,092) which is located 6.5 km south-west from the Project Area. Walcha has a multipurpose hospital opened Monday-Friday from 11 am-8 pm, as well as general practice clinic. The town hosts public and private primary schools and a preschool, as well as other social infrastructure such as an Australia Post office, Rural Fire Service, churches and a museum. Walcha also has a range of retail businesses, grocery stores, service stations, accommodation and a veterinary agricultural supplies business.

Uralla (population: 6,048) is a region centre located approximately 25 km northwest of the Project Area. Services in Uralla include the Uralla Medical Centre and Uralla Clinic which both offer general practice, and both opened for five days a week. Uralla also has a pharmacy and a range of emergency services such as Police, Ambulance and Rural Fire Services. The town hosts three primary schools (a mix of public and private), a preschool and a childcare centre. Uralla also has a range of social infrastructure such as a recycling centre, veterinary clinic, post office, churches, McCrossins Mill Museum, a golf course, grocery stores, service stations and a motel.

Armidale (population: 20,386) approximately 32 km north of the Project Area and Tamworth (population: 33,885) approximately 85 km south-west of the Project Area are both large regional centres. Armidale has four medical centres and a Private Hospital and Rural Referral Hospital. There are seventeen public and private primary and secondary schools, as well as a TAFE and the University of New England with eight residential colleges. Armidale also has a strong presence of emergency services and a wide range of community organisations, facilities and recreational facilities such as pharmacies, grocery stores, New England regional art museum, Jockey's society, St Vincent de Paul Society and post offices. Additionally, Tamworth offers very similar social infrastructure. There are 11 medical practices and two hospitals (public and private), pharmacies and emergency services such as ambulance, police and fire services. Tamworth hosts 18 public and private primary and secondary schools as well as a range of childcare facilities. Tamworth also has a strong presence of social services and a wide variety of community organisations and recreational facilities.

#### 5.7 Aboriginal Cultural Heritage

According to OzArk Environment and Heritage's Aboriginal Cultural Heritage and Historic Heritage Assessment Report (OzArk 2021), the Project is situated within the traditional lands of the Anaiwan, Amaroo, and Dunghutti peoples, who have lived in the region for more than 6,000 years. Falling mostly within the Aboriginal language group boundary of the Nganyaywana, also known as the Anaiwan, Tindale (1974) recorded the location of the Anaiwan as "New England tableland from Guyra and Ben Lomond south to Uralla and Moombie Range; northwest to Tingha; at Bendemeer and Armidale". Southwest of the Project Area, the Dunghutti language is still spoken and is being revitalised by the Amaroo LALC, who are conducting language classes in Walcha and the surrounding areas.

Engagement undertaken by OzArk focussed on perceptions and understandings of historical and ongoing land use practices, including the cultural significance of particular sites and the general vicinity of the Project Area. OzArk's report summarises the colonial history of the area, documenting the frontier wars that took place between 1830 and 1860 and resulting in eventual displacement and significant reduction in the local Aboriginal population. During these discussions OzArk were also directed to the heritage study for the New England Solar Farm project as being relevant to the Project Area. That study, and OzArk's, both reveal a variety of archaeological sites including artefact scatters, scarred trees, quarries, grinding grooves, and combinations of these finds. Several of the finds across both studies were considered to have high scientific significance and demonstrate rare and unique features, high educational potential as evidenced by their easily distinguishable characteristics and aesthetic qualities, and high research potential. Sensitive cultural information was also shared about the interaction of different tribes within the Project Area but owing to cultural sensitivities this was redacted from OzArk's report.

In general, traditional owners (TOs) engaged in the heritage study were aware of previous study findings and that findings were drawn from a wide range of landforms. TOs were conscientious to ensure that the Project Area and surrounds included in the heritage investigation were carefully surveyed (Ozark 2021).

#### 5.8 Community Values

The Walcha LSPS (Walcha Council 2019) describes the strong sense of community pride that exists among residents. A significant proportion of the LGA, approximately 32%, comprises national parks, wilderness and state forests, including the Macleay Gorges, Werrikimbe National Park, and the Oxley Wild Rivers National Park. Outdoor pursuits including camping and fishing are popular for locals and tourists, while the installation of an open air art gallery featuring numerous sculptures has become a popular tourist attraction.

During stakeholder interviews conducted for the SIA a variety of locals' perspectives on community values were obtained. Many respondents commented on the older and conservative but close-knit nature of the local community, as is commonly expressed in rural and regional communities in NSW and elsewhere in Australia. This was described as manifesting in everyone 'pitching in' to help others in need, even strangers. Several respondents also described the region as featuring widespread concerns around the impacts of climate change and pride that via the renewable energy projects in the region they can make some small contributions to mitigating it.

### 6. Social Impact Assessment

As outlined in Section 2.3, the impact assessment methodology follows that outlined in DPE's Technical Supplement (2021b). Overall, the key drivers of social change that may affect communities in the Social Locality resulting from the Project relate to:

- procurement opportunities for local businesses and employment opportunities for the local workforce;
- opportunities for diversification of income streams for host land owners and additional financial benefits for Project neighbours and the wider community through the Community Benefit Fund;
- disruptions due to construction related activities (noise, dust, transportation of materials and workers, etc);
- accommodation arrangements for construction workforce; and
- amenity (noise, visual) and other land use and landscape changes due to altered landscapes.

Technology to support renewable energy projects is continuously evolving and improving. Accordingly, following the 30-year operational timeframe, components of the wind farm may be upgraded to prolong the life of operation, or decommissioned and the land returned to the original land use. For the purposes of this SIA, therefore, the decommissioning phase has not been assessed. The potential social impacts associated with the decommissioning of the Project will be considered as part of a future Decommissioning Plan (or similar).

In assessing the potential impacts, ERM has considered the:

- characteristics of the Project, including the timing, duration and intensity of activities (where known);
- issues raised by stakeholders during the engagement process; and
- outcomes from technical studies undertaken by WWPL (noise, visual, cultural heritage etc.).

The impacts have been assessed based on the likelihood of the impact occurring, the magnitude of the impact (degree of change caused by the impact) if it occurs, and the vulnerability of the impacted receptors (refer to Chapter 2).

Table 6.1 provides an overview of predicted impacts likely to be experienced by different stakeholder groups, while Table 6.2 expands discussion of these impacts and reports the pre-mitigation impact significance for identified Project impacts.

Table 6.1 Impact Issues								
Impact Issue	Host Landowners	Project Neighbours	Wider Community	Local Workforce	Local Businesses	Regional Visitors	Traditional Owners	Emergency Services
Stakeholder and Community								
Adequacy and transparency of stakeholder engagement		$\checkmark$	$\checkmark$					
Establishment of the Community Benefit Fund		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$

Impact Issue	Host Landowners	Project Neighbours	Wider Community	Local Workforce	Local Businesses	Regional Visitors	Traditional Owners	Emergency Services
Community cohesion	$\checkmark$	$\checkmark$	$\checkmark$					
Employment and Procurement								
Increased employment opportunities			$\checkmark$	$\checkmark$				
Increased business opportunities			$\checkmark$		$\checkmark$			
Diversification of income streams for rural businesses (host landowners)	$\checkmark$							
Local Disruptions								
Disruptions to farming practices	$\checkmark$	$\checkmark$						
Road safety impacts	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$		
Interruptions to daily life	$\checkmark$	$\checkmark$	$\checkmark$					
Construction amenity impacts	$\checkmark$	$\checkmark$						
Accommodation and Worker Influx								
Increased demand for accommodation					$\checkmark$	$\checkmark$		
Increased demand for local services			$\checkmark$					
Antisocial behaviour of non-local workforce			$\checkmark$					
Land Use and Landscape								
Impacts on land use and values	$\checkmark$	$\checkmark$						
Perceived health impacts	$\checkmark$	$\checkmark$						
Visual amenity impacts	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$		
Improved vehicular access for fire- fighting in the vicinity of Project	$\checkmark$	$\checkmark$						$\checkmark$
Impacts to tangible and intangible Aboriginal heritage							$\checkmark$	
Cumulative impacts associated with the New England REZ	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

#### Table 6.2 Social Impact Assessment

Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Likelihood and nature of impact	Magnitude level and dimensions	Impact Significance (Pre-mitigation)
Pre-construction Phase				
Stakeholder and Community				
Project engagement is not transparent and inclusive. Stakeholders do not feel they have been heard and are unable to influence Project decisions.	Decision-making systems: Project neighbours, wider community	<u>Possible</u> : Negative	Moderate:Extent: Low, experienced by a small proportion of stakeholdersDuration: Medium, for the duration of the pre-construction phase of planning and developmentSeverity or Scale: Medium, depending on how many stakeholders feel 'unheard'Intensity or Importance: Medium, depending on how many stakeholders feel 'unheard'Level of Interest: Medium to high	Medium
Construction Phase				
Employment and Procurement				
Increased demand for labour creates direct and indirect employment opportunities for the local community. During stakeholder engagement activities and interviews local residents expressed interest in the employment opportunities associated with the Project, frequently noting local jobs as one of the key Project benefits.	Livelihoods: Local workforce	<u>Likely</u> : Positive	Major:Extent: Low to high, depending on the extent of local employmentDuration: Medium, for duration of construction phaseSeverity or Scale: High, for individuals gaining employmentIntensity or Importance: High, for individuals gaining employmentLevel of Interest: High	Very High
Increased demand for labour for the Project creates skills shortages. Other businesses in the region cannot find the relevant skilled and unskilled employees they need to operate their businesses due to the presence of the Project.	Livelihoods: Local businesses	Possible: Negative	Minor:         Extent: Low, experienced by a small proportion of local businesses         Duration: Low to medium, for duration of the construction phase         Severity or Scale: Medium to high, depending on extent of potential impacts to individual businesses         Intensity or Importance: Medium to high, depending on extent of potential impacts to individual businesses         Level of Interest: Medium	Medium
Increased demand for goods and services helps to stimulate the local economies. Businesses within the Social Locality benefit from increased economic activity associated with the construction workforce and Project material requirements.	Livelihoods: Local businesses	<u>Likely</u> : Positive	Moderate:         Extent: Medium to high, experienced by a moderate to high proportion of local businesses         Duration: Low to medium, for duration of the construction phase         Severity or Scale: Medium to high, depending on extent of potential impacts to individual businesses         Intensity or Importance: Medium to high, depending on extent of impacts to individual businesses         Level of Interest: Medium	High
Increased demand for goods and services creates shortages within local communities. The increased demand for goods and services due to the Project leads to local supply shortages and price increases which may affect the ability for the wider community to access and/or procure necessary goods and/or services. This is particularly pertinent following recent disruptions to supply chains related to Covid-19.	Livelihoods: Wider community	Possible: Negative	Moderate:Extent: Low, experienced by a small proportion of local businessesDuration: Low to medium, for duration of the construction phaseSeverity or Scale: Medium to high, depending on extent of potential impacts to individual businessesIntensity or Importance: Medium to high, depending on extent of potential impacts to individual businessesLevel of Interest: Medium	Medium

	1			
Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Likelihood and nature of impact	Magnitude level and dimensions	Impact Significance (Pre-mitigation)
Disruptions to farming practices because of Project construction.	Livelihoods:	Unlikely:	Minor:	Low
Construction activities may limit access and cause temporary	Host landowners and	Negative	Extent: Low, experienced by a small proportion of local farms	
inconveniences for the operation of rural properties, such as stock	Project neighbours		Duration: Low, for duration of individual construction phase tasks	
novements, paudock access, etc.			Severity or Scale: Medium, depending on extent of disruption	
			Intensity or Importance: Medium, depending on extent of inconvenience caused	
			Level of Interest: Medium	
Transportation of materials and equipment to the Project Area has	Health and wellbeing:	Possible:	<u>Major</u> :	High
the potential to cause road traffic inconvenience and safety impacts for road users along the haulage routes to site from the Port of	Host landowners, Project neighbours,	Negative	<b>Extent:</b> Medium, experienced by a moderate amount of road traffic between the Port of Newcastle and Project Area	
Newcastle and on local roads. Risk of traffic injury or in the worst case a fatality, resulting from increased vehicle movements during	wider community,		Duration: Low to medium, for duration of the construction phase	
the transportation of goods and workers to and from the site.	visitors to the region		Severity or Scale: Medium to high, depending on proximity to the Project Area	
			Intensity or Importance: Medium to high	
			Level of Interest: Medium to high	
Interruptions to daily life because of Project construction.	Way of life:	Likely:	Minor:	Medium
Daily life impacts, such as traffic changes, school buses, mail	Host landowners,	Negative	Extent: Medium to high	
deliveries, utilities interruptions, etc. arising from increased	Project neighbours, wider community		Duration: Low to medium, for duration of the construction phase	
congestion and wear and tear on local roads, leading to frustration by	whice community		Severity or Scale: Medium to high, depending on extent of disruption	
road users and requirement for more frequent repairs.			Intensity or Importance: Medium to high, depending on extent of inconvenience caused	
			Level of Interest: Low to medium, as noted during stakeholder engagement	
Construction environmental impacts, including noise, vibration, dust,	Health and wellbeing:	Likely:	Moderate:	High
Visual amenity.	Host landowners and	Negative	Extent: Medium, experienced by Project Area near neighbours	
by people living in proximity to construction activities, such as	FIOJECT HEIGHDOULS		Duration: Medium, for the duration of the construction phase	
degradation of air quality and health impacts as a result of increased generation of dust and particles from land clearing, and the use of			Severity or Scale: Medium to high, depending how close individuals live in relation to ongoing construction activity	
heavy vehicles and equipment.			<b>Intensity or Importance:</b> Medium to high, depending on extent of inconvenience caused to individuals	
			Level of Interest: Medium to high	
Accommodation and Worker Influx	1	1		

Increase in the demand for short and long-term accommodation because of the Construction Phase workforce. Considering the accommodation shortages and low vacancy rates reported in the region, the Project has the potential to create shortages and increase cost of living pressures through increased rents of local accommodation. Additional potential to impact availability of short term and tourist accommodation was raised during stakeholder engagement.	Way of life: Local businesses, visitors to the region	<u>Likely</u> : Negative	Major:Extent: Medium to high, experienced by large proportion of accommodation and rental providersDuration: Low to medium, for duration of the construction phaseSeverity or Scale: Medium to high, depending on extent of accommodation shortageIntensity or Importance: High, depending on extent of inconvenience causedLevel of Interest: High	High
Increased demand for social and emergency services and recreational facilities based on the temporary increase in local population due to the Construction Phase workforce. Pressure/ availability of community services to absorb the influx of workers (such as clinics, hospitals, police, emergency services).	Access: Wider community	<u>Likely</u> : Negative	Moderate:Extent: Medium to high, experienced by the local population who utilise local servicesDuration: Low to medium, for the duration of the construction phaseSeverity or Scale: Medium, depending on extent of potential impacts on availability oflocal servicesIntensity or Importance: Medium to high, depending on extent of inconvenience causedLevel of Interest: Medium	High
Community concerns about behaviour of non-local workforce.	Health and wellbeing: Wider community	<u>Unlikely</u> : Negative	<u>Minor</u> : Extent: Medium, experienced by the local population who utilise the social facilities	Low

Impact Significan (Pre-mitigation)	Impac
	(Pre-n
High	
High	
Very High	Ŋ
Very High	Ň
Medium	

Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Likelihood and nature of impact	Magnitude level and dimensions	Impact Significance (Pre-mitigation)
Perceived health impacts associated with operational noise.	Health and wellbeing: Host landowners and Project neighbours	<u>Unlikely</u> : Negative	Minor:Extent: Medium to high, experienced by those that live near the Project AreaDuration: High, for the period of wind farm operationSeverity or Scale: Medium to high, depending on the impactIntensity or Importance: High, when health is impacted, sensitivity levels are high.Level of Interest: High	Low
Altered rural character, including visual amenity impacts. Changes to rural landscape character through installation of industrial infrastructure.	Surroundings: Host landowners, Project neighbours, wider community, visitors to the region	<u>Almost Certain</u> : Negative	Transformational:Extent: High, experienced by those from multiple vantagesDuration: High, for the period of wind farm operationSeverity or Scale: High, depending on how much visual impact the wind farm has on the rural landscapeIntensity or Importance: Medium to high, depending on individuals' experiencesLevel of Interest: Medium to high	Very High
Improved vehicular access for fire-fighting in the vicinity of Project Road improvements will improve access required for fire-fighting vehicles and equipment in the event of a bushfire, and for individual property owners and local residents.	Access: Emergency services, host landowners, Project neighbours	Possible: Positive	Moderate:         Extent: Low, experienced by those needing access areas during bushfires         Duration: Medium to high, for the period of wind farm operation depending on maintenance         Severity or Scale: High, depending on the frequency, severity and location of bushfires         Intensity or Importance: High, depending on the frequency, severity and location of bushfires         Level of Interest: Medium	Medium
Altered landscapes have the potential to impact tangible and intangible Aboriginal heritage. The Aboriginal Cultural Heritage and Historic Heritage Assessment Report has identified seven potential sites which may be disturbed by the Project (OzArk 2021).	Culture: Traditional Owners	Possible: Negative	Moderate:Extent: Medium, considering the nature of heritage values identified within the Project AreaDuration High, for the period of wind farm operationSeverity or Scale: Medium to high, depending on the nature of specific impacts Intensity or Importance: Medium to high, depending on the nature of specific impacts Level of Interest: High	Medium
Stakeholder and Community				
Establishment of the Community Benefit Fund A Community Benefit Fund will be established to share the financial benefits of the Project with the wider community.	Community: Wider community	Almost Certain: Positive	Major:         Extent: Medium to high, depending on the number of beneficiaries of the fund         Duration Medium to high, for the period of wind farm operation         Severity or Scale: Medium to high, depending on the impact of initiatives supported by the fund         Intensity or Importance: Medium to high, depending on the impact of initiatives supported by the fund         Level of Interest: High	Very High
Impacts to community cohesion through divided opinions about the desirability of the Project in the community Community cohesion is likely to be impacted at the level of relationships between individuals who support the Project and those who do not support the Project.	Community: Wider community	Possible: Negative	Moderate:Extent: Medium to high, experienced by the communities surrounding the Project AreaDuration: Medium to high, commencing early in the Project but dissipating over timeSeverity or Scale: Medium, depending on the extent of impacts to individuals' relationshipsIntensity or Importance: Medium, depending on the extent of impacts to individuals' relationshipsLevel of Interest: Medium	Medium

Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Likelihood and nature of impact	Magnitude level and dimensions	Impact Significance (Pre-mitigation)
Cumulative socio-economic impacts from an additional project associated with the New England REZ Cumulative impacts affecting access to services are possible, particularly trades and accommodation arising from this Project	Accessibility: Wider community	Possible: Negative	Moderate: Extent: High, potentially experienced by a wide variety of people in the vicinity of the Project Area	Medium
combined with nearby proposed renewable development projects associated with the New England REZ.			Severity or Scale: Medium, for the duration of the construction phase Severity or Scale: Medium to high, depending on extent of local service procurement Intensity or Importance: Medium, depending on services potentially impacts Level of Interest: Low	
Cumulative visual amenity impacts from an additional project associated with the New England REZ Cumulative impacts to surroundings are unlikely as there are no opportunities to view any additional wind farms simultaneously from a static viewpoint in the foreseeable future, and the wind farm will not be sequentially visible with any nearby projects associated with the New England REZ (Moir Landscape Architecture 2022).	Surroundings: Wider community	<u>Unlikely</u> : Negative	Moderate:         Extent: High, potentially experienced by a wide variety of people in the vicinity of the Project Area         Duration: Low to medium, but potentially expanding over time with the addition of new projects in the REZ         Severity or Scale: Low to medium, depending on individuals' perceptions of the change Intensity or Importance: Low to medium, depending on individuals' perceptions of the change         Level of Interest: Medium	Medium

## 7. Social Impact Management, Mitigation and Residual Impact Ratings

This section provides a summary of the management and mitigation measures relevant to the identified Project impacts across all phases of the Project lifecycle and comprises a preliminary Social Impact Management Plan (SIMP).

The impact assessment ratings of impact significance provided in **Section 6** are for pre-mitigation impact significance levels. This section, specifically **Table 7.1**, elaborates the management and mitigation measures which may be applied to reduce the social impact significance levels for the various social impacts identified. **Table 7.1** also provides a post-mitigation revised impact significance rating.

#### Table 7.1 Proposed Social Impact Mitigations and Revised Impact Significances

Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Impact Significance (Pre-mitigation)	Proposed mitigation(s)	Revised Impact Significance (Post- mitigation)
Pre-construction Phase				
Stakeholder and Community				
Project engagement is not transparent and inclusive. Stakeholders do not feel they have been heard and are unable to influence Project decisions	Decision-making systems: Project neighbours, wider community	Medium	Continue to proactively implement the Engagement and Consultation Strategy and complaint management and recording procedure through the stakeholder management database.	Low
Construction Phase				
Employment and Procurement				
Increased demand for labour creates direct and indirect employment opportunities for the local community. During stakeholder engagement activities and interviews local residents expressed interest in the employment opportunities associated with the Project, frequently noting local jobs as one of the key Project benefits. Increased demand for labour creates skills shortages.	Livelihoods: Local workforce Livelihoods:	Very High Medium	<ul> <li>Develop and implement a Procurement Policy to maximise local employment and regional business opportunities.</li> <li>Develop hiring preferences with priority given to applicants from within the Walcha Region who have suitable skills to undertake the jobs required for the Project.</li> <li>Provide notification of employment opportunities through existing communication channels in a timely manner.</li> <li>Where hiring decisions are delegated to contracted entities (e.g.</li> </ul>	Very High Low
Other businesses in the region cannot find the skilled employees they need to operate their businesses due to the presence of the Project.	Local businesses		<ul> <li>construction contractors), consider implementing incentive structures that promote local recruitment.</li> <li>Collaborate with local trade/training organisations (such as TAFE) to promote ich and apprenticeship opportunities with the Project well shead of</li> </ul>	
Increased demand for goods and services helps to stimulate the local economies. Businesses within the Social Locality benefit from increased economic activity associated with the construction workforce and Project material requirements.	Livelihoods: Local businesses	High	<ul> <li>Regularly engage with key stakeholders (e.g. business chambers) and regional businesses to inform them of goods and services required for the Project. As part of this discussion, outline requirements for businesses to</li> </ul>	Very High
Increased demand for goods and services creates shortages within local communities. The increased demand for goods and services due to the Project leads to local supply shortages and price increases which may affect the ability for the wider community to access and/or procure necessary goods and/or services. This is particularly pertinent following recent disruptions to supply chains related to Covid-19.	Livelihoods: Wider community	Medium	<ul> <li>secure contracts.</li> <li>Create a register of regional businesses, so that when opportunities arise the relevant businesses can be contacted to submit a quote.</li> <li>Develop relevant networks to assist qualified local and regional businesses to tender for provision of goods and services to support the Project in an open and transparent manner.</li> <li>Monitor local markets for goods and services to understand shortages and competitive pressures that may arise due to the Project. In the event these are identified consider procurement measures to limit these pressures.</li> </ul>	Low
Local Disruptions				
Disruptions to farming practices because of Project construction. Construction activities may limit access and cause temporary inconveniences for the operation of rural properties, such as stock movements, paddock access, etc.	Livelihoods: Host landowners and Project neighbours	Low	<ul> <li>Establish and implement Construction Traffic Management Plan informed by the traffic impact assessment in the EIS.</li> <li>Establish and implement a Construction Environment Management Plan informed by the EIS to manage construction environmental impacts, consistent with component studies included in the EIS.</li> </ul>	Low
Transportation of materials and equipment to the Project Area has the potential to cause road traffic inconvenience and safety impacts for road users along the haulage routes to site from the Port of Newcastle and on local roads. Risk of traffic injury or in the worst case a fatality, resulting from increased vehicle movements during the transportation of goods and workers to and from the site.	Health and wellbeing: Host landowners, Project neighbours, wider community, visitors to the region	High	<ul> <li>Embed Project and specific key stakeholder updates within the Engagement and Consultation Strategy and complaint management and recording procedure through the stakeholder management database, and ensure execution occurs in a timely fashion when impacts from construction activities are likely.</li> </ul>	Medium
Interruptions to daily life because of Project construction.	Way of life:	Medium		Low

Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Impact Significance (Pre-mitigation)	Proposed mitigation(s)
Daily life impacts, such as traffic changes, school buses, mail deliveries, utilities interruptions, etc. arising from increased construction traffic and local road upgrades.	Host landowners, Project neighbours, wider community		
Construction environmental impacts, including noise, vibration, dust, visual amenity. Various impacts resulting from construction activities, generally felt by people living in proximity to construction activities, such as degradation of air quality and health impacts as a result of increased generation of dust and particles from land clearing, and the use of heavy vehicles and equipment.	Health and wellbeing: Host landowners and Project neighbours	High	
Accommodation and Worker Influx			
Increase in the demand for short and long-term accommodation as a result of the Construction Phase workforce. Considering the accommodation shortages and low vacancy rates reported in the region, the Project has the potential to create accommodation shortages and increase cost of living pressures through increased rents of local accommodation. Additional potential to impact availability of short term and tourist accommodation was raised during stakeholder engagement.	Way of life: Local businesses, visitors to the region	High	<ul> <li>Establish and implement Workforce Accommodation Strate impacts to local short and long-term accommodation arrang surrounding towns.</li> <li>Conduct health promotion and awareness programs, includ focused on workforce wellbeing.</li> <li>Ensure all personnel use relevant personal protective equip</li> <li>Undertake health surveillance and medical assessments per part of the pre-employment process.</li> </ul>
Increased demand for social and emergency services and recreational facilities based on the temporary increase in local population due to the Construction Phase workforce. Pressure/ availability of community services to absorb the influx of workers (such as clinics, hospitals, police, emergency services).	Access: Wider community	High	<ul> <li>Engage with local health care, social and emergency service monitor the Project's use (if any) of these facilities.</li> <li>Establish and implement Workforce Codes of Conduct which sites.</li> </ul>
Community concerns about behaviour of non-local workforce. Perceived community safety concerns, due to the influx of temporary out of town workers. For example, workers may exhibit anti-social behaviour at the local pubs. Generally, there is friction that can arise when 'city people' and/or people from outside small towns move to these locations en masse.	Health and wellbeing: Wider community	Low	
Operation Phase			
Employment and Procurement			
A small number of jobs created during the operation phase of the Project. In addition, there is the potential for local economic impacts to be experienced given the interest in the local economic opportunities associated with the Project, including direct and indirect jobs and an expansion of tourism once the Project is complete.	Livelihoods: Local workforce	High	<ul> <li>Develop and implement a Procurement Policy to maximise employment, and regional business (procurement), opportu</li> <li>Develop hiring preferences with priority given to applicants Walcha Region who have suitable skills to undertake the jo Project.</li> <li>Provide notification of employment opportunities through expression and a strength of the provide notification of employment opportunities through expression.</li> </ul>
Demand for locally procured goods and services during the operation phase of the Project. There is strong interest in the local economic opportunities associated with Project procurement.	Livelihoods: Local businesses	High	<ul> <li>Provide payments to host landowners as planned.</li> <li>Implement the Community Benefit Fund as planned.</li> </ul>
Diversification of income streams for rural businesses (host landowners) Landowners will receive payments for hosting wind turbine infrastructure, diversifying the income streams that are available to them.	Livelihoods: Host landowners	Very High	

	Revised Impact Significance (Post- mitigation)
	Medium
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gements in	Medium
ling initiatives	
oment (PPE). eriodically, and as	
ce providers to	Medium
ch apply to work	
	Low
local inities from within the bs with the	High
kisting	
	High
	Very High

Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Impact Significance (Pre-mitigation)	Proposed mitigation(s)
Establishment of the Community Benefit Program Project neighbours will receive a financial benefit.	Livelihoods: Project neighbours	Very High	
Land Use and Landscape			
Perceived impacts on land values. Perceived potential impacts to neighbouring land values is common with opposition to wind farms and was mentioned during stakeholder engagement.	Livelihoods: Host landowners and Project neighbours	Medium	<ul> <li>Establish and implement an Environmental Management S informed by the EIS to manage operational environmental consistent with component studies included in the EIS.</li> <li>Consider engaging with local aerial operators to develop p such aircraft apprations in the vicinity of the Project, consider</li> </ul>
Perceived health impacts associated with operational noise.	Health and wellbeing: Host landowners and Project neighbours	Low	<ul> <li>Aviation Impact Assessment (Aviation Projects 2022) inclu</li> <li>Include factual, scientific and publicly accessible information topics such as the impact of wind farms on land values and from wind farm infrastructure in ongoing Project undates</li> </ul>
Altered rural character, including visual amenity impacts. Changes to rural landscape character through installation of industrial infrastructure.	Surroundings: Host landowners, Project neighbours, wider community, visitors to the region	Very High	<ul> <li>Continue to proactively implement the Engagement and Constrategy and complaint management and recording process</li> <li>Implement all relevant mitigations from the Landscape and Assessment (Moir Landscape Architecture 2022) including recommended screening planting.</li> </ul>
Improved vehicular access for fire-fighting in the vicinity of Project Road improvements will improve access required for fire-fighting vehicles and equipment in the event of a bushfire.	Access: Emergency services, host landowners, Project neighbours	Medium	<ul> <li>Establish and implement cultural heritage management provide with the Aboriginal Cultural Heritage Assessment Report (a required management plans.</li> <li>Implement all relevant recommendations from the Noise and Assessment (Sonus 2022) including as regard wind turbing and the second second</li></ul>
Altered landscapes have the potential to impact tangible and intangible Aboriginal heritage. The Aboriginal Cultural Heritage and Historic Heritage Assessment Report has identified seven potential sites which may be disturbed by the Project (OzArk 2021).	Culture: Traditional Owners	Medium	<ul> <li>ancillary infrastructure, construction, blasting and traffic.</li> <li>Continue engagement with emergency services regarding requirements for bushfire fighting.</li> </ul>
Stakeholder and Community			
Establishment of the Community Benefit Fund	Community:	Very High	Establish the Community Benefit Fund as planned.
A Community Benefit Fund will be established to share the financial benefits of the Project with the wider community.	Wider community		Continue planned stakeholder engagement program prom environmental and local benefits of the Project.
Impacts to community cohesion through divided opinions about the desirability of the Project in the community Community cohesion is likely to be impacted at the level of relationships between individuals who support the Project and those who do not support the Project.	Community: Project neighbours, wider community	Medium	
Cumulative socio-economic impacts from an additional project associated with the New England REZ Cumulative impacts affecting access to services are possible, particularly trades and accommodation arising from this Project combined with nearby proposed renewable development projects associated with the New England REZ.	Accessibility: Wider community	Medium	
Cumulative visual amenity impacts from an additional project associated with the New England REZ Cumulative impacts to surroundings are unlikely as there are no opportunities to view any additional wind farms simultaneously from a static viewpoint in the foreseeable future, and the wind farm will not be sequentially visible with any nearby projects	Surroundings: Wider community	Medium	

	Revised Impact Significance (Post- mitigation)
	Very High
System (EMS) impacts,	Low
rocedures for stent with the	Low
on on sensitive health impacts	
onsultation lure.	High
Visual Impact the	
ocedures in line DzArk 2021) and	Medium
nd Vibration e operation,	
access	Low
oting the	Very High
	Low
	Medium
	Medium

Project Activity and Description of Likely Impact	Impact category and stakeholders affected	Impact Significance (Pre-mitigation)	Proposed mitigation(s)	Revised Impact Significance (Post- mitigation)
associated with the New England REZ (Moir Landscape Architecture 2022).				

### 8. Monitoring Framework and Reporting

This section provides an overview of the recommended monitoring framework for the social impact management measures put in place during the pre-construction, construction, and operation phases of the Project. For the post-mitigation impact significant levels to be achieved, as outlined in **Section 7**, the social impact mitigations will need to be monitored in accordance with the framework plan outlined **Table 8.1** and integrated with the broader environmental management strategy (EMS) to be developed for the Project.

The objectives of monitoring are to:

- Verify the predicted impacts and identify any other impacts that may arise;
- Verify that management measures are being implemented as planned;
- Assess the effectiveness of the management measures; and
- Provide data for any necessary regulatory reporting to the State Government or other internal compliance reporting.

Accordingly, Table 8.1 identifies the following:

- Management Goals: The overarching objective is to minimise the negative social impacts associated with the Project and enhance the positive impacts. As such, specific goals corresponding to each impact have been provided. These can be used to determine whether the management measures have been effectively implemented.
- Proposed Monitoring Activities: The monitoring activities proposed will ensure that relevant data is collected (e.g. the performance indicators) during the various phases of the Project to ensure the effectiveness of the management measures.
- Performance Indicators: The indicators provide a mechanism to determine whether the goals have been met.
- Monitoring Frequency: Outlines the period for data collection.
- Responsible Person: Assigns the relevant person and/or entity to take charge of the proposed monitoring in order achieve the management goal.

#### Table 8.1 Proposed Monitoring Framework

Management Goals	Proposed Monitoring Activities	Performance Indicator(s)		
Pre-construction Phase				
Stakeholder and Community				
Minimise community grievances	Record queries and complaints received from stakeholders	<ul><li>Number of complaints</li><li>Percentage of complaints satisfactorily resolved</li></ul>		
Construction Phase				
Employment and Procurement				
Maximise local employment	<ul> <li>Record local employment</li> <li>Record employee retention rate</li> <li>Record number of apprenticeships</li> <li>Ensure major contractors report on local employment</li> <li>Record the number of training programs undertaken</li> </ul>	<ul> <li>Percentage of people from the Region employed by the Project (by WWPL and its contractors)</li> <li>Number of training programs delivered</li> <li>Number of apprenticeships provided</li> </ul>		
Maximise local procurement	<ul> <li>Report on number of, and value of contracts with local and regional businesses</li> </ul>	<ul> <li>Percentage of local and regional businesses involved in the Project</li> <li>Percentage of total value of relevant Project expenditure awarded to local and regional businesses</li> </ul>		
Local Disruptions				
Minimise potential environmental and amenity impacts (i.e. noise, vibration, dust) on community members	Record queries and complaints received from stakeholders	Number of complaints		
Accommodation and Worker Influx				
Minimise potential impacts on accommodation availability, community and emergency services, and community wellbeing Minimise potential environmental and amenity impacts (i.e. noise, vibration, dust) on community members.	<ul> <li>Record number of admissions to regional health facilities resulting from project construction</li> <li>Record medical treatment provided on-site, including number of visits and treatment provided related to project construction</li> <li>Record all project interactions with local emergency services</li> <li>Survey and record Project induced interactions with local social services</li> <li>Record random alcohol and drug testing results</li> <li>Record breaches of the Code of Conduct</li> <li>Record complaints received from stakeholders</li> </ul>	<ul> <li>Number of admissions to regional health facilities related to project construction activities</li> <li>Number of emergency services callouts</li> <li>Number of on-site medical visits</li> <li>Type of medical treatment provided</li> <li>Percentage increase demand for local social services</li> <li>Percentage of positive alcohol and drug test results</li> <li>Number of breaches of Code of Conduct</li> <li>Percentage of complaints satisfactorily resolved</li> </ul>		
Operation Phase				
Employment and Procurement				
Maximise local employment	<ul> <li>Record local employment</li> <li>Record employee retention rate</li> <li>Report on number of, and value of contracts with local and regional businesses</li> </ul>	<ul> <li>Percentage of people from the Region employed by the Project</li> <li>Percentage of local and regional businesses involved in the Project</li> <li>Percentage of total value of relevant Project expenditure awarded to local and regional businesses</li> </ul>		
Land Use and Landscape				
Minimise impacts to visual amenity and rural character	Record number of trees planted to fulfil required screening planting mitigations	Percentage survival rate of trees planted		
Stakeholder and Community				
Distribute benefits from the Project among the wider community	<ul> <li>Record and publish detailed information on funds available and payments made through the Community Benefit Fund</li> </ul>	Number and value of grants and payments made		

Monitoring Frequency	Responsible Role
Ongoing	ТВС
TBC in line with Project EMS	ТВС
TBC in line with Project EMS	ТВС
TBC in line with Project EMS	TBC
TBC in line with Project EMS	TBC
TBC in line with Project EMS	TBC
TBC in line with Project EMS	TBC
TBC in line with Project EMS	TBC

#### 5.3. Reporting and Auditing

In addition to ongoing monitoring, regular audits are to be undertaken by the WWPL. These audits are to be conducted throughout the construction and operation phases of the Project, will likely be informed by the outcomes of the EIS process and DPE's conditions of approval and will be updated accordingly.

Audit findings will be reviewed, and where corrective actions are deemed necessary, specific actions (with designated responsibility and timing) will be developed. The focus of these actions will be on achieving the objectives set out in **Table 8.1**, as well as continuous improvement in performance.

A summary of the audit findings is to be reported externally on an annual basis. This will include an evaluation of the objectives set out in **Table 8.1** and any corrective actions that have been developed because of the audit process.

It is recommended that the predicted impacts and corresponding management measures (i.e. Project performance) be internally audited annually and externally audited once every three years. This timeframe may be extended or reduced based on the findings of ongoing audits.

#### 5.4. Roles & Responsibilities

WWPL will be principally responsible for implementation of the management measures and the monitoring activities carried out for the Project. However, there will be instances where data will need to be obtained from a third party, or implementation will require cooperation and involvement of others (e.g. contractors and relevant local stakeholders).

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Appendix A – SGS' *Winterbourne Wind Farm - Socio Economic* Assessment, July 2021



### WINTERBOURNE WIND FARM – SOCIO ECONOMIC ASSESSMENT

FINAL JULY 2021 Prepared for WinterbourneWind Pty Ltd Independent insight.

Classification: Restricted



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# TABLE OF CONTENTS

GLO	SSARY	4
EXEC	CUTIVE SUMMARY	5
1. IN	ITRODUCTION	9
1.1	Project context	9
1.2	Method	10
1.3	Structure of the report	10
2. CC	ONTEXT	11
2.1	Socio-economic profile	11
3. ES	STIMATED IMPACTS	29
3.1	Social impact	29
3.2	Economic impact	32
4. Sl	JMMARY	39
4.1	Net community benefit assessment	39
4.2	Conclusion	46
APPI	ENDIX 1: ECONOMIC MODELLING METHOD	49
APPI	ENDIX 2: LITERATURE REVIEW	56
Ecor	nomic impacts	56
Socia	al impacts	59
Case	e studies	61
APPI	ENDIX 3: EVENTS, ACCOMMODATION AND SERVICES	66

#### LIST OF FIGURES

FIGURE 1: PROJECT LOCATION NEAR WALCHA	9
FIGURE 2: CONTRIBUTION TO REGIONAL NSW GDP GROWTH, 2018-19	11
FIGURE 3: OVERALL POPULATION AGE STRUCTURE (2016)	12
FIGURE 4: OVERALL CHANGE IN POPULATION AGE STRUCTURE (2006-16)	13
FIGURE 5: OVERALL INDUSTRIES OF EMPLOYMENT (PUR 2016)	14
FIGURE 6: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT (PUR 2006-16)	15
FIGURE 7: INDUSTRIES OF EMPLOYMENT IN THE LGA (POW 2016)	16
FIGURE 8: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT IN THE LGA (2006- 16)	17
FIGURE 9: OVERALL POPULATION AGE STRUCTURE (2016)	18
FIGURE 10: OVERALL CHANGE IN POPULATION AGE STRUCTURE (2006-16)	19
FIGURE 11: OVERALL INDUSTRIES OF EMPLOYMENT (PUR 2016)	20
FIGURE 12: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT (PUR 2006-16)	20
FIGURE 13: INDUSTRIES OF EMPLOYMENT IN THE LGA (POW 2016)	21
FIGURE 14: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT IN THE LGA (2006-	
16)	22
FIGURE 15: NEW ENGLAND – INDICATIVE RENEWABLE ENERGY ZONE	25
FIGURE 16: HIGH LEVEL SUMMARY OF THE JOB ESTIMATION METHOD	33
FIGURE 17: IN THE LOCAL REGION - MINIMUM CAPITAL EXPENDITURE BY YEAR	34
FIGURE 18: MINIMUM OUTPUT - DIRECT AND ON-FLOW BY YEAR	34
FIGURE 19: MINIMUM VALUE ADD DIRECT AND ON-FLOW BY YEAR	35
FIGURE 20: MINIMUM EMPLOYMENT, DIRECT AND ON-FLOW BY YEAR	36
FIGURE 21: HIGH LEVEL SUMMARY OF THE JOB ESTIMATION METHOD	49
FIGURE 22: SCALE ASSUMPTIONS	53
FIGURE 23: COMPLEX RELATIONSHIP BETWEEN EXPOSURE TO WIND TURBINES AND PERSONAL RESPONSE	59
FIGURE 24: RUN WITH THE WIND FUN RUN, NSW	60
FIGURE 25: COMMUNITY ENHANCEMENT FUND DISTRIBUTION	61
FIGURE 26: GENERAL LOCATION – SAPPHIRE WIND FARM	62
FIGURE 27: SAPPHIRE WIND FARM AND COMMUNITY EVENT	63
FIGURE 28: MOUNT EMERALD WIND FARM	64
FIGURE 29: LOCATION OF ARARAT WIND FARM	64
FIGURE 30: ARARAT WIND FARM, VICTORIA	65

#### LIST OF TABLES

12
13
18
19
28
29



TABLE 7: CAPITAL EXPENDITURE OF PROJECT	33
TABLE 8: MINIMUM EMPLOYMENT BY PHASE, INDUSTRY AND TYPE	36
TABLE 9: MAXIMUM EMPLOYMENT BY PHASE, INDUSTRY AND TYPE	36
TABLE 10: CONSTRUCTION PHASE (2023, 2024)	37
TABLE 11: OPERATIONAL PHASE (PER ANNUM)	38
TABLE 12: CONSTRUCTION PHASE – IMPACT AND RATINGS	40
TABLE 13: OPERATIONAL PHASE – IMPACT AND RATINGS	43
TABLE 14: CONSTRUCTION – COSTS AND BENEFITS	47
TABLE 15: OPERATIONAL PHASE – COSTS AND BENEFITS	47
TABLE 16: WALCHA LARGE VISITOR EVENTS	66
TABLE 17: VISITOR ACCOMMODATION WALCHA, TAMWORTH AND ARMIDALE	67
TABLE 18: LOCAL COMMUNITY SERVICES	68

## GLOSSARY

ABS – Australian Bureau of Statistics

ANZSIC - Australian and New Zealand Standard Industrial Classification

ASCO - Australian Standard Classification of Occupations

BIC – Broad Industry Category

CAGR (%) - Compounded Annual Growth Rate

**CO2-e**. – Carbon dioxide equivalent, standardized values of the following greenhouse gases carbon dioxide, methane, nitrous dioxide, synthetic gases (HFC, SF, CF,  $C_2F_6$ )

DPIE - NSW Department of Planning, Industry and Environment

GHG- Greenhouse Gas

GRSP – Greater Sydney Region Plan

**GS** – Greater Sydney

**GSC** – Greater Sydney Commission

HR – Human Resource

I-O – Input Output

**km** - kilometre

LEP – Local Environmental Plans

LGA – Local Government Area

**m** - metre

NENW – New England North West

**POW** – Place of Work

**PP (%)** – Point Percentage

PUR – Place of Residence

SA2 - Statistical Area Level 2

SEARs - Secretary's Environmental Assessment Requirements

**TPA** – Transport Performance and Analytics

TZP - Travel Zone Projection

VET – Vocational Education and Training

WTG – Wind turbine generator

YE – Year End



## **EXECUTIVE SUMMARY**

Winterbourne Wind Farm is a proposed renewable energy project near the township of Walcha in the New England North West (NENW) region, consisting of up to 130 wind turbine generators (WTGs) with a combined installed capacity of 700MW (the 'Project'). The Project is approximately 75 kilometres (km) north-east of Tamworth and 35 km south west of Armidale in Walcha and Uralla Local Government Areas (LGAs). The nearest proposed WTG location is approximately 6.5 km from the centre of Walcha township.

SGS Economics & Planning has prepared a socio-economic assessment for the Project using qualitative and quantitative measures.

#### Key findings

Given the current economic situation due to COVID-19, investment of this kind could assist economic recovery in NSW by providing employment opportunities for local residents and alternate income sources for turbine hosts. Economic gains will radiate from Walcha LGA to the surrounding LGAs and into the rest of NSW, for example via employment opportunities, spending in local town centres, the purchase of materials and supplies and influence on electricity prices. The Project will have a substantial positive economic impact (income and employment) in the short-term, particularly for Walcha LGA and the surrounding area. Positive economic gains (income and employment) will continue throughout the operational phase to a lesser degree.

Consultation to date indicates the community is generally interested and supportive of the Project and its potential economic, employment and tourism benefits. Other local communities with similar renewable energy developments have received positive outcomes (income, employment and funding for local infrastructure) as demonstrated in the literature review and case studies. Some concerns were raised by community members over the impact on community services, safety and local accommodation capacity.

Given the ageing profile of the local population and recent contractions in agricultural and transport industries, progressing the growth of this industry in the region could generate opportunities to attract new workers and provide job opportunities for local residents.

From a sustainability perspective, the Project contributes to environmentally sustainable outcomes as it increases the projection of renewable energy. The projected avoided greenhouse gas (GHG) emissions from the Project would be approximately 1,494,000 t/CO2e/year<sup>1</sup>.

The Project aligns with State and local strategic planning actions and policies supporting the development of renewable energy in the region, including delivering new industries of the future such as 'green industries'; and rolling out a Renewable Energy Zone in the New England region.

#### Estimated impacts, benefits and opportunities

The following estimated impacts, benefits and opportunities have been identified through the literature review, community consultation report<sup>2</sup>, socio-economic profiling and economic modelling conducted as part of this study.

<sup>&</sup>lt;sup>1</sup> Data received from client: 21/12/20 (based on 117 turbines)

<sup>&</sup>lt;sup>2</sup> Winterbourne Wind Farm Scoping Report Stakeholder Engagement Section 25/06/20; NGH email 12/11/20

#### Construction phase

- Economic impact (gross value add): the economic impact of the Project is considered high (positive). There is strong interest in the community in the local economic opportunities associated with the Project. Economic modelling suggests the Project could provide around \$146-\$180 million in direct value add and \$162-\$195 million for on-flow value add per construction year (see Section 3.2). There is opportunity to leverage the community ownership model and engage local businesses at different stages of the development to maximise local flow-on effects.
- Employment impact: the employment impact has been rated high (positive). The Project is expected to provide around 462-540 full time equivalent jobs during the construction phase (minimum to maximum scenario). Under the minimum scenario, about 246 jobs would be direct and 216 would be on-flow jobs. Of the 246 direct jobs, about 203 jobs would be in Construction and 43 in Professional Services (see Table 8). Socio-economic profiling for Uralla and Walcha LGAs suggests there is a need to generate jobs in the local region due to the impact of drought; the decrease in 'working age' individuals in recent years; and the decline in traditional industries like manufacturing and agriculture (see Section 2.1). Opportunities would include working with local workforce operators to maximise local flow-on effects.
- Pressure on the availability of community services to support the influx of construction workers: this impact has been rated medium-high (negative). During construction, the impact may be significant with a large number of temporary workers coming into town<sup>3</sup>. There are also a few days per year when major tourism events are held in Walcha, attracting several hundred people. Overlap in peak construction periods and tourism events may increase demand for community services. Walcha has limited major/emergency health care services. Opportunities would include identifying peak periods with other major project developers in the region and notifying community services to determine a plan of action.
- Potential shortage of short term and visitor accommodation in Walcha: this impact was considered medium-high (negative). A review of visitor accommodation in Walcha suggests there may only be 68 rooms available for workers<sup>4</sup>. There may be pressure on local accommodation services in Walcha during construction given the projected number of direct workers (about 246 direct jobs under a minimum scenario). Pressure would increase during major tourism event weekends in town. Opportunities include maximising engagement of the local workforce to reduce pressure on local accommodation providers; working with accommodation providers to coordinate and manage accommodation; and working with local event organisers to avoid crossover between peak construction periods and event weekends.
- (Perceived) risk of reduced community safety: this impact was rated low-medium (negative). Consultation has indicated there is concern over safety and the potential for anti-social behaviour due to the influx of temporary out of town workers. There is one police station located in Walcha. There are three police stations in surrounding towns but these are about one-hour drive away. Opportunities include using contractor toolbox talks to outline worker expectations and dismissal processes; notifying local authorities of the construction project to ensure they are sufficiently resources; and continuing to complete Community Engagement Plan action items to ensure the community are informed and can collaborate to resolve issues.

<sup>&</sup>lt;sup>4</sup> Based on an estimation of one worker per room, the figure could be slightly less if one worker rents a whole guesthouse



<sup>&</sup>lt;sup>3</sup> Construction phase job estimates outlined in paragraph above

 Improved community cohesion: the impact rating was medium (positive). Increased local job numbers will enable young families and people of working age to remain in the community. Community and family ties in the area are considered important. Opportunities include involving community members in the community enhancement fund assessment team to ensure projects that received funding are valued and informed.

#### **Operational phase**

- *Economic impact (gross value add):* the economic impact during the operational phase was rated medium (positive). The Project is expected to provide around \$11.3-\$13.1 million in direct value add per year, and \$13.1-\$15.2 million on-flow value add per year during operation (see Section 3.2). There is opportunity to engage local businesses at different stages of development to maximise local flow-on effects.
- Employment impact: the employment impact during the operational phase was rated medium (positive). The Project would generate approximately 65-76 jobs (minimum to maximum scenario). These jobs would be located in Walcha, surrounding LGAs and NSW. Under the minimum scenario, about 33 jobs would be direct and 32 on-flow in Professional Services (see Table 8). Of the 33 jobs created by ongoing operations about 40-60% (13.2-19.8 jobs) will be in Walcha or nearby LGAs. The remaining jobs created will be spread across NSW, in various industries such as accounting. To maximise ongoing local flow-on benefits, there is opportunity to collaborate with education institutions to build local workforce skills; engage with tourism operators to support tourism activities; and employ the local workforce where possible.
- Land use and land values: the impact was considered low (negative) for land use and medium (positive) for land values. The Project will change land use. Yet, it is possible for turbine hosts to continue their farming operations and host a turbine. Land use for renewable energy purposes in this region also aligns with State and local government planning policy.

Community members can become concerned that a wind farm may reduce property prices. Land holdings with visual or noise exposure to the wind farm may experience a negative impact on residential land values. It is understood the exposure is low. The adverse impact on productive lands is expected to be very low, with a chance of a positive economic impact (i.e.: receiving income by hosting a turbine). The literature review indicated wind farms may not necessarily impact land values, and that this area of research remains unclear. Opportunities include working with the local community to ensure site design reduces potential impact on property price and land value; implementing recommended mitigation measures from noise and visual specialist reports; working with turbine hosts and relevant neighbours to identify suitable mechanisms to offset impacts.

- Avoided GHG emissions: the impact was rated high (positive). It is estimated the Project will result in approximately 1,490,000 t/CO2e per year of avoided GHG emissions. Replacing fossil fuels with renewable energy can result in monetary and health related gains for the wider community.
- Improved community and family cohesion and vibrancy: this impact was rated medium (positive). The Project will increase the number of local jobs which will enable young families and people of working age to remain in the community. Community and family ties are considered important to locals. Community consultation conducted to date suggests the community is generally supportive and interested in the Project. The community ownership model can help build a sense of



ownership and pride around the infrastructure, and the community enhancement fund can support, and help improve, other local projects.

• Pressure on the availability of community services to absorb the influx of operational workers: this impact was considered low (negative) and medium (positive). Walcha town centre has limited major/emergency health care services. There is a police station in town. There could be some increased impacted on community services. However, projected direct jobs during the operational phase are only about 33 (40-60% expected in Walcha and surrounding LGAs). An increase in the local population could help justify greater government investment in community services in the future.

During both the construction and the operational stage, the net community benefit is expected to be positive, especially if the recommended opportunities are taken on board.

During the construction stage, there are important local economic benefits which can be optimised by engaging the local labour market as much as possible. The possible costs can be managed and minimised. The net community benefit is therefore positive.



# 1. INTRODUCTION

#### 1.1 Project context

Winterbourne Wind Farm is a proposed wind farm near the township of Walcha in the New England North West (NENW) region<sup>5</sup>, consisting of up to 130 wind turbine generators (WTGs) with a combined installed capacity of 700MW (the 'Project').

The Project is approximately 75 kilometres (km) north-east of Tamworth and 35 km south west of Armidale in Walcha and Uralla Local Government Areas (LGAs). The nearest proposed WTG is approximately 6.5 km from the centre of Walcha township<sup>6</sup>. The Project Boundary extends over an area of approximately 24,400 hectares. The location of the Project is identified in Figure 1.

Construction is anticipated to start in 2023 subject to development consent and grid connection approval. Construction would take approximately two years.



FIGURE 1: PROJECT LOCATION NEAR WALCHA

Source: Google Earth 20-050 Project Boundary 17092020, NGH, 01/12/20

<sup>&</sup>lt;sup>6</sup> Winterbourne Wind, 2020, Scoping Report, p. 14



 $<sup>^{\</sup>scriptscriptstyle 5}$  NSW Department of Planning, Industry and Environment regional definition

#### 1.2 Method

The Secretary's Environmental Assessment Requirements (SEARs) for the Project require an assessment of the social and economic impacts and benefits be completed for the region and State as a whole. SGS Economics & Planning have used qualitative and quantitative research methods for the socio-economic assessment, including:

- Socio-economic profiling of Uralla and Walcha LGAs
- Review of the strategic policy context
- Literature review and case studies
- Economic impact assessment of construction and operation
- A review of the stakeholder consultation conducted
- Net community benefit assessment.

#### 1.3 Structure of the report

The report has been structured as follows:

- 1. Introduction: defines the project context and study method
- 2. Context: provides population and employment data for Walcha and Uralla LGAs and a review of the policy setting
- **3. Estimated impacts:** identifies the perceived socio-economic impacts raised during consultation and economic modelling results
- 4. Summary: net community benefit assessment and conclusion.



## 2. CONTEXT

#### 2.1 Socio-economic profile

#### **Regional NSW**

During 2018-19, regional NSW experienced a recession with Gross Domestic Product (GDP) falling by 0.3%<sup>7</sup>. The decline was primarily driven by contractions in agriculture (1%) and transport (0.7%), with smaller but notable contractions in retail and manufacturing (Figure 2).

Since 2016-17, agricultural production has fallen by almost 20% due to the impact of drought. This, in turn, impacted the transport industry as there was less agricultural product requiring transportation. Health care (0.5%), administrative services (0.4%) and public administration (0.4%) were the main contributors to GDP growth in regional areas<sup>8</sup>.

With sustained periods of drought and the threat of climate change impacting regional industries, it is relevant to consider other industries that could contribute to regional economies and provide employment, such as wind energy.



FIGURE 2: CONTRIBUTION TO REGIONAL NSW GDP GROWTH, 2018-19

<sup>7</sup> SGS, 2019, Economic Performance of Australia's Cities and Regions,

https://www.sgsep.com.au/assets/main/Publications/SGS-Economics-and-Planning\_Economic-Performance-of-Australian-Cities-and-Regions-UPDATED-2020.pdf, p. 56

<sup>&</sup>lt;sup>8</sup> SGS, 2019, Economic Performance of Australia's Cities and Regions,

https://www.sgsep.com.au/assets/main/Publications/SGS-Economics-and-Planning\_Economic-Performance-of-Australian-Cities-and-Regions-UPDATED-2020.pdf, p. 57
# Uralla Local Government Area

# Population change and demographic profile<sup>9</sup>

The population of the Uralla LGA at the time of the 2016 ABS Census was approximately 6,050 people. This represents an increase of approximately +310 people over the ten years between 2006 and 2016. The CAGR (Compounded Annual Growth Rate) of the LGA is 2.68%, similar to the regional average of 2.63%.

TABLE 1: POPULATION CHANGE OVER TIME

Geography	2006	2011	2016	Growth (10 years)	CAGR (%)
New England and North West	172,396	176,249	181,592	9,196	2.63%
Uralla	5,737	6,032	6,049	312	2.68%
	2 2011 2016				

Source: ABS Census 2006, 2011, 2016

Of Uralla's 6,050 people, approximately 31.2% are Mature Adults, 20.5% are Retirees, and about 20% fall into the Youth age cohort. Comparatively, Uralla's share of Mature Adults (31.2%) is higher than that of the broader region (26.4%).

FIGURE 3: OVERALL POPULATION AGE STRUCTURE (2016)



Source: ABS Census TableBuilder (2016)

Over the ten years between 2006 and 2016, Retirees have increased the most as a proportion of population (+6.8%), and at a faster rate than the broader NENW region (+4.05%). All other age groups, apart from a small increase in the proportion of Mature Adults (+0.75%), have decreased.



<sup>&</sup>lt;sup>9</sup> Age cohort definitions: Children 0-4 (still out of school system); Youth 5-19 (mostly living with parents); Young Adult 20-29 (starting to move out, becoming independent, saving for a deposit); Adult 30-44 (starting a family, buying a house); Mature Adult 45-64 (moving to better neighbourhood, settling long term, less mobile); Retirees 65+ (mainly out of workforce)

## FIGURE 4: OVERALL CHANGE IN POPULATION AGE STRUCTURE (2006-16)



Source: ABS Census TableBuilder (2006, 2011, 2016)

#### TABLE 2: AGE STRUCTURE TOTALS OVER TIME

Geography	Year	Children	Youth	Young Adult	Mature Adult	Retiree
Uralla	2016	303	1,218	445	957	1,887
Uralla	2011	382	1,312	461	1,023	1,904
Uralla	2006	348	1,270	496	1,088	1,747

Source: ABS Census TableBuilder (2006, 2011, 2016)

The decrease of persons in the Young Adult and Adult age cohorts suggests there may be a need to boost job opportunities in the region to help retain persons of 'working age'. While Mature Adults and Retirees may have increased the most as a proportion of the local population, just under 30% of the Uralla population are Youth and Young Adults (5-29 years). This may present favourable prospects for a locally trained workforce in future years.

## Industry of employment (jobs held by local residents in the LGA)

Of the approximate 2,530 working residents in the Uralla LGA<sup>10</sup>, 17% work in the Agriculture, Forestry & Fishing industry; 15% are in Education & Training; and 12% are from the Health Care & Social Assistance industry.

Approximately 8% of local working residents are employed in Construction, while 5% are employed in Professional, Scientific and Technical Services which is slightly higher than the NENW region at 7% and 4% respectively. This suggests there may be some local residents with relevant skillsets that could be employed for the construction and operation of a wind farm.



<sup>&</sup>lt;sup>10</sup> Using Place of Residence (PUR) data. PUR data are the jobs held by local residents in the study area boundary.

#### FIGURE 5: OVERALL INDUSTRIES OF EMPLOYMENT (PUR 2016)



Source: ABS Census TableBuilder (2016)

Between 2006 and 2016, Accommodation & Food Services has grown the most as a proportion of jobs taken up by working residents (+2.16%), and at a much faster rate than the NENW region (+0.29%). This is followed by the Health Care & Social Assistance industry (+1.96%), Construction (+1.73%) and Administrative & Support Services (+1.24%).

The Agriculture, Forestry & Fishing industry has declined the most as a proportion of jobs taken up by working residents (-3.31%), and at a faster rate than the broader region (-2.48%). Retail Trade has also declined faster in Uralla relative to the other industry changes (-2.04%), while the broader region average was only -1.14%. Manufacturing has also declined (-1.5%).

The Project could offer alternative local work opportunities given the decline of local residents working in traditional regional industries like Agriculture, Forestry & Fishing and Manufacturing. Given Construction employs approximately 8% of working residents (increasing as a proportion by +1.73% over the ten years between 2006 and 2016), this may present as an opportunity to leverage further employment in the industry.



## FIGURE 6: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT (PUR 2006-16)

## Main industries located in area (jobs available in the LGA)

Of the 1,170 jobs accounted for within the Uralla LGA<sup>11</sup>, almost a third (29%) of them are in the Agriculture, Forestry & Fishing industry. This is double the average of the broader NENW region (15%). Other large industries with jobs in the LGA include the Education & Training industry (10%) and Public Administration & Safety (8%).

The Construction industry accounts for approximately 8% of local jobs and Professional, Scientific and Technical Services about 4%. Retail Trade and Accommodation & Food Services industries are both approximately 7%. This indicates there are some other industries in the LGA employing people will skillsets that would be relevant to the development of the Project. The presence of Retail Trade and Accommodation & Food Services employment indicates there is a service industry in the LGA that could support local workers with accommodation, food, retail and other service needs.



Source: ABS Census TableBuilder (2006, 2011, 2016)

<sup>&</sup>lt;sup>11</sup> Using Place of Work (POW) data. POW data shows jobs that are located in the study area boundary. Local residents or people from outside the study area boundary could be employed in these jobs.

FIGURE 7: INDUSTRIES OF EMPLOYMENT IN THE LGA (POW 2016)



Source: ABS Census TableBuilder (2016)

The Agriculture, Forestry & Fishing industry is proportionally the largest employer in the LGA but has also declined the most (-9.77%) relative to the other industries, and at a much faster rate than the broader region (only -2.54%).

The Project could be an attractive offer to the region as it would offer alternative direct and indirect work opportunities in other industries such as Construction; Professional, Scientific and Technical Services; Retail Trade; and Accommodation and Food Services.

The Construction and Accommodation and Food Services industries have already seen growth between 2006 and 2016 at +3.68% and +3% respectively.



## FIGURE 8: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT IN THE LGA (2006-16)

Source: ABS Census TableBuilder (2006, 2011, 2016)

## Tourism

There is little tourism data available for the Uralla LGA<sup>12</sup>. The latest data available relates to the period between September 2013-14. There were 17,000 visitors to the Uralla LGA who participated in domestic overnight travel. Comparatively, NSW takes in 25,194,000 domestic overnight visitors and 73% of these visitors are from intrastate. Tourism for this period resulted in \$6 million of expenditure for Uralla. Comparatively, NSW experienced \$14,467 million in the same period.

Given Uralla accounts for approximately 0.07% of domestic tourist overnight visits to NSW per year, it is likely the Project will have little impact on the tourism sector at the LGA level. The local community may promote the Project as a point of interest for visitors.



<sup>&</sup>lt;sup>12</sup> This is largely due to the insufficient survey samples collected by Tourism Research Australia with regards to visitors of the LGA in recent years.

# Walcha Local Government Area

# Population change and demographic profile<sup>13</sup>

Walcha's population at the time of the 2016 ABS Census was 3,090 people. This represents a decrease of approximately -100 people over the ten years between 2006 and 2016. The CAGR (Compounded Annual Growth Rate) of the LGA is -1.55%, contrasting the regional average of 2.63%.

TABLE 3: POPULATION CHANGE OVER TIME

Geography	2006	2011	2016	Growth	CAGR (%)
New England and North West	172,396	176,249	181,592	9,196	2.63%
Walcha	3,188	3,021	3,090	-98	-1.55%

Source: ABS Census 2006, 2011, 2016

Of Walcha's 3,090 residents, 28.3% are Mature Adults, 25.7% are Retirees, and 16.8% are Youth. Comparatively, Walcha's share of Mature Adults (28.3%) is higher than that of the broader region (26.4%).

FIGURE 9: OVERALL POPULATION AGE STRUCTURE (2016)



Source: ABS Census TableBuilder (2016)

Between 2006 and 2016, Retirees have increased the most as a proportion of population (+8.9%), and at a faster rate than the broader NENW region (+4.05%). All other age groups, apart from a small increase in the proportion of Young Adults (+1.56%) have decreased.

The decline in Adult and Mature Adults (30-64 years of age) suggests there may be a need to generate local employment opportunities to retain local workers. With approximately 17% of the Walcha population in the Youth age cohort (5-19 years of age) and slight growth in the Young Adult cohort at 1.56%, this may present favourable prospects for a locally trained workforce in the future.



<sup>&</sup>lt;sup>13</sup> Age cohort definitions: Children 0-4 (still out of school system); Youth 5-19 (mostly living with parents); Young Adult 20-29 (starting to move out, becoming independent, saving for a deposit); Adult 30-44 (starting a family, buying a house); Mature Adult 45-64 (moving to better neighbourhood, settling long term, less mobile); Retirees 65+ (mainly out of workforce)

## FIGURE 10: OVERALL CHANGE IN POPULATION AGE STRUCTURE (2006-16)



Source: ABS Census TableBuilder (2006, 2011, 2016)

### TABLE 4: AGE STRUCTURE TOTALS OVER TIME

Geography	Year	Children	Youth	Young Adult	Mature Adult	Retiree
Walcha	2016	173	518	278	455	875
Walcha	2011	182	563	262	491	881
Walcha	2006	196	670	237	608	943

Source: ABS Census TableBuilder (2006, 2011, 2016)

# Industry of employment (jobs held by local residents in the LGA)

Agriculture, Forestry & Fishing is the predominant industry of employment for local residents. Of the approximate 1,470 working residents in the Walcha LGA<sup>14</sup>, 42% work in the Agriculture, Forestry & Fishing industry, significantly higher than the broader region average of 15%. Yet, between 2006 and 2016, the Agriculture, Forestry & Fishing industry has also declined the most as a proportion of jobs taken up by working residents (-4.91%), and at a faster rate than the broader region (-2.48%). Manufacturing has also declined faster in Walcha relative to the other industry changes (-2.51%).

The Project could offer local residents alternative employment opportunities and opportunities for skills diversification in Construction and Professional, Scientific and Technical Service industries. About 5% of local residents work in Construction and 4% in Professional, Scientific and Technical Services (slightly less than Uralla LGA at 8% and 5% respectively).



<sup>&</sup>lt;sup>14</sup> Using Place of Residence (PUR) data. PUR data are the jobs held by local residents in the study area boundary.

FIGURE 11: OVERALL INDUSTRIES OF EMPLOYMENT (PUR 2016)



Source: ABS Census TableBuilder (2016)

FIGURE 12: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT (PUR 2006-16)



Source: ABS Census TableBuilder (2006, 2011, 2016)

# Main industries located in area (jobs available in the LGA)

Of the 1,170 jobs accounted for within the Walcha LGA<sup>15</sup>, the majority (43%) are in the Agriculture, Forestry & Fishing industry. This is almost three times the average of the broader NENW region (15%). Other key industries with jobs in the LGA include the Health Care & Social Assistance industry (7%), Education & Training (7%) and Transport, Postal & Warehousing (6%).



FIGURE 13: INDUSTRIES OF EMPLOYMENT IN THE LGA (POW 2016)

Source: ABS Census TableBuilder (2016)

The proportional share of Manufacturing jobs located in the Walcha LGA has declined the most (-2.83%), followed by Retail Trade (-1.98%) and Construction (-1.04%). The proposed development could support more job opportunities in Construction and indirectly Retail Trade in the LGA, as well as supporting continued positive growth of Accommodation and Food Services (0.67%) and Professional, Scientific and Technical Services (0.54%).



<sup>&</sup>lt;sup>15</sup> Using Place of Work (POW) data. POW data shows jobs that are located in the study area boundary. Local residents or people from outside the study area boundary could be employed in these jobs.



## FIGURE 14: CHANGE IN STRUCTURE OF INDUSTRIES OF EMPLOYMENT IN THE LGA (2006-16)

Source: ABS Census TableBuilder (2006, 2011, 2016)

## Tourism

There is little tourism data available for the Walcha LGA<sup>16</sup>. The latest data available relates to the period between September 2013-14. There were 110,000 visitors to the Walcha LGA overall (who participated in domestic overnight travel and domestic daytrip travel). Comparatively, NSW takes in 80,316,000 visitors overall.

There were 37,000 domestic overnight visitors, resulting in a total expenditure of \$12 million. About 39% of domestic overnight visitors citied 'holiday' as their reason for travel, almost entirely travelling via private vehicle (91%). Approximately 50% of visitors came from regional NSW, and on a larger scale, 85% came from intrastate.

The total spend (including overnight and domestic daytrips) in the LGA was \$6 million. Comparatively, NSW was \$25,503 million. Approximately 88% of international visitors to the LGA cited 'holiday' as their reason for travel, mostly travelling by private car. Approximately 24% of international visitors were 15-24 years old, while 30% were 25-34 years old. There is insufficient survey data to determine the percentage across other age groups.

Given only 0.1% of international visitors to NSW in the year including September 2013-14 visited the Walcha LGA, it is likely there would be little impact on the tourism sector at an LGA-wide level. There are, however, some major events that run annually in Walcha (one day to three-day events)<sup>17</sup>. These events have potential to attract a few hundred visitors to Walcha. It is likely there would be capacity issues for local accommodation providers if workers at the proposed wind farm were staying in local accommodation at the same time as these events.

The Project could also be an opportunity for the local community to develop the wind farm as a point of interest for visitors.

<sup>&</sup>lt;sup>17</sup> See Appendix 3



<sup>&</sup>lt;sup>16</sup> This is largely due to the insufficient survey samples collected by Tourism Research Australia with regards to visitors of the LGA in recent years.

# **Policy context**

# National government policy

Australia is a signatory to the Paris Climate Agreement<sup>18</sup>. Approval of domestic policies at the national level are slowly progressing towards more favourable reductions.

# Renewable Energy Target scheme<sup>19</sup>

In operation since 2001, the Renewable Energy Target (RET) is a national government scheme designed to increase the proportion of electricity derived from renewable sources in Australia. The RET aimed to source 2% of Australia's electricity generation from renewables. By 2009, this increased to 20% (41,000 gigawatt-hours).

In 2011, the RET scheme began operating at two scales: a large-scale renewable energy target (financial incentives to establish and expand developments such as wind and solar farms), and a small-scale renewable energy target (financial incentives for installations like rooftop solar panels and air sourced heat pumps).

In 2015, the Australian Government passed the *Renewable Energy (Electricity) Amendment Bill 2015* that reduced the RET from 41,000 gigawatt-hours to 33,000 gigawatt-hours for 2020, with interim and post-2020 targets also adjusted.

Owners of the renewable energy source can create large-scale and small-scale certificates for each megawatt hour of energy generated. The certificates are then purchased by electricity retailers who supply energy to homes and businesses. The Clean Energy Regulator oversees the operation of the RET.

# National Energy Policy

Since coming to power in 2013, the Government has sought to develop renewable energy policy. The National Energy Guarantee was proposed in late 2017 as the national energy policy. However, it was abandoned with the change of Prime Minister in August 2018.

The Clean Energy Council states the lack of long-term policy around energy is affecting investment confidence in large-scale renewable energy sources and storage.

# State government policy

While national policy around renewable energy remains uncertain, State and local government policy for the NENW region has identified renewable energy as an opportunity area.

The NENW region is earmarked as a 'renewable energy hub'. This is to be achieved alongside balanced development that supports the protection of agricultural lands; development of tourism opportunities; and safe and healthy town centres. The Project would support the 'renewable energy hub' policy direction.

# New England North West Regional Plan

The Department of Planning, Infrastructure and Environment (DPIE) Regional Plans identify a framework for future planning and land use across regional NSW.

The NENW Plan supports the development of renewable energy in the region, but this must also be balanced with agricultural land use and the provision of safe and healthy towns/villages for the local communities.

Relevant policy directives include:



Regional Plan

<sup>&</sup>lt;sup>18</sup> A global accord that aims to reduce GHG emissions

<sup>&</sup>lt;sup>19</sup> Australian Government, Renewable Energy Target scheme

- *Direction 3: Protect and enhance agricultural lands,* including management of the interface between important agricultural and other land use types.
- Direction 5: Grow NENW as the renewable energy hub of NSW, where action items support the diversification of the energy sector with identification of renewable energy resource precincts and infrastructure corridors that access the electricity network; and also, the development of small-scale renewable energy projects, including wind.
- Direction 6: Deliver new industries of the future, such as 'green industries'.
- Direction 8: Expand tourism and visitor opportunities.
- Direction 19: Support healthy, safe, socially engaged, and well-connected communities.

Priorities identified for both Uralla and Walcha LGAs include investigating the potential for wind and solar production and encouraging renewable energy opportunities; and raising the area's profile and awareness of employment, business development and lifestyle opportunities.

# NSW Electricity Strategy

The NSW Electricity Strategy is a plan to secure a reliable, affordable and sustainable electricity future that supports a growing economy. The following actions will be undertaken by the NSW Government:

- Roll out Renewable Energy Zones (REZs): in the Central West, South West and New England regions of NSW<sup>20</sup>.
- Provide a new case management service for critical electricity infrastructure
- Project funding through the Emerging Energy program for new technologies that provide sustainable and on-demand electricity
- Work with industry to reduce red tape and streamline process to make business easier
- Expand the Energy Savings Scheme (now called the Energy Security Safeguard) to encourage new technologies and transition within the electricity system.
- Develop a regulatory framework that supports new electricity generation in NSW
- Set an Energy Security Target to give the market certainty about how much new electricity is needed in the medium to long term to deliver a reliable energy system
- Accelerate projects to create resilience in the electricity system
- Collect information from industry to keep track of the system
- Review the emergency response powers and processes so that it is fit-for-purpose.

In 2020, the NSW Government announced a \$79 million plan to develop the 8,000MW REZ in the New England region. It is expected the New England REZ will attract \$12.7 billion in investment, create 2,000 construction jobs and 1,300 operational jobs, lower energy prices, power 3.5 million homes (when linked with the Central West REZ), as well as help diversify the local economy and contribute to local road and telecommunication improvements<sup>21</sup>. The New



<sup>&</sup>lt;sup>20</sup> A REZ involves coordinated development of new grid infrastructure to connect multiple generators in energy rich areas. A dedicated body will oversee early planning and bring together investors to maximise benefits for the community. The REZ is to capitalise on economies of scale and unlock new generation at a lower cost.

<sup>&</sup>lt;sup>21</sup> NSW Government, 2020, https://www.nsw.gov.au/media-releases/new-england-to-light-up-second-nsw-renewableenergy-zone, date accessed: 181120

England REZ also provides an opportunity for NSW to increase its energy resilience and export energy excess to Queensland<sup>22</sup>.

The New England REZ is identified in Figure 15. The Project will contribute to the New England REZ.



FIGURE 15: NEW ENGLAND - INDICATIVE RENEWABLE ENERGY ZONE

Source: www.energy.nsw.gov.au



<sup>&</sup>lt;sup>22</sup> NSW Government, 2020, <u>https://energy.nsw.gov.au/renewables/renewable-energy-zones</u>, date accessed: 251120

# NSW Government Electricity Infrastructure Roadmap

The NSW Government's Electricity Infrastructure Roadmap is a framework to deliver a modern electricity system for NSW.

The Roadmap continues the commitment to REZs and is a whole of system approach addressing generation, transmission, long duration storage and firming. This will be delivered in five steps:

- Driving investment in regional NSW
- Delivering energy storage infrastructure (supporting stable, long-term energy storage)
- Delivering REZs (coordinating regional transmission and renewable generation in the right places)
- Keeping the grid secure and reliable (having a backup system of gas, batteries or other sources)
- Harnessing opportunities for industry (empowering new and revitalised industries with cheap, reliable and low emissions electricity).

# A 20-Year Economic Vision for Regional NSW

The NSW Government's economic vision for regional NSW is to leverage seven established industries and three emerging sectors which includes renewable energy<sup>23</sup>.

Priority 4 under the strategy is to manage vital energy and water resources sustainably and ensure support meets long-term regional demand. In the next 5 to 20 years, actions items include:

- Investigation 0-5 years: the potential for energy zones and transmission requirements; and research and development investment in energy and water security and resilience, particularly for engine industries.
- Investigation 5-10 years: focus energy projects relevant to engine industries; and climate-resilient water infrastructure options.
- Investigate 10-20 years: ongoing infrastructure to provide safe and secure water to regional communities.

Priority 6 supports increasing regional NSW's knowledge economy and excellence in innovation in several industries, including energy.

# Local government policy

Similar to the strategic intent of the NSW Government, local councils support a future that protects the character, heritage and environment of the local area and also supports economic development and renewable energy uptake. The Project, therefore, would also address community interest to support renewables.

# Uralla Community Strategic Plan

The Uralla Community Strategic Plan sets out community goals to 2027 and outlines strategies and measures to achieve the goals.

For the future, the Uralla community supports:

- Provision of vibrant town centres and a safe and healthy shire
- Promotion of an attractive environment for business, tourism and industry with diversified employment, education and tourism opportunities



<sup>&</sup>lt;sup>23</sup> These include agribusiness and forestry, resources and mining, tourism, tertiary education, health and residential care, freight and logistics, and defence.





• Maintaining a healthy balance between development and the environment.

# Walcha Community Strategy Plan

Walcha 2027 presents the vision, aspirations, goals, priorities and challenges for the local community. These include:

- Maintenance and improvement to the LGA to increase tourism and commercial activity
- Increasing local employment, and taking maximum advantage of commercial opportunities, yet also growing in harmony with the natural environment
- Protection and enhancement of the natural and built environment in the LGA
- Establishment (with partners) of alternate renewable energy supplies that will exceed the energy needs of the local community (Walcha to increase the use and production of renewable energy).

# Other major projects in the region

As identified in Table 5 there are a number of major projects planned for Uralla, Tamworth Regional and Armidale Regional LGAs. The status of these projects ranges from preparation to determination.

Salisbury Solar Farm and Thunderbolt Energy Hub (solar and wind) are the two closest major projects to the Winterbourne Project and Walcha town. Both projects are in their early stages of development like the Winterbourne Project. These two projects may draw on the local labour force for construction and operational skillsets. This may create competition for local workers in the region but may also help draw more skilled workers to live and work locally. The breadth of local projects may also help upskill and/or diversify local worker skillsets.

The Salisbury and Thunderbolt projects are however, located closer to Uralla town centre than Walcha town centre. Therefore, it is less likely these projects would impact Walcha town centres for accommodation, housing and services.

Benefits can accrue to local businesses who support the workers, although this depends on the ability of the closest town to support the workforce. Benefits may drift to the closest major town instead.



Local government area	Project name*	Planning status
Uralla	SSD New England Solar Farm	Determination
	SSD Salisbury Solar Farm	Prepare EIS
Tamworth Regional <sup>^</sup>	SSD Tamworth Solar Farm	Determination
	SSD Middlebrook Solar Farm	Prepare EIS
	SSD Hills of Gold Wind Farm	Response to Submissions
	SSD Thunderbolt Energy Hub Wind Farm	Prepare EIS
	SSD Tamworth Hospital - redevelopment/modifications	Determination
	Part 3A Manilla Hospital	Determination
	SSI Dungowan Dam	Prepare EIS
	Part 3A Keepit Dam Upgrade	Determination
	SSI Chaffey Dam Upgrade	Determination
Armidale Regional <sup>^</sup>	SSD Metz Solar Farm	Determination
	SSD Tilbuster Solar Farm	Response to Submissions
	SSD Doughboy Wind Farm	Prepare EIS
	SSD Rangoon Wind Farm	Prepare EIS
	SSD Oxley Solar Farm	Response to Submissions
	Hillgrove Mine – a number of modification submissions	Determination
	New England Highway Upgrade	Determination

TABLE 5: DPIE MAJOR PROJECTS REGISTER – PLANNING STATUS OF THE PROJECTS IN THE REGION

Source: <u>https://www.planningportal.nsw.gov.au/major-projects</u>, planning status reported as documented on the DPIE Major Projects website 24062021

\*State Significant Development (SSD), State Significant Infrastructure (SSI)

<sup>A</sup> Major infrastructure projects that are generally similar to the Project were included in the list above. There are other major projects listed on the DPIE website for Tamworth and Armidale LGAs, such as high school modifications or poultry farm modifications. These have not been included in the list.

# 3.1 Social impact

Since 2019, WinterbourneWind has facilitated community consultation with key stakeholders. Table 6 lists the perceived socio-economic impacts raised by participants to date<sup>24</sup>. The second column identifies research completed on the perceived impact and the expected outcomes or benefits.

TABLE 6: PERCEIVED SOCIO-ECONOMIC IMPACTS FROM CONSULTATION AND EXPECTED OUTCOMES/BENEFITS

Consultation findings and perceived socio- economic impacts	Expected outcomes and benefits from the Project based on socio-economic research		
Construction phase			
Local economic impact - there is strong interest in the local economic opportunities associated with the Project, including jobs.	Section 3.2 presents economic modelling for the projected number of jobs (direct and indirect) from the Project. Modelling indicates there would be approximately 462-540 full time equivalent jobs during construction across Walcha, the regions and NSW. Under the minimum scenario, about 246 jobs would be direct and 216 on-flow. Of the 246 direct jobs, about 203 jobs would be in Construction and 43 in Professional Services (see Table 8).		
	Appendix 2 – Economic impacts and Case Studies identifies the economic benefits that regional communities can gain from wind farm developments.		
Pressure/availability of community services to absorb the influx of workers (such as clinics, hospitals, police, emergency services).	Section 2.1 – Other major projects in the region identifies two other major projects in close proximity to the Project. Both of these projects are located closer to Uralla town then Walcha, therefore are more likely to use services in Uralla.		
	<i>Appendix 3 – Events, accommodation and services</i> lists the community services available in Walcha, Tamworth and Armidale.		
	Walcha has limited health service capacity. Major health services would have to be sought in Tamworth or Armidale.		
Affordability and availability of short term and temporary accommodation for locals/people not associated with the project who might move to these towns.	Appendix 3 – Events, accommodation and services lists the visitor accommodation available in Walcha, Tamworth and Armidale, and some major visitor events held in the town of Walcha annually.		
	Visitor accommodation in Walcha and the surrounding area has the capacity to offer		

<sup>&</sup>lt;sup>24</sup> Winterbourne Wind Farm Scoping Report Stakeholder Engagement Section 25/06/20; NGH email 12/11/20



Availability/affordability during peak tourism periods for holiday rentals and hotels/motels/pub accommodation.	approximately 68 rooms (on the basis of 1 person per room). In reality, it may be slightly less, as 1 worker could choose to rent an entire guesthouse, rather than have a worker staying in each room of the house.		
	Given the number of workers projected to be employed by the Project, and because there are a few weekends per year that draw large numbers to Walcha, it is likely there will be pressure on local accommodation services at particular times.		
(Perceived) community safety concerns, due to the influx of temporary out of town	Appendix 3 – Events, accommodation and services lists the local police stations.		
workers. For example, workers may exhibit anti-social behaviour at the local pubs. Generally, the friction that can arise when 'city people' move to small towns.	There is one police station in Walcha. There are three located in towns about 50-60-minute drive away.		
	Given the number of workers projected to be employed by the Project, it is possible there could be some instances of anti-social behaviour.		

Consultation findings and perceived socio- economic impacts	Expected outcomes and benefits from the Project based on socio-economic research		
Operational phase			
Local economic impact - There is strong interest in the local economic opportunities associated with the Project, including jobs and tourism.	Section 3.2 presents economic modelling for the projected number of jobs (direct and indirect) from the Project. Modelling indicates there would be approximately 65-76 operational jobs (minimum scenario – 33 direct and 32 on-flow		
There is interest in understanding the community ownership and revenue sharing model, and the opportunities for funding of local projects through the community fund.	jobs). Jobs would be local, regional and within NSW with about 40-60% located in Walcha or surrounding LGAs.		
	Appendix 2 – Economic impacts and Case Studies identifies the economic benefits that regional communities can gain from wind farm developments. Appendix 2 – Tourism highlights a few visitor events that are associated with other wind farms.		
	Appendix 2 – Community ownership and enhancement details the benefits from community ownership models and provides a summary of the variety of benefits and projects that can result from community enhancement funds. The section includes three case studies that detail the wide range of projects that can benefit from community enhancement funds.		
	Regional areas can benefit socially, environmentally and economically via community ownership models and the		

	community enhancement funds associated with wind farms.
Impact on land use and land values.	Section 2.1 – Policy context provides an overview of the policy context for future land use and the development of renewables at National, State and local government levels.
	In relation to land use, the Project aligns with State and local policy directions to create a renewable energy hub in the region.
	Appendix 2 – Property prices and land values provides a summary of the impact of wind farms on land value.
	Research suggests some communities (or individuals) can become concerned that property prices will decrease with the presence of a wind farm. However, property price analysis generally indicates that wind farms do not impact property prices or that there is not enough conclusive data. It is acknowledged that there could be potential for some property values to decrease.
Impact on GHG emissions – there is support for clean energy, reducing CO <sub>2</sub> emissions and generating local renewable energy sources were considered important by the community.	Section 2.1 – Policy context provides an overview of the policy context for renewables and development at National, State and local government levels.
	There is policy support at the State and local government levels to develop a renewable energy hub in the region.
	<i>Appendix 2 – Replacing fossil fuels</i> provides a summary of the benefits renewable energy provides in reducing the use of fossil fuels for energy generation.
Improved community and family cohesion and vibrancy – community and family ties in the area are viewed as important.	Appendix 2 – Community ownership and enhancement lists the benefits of a community ownership model and community enhancement funds associated with wind farms.
	Benefits derived from the community ownership model and enhancement fund would help strengthen community ties; build pride and ownership around local infrastructure; and generate social/economic/environmental benefits from locally funded projects that would help encourage communities and families to remain living and working in the local area.
	The influence on art in Walcha is stressed as important to the local community. Based on case studies, there is scope for art related projects to be funded under the community enhancement funds program.
Pressure/availability of community services to absorb the influx of workers (such as	Section 2.1 – Other major projects in the region identifies two other major projects in close proximity to the Winterbourne Project. Both of



clinics, hospitals, police, emergency services).	these projects are located closer to Uralla town then Walcha, therefore are more likely to use services in Uralla.		
	<i>Appendix 3 – Events, accommodation and services</i> lists the community services available in Walcha, Tamworth and Armidale.		
	Walcha has limited capacity to cater to health issues. Major health services would have to be provided in Tamworth or Armidale.		
(Perceived) community safety concerns, due	Appendix 3 – Events, accommodation and		
to the influx of temporary out of town workers. For examples, workers may exhibit anti-social behaviour at the local pubs. Generally, the friction that can arise when 'city people' move to small towns	There is one police station in Walcha. There are three located in towns about 50-60-minute drive away.		
	Given the number of workers projected to be employed by the Project, it is a possible there could be some instances of anti-social behaviour.		

Source: Winterbourne Wind Farm Scoping Report Stakeholder Engagement Section 25/06/20; NGH email 12/11/20

# 3.2 Economic impact

# Purpose

The purpose of the economic impact analysis is to estimate the number of jobs and the value of wages and profits (referred to as gross value added) that may be generated from the Project. For example, a job is directly linked to the Project (a maintenance worker) or indirectly linked to the Project (a maintenance worker purchases a meal in Walcha). To prepare the meal for the maintenance worker, fresh food is purchased from a local grocery store and/or butcher. This increases the revenue of these businesses who then may employ more workers. With more money in their pockets, the grocer and butcher may spend more money at the local café. This then increases the profits of that local business. Another example of indirect economic impact is local building work funded by a community fund, which might support employment of local trades which helps to inject money into the economy.

# Method

To understand the economic impact of the Project an Input/Output (IO) Modelling approach has been used. This is a statistical method to understand the supply chain of different types of purchases and how money flows through the economy<sup>25</sup>. Data provided by the client informed the IO Model. Data included intended project capacity (turbines and megawatt), construction and operation costs for a minimum (100 turbines) and maximum (125 turbines) scenario.

The employment estimates generated by the IO approach are created by using regional multipliers and are a reflection of localised industry averages (to identify the likely employment impact of a given level of operational expenditure)<sup>26</sup>. Sometimes money is lost to the local economy as there are other businesses to 'capture' that spending. For example, if the turbines are built overseas, then that money is 'lost' overseas. A high-level summary of how the jobs have been estimated is shown in Figure 16.

<sup>&</sup>lt;sup>25</sup> Appendix 1 provides more information on the modelling method.

<sup>&</sup>lt;sup>26</sup> More specific project costings and hiring date may provide a different employment outcome.

## FIGURE 16: HIGH LEVEL SUMMARY OF THE JOB ESTIMATION METHOD



Source: SGS, 2020

# **Economic stimulus**

# Capital

Table 7 outlines the estimated economic stimulus of the Project. Modelling included a stimulus range from 100 to 125 turbines. All outcomes of the impact assessment are only linked to the specific configuration of the minimum scenario (100 turbines) and maximum scenario (125 turbines).

The Project is expected to include a minimum capital expenditure of \$1,170 million with ongoing operational expenses of \$20 million not including finance costs. Under the maximum scenario capital expenditure is expected to be \$1,460 million and ongoing operational expenses of \$23 million not including finance costs.

## TABLE 7: CAPITAL EXPENDITURE OF PROJECT

	Min Stimulus (100 Turbines)	Max Stimulus (125 Turbines)
Capital Expenditure (total)	\$1,170 million	\$1,460 million
Capital Expenditure (local region)	\$619 million	\$746 million
Annual Operational Costs (Local Region)	\$20 million	\$23 million
Total Operational Costs (NPV 20 -years)	\$210 million	\$287 million

Source: SGS, Winterbourne, 2020





FIGURE 17: IN THE LOCAL REGION - MINIMUM CAPITAL EXPENDITURE BY YEAR

Source: SGS

## Output

Changes in output (e.g. the turnover within the economy) are estimated from the direct capital injection from the Project (this value is identified in Table 7). The output is primarily front loaded in the first two years of construction. Extrapolating the construction phase impacts and operational phase impacts, the cumulative nominal positive economic output can be expected to range between \$1.86-\$2.23 billion by 2040.



FIGURE 18: MINIMUM OUTPUT - DIRECT AND ON-FLOW BY YEAR

Source: SGS

# Value add

The additional value add (e.g. wages and profits) directly produced by the Project are expected to be between \$146-\$180 million during the construction phase and \$11.3-\$13.1 million per year during operation. The on-flow value add is between \$162-\$195 million per year in the construction phase and \$13.1-\$15.2 million per year during operation<sup>27</sup>.



<sup>&</sup>lt;sup>27</sup> Lower values refers to minimum scenario and high values refers to maximum scenario

## FIGURE 19: MINIMUM VALUE ADD DIRECT AND ON-FLOW BY YEAR



Source: SGS

# Employment

Using the IO approach to generate region level multipliers and applying these to capital inputs to the Project, an estimate of employment numbers have been derived<sup>28</sup>. Figure 16 summarises this approach.

The total employment impact during the construction phase (2-year total) is estimated to be:

- Between 462-540 Full Time Equivalent (FTE) jobs (minimum to maximum scenario).
  - Under the minimum scenario, approximately 246 are direct jobs and 216 are onflow jobs.
  - Of the 246 direct jobs, approximately 203 would be in Construction and 43 in Professional, Scientific & Technical Services.
  - For on-flow jobs, about 174 jobs would be in Construction and 42 for Professional, Scientific & Technical Services<sup>29</sup>.

The total employment impact during the operation phase (per annum) is estimated to be:

- Between 65-76 ongoing FTE jobs in the Professional, Scientific & Technical industry sector (minimum to maximum scenario).
  - Under the minimum scenario, approximately 33 direct jobs and 32 on-flow jobs, under a minimum scenario.
  - Of these 33 direct jobs, some will be ongoing operations in Walcha, other jobs will be in surrounding LGAs and other jobs will be spread across NSW. For example, of the 33 jobs created by ongoing operations about 40-60% (13.2-19.8 jobs) will be in Walcha or nearby LGAs. The remaining jobs created will be spread across NSW, in various industries such as accounting.
  - After these 33 direct jobs have been created, those employed persons will have an additional impact of jobs within the broader economy through their

<sup>&</sup>lt;sup>28</sup> The employment estimates are a reflection of localised industry averages to identify the likely employment impact of a given level of operational expenditure. More specific project costings and hiring data may provide a different employment outcome.

<sup>&</sup>lt;sup>29</sup> For example, on-flow jobs could be in human resources or accounting

expenditure on various avenues such as consumption, investment and taxes paid.

These estimated job numbers, as a result of the IO modelling, are presented in the tables below. The employment impacts are split by industry and phase. About 10-20% would be in Walcha, 30-40% in the surrounding LGAs and the balance in the rest of NSW.

	Construction Phase (2-year total)			Operation Phase (per annum)		
Industry Type	Direct jobs	On-flow jobs	Total	Direct jobs	On-flow jobs	Total
Construction	203	174	377	-	-	0
Professional, Scientific & Technical Services	43	42	85	33	32	65
Total	246	216	462	33	32	65*

## TABLE 8: MINIMUM EMPLOYMENT BY PHASE, INDUSTRY AND TYPE

Source: SGS

\*See text above referring to the 65-76 estimated Operational Phase jobs. These jobs are expected to be occur between Walcha, surrounding LGAS and NSW.

TABLE 9: MAXIMUM EMPLOYMENT BY PHASE, INDUSTRY AND TYPE	

	Construction Phase (2-year total)			Operation Phase (per annum)		
Industry Type	Direct jobs	On-flow jobs	Total	Direct jobs	On-flow jobs	Total
Construction	244	209	453	-	-	0
Professional, Scientific & Technical Services	44	42	86	39	37	76
Total	288	252	540	39	37	76*

Source: SGS

\*See text above referring to the 65-76 estimated Operational Phase jobs. These jobs are expected to be occur between Walcha, surrounding LGAS and NSW.

# Figure 20 provides an overview of the impact on employment overtime.



## FIGURE 20: MINIMUM EMPLOYMENT, DIRECT AND ON-FLOW BY YEAR

Source: SGS



Nacelles for the Project may be produced in Australia, therefore contributing to the Australian economy. In 2019, it was announced that nacelle manufacturing will be undertaken once again in Australia. Vestas (global wind turbine original equipment manufacturer and owner of the Winterbourne Wind Farm project) have partnered with Marand Precision Engineering in Victoria to establish a turbine assembly and testing facility. The facility is expected to directly employ more than 20 staff and 'hundreds' of local staff are to be trained in wind turbine maintenance<sup>30</sup>. In effect, the facility will bring new employment and skill development opportunities in renewables and contribute to the Australian economy.

## Sensitivity analysis

By altering the intensity of the flow-on effects, lower and upper estimates of the economic impact of the Project can be created. Table 10 and Table 11 present the results for construction and operational impacts respectively.

By holding inputs constant there is quite a variance in the total impacts with employment value add and output significantly lower under the scenario where only 10% of potential onflow occurs. The lower scenario can be seen as the lower limit of the economic impact of the Project and the higher scenario the upper limit.

Overall impacts have been scaled down during the model validation in order to account for overestimation of flow-on effects within the IO Model.

During boom times 25% would be appropriate (this is based on comparison of IO Model results and the results from computable general equilibrium (CGE) models). CGE Models account for the price effects and constraints within the economy which the IO Model does not. For the same stimulus, an IO Model would produce \$100 of benefits and a CGE Model would produce \$25 of economic benefits.

However, given the economic fallout from COVID-19, there will be spare capacity in the economy. This will mean that the construction phase stimulus impact of the Project will have a much greater effect, more towards  $100\%^{31}$ .

Impact	Min	Max
Output (Direct \$, m)	\$621	\$765
Output (On-Flow \$, m)	\$603	\$727
Value add (Direct \$, m)	\$293	\$361
Value add (On-Flow \$, m)	\$325	\$391
Employment (Direct FTE)	246	288
Employment (On-Flow FTE)	216	252
Source: SGS		

TABLE 10: CONSTRUCTION PHASE (2023, 2024)



<sup>&</sup>lt;sup>30</sup> Schlink, S & Teo, C., 2019, 'Wind turbine manufacturing resumes in Australia',

https://www.mondaq.com/australia/renewables/792850/wind-turbine-manufacturing-resumes-in-australia, date accessed: 181120; Vorrath, S., 2019, 'Vestas brings winds of change to Victoria manufacturing, with turbine plant in Geelong', https://reneweconomy.com.au/vestas-brings-winds-of-change-to-victoria-manufacturing-with-turbine-plant-in-geelong-12702/, date accessed: 181120

<sup>&</sup>lt;sup>31</sup>This is a reference to economic slack, ie: the local regions under/over performance. When regions are under performing (below the steady state), there is excess capacity for the region to take up exogenous investment to bring it back to a steady state. Recession conditions during 2020 have caused most regions to fall out of a steady state.

The table below provides some insights into the operational impacts on spending in the Walcha economy. The operational phase would be likely towards the lower estimate of 32 jobs (ongoing skilled jobs – providing opportunities that were previously unavailable). This is due to the local Walcha area having an economy which would have many 'leakages'. That is, work is done by 'drive-in-drive-out' workers of business. Therefore, the stimulus is not captured by the local community.

## TABLE 11: OPERATIONAL PHASE (PER ANNUM)

Impact	Min	Max
Employment (On-Flow, FTE)	32	37

Source: SGS



# 4. SUMMARY

# 4.1 Net community benefit assessment

Table 12 and Table 13 present ratings that have been applied to the socio-economic impacts associated with the Project. Ratings are low/medium/high and positive/negative. Local stakeholders that may be impacted by the Project are also identified. Benefits and/or opportunities arising from the Project have been identified in the final column.

These qualitative descriptions are defined as follows:

*High:* the impact is expected to have a significant effect that could be local or throughout the wider catchment, driven by the provision of services or infrastructure not currently within the catchment.

*Medium:* the impact is expected to have a moderate impact through the catchment and be driven by a marginal change in infrastructure or services already provided.

*Low:* the impact is likely to have negligible impact, to be appropriately mitigated to remove its impact or have local or temporary impacts.

Ratings were determined by the project team and aim to provide a concluding assessment on the Project and its potential future impact.



## TABLE 12: CONSTRUCTION PHASE – IMPACT AND RATINGS

Construction phase					
Impact	Impact rating	Rationale	Local stakeholder potentially impacted	Opportunities	
1 Economic impact (gross value add)	High (positive)	The Project is projected to provide around \$146-\$180 million in direct value add and \$162-\$195 million for on-flow value add per construction year (see Section 3.2).	Community Local business	<ul> <li>Leverage the community ownership model and engage local businesses at different stages of development to maximise local flow-on effects.</li> </ul>	
2 Employment impact	High (positive)	Socio-economic profiling for Uralla and Walcha LGAs suggests there is a need to generate jobs in the local region due to the impact of drought; the decrease in 'working age' individuals in recent years; and the decline in traditional industries like manufacturing and agriculture (see Section 2.1). The Project is projected to provide around 462-540 full time equivalent jobs during the construction phase (minimum to maximum scenario). Under the minimum scenario, about 246 jobs would be direct and 216 would be on-flow jobs. Of the 246 direct jobs, about 203 jobs would be in Construction and 43 in Professional Services (see Table 8).	Community Local business	<ul> <li>Work with local workforce operators to maximise local flow-on effects.</li> </ul>	
3 Pressure on the availability of community services to support the influx of construction workers	Medium- high (negative)	<ul> <li>During construction, this impact may be significant with temporary workers coming into the town.</li> <li>Walcha town centre has limited major/emergency health care services. There are major health service facilities in Tamworth and Armidale, however both of these towns are approximately one hour drive away from Walcha town centre. Police are located in each of the three centres (see Appendix 3).</li> <li>There are two other major projects in the development pipeline that are in close proximity to the Project (Salisbury Solar Farm and Thunderbolt Energy Hub (solar and wind) see Section 2.1). The degree of pressure on community services would vary depending on construction for each project and the ability of surrounding town centres to provide support, noting the two other projects are more likely to use services in Uralla as this town is closer.</li> <li>Pressure on community services may also be significant in conjunction with local visitor events that run in Walcha throughout the vear. Some of these</li> </ul>	Community Community service providers	<ul> <li>Communicate with other major project developers in the region to understand whether there will be overlap in peak periods of development.</li> <li>Notify community services of the likely number of workers and peak periods of work.</li> <li>Work with local health authorities to determine a plan of action in cases where workers require community services, particularly during peak development periods.</li> </ul>	

Construction phase					
Impact	Impact rating	Rationale	Local stakeholder potentially impacted	Opportunities	
		events can bring several hundred people to town (see Appendix 3). However, the number of days per year this would occur is minimal.			
4 Potential shortage of short term and visitor accommodation in Walcha	Medium - high (negative)	<ul> <li>Under the minimum scenario, of the 246 direct jobs, about 203 jobs would be in construction and 43 in professional services (see Table 8). This indicates there could potentially be high numbers of people seeking short term accommodation.</li> <li>A review of tourism data indicates there are low levels of tourism in Uralla and Walcha LGAs when compared to NSW (see Section 2.1). However, there are a few weekends per year when hundreds of people are potentially attracted to Walcha town for events (see Appendix 3). Accommodation services in Walcha would be under pressure during major event weekends.</li> <li>A review of visitor accommodation in Walcha suggests there may only be 68 rooms available for workers^ (see Appendix 3). There may be pressure on local accommodation services in Walcha (particularly in the first two years of construction) given the projected number of workers expected to work on the Project. There are numerous accommodation options in Tamworth and Armidale (see Appendix 3).</li> </ul>	Community Visitors Tourism operators	<ul> <li>Maximise engagement of the local workforce, as this will help reduce pressure on local accommodation.</li> <li>In addition, the proponent is encouraged to work with accommodation providers in Walcha to coordinate and manage availability of accommodation.</li> <li>Work with local event organisers to avoid crossover between peak work periods and key visitor event weekends in Walcha town.</li> </ul>	
5 (Perceived) risk of reduced community safety	Low- medium (negative)	There are community concerns in relation to safety and the influx of temporary out of town workers. Concerns relate to alcohol and drug abuse, anti-social behaviour and possible friction with the local population. There is one police station located in Walcha and three in surrounding towns approximately one-hour drive away.	Community	<ul> <li>Notify local authorities of construction program and workforce, to ensure authorities are sufficiently resourced and prepared to handle any complaints.</li> <li>Use contractor toolbox talks to outline worker expectations, responsible behaviour and consequences for dismissal.</li> <li>Continue to roll out the action items in the Community Engagement Plan as a mechanism to inform, collaborate and</li> </ul>	

Construction phase				
Impact	Impact rating	Rationale	Local stakeholder potentially impacted	Opportunities
				resolve issues between the community and the Project team.
6 Improved community cohesion	Medium (positive)	<ul> <li>Increased local job opportunities will enable young families and people of working age to remain in the community. Community and family ties in the area are considered important.</li> <li>The community ownership model and the community enhancement fund offer opportunities to build ownership and pride in the local infrastructure; and investment back into the community via locally funded projects (see Appendix 2 – Social impacts). In turn, this may encourage people to remain living and working in the area as facilities are improved.</li> </ul>	Community	<ul> <li>Continue to collaborate with the community – building a sense of ownership around the Project.</li> <li>Ensure community members are part of the community enhancement fund assessment team so that projects that receive funding are informed and valued.</li> </ul>

#### Source: SGS

^Based on an estimation of one worker per room, the figure could be slightly less if one worker rents a whole guesthouse

## TABLE 13: OPERATIONAL PHASE – IMPACT AND RATINGS

Impact	Impact rating	Rationale	Local stakeholders potentially impacted	Opportunities
7 Economic impact (gross value add)	Medium (positive)	The Project is projected to provide around \$11.3-\$13.1 million in direct value add per year, and \$13.1-\$15.2 million on-flow value add per year during operation (see Section 3.2).	Community Local business	<ul> <li>Leverage the community ownership model and engage local businesses at different stages of development to maximise local flow-on effects.</li> </ul>
8 Employment impact	Medium (positive)	<ul> <li>Socio-economic profiling for Uralla and Walcha LGAs suggests there is a need to generate jobs in the local region due to the impact of drought; the decrease in 'working age' individuals in recent years; and the decline in traditional industries like manufacturing and agriculture (see Section 2.1). There is strong interest from the local community in the local economic opportunities associated with the Project, including jobs and tourism.</li> <li>The Project would generate approximately 65-76 jobs during the operational phase (minimum to maximum scenario). These jobs would be located in Walcha LGA, surrounding LGAs and NSW. Under the minimum scenario, about 33 jobs would be direct and 32 on-flow in Professional Services (Table 8). Of the 33 jobs created by ongoing operations about 40-60% (13.2-19.8 jobs) will be in Walcha or nearby LGAs. The remaining direct jobs created will be spread across NSW, in various industries, such as accounting.</li> <li>The literature review and case studies provide examples of other similar projects in Australia that have achieved direct financial gain, job creation and value add outcomes (see Appendix 2).</li> </ul>	Community Local business Tourism operators	<ul> <li>To maximise ongoing local flow-on benefits:</li> <li>Work with local workforce operators and employ local workforce where possible</li> <li>Collaborate with education institutions to build the skills and capabilities in the local workforce</li> <li>Engage with local tourism operators to support tourism activities.</li> </ul>
9 Land use and land values	Low (negative)/ Medium (positive)	The Project will change land use. However, as mentioned in the literature review it is possible for turbine hosts to continue their farming operations while hosting turbines (see Appendix 2). Also, the policy review indicated there is policy support at the State and local government levels for the development of the Renewable Energy Zone (REZ) in the region (see Section 2.1).	Turbine hosts Impacted neighbours	<ul> <li>Work with the local community and affected landholders to ensure site design reduces the potential impact to property price and land value.</li> <li>Implement recommended mitigation measures from the noise and visual specialist reports to minimise potential impacts to property prices.</li> </ul>

Operational phase					
Impact	Impact rating	Rationale	Local stakeholders potentially impacted	Opportunities	
		The literature review highlighted that some community members can become concerned that a wind farm may reduce property prices. However, research also suggested wind farms may not necessarily impact land values, and that this area of research remains unclear (see Appendix 2). Land holdings with visual or noise exposure to the Project may experience a negative impact on residential land values. Visual and noise assessments are being completed on the Project as part of the planning process and therefore, would assist in identifying mechanisms to reduce the impact on property values. The additional employment opportunities, to a small degree, may drive up residential demand, which will have an upward pressure on land values.		<ul> <li>Work with WTG hosts and relevant neighbours to identify suitable mechanism to offset impacts.</li> </ul>	
10 Avoidance of GHG emissions	High (positive)	<ul> <li>It is estimated the Project will result in about approximately 1,494,000 t/CO2e per year of avoided GHG emissions.</li> <li>The policy review highlighted State and local government support for the development of renewable energy in the region, including the New England REZ (see Section 2.1).</li> <li>The literature review highlighted the monetary and health gains from replacing fossil fuels with renewable energy. Wind energy also has the lowest GHG impact (see Appendix 2).</li> </ul>	Local and wider population	-	
11 Improved community and family cohesion and vibrancy	Medium (positive)	Increased local employment opportunities will enable young families and people of working age to remain in the community. Community and family ties in the area are considered important. The literature review suggested communities may have differing attitudes towards wind farms often derived from personal characteristics, situational and contextual factors (see Appendix 2). Avoiding community tension and division over development is important for close-knit, regional communities.	Community	<ul> <li>Continue to collaborate with the community – to help build a sense of ownership around the Project.</li> <li>Ensure community members are part of the community enhancement fund assessment team so that projects that receive funding are informed and valued.</li> <li>The influence on art in Walcha is stressed as important to the local community. As above, ensure</li> </ul>	

Operational phase				
Impact	Impact rating	Rationale	Local stakeholders potentially impacted	Opportunities
		Community consultation conducted to date indicates the community is generally supportive and interested in the Project. The community ownership model and the community enhancement fund offer opportunities to build ownership and pride in the local infrastructure; and invest back into the community via locally funded projects (see Appendix 2) which may in turn encourage people to remain living and working in the area as other facilities are improved.		community members are part of the community enhancement fund assessment team so that projects that receive funding are relevant and valued.
12 Pressure on the availability of community services to absorb the marginal increase of operational workers	Low (negative)/ Medium (positive)	<ul> <li>Walcha town centre has limited major/emergency health care services. There are major health service facilities in Tamworth and Armidale, however both of these towns are approximately one hour drive away from Walcha town centre (see Appendix 3).</li> <li>Of the 33 direct jobs under the minimum scenario (see Table 8) created during the operational phase about 40-60% are expected to be in Walcha or nearby LGAs. Pressure on existing community services would be lower than during the construction phase as there will be less workers on-site (eg: healthcare).</li> <li>The addition of workers to the local population would also enhance the viability of local infrastructure and facilities in Walcha.</li> </ul>	Community Community service providers	<ul> <li>During operation there may be an increased demand and viability for community services like schools, or new healthcare facilities etc. due to new workers (i.e.: increased population) locating in the town. There may be opportunity in the future for the community to leverage this with government authorities.</li> </ul>

Source: SGS

# 4.2 Conclusion

The socio-economic impact assessment has applied a mix of qualitative and quantitative methods to assess the social and economic benefits and impacts of the Project.

Given the current COVID-19 situation, investment of this kind could assist economic recovery in NSW. The Project will have a substantial positive economic impact (income and employment) in the short-term with significant financial gains. Positive economic gains (income and employment) would continue throughout the operational phase to a lesser degree. Economic modelling suggests the Project would generate between<sup>32</sup>:

- \$146-\$180 million in direct value add and \$162-\$195 million for on-flow value add per construction year.
- Between 462-540 full time equivalent jobs during the construction phase (minimum to maximum scenario). Under the minimum scenario, about 246 jobs would be direct and 216 would be on-flow jobs. Of the 246 direct jobs, about 203 jobs would be in Construction and 43 in Professional Services.
- \$11.3-\$13.1 million in direct value add per year, and \$13.1-\$15.2 million on-flow value add per year during operation.
- 65-76 jobs during the operational phase in Walcha, neighbouring LGAs, and NSW (under the minimum scenario, about 33 jobs would be direct and 32 on-flow).

Given the ageing profile of the local population and recent contractions in the agricultural and transport industries, as highlighted in the socio-economic profiling, progressing the growth of this industry in the region should be considered. It has the potential to attract new workers and provide alternate income streams for local residents which is considered a positive outcome. Profiling for Walcha and Uralla LGAs suggests there may be some individuals living locally with relevant skillsets that could be employed (particularly in construction).

Community consultation undertaken to date indicates the community is generally interested and supportive of the Project on the basis of the potential economic and tourism benefits. The literature review and case studies identify some of the benefits local communities have received for similar projects (including direct economic gain, job creation, funding for a variety of local project). Some questions have been raised by participants over the impact on community services, safety and local accommodation capacity. Opportunities to reduce the pressure on services and prepare for peak worker periods have been listed in Table 12 and Table 13.

From a sustainability perspective, the Project contributes to environmentally sustainable outcomes. Approximately 1,494,000 tCO2e GHG emissions could be avoided per year<sup>33</sup>. The Project aligns with State and local strategic planning actions to develop renewable energy in the region. Key actions include developing the NENW region as a renewable energy hub; delivering new industries of the future such as 'green industries'; and rolling out a Renewable Energy Zone in the New England region.

During both the construction and the operational stage, the net community benefit will be positive, especially if the recommended opportunities listed in Table 12 and Table 13 are taken on board.

During the construction stage, there are important local economic benefits which can be optimised by engaging the local labour market as much as possible. The possible costs can be managed and minimised. The net community benefit is therefore positive.

<sup>&</sup>lt;sup>32</sup> Based on minimum scenario of 100 turbines and maximum scenario of 125 turbines.

<sup>&</sup>lt;sup>33</sup> Data received from client: 21/12/20 (based on 117 turbines)

## TABLE 14: CONSTRUCTION – COSTS AND BENEFITS

Construction phase				
Community Costs	Community Benefits			
4 Potential shortage of short term and visitor accommodation Proactive response can help to mitigate this impact.	<b>1 Enhanced economic value add</b> Approximately \$146-\$180 million in direct value add and \$162-\$195 million for on-flow value add per construction year.			
3 Pressure on the availability of community services Proactive response can help to mitigate this impact.	2 Enhanced employment opportunities Approximately 462-540 full time equivalent jobs during the construction phase (minimum to maximum scenario). Under the minimum scenario, about 246 jobs would be direct and 216 would be on-flow jobs. Of the 246 direct jobs, about 203 jobs would be in Construction and 43 in Professional Services (see Table 8).			
5 (Perceived) risk of reduced community safety Proactive approach can minimise real and perceived impacts.	6 Improved community and family cohesion and vibrancy. Community ownership and pride in the Project.			

Source: SGS

After construction, the Project will continue to generate local economic benefits. For example, a local resident could be employed to operate the Project on-site, or a local resident in the wider region could be employed to do accounting that is related to the Project. These employees may also spend on local goods and services which will be of economic benefit to the community.

## TABLE 15: OPERATIONAL PHASE – COSTS AND BENEFITS

Operational phase				
Community Costs	Community Benefits			
9 To a small degree, residential demand may have upward pressure on land values, reducing housing affordability, especially for low- income householders	<b>7 Enhanced economic value add</b> Approximately \$11.3-\$13.1 million in direct value add per year, and \$13.1-\$15.2 million on-flow value add per year during operation.			
12 Pressure on the availability of community services Proactive approach can minimise real and perceived impacts.	<ul> <li>8 Enhanced employment opportunities</li> <li>Approximately 65-76 jobs during the operational phase in Walcha, neighbouring LGAs, and NSW (minimum to maximum scenario). About 33 jobs would be direct and 32 would be on-flow. Of the 33 direct jobs, about 40-60% would be in Walcha or nearby LGAS, the remaining jobs could be spread across NSW.</li> <li>11 Improved community and family cohesion and vibrancy.</li> <li>Enhanced sustainability of local health and education services. Community ownership and pride in the Project.</li> <li>10 The Project will produce energy for households and result in avoided GHG emissions</li> </ul>			
9 Land holdings with visual or noise exposure to the farm may	9 Improved residential and commercial land values (where not directly exposed to farm).			
--------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------			
experience a negative impact on residential land values	The adverse impact on productive lands is expected to be very low, with a chance of a positive impact.			
Implement noise and visual specialist mitigation measures to minimise impacts.				

Source: SGS

## APPENDIX 1: ECONOMIC MODELLING METHOD

A regional input/output (IO) table was constructed for relevant regions. In constructing an IO table for an area as small as the Local Region (in relation to population), it is important to validate the results of the statistical model to ensure that the results accurately represent the real world.

The IO table is constructed by applying a Residual Allocation System (RAS) also known as iterative proportional fitting algorithm, to the nation IO account table produced in the Australian Bureau of Statistics (ABS 5209.0.55.001) to allocate the national data to state level based on the state level geospatial distribution of workers in the 2016 ABS Census of Population and Housing.

The state totals that are produced are then allocated down to smaller geographies (such as a municipality of a capital city) based on relative location quotients (LQ). This data is then used to produce multipliers used in the Economic Impact Assessment (EIA).

Data from the ABS on wages & salaries and business profits are used to estimate the level of capital expenditure required to produce a job within these areas as a measure of the employment impacts of the project.

The EIA utilises capital inputs for a given project and using the multipliers produced from the IO modelling quantifies the economic impacts of the given project in the categories of Output, Value add and Employment. This gives deeper insight into the interaction the given project has as an exogenous impact to the local economy (defined during the IO modelling) beyond the base capital expenditure of the project.

#### FIGURE 21: HIGH LEVEL SUMMARY OF THE JOB ESTIMATION METHOD



Source: SGS, 2020



## Input Output Tables

In order to measure the upstream and downstream linkages in the economy, it is important to first have a detailed 'picture' of the dynamics of the economic geography. For this purpose, the Australian Bureau of Statistics (ABS) collects various data that represents the flow of goods and services between industries at a national level and publishes this data in the form of an IO table.

"Input output tables provide a detailed dissection of intermediate transactions in an economy and are thereby a means of describing the supply and use of the products of an entire economic system. They provide detailed statistics underlying the national accounts for a specified economy and period and so enable more comprehensive analysis of the productive system than do standard national income and expenditure accounts, which are concerned only with the end result of production, rather than the intermediate flows"<sup>34</sup>.

The structure of an IO table is presented in Figure A1. Each column in the table represents a specific source of demand, while each row shows a specific source of supply. For analytical purposes, the table is often presented as four quadrants:

- Intermediate Usage measures the flow between industries in the national economy. Each column represents the total demand of the industry in terms of the value of goods and services it requires from other industries to operate. For instance, a cell within Quadrant 1 represents the value of goods and services purchased by agriculture from manufacturing.
- 2. **Final Demand** represents sections of the economy that buy goods and services from industries, but which do not form industries themselves. Two examples are exports outside of the Australian economy and private household consumption expenditures.
- 3. **Primary Inputs to Production** are the opposite of Final Demand, i.e. the components of industry demand that are attributed to sections of the economy but are not industries, such as imports, wages and salaries, taxes, etc.
- 4. **Primary Inputs to Final Demand** measures the remainder of the economy, such as the amount of private household expenditure that is spent on taxes.

Once an IO table is constructed, it can be used to study the various linkages between industries. For example, by cross-referencing the Agriculture column with the Manufacturing row, we know how much of total Agricultural production is supplied by the Manufacturing industry, and thus have a measure of the downstream linkage between Agriculture and Manufacturing.



<sup>&</sup>lt;sup>34</sup> ABS (1995, cat no. 5246.0, p.1)

#### Figure A1: Input Output Table Structure

#### STRUCTURE OF AUSTRALIAN INPUT-OUTPUT TABLES

#### Direct allocation of imports, Basic prices, Recording of intra-industry flows

	Ĩ.	To		Intermediate Uses						Final Uses			1					
		From	Rine profits	Agriculture, etc	Mining	Manufacturing, etc	Construction	Services	Intermediate uses (sub-total)	Final consumption expenditure — bousebold	Final consumption expenditure — government	Gross fixed capital formation - private	Gross fixed capital formation - public enterprises	Gross fixed capital formation – general government	Changes in inventories	Exports of goods and services	Final Uses (sub-total)	Total supply (grand total)
		Column prefix		0101-0400	1100-1500	2101-3701	4101-4102	4501-9601		QI	Q2	Q3	Q4	Q5	Q6	Q7		
Internediate	uses	Agriculture Mining Manufacturing, etc. Construction Services	0101-0400 1100-1500 2101-3701 4101-4102 4501-9601		QUADRANT 1 INTERMEDIATE USE							QU. FI	ADRANT NAL USI	2				
		Intermediate uses (sub-total)																
Primary	inputs	Compensation of employees Gross operating surplus and mixed income Taxes on products (net) Other taxes on production (net) Imports	P1 P2 P3 P4 P5	QUADRANT 3 PRIMARY INPUTS TO PRODUCTION PRIM.					QU IARY INF	ADRAN'I PUTS TO	4 FINAL U	JSE						
		Australian production									1	1	1	1	1			

The shaded areas correspond to aggregates shown in the Gross Domestic Product Account.



corresponds to aggregates shown as the components of gross domestic product, income approach.



corresponds to aggregates shown as the components of gross domestic product, expenditure approach.



#### State input output simulation

By using the Australian IO table as a base it is possible to synthesise a State IO Table by using NSW specific data (such as employment and population). The first step in this process is to consider only the total supply column and production row of the Australian IO table.

If the total supply column and production row are to represent a valid description of the economy, two properties must hold:

- Total supply in the entire economy must equal total demand, and
- The total supply provided by an industry must equal the total production generated by that industry.

Using these properties, industry employment and regional population data, a set of assumptions can now be developed for adjusting the total supply column and total production row to the State level.

Of all these assumptions, the one with the most profound effect on the State economy is the calculation of exports. These can be estimated using the location quotient method, as follows:

```
Industry Location Quotient =
(State Industry Employment/Total Regional Employment)/
(National Industry Employment /Total National Employment).
```

If the Location Quotient is greater than or equal to one, then the industry is said to be overrepresented in the area and is therefore supplying commodities for inter-state export. To find the amount of export generated jobs, the following formula is utilised:

### Inter-Regional Export Generated Jobs = (Industry Location Quotient – 1)/ (Industry Location Quotient)\*State Industry Employment.

Inter-state Exports can then be calculated by assuming that industry production per employee is the same as at the national level.

### Inter-state Exports = Inter-state Export Generated Jobs\*Industry Production per Employee.

International exports from the State can also be found using the following formula:

International Exports from State = International Exports from a National Level \* (Total State Employment / Total National Employment).

Therefore, to calculate total State exports:

State Exports = Inter-state Exports + International Exports from State.

#### Total Supply Column Assumptions (Adjustments)

- Industry Supply is scaled down using State industry employment (e.g. State Industry Production = National Industry Production / National Industry Employment \*State Industry Employment).
- 2. Household Consumption is scaled down using State Population.
- 3. Government Consumption is scaled down using State Population.
- 4. Private Gross Fixed Capital Formation is scaled down using State Employment.
- 5. Public Gross Fixed Capital Formation is scaled down using Government Employment.
- 6. Government Gross Fixed Capital Formation is scaled down using Government Employment.
- 7. Consumption due to Change in Inventories is scaled down using State Employment.
- 8. State Exports is calculated using the Location Quotient Method (described above).

#### Total Production Row Assumptions (Adjustments)

- 9. Industry Production equals Industry Supply (by definition).
- 10. Employee Compensation is scaled down using State Employment.
- 11. Gross Operating Surplus and Mixed Income are scaled down using State Employment.
- 12. Taxes less subsidies on production is scaled down using State Employment.
- 13. Taxes on imports equates to 37.4% of Total International Imports (as in proportion to the National Industry Flow Table).
- 14. Total Imports is chosen so that total State supply equals total State production.

To create the regional IO model detailed employment data is required for the local region and New South Wales. This information can be drawn from the Australian Bureau of Statistics Census of Population and Housing. Detailed employment data is estimated using data from the 2016 and 2006 Census. This data was:

- Employment by industry within Uralla and Walcha from the 2016 Census.
- Employment of residents of the Uralla and Walcha from the 2016 Census.
- Employment of residents of the Regional NSW and Greater Sydney from the 2016 Census.

#### Calculation of Inter-Industry Flow

It is possible to down scale the total supply column and demand rows of the Australian IO table, i.e. so that they represent the region under study. However, how the demand and supply flows between these sources and destinations is still unknown, e.g. how much of Agricultural Production in the region is used as raw materials by the region's Manufacturing Industry?

This is estimated via the RAS method. The RAS method is a common procedure used to manipulate industry flow tables and is also used by the ABS to update historic industry flow tables to the current year given only a small amount of information. A complete description of the RAS method can be found in Appendix A of the ABS publication 5209.0 "1996-97, Input-Output Tables, Australia".

Essentially the SGS model applies the RAS method by using the existing Australian IO table as a base and generates a State IO table that satisfies the total production row and total supply columns described above. Mathematically speaking, this is achieved by minimising the error between the two tables, while satisfying the column and row totals of the matrix. This is

achieved via an iterative process, which starts from an initial guess based on the column and row totals, adjusting the guess in the direction that has the least amount of error until the optimal solution is found.

It has been noted in the literature that the structure of the economy in a specific area will be similar structure to those regions surrounding it. For this reason, it would make more sense to generate the Input-Output table for New England region based on the NSW economy structure rather than basing it from the National Input-Output table directly. Therefore, for regional analysis the SGS Regional Input-Output model undertakes a layered approach.

For example, to calculate the Input-Out table for the New England region:

- 1. The NSW input-output table is derived from the National Table.
- 2. The Sydney Metropolitan Regional Table is derived from the NSW Table.
- 3. The New England region of the Sydney Table is derived from the Sydney Metropolitan Table.

The final result of the procedure is a fairly close approximation to the required region's Industry Flow table.

## **Generating Regional Multipliers**

An IO table represents the inter-linkages in an economy in its present state. To evaluate how any economic stimulus will impact on the regional economy, it is necessary to derive and subsequently use a set of 'multipliers'. These multipliers summarise the total effect to the economy after the flow on consumption and production effects have been accounted for, as follows:

## Total Effects = (Initial Effect) + (Flow On Effects)

## = (Initial Effect) + (Production Induced Effects + Consumption Induced Effects)

The first step in generating multipliers is to create the 'Direct Requirements' matrix. This matrix is found by dividing every column in the IO table by the industries column total. The downstream linkages in the Direct Requirements matrix now represent the amount of production supplied by other industries on a per dollar basis. Therefore, cross-referencing the Agriculture column with the Manufacturing row in the Direct Requirements matrix will give the amount of production that must be supplied by the Manufacturing industry for each dollar increase in production in Agriculture. This is also known as the First Round effect.

However, as a result of the demand generated by the first round, another round of increased production will occur in supplier industries to service this demand. This round will produce yet another round of effects, and so forth. Fortunately, a mathematical procedure exists that can calculate every multiplier in a single step, assuming an infinite number of rounds. This is known as the Leontief Inverse and can be calculated using matrix algebra<sup>35</sup>.

Mathematically, to find the total multipliers, the starting point is with the Intermediate Usage quadrant of the Direct Requirements matrix (which is used to analyse production induced effects). The household consumption column and wages and supplements row (to analyse the consumption induced effects) is appended to this to produce matrix A. The Leontief Inverse is found by subtracting matrix A from an identity<sup>36</sup> matrix I (to prevent double counting the industry under study), and then finding the inverse of this matrix, to find the Leontief inverse

<sup>&</sup>lt;sup>36</sup> A matrix where all the diagonal elements are 1, and all other elements are 0, i.e. cross referencing the same industry column and row would result in the value of 1.



<sup>&</sup>lt;sup>35</sup> A full description of the Leontief Inverse procedure is described in ABS Cat No. 5246.0, "Information Paper, Australian National Accounts, Introduction to Input Output Multipliers".

 $(I-A)^{-1}$ . By inverting the matrix the set of multipliers that must exist to make the current economy possible is derived<sup>37</sup>.

The final result of the Leontief Inverse procedure as used in the Australian IO table is presented in Figure A1. Regional table derived multipliers follow the same format but will have smaller effects due to the fact that some production generated will be lost to external producers (imports) and consumers might literally spend their dollars outside the region.<sup>38</sup>

The multipliers in Figure A1 can be interpreted as follows:

- **Output Multipliers** for every additional dollar earned in Australia's Agriculture, Hunting & Trapping industry, the level of national output increases by \$2.411.
- Employment Multipliers at present each \$1 million in Australia's Agriculture, Hunting & Trapping industry supports 12 jobs. For each \$1 million increase in output by the Agriculture, Hunting & Trapping industry, total national employment is expected to rise by 22 jobs.
- Value Added Multipliers for every extra dollar of output generated in the Agriculture industry, 50.7¢ is attributable to an increase in income (wages, salaries, and supplements) and gross operating surplus in the Agriculture industry. Nationally, total income and gross operating surplus will increase by \$1.157.



<sup>&</sup>lt;sup>37</sup> This procedure is known as a demand side model, and therefore assumes that demand influences supply but supply does not influence demand.

<sup>&</sup>lt;sup>38</sup> It is possible (but unlikely) that due to the mathematics involved in deriving regional output multipliers, that the derived regional total multiplier will be greater than the National/ State Multipliers for heavily export-based industries. In this case, all flow on production due to that industry is likely to remain inside the region. Therefore, in this case, the SGS model will report the National Industry Multipliers instead of the derived regional values.

## APPENDIX 2: LITERATURE REVIEW

## **Economic impacts**

## Direct financial gain

Land holders can host a wind turbine on their properties and collect rent from the wind farm operator while also continuing to work their land<sup>39</sup>. Financial gains from hosting a wind turbine on a property can help individuals:

- Hedge agricultural income during difficult periods (eg: drought or bushfire)
- Provide an income stream which enables families to remain on the land postretirement
- Prevent subdivision of large land parcels
- Support local business, community initiatives and local government revenue
- Assist families with the issue of succession, making the farming business more attractive to the next generation<sup>40</sup>.

The Australian Wind Alliance estimates that wind farms currently in operation will pay between \$22.4 million to \$26.9 million to turbine host landholders per year via lease payments and that this could reach \$51.5 million to \$56 million per year with the addition of the wind farms under construction<sup>41</sup>. In addition, neighbouring landholders to turbine hosts can receive financial gains. The agreements for these will differ from project to project and tend to be based on proximity to turbines<sup>42</sup>.

Financial gains from wind farms can also be derived from the provision of funding from the wind farm operator into a community enhancement fund that supports regional development and regional projects. As demonstrated in the case studies below, community funds support a range of regional projects such as buying sports equipment for local sporting teams to supporting the redevelopment of local infrastructure for community groups.

The Australian Wind Alliance estimates wind farm construction has led to approximately \$5.1 billion being added to regional Australian economies<sup>43</sup>.

## Job creation and value add

Wind farm employment can be short-term and long-term, as well as direct and indirect. Direct jobs are usually associated with project development, construction of foundations and hardstands, construction of access roads, and erection of wind turbines<sup>44</sup>. Indirect employment benefits will accrue to local businesses such as shops and providers of accommodation who service workers. Some of these local benefits will be temporary because the construction phase is much more labour intensive than the operations and maintenance phase.

https://publications.csiro.au/rpr/download?pid=csiro:EP117743&dsid=DS3, date accessed: 10/03/2020,



 <sup>&</sup>lt;sup>39</sup> US Office of Energy Efficiency & Renewable Energy, 2020, Advantages and Challenges of Wind Energy, <u>https://www.energy.gov/eere/wind/advantages-and-challenges-wind-energy</u>, dated accessed: 17/03/20
 <sup>40</sup> CSIRO, 2012, Exploring community acceptance of rural wind farms in Australia: a snapshot,

https://publications.csiro.au/rpr/download?pid=csiro:EP117743&dsid=DS3, date accessed: 10/03/2020, p. 40; Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 20

<sup>&</sup>lt;sup>41</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 20

<sup>&</sup>lt;sup>42</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 20

 <sup>&</sup>lt;sup>43</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 3
 <sup>44</sup> CSIRO, 2012, Exploring community acceptance of rural wind farms in Australia: a snapshot,

The Australian Wind Alliance estimates the number of jobs in the industry has almost tripled between 2017-2019 with about 5,700 direct local jobs and 13,300 indirect jobs linked to the six gigawatts of new wind farm capacity currently under construction<sup>45</sup>.

The construction of a wind farm can generate employment outside Australia. Components of the wind turbine generator (blades) can be manufactured overseas. In 2019, it was announced that the nacelles would be assembled in Australia for the first time in more than 10 years at the Vestas Renewable Energy Hub in Victoria<sup>46</sup>.

### Property prices and land value

Some local communities, or individuals within a community, can become concerned that a wind farm development will reduce property prices. Interviews with rural communities conducted by the CSIRO highlighted this view where wind farm objectors suggested anecdotally that property devaluation could be up to 40%<sup>47</sup>. Research tends to suggest that wind farms do not impact property prices or that there is not enough conclusive data. It is acknowledged that there could be potential for some property values to decrease.

The UK Centre for Sustainable Energy states there can be an 'anticipation stigma' and a transitory fall in property prices due to perceived negative impacts from wind farm developments nearby. However, they find the fall in prices tend to reverse when the negative effects do not result post-construction<sup>48</sup>.

In Australia, the CSIRO has indicated there does not appear to be a negative impact on neighbouring property prices based on an assessment completed for the NSW Valuer General. The assessment looked at property sales transaction data for 45 properties near six wind farms in Australia. Of the 45 properties reviewed, 40 did not show any reduction in value. For the five properties that had lower than expected sales prices, it was recommended that further work be undertaken to confirm whether the wind farm had impact. The CSIRO noted that while a wind farm may not reduce property value, it could limit the market of buyers<sup>49</sup>.

Urbis completed a study in 2016 that considered the impact of wind farms on property values. The study included an Australian and international literature review, and NSW and Victorian case studies analysing sales data of properties over 15 years. The study concluded windfarms may not significantly impact rural properties used for agricultural purposes and that there was limited sales data available to conclude the impact on residential or lifestyle properties located in close proximity to wind farms<sup>50</sup>.

In 2011, the Senate Community Affairs References Committee published an inquiry report into the social and economic impact of rural wind farms<sup>51</sup>. After reviewing a wide range of local and international evidence, the Committee concluded the impact of wind farms on property values is unclear, and the value of some properties that are close to turbines may be

<sup>&</sup>lt;sup>51</sup>The Senate Community Affairs References Committee, 2011, 'The Social and Economic Impact of Rural Wind Farms', <u>https://www.aph.gov.au/parliamentary\_business/committees/senate/community\_affairs/completed\_inquiries/2010-13/impactruralwindfarms/report/index</u>, date accessed: 251120



<sup>&</sup>lt;sup>45</sup> Currently under construction: November 2019. Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 3

<sup>&</sup>lt;sup>46</sup> Vorrath, S., 2019, 'Vestas wind turbine assembly plant opens at old Ford factory in Victoria',

https://reneweconomy.com.au/vestas-wind-turbine-assembly-plant-opens-at-old-ford-factory-in-victoria-20839/, date accessed: 301120

<sup>&</sup>lt;sup>47</sup> CSIRO, 2012, Exploring community acceptance of rural wind farms in Australia: a snapshot,

https://publications.csiro.au/rpr/download?pid=csiro:EP117743&dsid=DS3, date accessed: 10/03/2020, p. 42 <sup>48</sup> Centre for Sustainable Energy UK, 2017, 'Wind turbines and property prices', Common concerns about wind power, https://www.cse.org.uk/downloads/reports-and-

publications/planning/renewables/common\_concerns\_about\_wind\_power.pdf, p. 71

<sup>&</sup>lt;sup>49</sup> CSIRO, 2012, Exploring community acceptance of rural wind farms in Australia: a snapshot,

https://publications.csiro.au/rpr/download?pid=csiro:EP117743&dsid=DS3, date accessed: 10/03/2020, p. 42 <sup>50</sup> Urbis, 2016, Review of the Impact of Wind Farms on Property Values,

https://www.environment.nsw.gov.au/resources/communities/wind-farm-value-impacts-report.pdf, date accessed: 251120

adversely affected. The Committee understood that planning processes were designed to avoid such impacts.

## **Replacing fossil fuels**

Renewable energy can have a positive impact on the Australian economy. Modelling conducted by PwC and Jacobs has indicated that if Australia were to transition to a mixed power generation model that is dominated by renewables and with a more connected national grid (improving reliability and affordability) there would be an additional \$13 billion to Australia's GDP (net present value terms) to 2040. In contrast, if Australia were to invest in coal as the existing coal plants close, the economic return would be far less at an additional \$6.2 billion to GDP to 2040<sup>52</sup>.

For consumers, energy prices have risen in recent years. This has been attributed to the lack of national energy policy, rising network costs, increased charges by energy retailers, exports of gas and the retirement of large coal-fired power stations without new energy power generation to replace them. It is however expected that with the significant increase of renewables and supply in the energy system, prices for consumers will drop and reduce the strain from coal plant closures<sup>53</sup>. Baldwin (2017) argues by the time renewables dominate the Australian electricity supply; it is likely carbon pricing would have also been introduced while improvements in technology would have continued to make renewables cheaper. This would mean a renewable electricity system would be more affordable than a coal-based system<sup>54</sup>.

Renewable energy can also help reduce the use of fossil fuels that contribute to air pollution. Wind energy is estimated to have an extremely low greenhouse gas impact - the lowest of all currently available technologies<sup>55</sup>. In effect, this would lead to better health outcomes. According to the World Health Organisation (2014), approximately 13% of deaths worldwide were caused by air pollution in 2012, making it 'the world's largest single environmental health risk'<sup>56</sup>.

A study by the University of Melbourne and SGS Economics and Planning considered the cost of emissions reduction in Australia relative to the potential damages from climate change under the current policy setting. If a number of best practice emission reduction options were undertaken this could lead to a reduction in greenhouse gas emissions over a business-as-usual scenario of 627 million tonnes from 2020-2075. This would come at a cost of \$3.6 billion and a net benefit of \$16.2 billion at a discount rate of 7%. The study concluded that the economic benefits of a transition to a clean economy far outweighs the costs<sup>57</sup>.

<sup>&</sup>lt;sup>52</sup> PwC, 2019, 'Australia \$13 billion better off by 2040 with renewable power', <u>https://www.pwc.com.au/press-</u>room/2019/Billions-better-off-by-2040-with-renewable-power.html, date accessed: 251120

<sup>&</sup>lt;sup>53</sup> Clean Energy Council, 2020, 'Electricity prices', <u>https://www.cleanenergycouncil.org.au/consumers/electricity-prices</u>, dated accessed: 251120

<sup>&</sup>lt;sup>54</sup> Baldwin, K., 2017, 'Renewables will be cheaper than coal in the future. Here are the numbers',

https://theconversation.com/renewables-will-be-cheaper-than-coal-in-the-future-here-are-the-numbers-84433, date accessed: 251120. Under the assumption that a carbon price is inevitable via a simple carbon price mechanism or policies that would put upward price pressures on coal relative to renewables, and also the global move towards carbon pricing that would eventually see Australia follow suit.

<sup>&</sup>lt;sup>55</sup> Moss et.al., 2014, Wind Energy, Climate and Health, evidence for the impacts of wind generated energy in Australia, Select Committee on Wind Turbines submission 67 – attachment 1, p. 10-11

<sup>&</sup>lt;sup>56</sup> World Health Organization, 2014, '7 million premature deaths annually linked to air pollution', <a href="https://www.who.int/mediacentre/news/releases/2014/air-pollution/en/">https://www.who.int/mediacentre/news/releases/2014/air-pollution/en/</a>

<sup>&</sup>lt;sup>57</sup> University of Melbourne and SGS, 2019, Australia's Clean Economy Future: Costs and Benefits, Issues Paper 12, <u>https://www.sgsep.com.au/assets/main/Australias\_Clean\_Economy\_MSSI\_Issues\_Paper12.pdf</u>, date accessed: 251120, p. 3-4

## Social impacts

## **Community attitudes**

Community attitudes towards wind farms are diverse and are usually the result of a complex mix of reasons, including:

- Misconceptions about wind energy
- Aversion to visual change in the landscape
- A strong emotional attachment to place
- Tension between policies and objectives for different tiers of government
- Concern over the distribution of benefits
- Concern that revenue will leak away to actors outside of the local area
- Uncertainty towards climate change impacts.

These reasons are then underpinned, conversely, with a sense that wind energy will also contribute to the greater good<sup>58</sup>.

Figure 23 from Berge and Kamp (2018) demonstrates the extent to which personal characteristics, situational and contextual factors (including particular aspects around decision-making processes) have a bearing on perceived impact of wind turbines beyond the impact itself (noise impacts in this case).

FIGURE 23: COMPLEX RELATIONSHIP BETWEEN EXPOSURE TO WIND TURBINES AND PERSONAL RESPONSE



Source: Kamp & Berg, 2018

The Centre for Sustainable Energy UK argues, in most cases, if those residents in frequent contact with wind turbines are provided an explanation of the benefits (local and wider), most tend to be more receptive to such developments. Collaboration is therefore considered a key part of the development process (forms of local ownership and municipal leadership) alongside reinvestment of revenue into local social schemes and transparency of fund distribution. Scandinavian and Germanic regions tend to employ more collaborative approaches when developing wind farms, and these are the same regions that are leading the way with deployment of renewable energy<sup>59</sup>. The Australian Office of the National Wind Farm Commissioner has noted in the year-to-date December 2019, there has been a relative reduction in community concerns<sup>60</sup>.



<sup>&</sup>lt;sup>58</sup> Centre for Sustainable Energy UK, 2017, 'Public acceptance and community engagement', Common concerns about wind power, June, p. 59, 61. A UK reference has been used as the UK is one of the leaders in wind farming (https://www.renewableuk.com/page/WindEnergy). This is also a recent reference and at a high level, Australia and the UK

<sup>(&</sup>lt;u>https://www.renewableuk.com/page/WindEnergy</u>). This is also a recent reference and at a high level, Australia and the UK are generally similar socially and culturally.

<sup>&</sup>lt;sup>59</sup> Centre for Sustainable Energy UK, 2017, 'Public acceptance and community engagement', Common concerns about wind power, June, <u>https://www.cse.org.uk/downloads/reports-and-</u>

publications/planning/renewables/common\_concerns\_about\_wind\_power.pdf, dated accessed: 06/03/2020, p. 59-60 <sup>60</sup> Office of the National Wind Farm Commissioner, 2019, <u>https://www.nwfc.gov.au/sites/default/files/nwfc-annual-report-2019.pdf?v=1602650948</u>, date accessed: 221220

## Tourism

Research into the impact of wind farms on tourism presents mixed results. In Australia, a 2012 study conducted by the CSIRO considered the impact of wind farms in rural areas. Qualitative interviews with rural communities indicated people felt wind farms had the potential to attract tourists and it was one of the reasons to support wind farms. However, some views also suggested that wind farms may have the potential to conflict with other tourism features, such as changed visual amenity for 'nature or landscape tourists'<sup>61</sup>.

There are some examples of wind farm sites generating specific events/visitor opportunities:

- The Clean Energy Council in association with the Australia Wind Alliance, held a Clean Energy Open Day across 15 clean energy project sites in Australian in 2019. The community was invited to these sites to 'get-up-close' and learn about the renewable technology.
- Gullen Range Wind and Solar Farm (near Goulburn, NSW) opened its gates to the wider community so that they could gain insights into how wind farms operate and how renewable energy works<sup>62</sup>.
- Infigen Energy who manages the Woodlawn Windfarm (near Lake George, NSW) also held an open day. The open day included a fun run which includes a 5km and a 10km course that allows people to run around the wind turbines. In 2019 the fun run attracted 505 race competitors and over 100 hundred guests, volunteers, and event organisers. The fun run aimed to empower and inform people about wind energy<sup>63</sup>.



FIGURE 24: RUN WITH THE WIND FUN RUN, NSW

Source: Google Image

## Community ownership and enhancement

The Project has an innovative community ownership and revenue sharing model. Turbine hosts, easement owners and project neighbours are invited to become involved in a 5% stake at no cost. The benefits received will be shared 50%:50% with the broader Walcha community<sup>64</sup>.

Alongside direct financial benefits, community owned wind farms can also help ensure the project is a 'true community effort' where local businesses can be employed at different stages of the project; communities can tackle the issue of climate change at the local level; and the community can be empowered in decision-making roles<sup>65</sup>. Similarly, the Clean Energy Council notes local employment and business contacts are more likely to be prioritised;

<sup>61</sup> CSIRO, 2012, Exploring community acceptance of rural wind farms in Australia: a snapshot,

<sup>&</sup>lt;sup>65</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 16



https://publications.csiro.au/rpr/download?pid=csiro:EP117743&dsid=DS3, date accessed: 10/03/2020 <sup>62</sup> Clean Energy Council 2018, 'Clean Energy Open Day', <u>https://www.cleanenergycouncil.org.au/events/clean-energy-open-day</u>, date accessed: 17/04/2020.

<sup>&</sup>lt;sup>63</sup> Infigen Energy 2020, 'Run with the Wind', <u>https://www.infigenenergy.com/community/run-with-the-wind/</u>, date accessed: 17/04/2020.

<sup>&</sup>lt;sup>64</sup> Winterbourne Wind, 2020, <u>https://winterbournewindfarm.com.au/our-community/community-benefits/</u>, date accessed: 201120

neighbours can also be renumerated if they experience amenity impacts; and local education and training opportunities are more likely to arise under community ownership models<sup>66</sup>.

Wind farms can provide a number of social, environmental and development benefits to local communities via contributions made to community enhancement funds. The Australian Wind Alliance estimates from 2021 community enhancement funds will provide approximately \$5 million per year towards community projects<sup>67</sup>. These funds support programs, infrastructure development, environmental improvements and educational and social opportunities. Examples are provided in Figure 25 and the case studies below.

FIGURE 25: COMMUNITY ENHANCEMENT FUND DISTRIBUTION



Source: AWA, 2019

## Case studies

Case studies are provided below that outline the socio-economic impacts for three Australian wind farm developments. The case studies demonstrate there are a range of socio-economic benefits for local communities associated with wind farm developments.

## Sapphire Wind Farm, NSW

Sapphire Wind Farm is located approximately 28km east of Inverell and 18km west of Glen Innes in the New England region. The Wind Farm has 75 turbines and produces enough energy to power 115,000 homes and displaces 700,000 tonnes of  $CO_2$  each year<sup>68</sup>. Construction began in 2017. The Wind Farm was fully operational by November 2018.



<sup>&</sup>lt;sup>66</sup> Clean Energy Council, 2015, Sharing the benefits of wind projects: discussion paper,

https://www.parliament.vic.gov.au/images/stories/committees/eejsc/Submission 5 - Attachment 1 05092016.pdf, p. 6-7

 <sup>&</sup>lt;sup>67</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 3
 <sup>68</sup> Sapphire Wind Farm, 2020, <u>https://www.sapphirewindfarm.com.au/</u>, date accessed: 231120

FIGURE 26: GENERAL LOCATION - SAPPHIRE WIND FARM



Source: Sapphirewindfarm.com.au

### Economic impact

The project was estimated to be worth \$600 million<sup>69</sup>. It has provided more than 150 jobs<sup>70</sup>. During construction, 42% of the workforce were local residents<sup>71</sup>.

## Social impact

The project includes four community programs<sup>72</sup>:

- Community Legacy Projects: the delivery of longer-term, legacy projects that span the life
  of the Wind Farm. Sapphire Wind Farm co-funds and co-delivers a series a community
  projects in the areas of education and construction. One of the education projects
  included bringing vocational education teachers from across the New England North
  West region to visit the Wind Farm<sup>73</sup>. Construction projects have included:
  - A concrete apron for Kings Plains Rural Fire Brigade
  - An initiative garden for Glen Industries
  - Loading ramp at Chapel Theatre for Glen Innes Arts Council
  - Ceiling replacement for Elsmore Soldiers Memorial Hall
  - Expo ground improvements for the National Transport Museum.
- Community Co-investment Initiative: an opportunity for the local community to invest money in the Wind Farm. A survey was run in 2017 to gauge interest in the Initiative. About 80% of local residents responded with a very positive sentiment and pledged \$5,357,000. The public offer closed in 2019 and about 100 investors had taken \$1.8 million in community shares<sup>74</sup>.
- Community Benefit Fund: with the generation of energy, about \$3.75 million is to be invested in community projects over 20 years. Grant funding is within the Inverell Shire LGA.



<sup>&</sup>lt;sup>69</sup> Sapphire Wind Farm, 2017, Newsletter #4, <u>https://inverell.nsw.gov.au/wp-</u>

content/uploads/2018/04/SWF\_Newsletter\_Nov2017.pdf, date accessed: 231120

 <sup>&</sup>lt;sup>70</sup> Sapphire Wind Farm, 2020, <u>https://www.sapphirewindfarm.com.au/</u>, date accessed: 231120
 <sup>71</sup> Sapphire Wind Farm, 2018, Newsletter #5, <u>https://inverell.nsw.gov.au/wp-</u>

content/uploads/2018/04/SWF\_Newsletter\_FirstQuarter2018.pdf, date accessed: 231120

<sup>&</sup>lt;sup>72</sup> Sapphire Wind Farm, <u>https://www.sapphirewindfarm.com.au/</u>, date accessed: 231120

<sup>&</sup>lt;sup>73</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 11

<sup>&</sup>lt;sup>74</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 28. The drought had a negative impact of the local economy during this time; therefore, the offer was extended to investors in NSW and ACT as well.

 Community Consultative Committee: this forum was also run throughout 2013-2019 as a regular platform to work with the community and share information and respond to concerns.



FIGURE 27: SAPPHIRE WIND FARM AND COMMUNITY EVENT

Source: Sapphirewindfarm.com.au

## Mount Emerald Wind Farm, Queensland

Mount Emerald Wind Farm is located 5km west of Walkamin (population of approximately 480 persons) in Far North Queensland. Construction started in 2017 and was completed by October 2018. The Wind Farm includes 53 turbines with an operating life of 25 years. The Wind Farm powers about 75,000 homes and displaces 450,000 tonnes of CO<sub>2</sub> per year<sup>75</sup>.

#### **Economic impact**

Project was estimated as being worth \$380 million (\$66.8 million direct and \$44.3 million indirect into the Far North Queensland regional economy). During construction, the project provided more than 200 jobs<sup>76</sup>. The peak workforce exceeded 300 person per day. About 40 contractors from the Cairns and Tablelands regions were involved in the construction<sup>77</sup>.

### Social impact

For each year of the Wind Farm's working life, \$200,000 is donated by the developer Ratch-Australia into the Community Benefit Fund to support local projects. Projects within a 50km radius of the Farm are eligible to apply. Successful applicants are chosen twice a year by a committee of local volunteers.

In the first year, the Fund was oversubscribed and received 81 applications. Grants have been provided to a wide range of projects including:

- Kairi State School sustainable garden project
- Atherton Bowls Club defibrillator
- Ravenshoe Meals on Wheels new freezer
- Mareeba BMX and mountain bike track
- Not-for-profit aged care facility integration of video gaming for physical rehabilitation of elderly residents<sup>78</sup>.

The Community Consultative Committee was held between 2016 and 2019 as a forum to engage on issues related to the construction and operation of the project.

Mount Emerald Wind Farm also accepts visitors to site (such as Mareeba and Tablelands Councils, community groups, and government officials) to educate the wider community on the impacts, scale and benefits of the wind farm.



<sup>&</sup>lt;sup>75</sup> Mount Emerald Wind Farm, <u>http://mtemeraldwindfarm.com.au/</u>, date accessed: 231120

<sup>&</sup>lt;sup>76</sup> Mount Emerald Wind Farm, <u>http://mtemeraldwindfarm.com.au/</u>, date accessed: 231120

<sup>&</sup>lt;sup>77</sup> Mount Emerald Wind Farm, <a href="http://mtemeraldwindfarm.com.au/construction/">http://mtemeraldwindfarm.com.au/construction/</a>, date accessed: 231120

<sup>&</sup>lt;sup>78</sup> Australian Wind Alliance, 2019, Building Stronger Communities: wind's growing role in regional Australia, p. 10

#### FIGURE 28: MOUNT EMERALD WIND FARM



Source: Google Image

## Ararat Wind Farm, Victoria

Ararat Wind Farm is located approximately 180km northwest of Melbourne and is between 9km-17km northeast of Ararat township in regional Victoria. The Wind Farm comprises 75 turbines and 21.5km of transmission lines with 240MW of total installed capacity. It was officially opened in 2017 and is expected to have a lifespan of 25 years. It was estimated the development would generate enough electricity to power about 120,000 Victorian homes per year<sup>79</sup>.

FIGURE 29: LOCATION OF ARARAT WIND FARM



Source: <a href="https://www.ararat-windfarm.com/about/">https://www.ararat-windfarm.com/about/</a>



<sup>&</sup>lt;sup>79</sup> These figures are from the Ararat Wind Farm website, dated 2015

## Economic impact

In 2015, the development was estimated to be worth \$450 million with \$10 million worth of contracts being awarded to local and Victorian businesses. It was estimated as providing about 165 construction jobs and \$7-8 million to the local economy during the two-year construction period<sup>80</sup>. Currently, the website states that at the height of construction approximately 350 full time equivalent personnel were working on the project and 10 personnel will operate the facility for its 25-year lifespan; and that more than \$20 million of goods and services associated with construction have been procured from local suppliers<sup>81</sup>.

During 2015 a Select Committee was established to report on the application of regulatory governance and economic impact of wind turbines<sup>82</sup>. Ararat Rural City Council (submission 176) supported the development of the Ararat Wind Farm. It was seen as a major project for the region and would provide the following benefits:

- A source of local and regional employment during construction and operation
- Commercial opportunities for regional businesses during construction and operation periods
- Annual payments to the Council in-lieu of rates at approximately \$300,000 per annum
- Establishment of a confirmed community fund of \$75,000 per annum from the start of operations
- Construction of heavy load capacity roads, that in time could be access by emergency services in the event of a fire
- An alternate source of drought-proof income for 25 years for relevant farms.

### Social impact

In 2015-16 Ararat Wind Farm has provided financial support to WARM (a sustainable textile art project); the Ararat Pony Club endurance ride; the Wimmera Axeman's Association; Elmhurst Tennis Club; and VRI Bowls Club.

In 2019, they ran a Sustainable Community Grants Program where 17 recipients were successful with a range of projects that included the Country Women's Association (Landsborough) and a Pyrenees Project defibrillator; St Arnaud Citizens Band for a band hall electrical refurbishment; and Elmhurst Development Group with a seating and shade project<sup>83</sup>. The program being run again in 2020.

Ararat City Council stated the operators had taken great care to consult the community and had kept Council fully informed and were compliant, and that the community fully supported the development and has benefited economically<sup>84</sup>.



FIGURE 30: ARARAT WIND FARM, VICTORIA

Source: Google Image

<sup>&</sup>lt;sup>80</sup> These figures are from the Ararat Wind Farm website, dated 2015

<sup>&</sup>lt;sup>81</sup> Ararat Wind Farm, <u>https://www.ararat-windfarm.com/benefits/</u>

<sup>&</sup>lt;sup>82</sup> Parliament of Australia, <u>https://www.aph.gov.au/select\_windturbines</u>

<sup>&</sup>lt;sup>83</sup> Ararat Wind Farm, <u>https://www.ararat-windfarm.com/grants/, date accessed: 310820</u>

<sup>&</sup>lt;sup>84</sup> Ararat City Council, 2015, 'Select Committee on Wind Turbines', Submission 176

# APPENDIX 3: EVENTS, ACCOMMODATION AND SERVICES

#### TABLE 16: WALCHA LARGE VISITOR EVENTS

Event	Time	Visitor numbers
Walcha Cup & Races	Held over two days in February	Not available
Walcha Mountain Festival	Held one weekend in October.	Can attract between 200-500 visitors (https://www.walchanewsonline.com.au/story/2643617/festival- site-a-hit/)
Walcha Road Ride	Cycling one day event	Not available
Walcha Motorcycle Rally	Three-day event held in November.	Can attract over 700 motorcycle enthusiasts (https://walchansw.com.au/walcha-motorcycle-weekend/)
Pasture Wonderland Bowls Carnival	Two-day event in November	Can attract up to 100 participants (https://www.walchanewsonline.com.au/story/4324728/pasture- wonder-land-winners/)
Horns, Hooves and Harleys RODEO	One day event in November	Not available

Source: https://walchansw.com.au/past-events/

TABLE 17: VISITOR ACCOMMODATION WALCHA, TAMWORTH AND ARMIDA	٩LE
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Walcha (town)		Capacity				
Guesthouse	Anglea House B&B	3 persons/ 2 beds				
	High Country Cottage	7 persons/ 4 rooms				
	Valley Views Cottage	6 persons/ 4 beds				
	Walcha Guesthouse	8 persons/ 4 rooms				
Hotel/Motels	Walcha Motel	19 rooms				
	New England Hotel-Motel	10 motel units 9 hotel rooms				
	Apsley Arms	10 persons/ 4 rooms*				
	Commercial Hotel	Not clear on website				
	Walcha Royal Café & Boutique Accommodation	21 persons/ 2 queen rooms/ 2 cottages/ 3 single rooms				
AirBnB	Self-contained cottage	6 persons/ 3 rooms/4 beds				
Outside Walch	a town	Capacity	Distance			
Guesthouse	Cairnie Country Cottage	2 people/ 1 bed	8km from Walcha			
	Old Greenwells B&B	4 persons/ 2 rooms	3km from Walcha			
	Walcha Road Hotel (Royal)	6 persons/ 3 rooms	20km from Walcha			
Hotel/motel	Nowendoc Country Motel	4 units	75km from Walcha			
Tamworth (an	d surrounds)					

Tamworth and the surrounding area offer a large range of accommodation options. Tamworth town is about a one-hour drive from Walcha town centre.

Thirty-nine accommodation options were found through one accommodation search engine (search included apart-hotel, motel, hotel, apartment). Three of these options were in Kootingal, Nemingha and Kingswood (about 10-20km drive from town). Some of the properties have large capacity for guests with up to 50-60 rooms on-site.

#### Armidale (and surrounds)

Armidale and the surround area offer a large range of accommodation options. Armidale is about a one-hour drive from Walcha town centre.

Thirty-five accommodation options were found through one accommodation search engine (search included hotel, motel, apartment, apart-hotel). One option was located in the nearby town of Uralla. Some of the properties have large capacity for guests with up to 40-57 rooms on-site.

Source: Walchansw.com.au, Expedia, AirBnb

\*Estimated



#### TABLE 18: LOCAL COMMUNITY SERVICES

Community services in town centres					
Walcha	Walcha Multipurpose Service: integrated acute health, community health, aged care service, residential aged care respite and permanent placement Walcha Police Station				
A una tata la					
Armidale	Armidale Hospital: offers major medical service units				
	Armidale Private Hospital				
	Armidale Hospital Drive Through Clinic				
	Armidale Community Health Services: offer wide range of services				
	Armidale Police Station				
Tamworth	Tamworth Hospital: offer major medical service units				
	Tamara Private Hospital				
	Tamworth Community Health Services: offers a number of community services				
	Tamworth Police Station				
	Kootingal Police Station (15 mins drive from Tamworth)				

Source: http://www.hnehealth.nsw.gov.au/, Google Maps



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