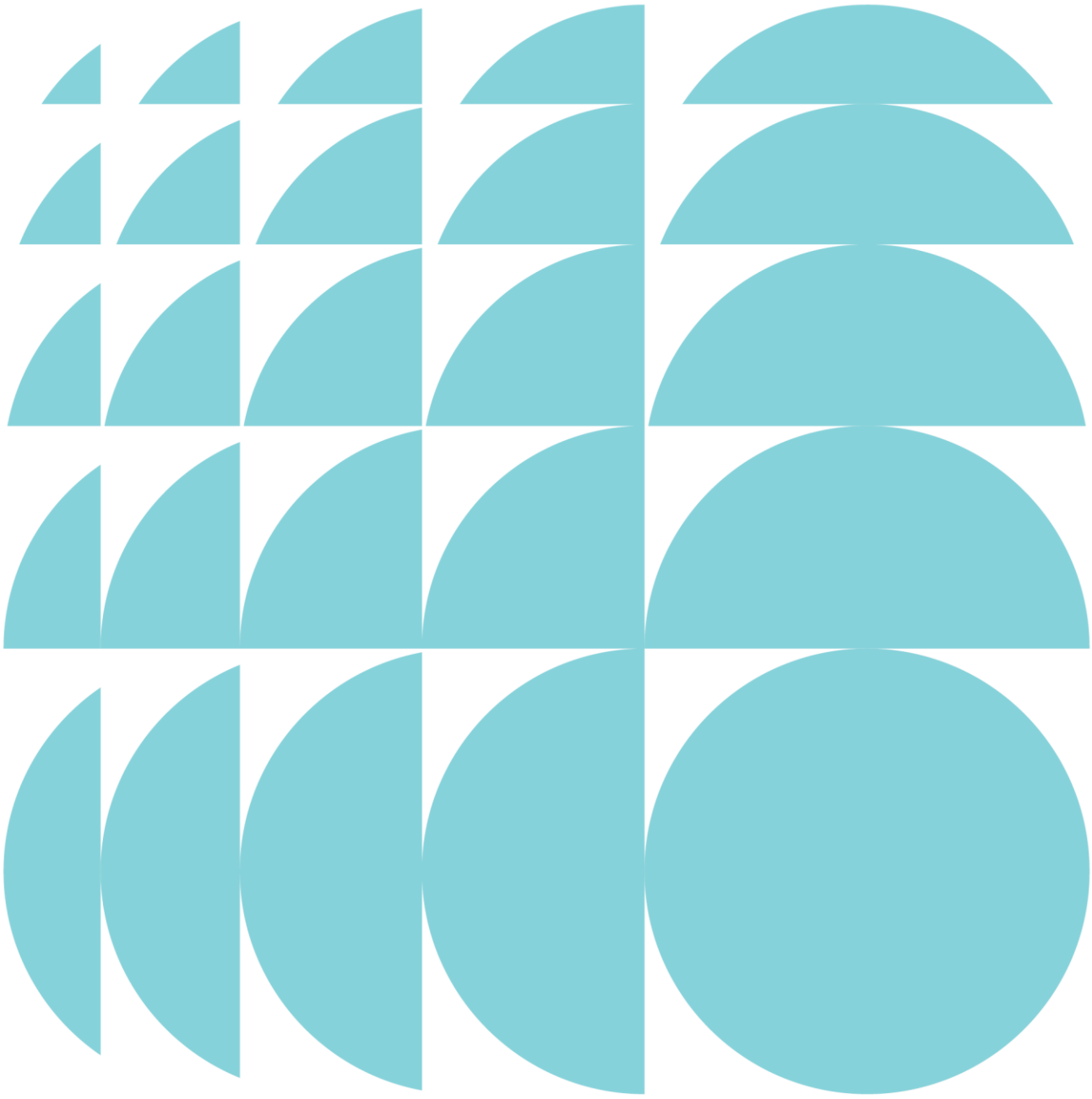
ETHOS URBAN

Willatook Wind Farm
Social and Economic Impact Assessment

Prepared on behalf of Willatook Wind Farm Pty Ltd

April 2022 | 3200368



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Executive Summary

Willatook Wind Farm Pty Ltd (the Proponent) has commissioned Ethos Urban to prepare a Social and Economic Impact Assessment as input to the Environment Effects Statement (EES) requested by the Planning Minister for the proposed Willatook Wind Farm (the Project). The Project consists of up to 59 wind turbines generators and associated infrastructure, to be located on 4,154 hectares of land (Project Site) approximately 22 kilometres to the north of Port Fairy and 32 kilometres to the northwest of Warrnambool.

The Project's total installed capacity is anticipated to be around 354 Mega Watts (MW) and the construction phase of the Project is expected to last approximately 24 months. The Project will operate for 25 years, following a period of up to 3 years of pre-development and construction activities. Pre-development would include detailed design and early works, where permitted.

1. The Social Impact Assessment (SIA) has considered a broad range of potential impacts arising from the construction, operation and decommissioning of the Project, with these impacts identified principally through the stakeholder consultation process. Key potential impacts identified are:
    - Noise and visual amenity impacts
    - Access for emergency services
    - Impact on agriculture activities
    - Impact on the natural environment, in particular impacts to avifauna
    - Cumulative impacts
    - Impact on land values.
2. Using the International Association for Impact Assessment (IAIA), *International Principles for Social Impact Assessment* guidelines, potential impacts have been assessed against specific social factors, taking into account the findings of completed specialist technical reports for the Project and the ease (or otherwise) of mitigating these impacts.
3. Overall, the SIA indicates a range of positive and negative social impacts. Key impacts identified include:
    - Temporary negative impacts to way of life, community, culture, health and wellbeing, environment and amenity associated with construction activity.
    - Potential negative impacts to environment and amenity, and culture and way of life associated with the operation of the Project; particularly the cumulative noise and visual impacts resulting from the nearby existing and proposed wind farms.
    - Social benefits of the Project relate to the opportunities for local job generation and training from the construction and operation phases.
    - Overall long-term benefits include the Project's contribution to the local economy and provision of new renewable energy resources to help address climate change.
4. Social mitigation measures recommended - which are above baseline/ regulatory mitigations - include, but are not limited to, the following:
    - Development and implementation of a Communications and Engagement Strategy, including a Complaints Management Procedure
    - Implementation of the Proponent's proposed Neighbourhood Benefit Sharing Program
    - Partnership building between the Proponent and businesses, employment agencies, training and education providers to maximise local employment and contract opportunities.
    - Engagement between local community groups, landowners, surrounding residents, business and workers to enhance social connections and community cohesion.
    - Exploring opportunities with local community groups and Aboriginal organisations to preserve and maintain local connections to cultural heritage.

5. The key findings of the Economic Impact Assessment (EIA) are as follows and relate to a Study Area which comprises the Local Government Areas of Moyne, Glenelg, Southern Grampians and Warrnambool.

- The Project will involve $800 million (2022 dollars) in investment during the construction phase and will support 470 Full Time Equivalent (FTE) jobs (180 FTE direct and 290 FTE indirect positions) over the 24-month construction period. Once operational, 47 FTE jobs (12 FTE direct and 35 FTE indirect positions) will be supported by the facility. Approximately $120 million (2022 dollars) of construction investment is estimated to be retained in the Study Area.
- Allowing for the Project to be carefully managed around the Study Area's peak times for agricultural activity, tourism and so on, and having regard for potentially concurrent infrastructure projects, accessing adequate labour supply should not present a major issue for the Project. The peak local employment requirement of 270 FTE positions (includes direct and indirect Study Area employment) represents only 2% of workers occupied in construction-related activities in the Study Area; and also noting some indirect local jobs will be spread across a wide range of sectors including retail, accommodation, food and beverage etc.
- Competing projects may include the proposed Hawkesdale, Ryan Corner and Woolsthorpe wind farms and the proposed Tarrone Gas Fired Power Station, although this is dependent on financing and construction phase timing for these projects, especially the success (or otherwise) of the Victorian Renewable Energy Auction Target 2 (VRET 2) auction bids for the wind farm projects.
- The Project will provide significant participation opportunities for businesses and the labour force located in the Study Area, having regard for the good match of skills and resources available. In this regard, organisations such as the Industry Capability Network (ICN) might be involved in ensuring maximum local inputs are secured, which would be in addition to the Proponent's own local sourcing initiatives. Specifically, the Proponent has a set up a business register for the Project, which is expected to grow as awareness of the Project increases through EES exhibition. Companies can register their interest in providing a range of goods or services through the website.
- The 'external' project labour requirement would be expected to generate an accommodation requirement for 110 project workers at the peak of the construction phase. This represents only 6% of total commercial accommodation or rooms/cabins available in the Study Area and would provide a boost to local accommodation operators. Additionally, there is significant capacity available in the private rental market providing new revenue streams for homeowners/investors.
- However, it is recognised that commercial accommodation and housing market conditions are ever changing, such as during the current COVID-19 pandemic. The COVID-19 environment has led to an upsurge in migration from metropolitan to regional Victorian areas; associated with workers/families relocating to second homes/holiday homes and others seeking a permanent move to the regions for lifestyle reasons. This situation currently applies to the Study Area, where there has been a tightening of rental accommodation (commercial and private households) over the past 24 months or so.
- In this regard, the Proponent is committed to developing a Construction Workforce Accommodation Strategy (CWAS) prior to the construction phase of the Project commencing. The CWAS, which will reflect local market conditions at the time, would aim to minimise impacts on the community especially for those reliant on low-cost housing, as well as ensuring sufficient accommodation is available to service the tourism sector. The CWAS will be prepared in conjunction with local councils, commercial accommodation providers, private accommodation providers, the real estate sector and other relevant stakeholders.
- Non-local construction workers living in the Study Area would be expected to inject approximately $3.5 million (2022 dollars) in additional spending to local and regional economies over the construction phase, supporting around 23 FTE jobs in the service sector.
- Agricultural land use will only be marginally affected by the Project, with existing farm activities continuing as normal with only 2.4% of the Project Site being used to host wind farm infrastructure (i.e., operational footprint). While limited aerial spraying occurs in this area, an

Aviation Assessment undertaken for the Project confirms no impacts are anticipated on aerial spraying activities or on local airstrips.

- Ongoing economic stimulus in the Study Area associated with the operation of the Project through the financial returns to host landowners, local wage spending, community payments and Council financial returns is estimated at approximately $158.4 million (2022 dollars) over 25 years (adjusted for CPI @ 2.5%).
- Other community benefits include improvements to host landowner properties through the construction of new internal roads (61 km of new access tracks), which will improve efficiency of movement across the land from an agricultural and safety perspective. Some local roads and intersections are likely to be upgraded to service the construction of the wind farm, which will provide improved and safer access for the local community.
- The Project has the capacity to supply sufficient clean energy to power approximately 200,000 homes (approximately 8% of all Victorian dwellings) and, in the process, to reduce CO_2 emissions by 1.3 million tonnes per year.

Table 1 provides a Net Economic Benefit Assessment of the Project.

Table 1 Willatook Wind Farm – Net Economic Benefit Assessment, Study Area

Factor	Value
Negative Economic Outcomes	
Temporary loss of agricultural land (25 years)	100 ha
Loss of employment (includes direct and indirect jobs)	0 jobs
Positive Economic Outcomes	
Construction Phase	
Capital investment (2022 dollars)	$800 million; of which *$120 million (15%) is expected to be retained in the Study Area*
Construction employment (direct plus indirect jobs)	470 FTE jobs (over 24 months); including *185 FTE Study Area jobs (110 FTE direct on-site and 75 FTE indirect off-site)*
Operational Phase	
Employment	
Operational employment (direct and indirect jobs)	47 FTE jobs; *including 18 FTE Study Area jobs (9 FTE direct on-site and 9 FTE indirect off-site)*
Economic Stimulus	
Total Study Area economic stimulus associated with landowner returns, wage stimulus, Council revenue and neighbourhood benefit program payments (using base 2022 dollars, adjusted for CPI over 25 years).	$158.4 million (over 25 years)
Total Net Study Area Economic Benefits - Construction and Operational Phases (using base 2022 dollars, adjusted for CPI over 25 years).	$278.4 million (Construction period PLUS 25 years operations)

6. Decommissioning is considered within the social impact assessment (Section 4) and economic impact assessment (Section 7), with a combined conclusion provided at the end of this report (Section 9).

   The wind turbines would have an operating life of approximately 25 years, at which stage decommissioning of the Project would occur (depending on options available to the operator at the time).

Decommissioning activities pose similar potential impacts as construction activities, including involvement of large equipment (cranes, excavators and graders) and the transport of large project components from the site (e.g., wind turbine towers and blades).

The decommissioning process is anticipated to take approximately six months, but like the construction phase, activities would be concentrated at a few discrete locations in any given week. Neighbouring or non-involved landowners and the local community would be engaged throughout to address any issues, minimise impacts and maximise benefits.

From a social and economic perspective, mitigation measures would be similar to those outlined for the construction phase of the Project - for example, Construction Management Plan, Traffic Management Plan, Communications and Engagement Strategy, Workforce Accommodation Strategy, but noting the significantly shorter timeframe involved in the decommissioning phase.

1 Project Description

1.1 Description of the Proposal

The proposed Willatook Wind Farm (the Project) will be located approximately 22 kilometres to the north of Port Fairy, 32 kilometres to the northwest of Warrnambool, 9 kilometres southwest of Hawkesdale and three kilometres northeast of Orford. The Project Site, which is located entirely in Moyne Shire, is situated between the Hamilton-Port Fairy Road to the west and the Penhurst-Warrnambool Road to the east.

The Project Site is approximately 4,154 ha in size covering 16 landholdings, with this land currently used for farming purposes (largely used for agriculture - predominantly sheep and cattle grazing), under the Farming Zone (FZ). It is estimated that approximately 2.4% of the site will be utilised for permanent wind farm infrastructure (i.e., operational footprint).

Plans for the Project include the following:

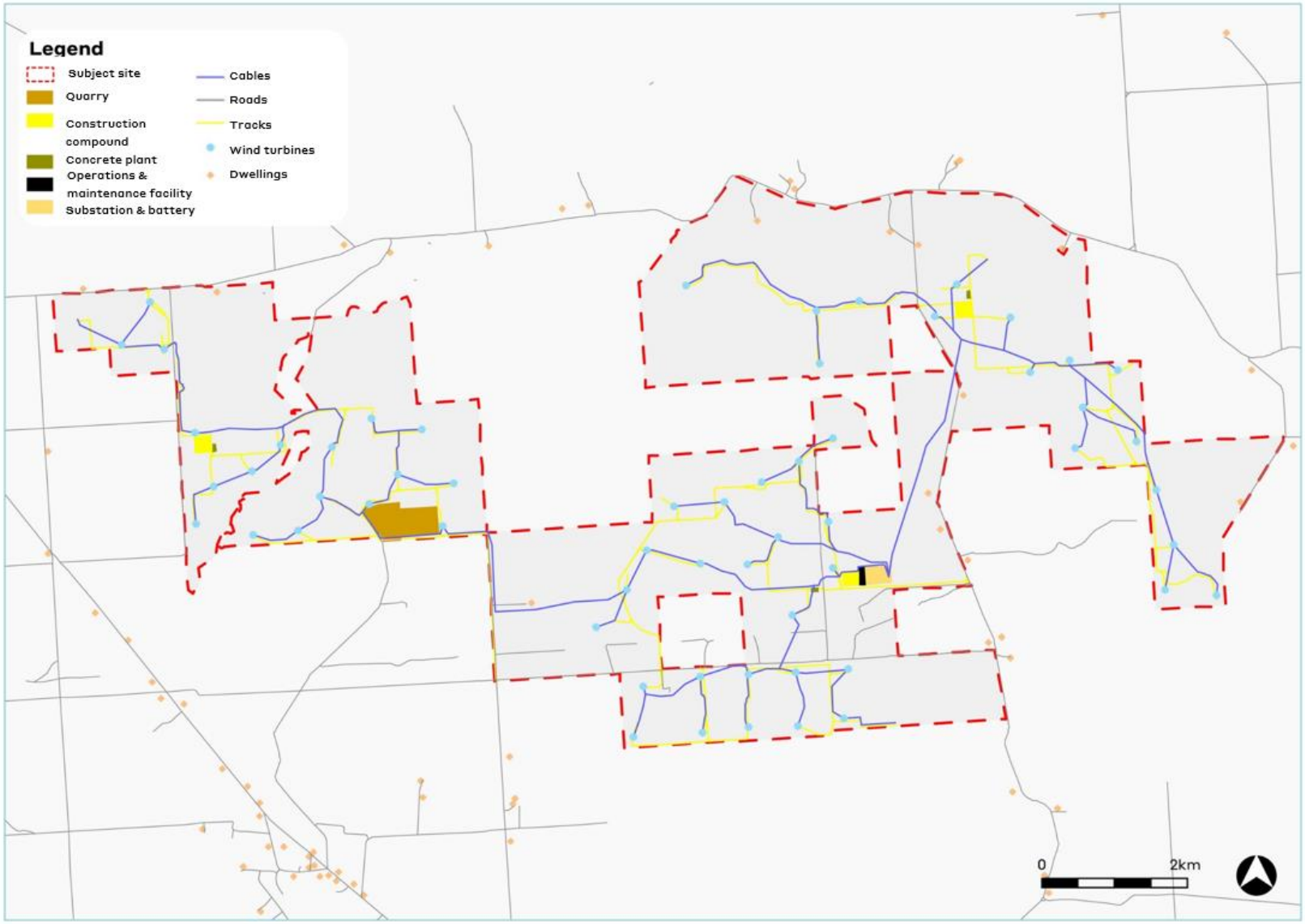
- Total installed capacity anticipated to be around 354 MW (assumed for the purposes of this report).
- Up to 59 wind turbines generators, with tip heights of up to 250 metres (m).
- Estimated annual output of more than 1,300 Giga Watt hours (GWh).
- An on-site Battery Energy Storage System (BESS) with a capacity of 200 MW / 400 Mega Watt hours (MWh), proposed to be located adjacent to the on-site substation.
- On-site substation located within the Project Site to the north of the Tarrone Terminal Station, which would connect to the 500 kV Moorabool to Heywood transmission line via the Tarrone Terminal Station.
- Approximately 112.6 kilometres of underground 33 kV electricity cable with fibre-optic cabling connecting the wind turbines to the on-site substation.
- Up to three permanent meteorological masts.
- An operations and maintenance facility located adjacent to the on-site substation and providing office, storage, and maintenance facilities.
- On-site access tracks of approximately 60.4 kilometres in length and 6m in width.
- During construction temporary infrastructure will include:
    - A temporary construction compound located within the Project Site; including office facilities, amenities, and car parking.
    - A temporary on-site quarry established to provide aggregate for the construction of the Project; including tracks, hardstands, the temporary construction compound, and potentially the wind turbine foundations.
    - Three concrete batching plants established to supply concrete for the wind turbine foundations, the on-site substation, and the BESS.
    - Four laydown hardstand areas established for the storage of wind turbine components and other equipment.
- Turbines and associated infrastructure to be spread across land held by 16 host farms
- Construction period is estimated at 24 months
- Operational lifespan estimated at 25 years, following a period of up to 3 years of pre-development and construction activities. Pre-development would include detailed design and early works, where permitted.

- Within 12 months of wind turbines permanently ceasing to generate electricity, the wind farm would be decommissioned.

Note the parameters outlined above may change subject to planning approval guidelines, while project financing may also influence the final project plan.

The preliminary site layout is shown in Figure 1.

Figure 1 Willatook Wind Farm Preliminary Site Layout



Source: Willatook Wind Farm Pty Ltd

1.2 Neighbour Benefit Sharing Program

The Neighbour Benefit Sharing Program (NBSP) prepared by the Proponent for the Project is described in Figure 2 and 3. The proposed NBSP is informed by and consistent with the best practice approach to benefit sharing described in the Clean Energy Council's *A Guide to Benefit Sharing Options for Renewable Energy Projects* (October 2019) and the Department of Environment, Land, Water and Planning's (DELWP) *Community Engagement and Benefit Sharing in Renewable Energy Development: A Guide for Renewable Energy Developers* (2017, developed as part of the Victorian Renewal Energy Target and first auction scheme in 2017).

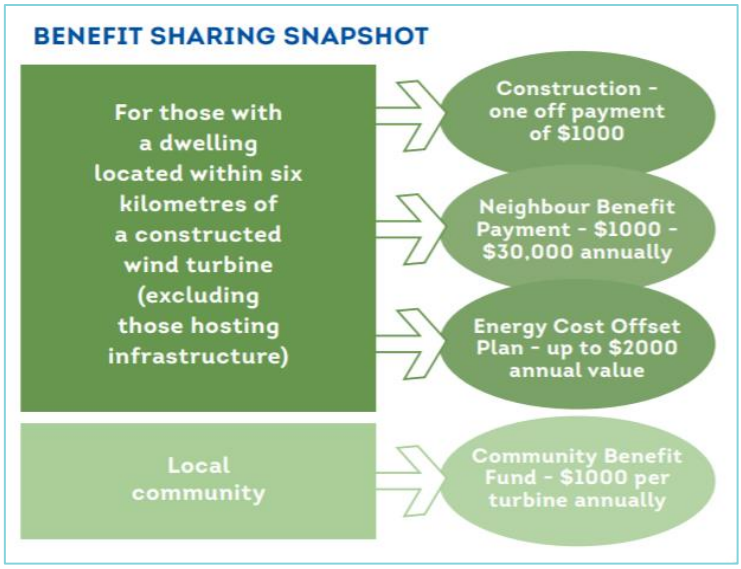
It is noted that the details and focus of the Community Benefit Fund included as part of the NBSP will be developed through further community engagement, with reference to DELWP's recommendation that benefit sharing should be:

- *Framed as an offer by a responsible neighbour to a valued community, rather than a form of compensation*
- *Led by quality community engagement and offering benefits early in the development process with 'no strings attached' so it is not seen as a 'tack-on' at the end. Failure to do this risks the community perceiving it as buying support.*

Figure 2 Outline of Neighbour Benefit Sharing Program

Under the Neighbour Benefit Sharing Program:	
IF YOU	**YOU WILL BE ELIGIBLE FOR**
Own a dwelling located within six kilometres of a constructed wind turbine	The Neighbour Benefit Payment
Live in a dwelling located within six kilometres of a constructed wind turbine	The Energy Cost Offset Plan
Are an owner occupier of a dwelling located within six kilometres of a constructed wind turbine	The Neighbour Benefit Payment and the Energy Cost Offset Plan
Are hosting wind farm infrastructure	Neither the Neighbour Benefit Payment, Energy Cost Offset Plan, or Construction Payment
Are eligible for the Neighbour Benefit Payment	A one-off construction payment of $1000

Figure 3 Snapshot of Benefit Sharing Program



Source: Willatook Wind Farm Pty Ltd .

As this information indicates, payments to eligible landowners within the Primary Study Area (PSA) (discussed in Section 2.3) under the NBSP are potentially up to $30,000 per annum (2022 dollars). There is no obligation for landowners to sign up to the agreement as it is completely voluntary.

After engaging with the community via door knocking, the NBSP proposes the following payments being made to:

- Owners of dwellings within 6km of a wind turbine – equivalent to the PSA identified for this assessment (direct payments under the NBSP)
- The broader community of Moyne Shire, through a Community Benefit Fund (part of the NBSP), comprising annual payments per turbine, which may be used to fund community infrastructure and/or services.

Additionally, host landowners, who lease part of their land to accommodate project infrastructure are provided direct annual lease payments, separate from the NBSP payments.

2 Introduction to Social Impact Assessment

2.1 Overview of this Assessment

This Social Impact Assessment (SIA) supports an Environment Effects Statement (EES) for the proposed Project, on behalf of the Proponent.

The purpose of this SIA is to analyse potential social impacts that may arise from the development and operation of the Project, having regard to specific aspects of each development phase, along with social characteristics of the locality and broader district and its communities, and social trends and issues affecting these communities which may be of relevance to the proposed Project.

This SIA addresses the requirement by the Victorian Minister for Planning (December 2018) for the social impacts of the Project to be assessed as part of the Environment Effects Statement (EES), as per the specifications of the Environment Effects Act 1978 (the Act). The meaning of 'environment' under the Act includes (*inter alia*) cultural, social, heritage, health, and safety.

The assessment of social impacts has been based on guidelines published by the International Association for Impact Assessment (IAIA), *International Principles for Social Impact Assessment* (Vanclay, 2003).

This SIA covers the following:

- Definition of a primary and secondary study area, for the purposes of assessing social impacts
- Analysis of the 'social baseline' of the study area/s including current population profile and social issues and trends
- Strategic policy context impacting the site and proposed development, including relevant state and local government strategies
- Community perspectives of relevance to the proposed development, including those gathered through community engagement activities specific to the Project
- Assessment of predicted social impacts of the proposed development, and operation of the Project at this location, and recommended mitigation and enhancement measures to respond to these impacts.

2.2 References

Following are the key data sources and policy documents used to prepare this SIA (ordered by title):

- ABS Census of Population and Housing, Australian Bureau of Statistics, 2016
- Great South Coast Regional Partnerships – Outcomes Roadmap, 2019
- Moyne Shire Municipal Health and Wellbeing Plan, 2017-2021
- Moyne Shire Council Plan 2017-2021
- Moyne Shire Open Space Strategy 2020-2035
- Moyne Warrnambool Rural Housing and Settlement Strategy, 2010
- Moyne Shire Economic Development Strategy 2019-2029
- Moyne Shire Youth Services Priorities 2020-2022
- Moyne Shire Arts and Culture Strategy 2012
- Moyne Shire Environmental Sustainability Strategy, 2015
- United Nations Framework Convention on Climate Change, Paris Climate Agreement, 2016
- Victorian Renewable Energy Action Plan, 2017
- Willatook Wind Farm Neighbourhood Benefit Program brochure (https://f82b83e1-b207-4c0c-b945-66e5ffd3d522.filesusr.com/ugd/fa17de_38fdb337077b43f08a18a2143e27db14.pdf)

- Willatook Wind Farm Aboriginal Cultural Heritage Impact Assessment: Environment Effects Statement 2022
- Willatook Wind Farm Transport Impact Assessment 2022
- Willatook Wind Farm Environmental Noise Assessment 2022
- Willatook Wind Farm Geoheritage Assessment 2022
- Willatook Wind Farm Land Use and Planning Technical Report 2022
- Willatook Wind Farm EMI Assessment 2022
- Willatook Wind Farm Shadow Flicker and Blade Glint Assessment 2022
- Willatook Wind Farm Landscape and Visual Impact Assessment 2022
- Willatook Wind Farm Flora and Fauna Report 2022
- Willatook Wind Farm Aeronautical Impact Assessment 2022
- Willatook Wind Farm Air Quality Assessment 2022.

2.3 Purpose and Scope

The purpose of this SIA is to assess the impacts, both positive and negative, for all stages of the Project's lifecycle for the community and stakeholders.

The SIA involves the analysis of social changes and impacts on communities that are likely to occur as a result of a particular development, planning scheme, or government policy decision. It makes use of findings from other technical reports as well as additional research and community consultation to consider the impacts of the Project from a social lens.

Minister's Scoping Requirements

The Victorian Minister for Planning determined 27 December 2018, that the Willatook Wind Farm has the potential for significant environmental effects under the Environment Effects Act 1978 (the Act) and is therefore required to prepare a detailed Environment Effects Statement (EES) that identifies potential impacts and approaches for mitigation. The draft evaluation objective within the EES scoping requirements is:

To avoid and minimise adverse effects on land use (including agricultural and residential), social fabric of the community (with regard to wellbeing, community cohesion), local infrastructure, electromagnetic interference, aviation safety and to neighbouring landowners during construction, operation and decommissioning of the project.

Under the Act, for 'environment' includes (inter alia) cultural, social, heritage, health, and safety. An analysis of these matters has been incorporated in the SIA:

- Effects on the local visual amenity values, including for non-involved landholders
- Effects on the socio-economic environment, at local and regional scales, including increased traffic movement and indirect effects of construction on the capacity of local community infrastructure
- Effects from a cumulative perspective, including on threatened flora and fauna, social and amenity values, with particular consideration of the currently operating and already approved wind farm projects in the region.

Table 2 summarises the EES Scoping requirements that are particularly relevant to social (and economic) impact and where they have been addressed in this social and economic impact assessment. Due to the complexity and interweaving of various environmental effects on the social experience, the following effects are thought to be particularly relevant to the SIA: landscape and visual, amenity, land use and socioeconomic, and traffic and roads.

However, it is noted that other technical assessments as part of the Willatook Wind Farm EES will also address many of these matters. In some cases, while the SIA has summarised those assessments' conclusions, the full technical assessment should be referred to for an in-depth consideration of an effect such as traffic and roads.

Table 2 Scoping Requirements, as relevant to social and economic impact assessment

Matter	Detail	Where addressed in this report
Key Issues	• **Land use and socioeconomic:** Significant disruption to existing and/or proposed land uses, with associated economic and social effects on households and businesses. • **Landscape and visual:** Potential for nearby residents / communities to be exposed to significant effects to the visual amenity, including blade glint and shadow flicker, from project infrastructure. • **Amenity:** Potential for adverse effects to air quality at sensitive receptors and on other sensitive land uses during construction of wind turbines, associated infrastructure and use of an on-site quarry. • **Amenity:** Potential for adverse effects on noise and vibration amenity at sensitive receptors during construction, operation and decommissioning (including on-site quarry). • **Cultural heritage:** Destruction or disturbance of sites or places of Aboriginal or historical cultural heritage significance. • **Traffic and roads:** Managing traffic disruptions for residents, businesses and travellers during the construction of the project. • **Traffic and roads:** Potential damage to local and regional road surfaces along transport routes and increased risk to road safety on transport routes.	*Section 4 Social Impact Assessment* *Section 7 Economic Impact Assessment*
Existing Environment	• **Landscape and visual:** Characterise the landscape character, features and values of the project area. • Identify public and private view sheds to and from the project and characterise visual values of the area, including dark skies. • **Landscape and visual:** Identify existing built features within the landscape (e.g., Macarthur wind farm and 500 kV powerlines) and their impact on the existing landscape and visual setting. • **Landscape and visual:** Identify the components of the project that may result in a significant visual amenity effect including turbines, powerlines and on-site quarry. • **Land use and socioeconomic:** Describe the project area in terms of land use (existing and proposed), residences, zoning and overlays under the Moyne Planning Scheme and public infrastructure that support current patterns of economic and social activity. • **Land use and socioeconomic:** Describe community attitudes, identified through consultation activities, to the existing environment and the potential changes and opportunities brought by the project. • **Amenity:** Identify sensitive receptors that may be subject to effects to amenity from the project including, but not limited to, all dwellings within 3km of wind turbines, associated infrastructure and on-site quarry.	*Section 1 Project Description* *Section 3.1 Baseline Analysis: Current Social Context* *Section 3.2 Community Profile* *Section 3.3 Communities of Local Settlements* *Section 3.4 Social Infrastructure Context*
Likely Effects	• **Landscape and visual:** Assess the landscape and visual effects of the project, including on public and private views, and effects of blade glint and shadow flicker on neighbouring dwellings and communities. Use photomontages and other visual techniques to support the assessment. • **Landscape and visual:** Assess the potential for cumulative impacts associated with the development of the project in the context of existing built infrastructures and nearby proposed/approved wind farm developments. • **Land use and socioeconomic:** Identify potential long and short-term effects of the project on existing and potential land uses (such as aerial spraying and other agricultural activities), public infrastructure (such as roads, transport routes) and fire and emergency management (such as aerial firefighting).* • **Land use and socioeconomic:** Identify the potential economic effects, taking into account direct and indirect consequences of the project on employment and existing economic land uses within the area.	*Sections 4.1-4.10 Social Impact Assessment* *Section 5 SIA Conclusions* *Section 7 Economic Impact Assessment*

Matter	Detail	Where addressed in this report
	• **Land use and socioeconomic:** Identify the potential for electromagnetic interference to radio-communications services from the project. • **Amenity:** Assess the potential effects of the project on noise and vibration amenity at sensitive receptors. • **Traffic and roads:** Assess the potential effects of construction activities on existing traffic, preferred traffic routes and road conditions. This assessment should take account of amenity and accessibility impacts on adjoining residents and in nearby townships, environmental effects arising from such works and physical impacts on the road infrastructure. • **Traffic and roads:** Assess the potential effects to traffic and roads during operation and decommissioning of the project.	
Design and Mitigation	• **Landscape and visual:** Outline and evaluate any potential design and siting options that could avoid and minimise potential effects on landscape and visual amenity of neighbouring residences and communities and additional management strategies that may further minimise potential effects. • **Land use and socioeconomic:** Demonstrate whether the project is consistent with relevant provisions of the Moyne Planning Scheme and other relevant strategies made under Victorian legislation. • **Land use and socioeconomic:** Outline measures to minimise potential adverse effects and enhance benefits to the community and local businesses.	*Section 3.5 Policy Framework and Drivers* *Section 4.9 Summary of Mitigations* *Section 3.7 Stakeholder and Community Perspectives* *Section 3.6 Scoping of Social Issues and Trends*
Performance Objectives	• **Landscape and visual:** Describe proposed measures to manage residual effects on landscape and visual amenity values, including in the context of potential rehabilitation and restoration work following decommissioning. • **Land use and socioeconomic:** Describe any further measures that are proposed to mitigate, offset or manage social, land use and economic outcomes for communities living within or in the vicinity of the project area, as well as proposed measures to enhance beneficial outcomes. • **Amenity:** Describe contingency measures for responding to unexpected impacts to amenity values resulting from the project during construction, operation and decommissioning.	*Section 4.9 Summary of Mitigations*

Source: Willatook Wind Farm Final Scoping Requirements

The Proponent has accordingly commissioned this SEIA to examine the Project's potential social impacts and mitigation strategies in order to comply with these scoping requirements.

2.4 Assessment Framework and Approach

Social Impact Assessment Guidelines

The assessment of issues has been based on Guidelines published by IAIA, which defines Social Impact Assessment as:

> *'The process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.'* (2003, p.5).

The Guidelines establish a clear, consistent and rigorous framework for identifying, predicting, evaluating and developing responses to the social impacts of development proposals. They are recognised as best-practice and are used as the basis for standardised assessments utilised by a number of authorities, including the NSW Department of Planning, Industry, and Environment (DPIE).

There is no Victorian Government framework or prescribed methodology for social impact assessments. Historically it has been up to professionals to make a judgement as to the appropriate content of a social impact assessment given the nature and scale of a project, guided by high-level scoping specified by the Minister for Planning. In view of these circumstances, the IAIA Guidelines and the NSW Department of Planning, Industry and Environment's *Social Impact Assessment Guideline* (July 2021) have been used to inform and benchmark the assessment framework for this SIA.

The IAIA guidelines classify social impacts in the following way, which forms the basis of this assessment:

- People's way of life – that is, how they live, work, play and interact with one another on a day-to-day basis
- Their community – its composition, cohesion, stability, character, services and facilities, how it functions and sense of place
- Their culture – that is, shared beliefs, customs, values and stories, and connections to land, places, buildings
- Their health and wellbeing – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity
- Their environment and amenity – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources
- Their decision-making systems – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose
- Their personal and property rights – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties
- Their fears and aspirations – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

As discussed in the IAIA Guidelines, social impacts vary in their nature and can be positive or negative, tangible or intangible, physically observable, or psychological (fears and aspirations). They may be quantifiable, partly quantifiable or qualitative. Social impacts can also be experienced or perceived differently by different people and groups within a community, or over time.

These Guidelines have been applied with regard to the framework of social factors they set out.

SIA Methodology

Preparation of the SIA involves a number of steps, including:

- Baseline analysis of the existing socio-economic environment, involving:
  - Study area definition, including primary and secondary geographic areas likely to be impacted (see section 3.1)
  - Demographic analysis: community profile including socio-economic characteristics of current communities and population forecasts (see sections 3.2 to 3.3)
  - Analysis of social infrastructure likely to be accessed by communities during construction and operation – including the temporary construction workforce (see section 3.4). Decommissioning is discussed in Chapter 9 of this report.
  - Review of relevant local and state policy frameworks (see section 3.5).
- Review of stakeholder and community engagement findings: analysis of stakeholder and community consultation undertaken in relation to the Project over a number of years, and in relation to broader community issues, perspectives and aspirations that may be relevant to this assessment.
- Scoping of issues: Analysis of potential social impacts during construction and operational phases, with each of the directly affected communities and other stakeholders identified in relation to the way they may be affected. Both positive and negative potential issues are identified. This scoping process has underpinned the social impact analysis (see section 3.6).
- Identification of impacts as per established guidelines, as discussed above.
- Assessment of potential impacts of the specific social factors set out above, and in terms of their likelihood and consequence.
- Identification and assessment of potential cumulative impacts on communities.
- Development of mitigation measures for identified negative impacts and means to enhance social benefits and opportunities.
- The methodology employed in preparing this SIA is designed to ensure that the social environment of communities potentially impacted by the Project is properly accounted for and recorded, and anticipated impacts are adequately considered and assessed.
- For the potential social impacts identified, the assessment sets out strategies for mitigation of negative impacts, and enhancement of positive impacts, taking into account standard or regulatory mitigations in place.

Evaluation / Assessment of impact

This assessment has been carried out in two key stages:

- **Stage 1: Preliminary Scoping Assessment:** This step considers the potential social impacts arising from the Project in relation to the social factors identified above. The scoping exercise is designed to identify what social impacts require further assessment, and the degree of assessment that is required.
- **Stage 2: Impact Assessment:** This step is based on the outcomes of the scoping stage and includes the assessment of potential positive and negative social impacts and the evaluation of residual impacts following the implementation of mitigation and management responses.

Stage 1: Preliminary Scoping Assessment

The preliminary scoping assessment considered the duration and extent of potential social impacts, defined in the Table 3 below.

This assessment considered the potential positive and negative impacts without additional mitigation or management measures. For the purposes of this assessment, ‘without’ mitigation’ represents the potential social impact without any specific social mitigation measures above and beyond what has already been undertaken or what is considered standard or baseline regulatory practices.

To assess the potential negative impacts, a social significance assessment was carried out to determine the overall significance of the potential social impact (firstly without mitigation). As part of this assessment, consideration was given to the following:

- The likely population to be affected
- The timing of the potential social impact
- The impact characteristics that were assessed during the scoping phase (and shown in Table 3 below) including extent, duration

The potential level of social impact significance (shown in Table 6), considering the magnitude level and likelihood of the social impact (as defined in Table 4 and Table 5 below).

Table 3 Characteristics of social impact

Characteristic	Assessment details/ methodology
Extent	Extent geographies defined as: • Site Area • Primary Study Area • Secondary Study Area More detail in section 3.1.
Duration	Duration defined as: • Temporary - for example during construction or decommissioning phase • Ongoing - for example during operation of the wind farm

Table 4 Defining likelihood levels of social impacts

Likelihood level	Meaning
Almost certain	Definite or almost definitely expected
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

Table 5 Definition of magnitude levels for social impacts

Magnitude	Meaning
Transformational	Substantial change experienced in community wellbeing, livelihood, amenity, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20% of a community.
Major	Substantial deterioration/improvement o 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	No noticeable change experienced by people in the locality.

Table 6 Social impact significance matrix

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

Source: NSW DPE, 2021, Technical Supplement - Social Impact Assessment Guideline for State Significant Projects.

Stage 2: Impact Assessment and Ratings

The second stage of social impact assessment considers the positive and negative impacts with regulatory/ baseline mitigations in place. This is followed by a secondary impact assessment which considers additional social mitigation or management measures. This outlined in section 4.10 of the report.

Assumptions applied to complete this SIA include:

- The key findings of the background studies and technical reports are accurate
- Socio-economic data for each study area accurately reflects the community demographic profile
- Outcomes of the community consultation and engagement undertaken to date accurately reflect community views
- Potential social impacts to the local community and particular groups are accurately identified
- Potential social impacts are assessed in terms of standard or regulatory mitigations in place, and subsequently, any residual social impacts following the implementation of recommended additional social mitigations.

3 Social Context

3.1 Baseline Analysis: Current Social Context

This Chapter provides an overview of the Project Site and its current social context with regard to a defined Primary Study Area (PSA) and Secondary Study Area (SSA) or 'areas of social influence,' reflecting geographies of primary and secondary social impact. The baseline analysis assesses the existing social characteristics of the community within the identified study area/s to better understand the potential community characteristics and specific communities that may be impacted by the Project.

Study Area Definition (Social)

The PSA and SSA identified for the purposes of this assessment are shown in Figure 4.

The following study areas represent extent and areas of 'social influence'. The localities represent the geographies/ populations most directly impacted by the construction works and operation of the Project, noting that some social factor impacts extend to populations at a broader level.

The SIA has considered the following spatial extents or 'areas of social influence':

Project Site Area

The Project Site area refers to the area within the Project boundary of the Willatook Wind Farm. This area includes landowners who will host Project infrastructure on their properties.

Primary Study Area (PSA)

The PSA represents the local community within a 6km geography of the Project Site. The PSA represents the primary area in which social impacts will occur beyond the Project Site itself. The PSA includes landowners, neighbouring residents, businesses, workers and other community members and stakeholders who may be affected. The PSA also includes the area to which dwelling-specific aspects of the NBSP apply (i.e., all non-host dwellings within 6km of a constructed wind turbine).

Additional consideration was also given to properties within an approximate 10km radius of the Project Site to factor the potential cumulative effect of the approved Hawkesdale Wind Farm, as well as the two other approved wind farms (Woolsthorpe and Ryan Corner).

Secondary Study Area (SSA)

An SSA has been considered for the purposes of this study due to importance on the broader region in which the Project will operate, and this will assist in determining wider term social impacts and benefits.

The SSA or 'area of social influence' represents the broader immediate area likely to be impacted by the flow on-effects of the development i.e. the Shire of Moyne. This SSA takes into consideration the broader potential cumulative impacts by the three operating wind farms within 20km of the Project, as well as the broader community impacts experienced across the municipality, including access to community services and potential changes to community character and cohesion.

This SSA takes into account the EES scoping matters which require consideration of the significant cumulative effects of the three operating wind farms located within 20km of the Project Site.

District context: a number of operating and approved wind farms

It is noted that there are a number of operating and approved wind farms located within 10km of the Project Site, just beyond the boundary of the PSA. These projects are identified in Figure 5. The operational Macarthur Wind Farm is located to the north of the Project Site. The 500kV transmission line runs through the southern portion of the Project Site and is connected to the Tarrone Terminal Station which will be used by the Project to connect to the grid.

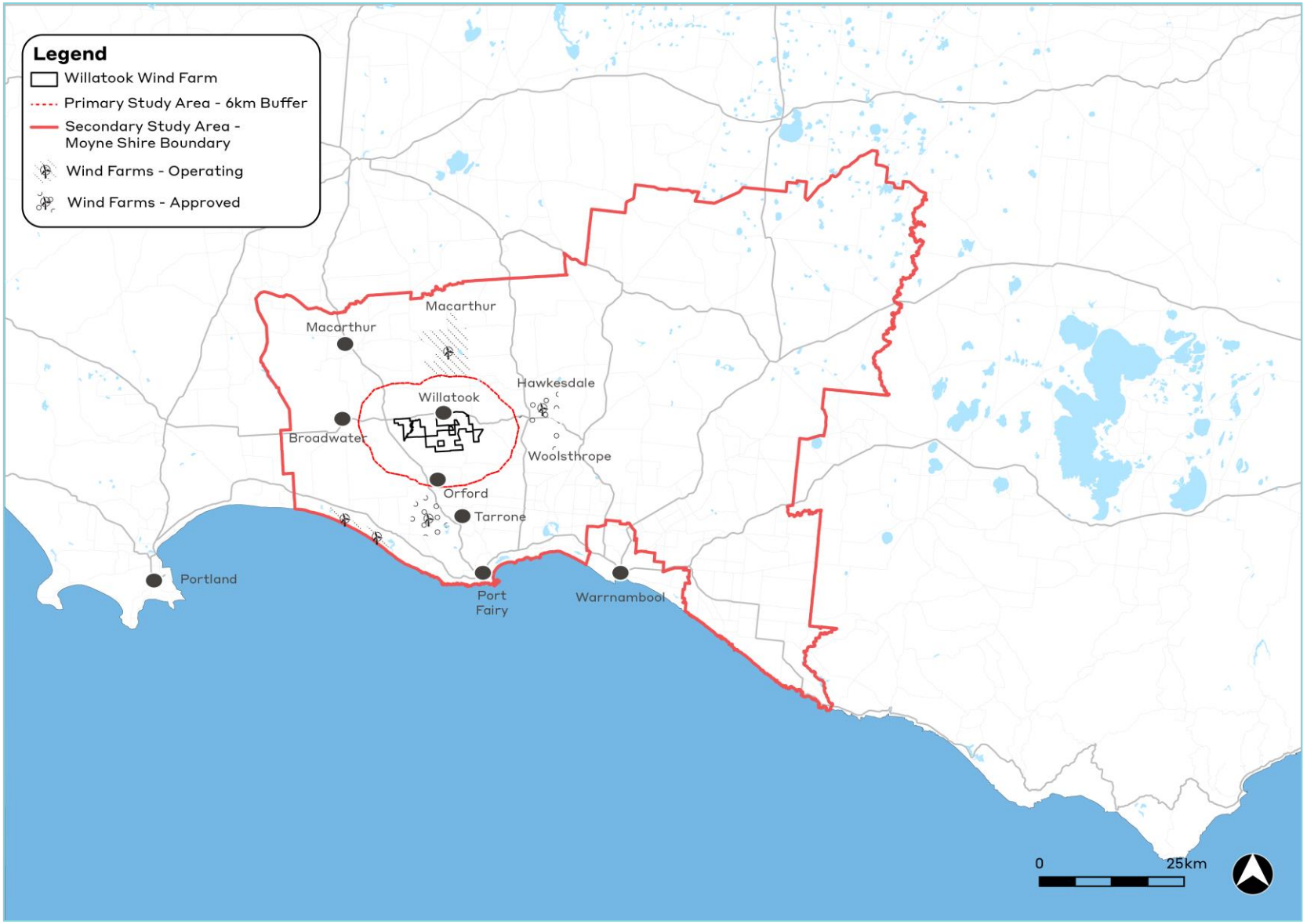
These current and approved wind farms constitute important considerations in relation to potential cumulative impacts on communities.

Section 7.3 of this report (part of the Economic Impact Assessment) provides a summary of wind farms that are planned, approved or under construction in the broader southwest Victoria region, noting impacts on labour and supply chains have a wider area of influence from an economic perspective.

Figure 4 Study Area Definition: Primary and Secondary Areas

Source: Willatook Wind Farm Pty Ltd and Ethos Urban

Figure 5 Proposed and Operating Wind Farms in the Study Area



Source: Willatook Wind Farm Pty Ltd and Ethos Urban

3.2 Community Profile

A detailed assessment of the key community characteristics of the SSA (the Shire of Moyne) is provided in Table 7 and Table 8, and is based on results from the 2016 ABS Census of Population and Housing. The characteristics of Moyne Shire have been benchmarked against Victoria for comparison purposes.

The population of this SSA can be considered broadly representative of the population of the PSA, for social impact assessment purposes. The Willatook State Suburb population profile is also included in Table 7. However, it is noted this data dates back to the 2016 ABS Census, and therefore may not represent the current composition of the population of this very small community.

Further detail on key communities/ settlements within the Primary and Secondary Study Areas is provided in Figure 4.

Current community profile – Moyne Shire (2016 Census)

Key community characteristics are as follows:

- Moyne Shire has a relatively small population of approximately 17,000 persons.
- The household profile of Moyne Shire is similar to that of Victoria. One-family households are most common (68%), and most often have an occupancy two to four persons.
- The population of Moyne Shire is older than that of Victoria, with the 50-59 years as the largest age cohort (approximately 17% of residents).
- The Moyne Shire community is less ethnically and linguistically diverse than the State overall, with only 6% of residents born overseas compared to 28% for Victoria.
- When compared with Victoria, Moyne Shire is characterised by high levels of certificate level education attainment (17% compared to 14%), but significantly lower levels of attainment of university qualifications (11% compared to 20%).
- The Agriculture, Forestry, and Fishing industry has strong workforce representation in the Shire (13% of resident workers).
- Unemployment is relatively low in the Shire (1.5%) compared to 3.3% for Victoria. Note, updated unemployment data for 2020 is included in Table 26.
- Moyne Shire experiences a level of socio-economic disadvantage that is consistent with the average for the State; most LGAs in Victoria are more disadvantaged than Moyne Shire.

The Moyne Shire Municipal Health and Wellbeing Plan (2017-2021) provides some additional insight into the local population. According to the Plan, Moyne Shire residents are more likely to have a lower average household income and higher rates of heart disease, cancer and mental health issues, when compared with the Victorian average.

Table 7 Willatook State Suburb, Moyne Shire and Victoria population profiles

Indicator	Willatook State Suburb	Moyne Shire	Victoria
Estimated Resident Population (2019)	55*	16,953	5,927,000
Total Dwellings	20	16,241	5,946,000
Average household size	2.2	3.2	3
Household composition	Family households (100%)	Family households (72.9%) Single (or lone) person households (25%) Group households (2.2%)	Family households (70.8%) Single (or lone) person households (24.7%) Group households (4.5%)
Median age	39	43	37
Largest age cohorts (top 3)	55-59 years (18.1%) 10-14 years (18.1%) 5-9 years (14.5%)	55-59 years (7.6%) 50-54 years (7.5%) 60-64 years (7.5%)	30-34 years (7.6%) 25-29 years (7.4%) 20-24 years (7.0%)
Place of Birth	Australia (70.9%) Elsewhere (29.1%)	Australia (85.2%) Overseas (6.0%) Not stated (8.8%)	Australia (64.9%) Overseas (28.4%) Not stated (6.8%)
Languages Spoken at Home (top 3)	English (76.3%) Other (5.1%) Not stated (9.1%)	English (90.9%) Other (0.4%) Mandarin (0.2%)	English (67.9%) Mandarin (3.2%) Italian (1.9%)
Highest Level of Non-school Qualifications	Postgraduate Degree Level (0%) Graduate Diploma & Graduate Certificate Level (0%) Bachelor Degree Level (0%) Advanced Diploma and Diploma Level (10.9%) Certificate Level (32.7%) Not stated (32.7%)	Postgraduate Degree Level (1.4%) Graduate Diploma & Graduate Certificate Level (1.4%) Bachelor Degree Level (8.1%) Advanced Diploma and Diploma Level (6.8%) Certificate Level (17.4%) Not stated (9.6%)	Postgraduate Degree Level (4.4%) Graduate Diploma & Graduate Certificate Level (2.0%) Bachelor Degree Level (13.5%) Advanced Diploma and Diploma Level (7.5%) Certificate Level (13.8%) Not stated (7.5%)
Industry (top 3)	Agriculture, Forestry, and Fishing (27.3%) Public Administration and Safety (5.5%) (No other data available)	Agriculture, Forestry, and Fishing (12.7%) Healthcare and Social Assistance (5.0%) Education and Training (3.1%)	Healthcare and Social Assistance (5.8%) Retail trade (4.7%) Education and Training (4.0%)
Median weekly household income	$1,312	$1,225	$1,419
Unemployment (looking for part-time or full-time work)	0%	1.5%	3.3%
SEIFA Index of Disadvantage Score	1031	1016	1010

*Source: REMPLAN (2021) based on 2016 ABS Census data, figures rounded. (*Data from 2016 ABS Census.)*

Forecast community profile: 2016–2041

Through 2041, the population of Moyne Shire is anticipated to expand modestly, increasing from 16,737 persons in 2016 to 18,499 persons (+1,762 persons over the 25 year period). The population is expected to age significantly, with population growth underpinned by the 65+ years cohorts.

Table 8 summarises the anticipated age profile from 2016-2041 in 5-year intervals.

Table 8 Forecast Population Age Structure, 2016-2041

Age Groups	2016	2021	2026	2031	2036	2041
Preschool (0 - 4)	6.2%	6.0%	5.6%	5.4%	5.2%	5.1%
School Age (5 - 19)	20.5%	19.6%	19.0%	18.0%	17.4%	17.0%
Young Workers (20 - 34)	14.5%	13.6%	13.1%	13.2%	13.4%	13.6%
Workers (35 - 49)	18.9%	19.5%	19.9%	19.5%	18.6%	17.9%
Empty Nesters (50 - 64)	22.1%	21.1%	20.4%	20.5%	21.0%	20.9%
Retirement (65 - 79)	13.7%	15.8%	16.4%	16.6%	16.5%	16.7%
Elderly (80+)	4.1%	4.5%	5.6%	6.8%	7.8%	8.8%
Total (%)	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Total (No.)	**16,737**	**17,178**	**17,606**	**17,957**	**18,250**	**18,499**

Source: REMPLAN (2021); figures rounded.

3.3 Communities of Local Settlements

The PSA and SSA include a number of small settlements (within approximately 10km of the site), with their population and approximate distance from the Project Site shown in Table 9.

Table 9 Population of Local Settlements within the PSA and SSA

Name	Population estimate No. of Persons	Distance & direction From Project Site
Willatook	54	3.6km east
Orford	102	3.2km south- west
Broadwater	90	3.3km north-west
Tarrone	69	3.7km south
Hawkesdale	319	7.8km east

Source: 2016 ABS Census, Ethos Urban, 2021

Each of these settlements is profiled in the following section, providing an overview of their social amenity and infrastructure. For detail on the major settlements near the study area, refer to section 6.7, which outlines the key features of Port Fairy, Koroit, Warrnambool, Hamilton and Portland.

3.4 Social Infrastructure Context

It is important to consider the provision of key social infrastructure to support the Project – such as hospitals, emergency services, schools and other social and health services. This is especially important in relation to the construction phase of the Project, when an estimated workforce of 290 Full Time Equivalent (FTE) workers will occupy the site at the Project's construction peak, with 115 FTE of these workers (or 40% of the workforce) likely be relocating to the area and living in the surrounding communities (refer to section 7.2 for more details). This workforce will place demands on existing infrastructure and services.

Existing social infrastructure accessible to the Primary and Secondary Study Areas is shown in Figure 8. There is a small amount of social infrastructure within the PSA, discussed on the following pages. Larger regional facilities (for example major hospitals with emergency departments, other emergency services (Police, CFA, SES)) are located within the larger regional towns of Portland, Warrnambool, Hamilton and Colac, most of which are within an hour's drive of the Project Site.

This indicates there is a range of accessible social infrastructure options available to the north and south site, with the capacity to meet the demand of the Project's workforce and other nearby wind farm developments.

Willatook
Willatook is a small settlement of 55 people, including predominantly farming properties, with sheep and cattle grazing and plantation forestry being common land uses. Due to its very small size, the settlement is not referenced in the Moyne Warrnambool Rural Housing and Settlement Strategy. The nearest educational opportunities are Macarthur Primary School to the north-west, and Hawkesdale P-12 College to the east. Koroit, to the east, also offers a primary school. Port Fairy and Warrnambool further afield also offer primary and secondary school options. Key amenities and social resources in Willatook include:

- Willatook community hall – used to host community gatherings and events; managed by a volunteer committee
- Willatook Tennis Club, within the Willatook Recreation Reserve – two tennis courts.

Orford
Orford is a small settlement approximately 10km to the south-west of Willatook, consisting of predominantly farming properties, with sheep and cattle grazing the main land uses.

Port Fairy is the local hub for retail and education, being 20 minutes' drive, with direct access via the Hamilton-Port Fairy Road. Port Fairy offers primary schools, but no secondary school. Warrnambool and Hawkesdale offer the closest secondary schools. Key amenities and social resources in Willatook include:

- Orford Memorial Hall
- Orford and District Table Tennis Association, established in the 1950s, and usually making use of the memorial hall

Figure 6 Orford Memorial Hall
Source: ABC South West Victoria, photo by Sian Johnson

- Orford Recreation Reserve, which services as a hub for outdoor recreation, and a starting point for some horse trail riding gatherings
- Orford CFA.

European settlement in Orford dates to 1856. The town has seen a progressive decline in population since the early 20th century, and the only primary school was closed in 1949.

Broadwater
Broadwater is a small settlement of 90 people located to the west of Willatook. The area is predominately characterised by farming properties. Port Fairy is closest hub for retail and education, being 25 minutes' drive, with direct access via the Hamilton-Port Fairy Road. However, Hamilton provides another hub, at 35 minutes' drive. Broadwater's closest schooling options are to the south (Port Fairy, Koroit, Hawkesdale), though Hamilton schools are also a possibility. Key amenities and social resources in Broadwater include:

- Broadwater Recreation Reserve
- Broadwater Tennis Club.

Tarrone
Tarrone is a small settlement of 69 people, predominantly characterised by farming properties, and located approximately 14km to the north of Port Fairy. With Port Fairy within about 10 minutes' drive, this provides the main retail and education hub for the settlement. Key amenities and social resources in Tarrone include:

- Close proximity to the Moyne River.

AGL proposes to build the gas turbine Tarrone Power Station in the settlement on land that is currently used for grazing.

Hawkesdale

Hawkesdale is a historic hamlet located approximately 13km to the north-east of Willatook. The town centre features subdivision into a number of small lots, while the town is surrounded by farming properties. The population is not expected to grow notably. The town is within commuting distance of Mortlake, Port Fairy and Warrnambool – all within about half an hour's drive – which provide numerous retail, education and employment opportunities. Key amenities and social resources in Hawkesdale include:

- Post Office
- Hawkesdale P-12 College (main secondary school in this area)
- Hawkesdale and District Pre-School
- Hawkesdale Racecourse and Recreation Reserve – racecourse and sporting oval
- Immanuel Lutheran Church
- St Joseph's Catholic Church
- Hawkesdale Hotel and Wine Bar – local pub, also hosts the Henty Region Wine Hub highlighting local wines
- Hawkesdale Golf Course
- Outdoor Swimming Pool
- Football and Netball Club, with an Australian Rules football team with neighbouring township Macarthur competing in the Mininera & District Football League
- Hawkesdale Apex Campsite – campground and small general store
- Playground and BBQ area.

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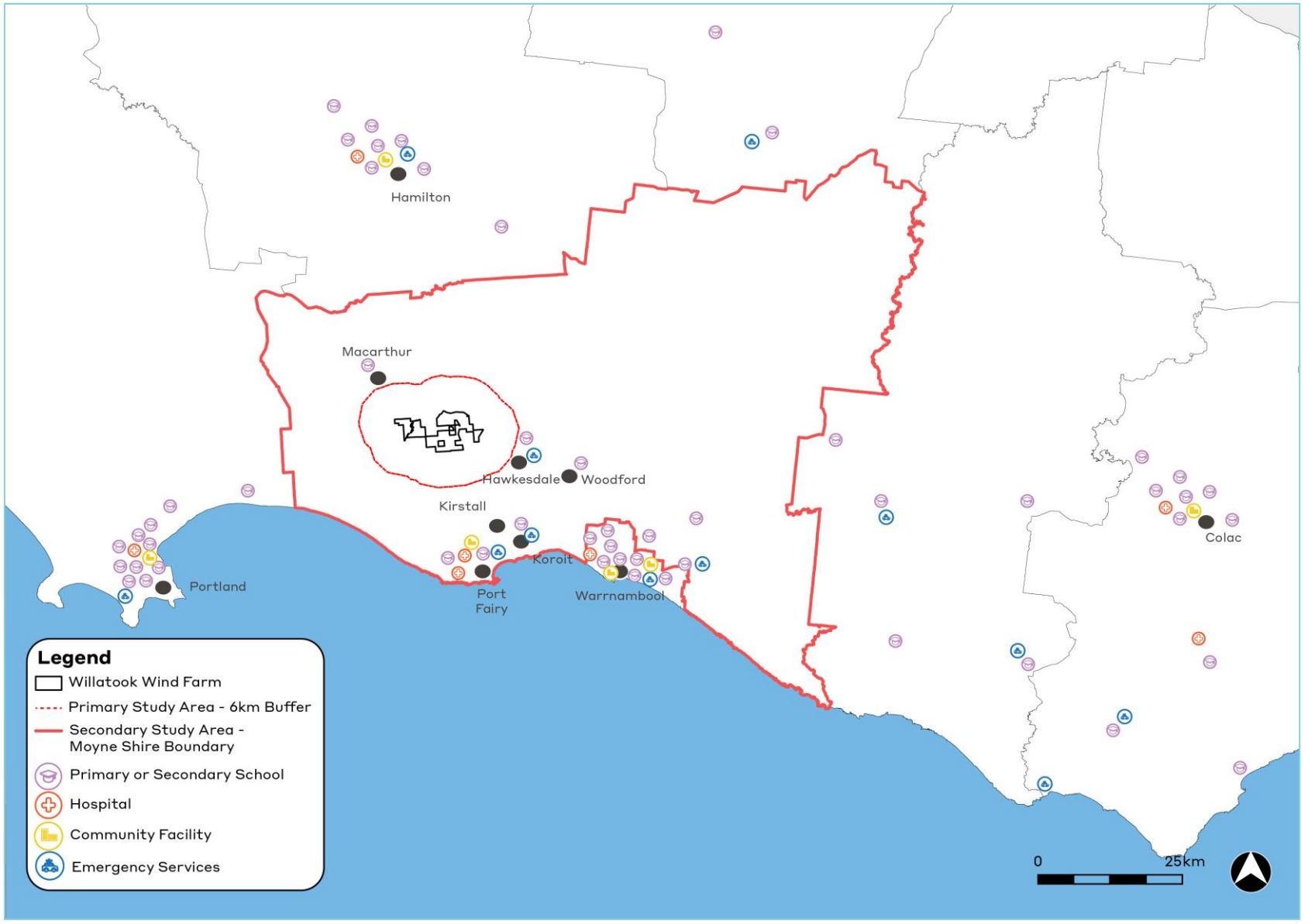
Figure 7 Hawkesdale Recreation Reserve

Source: Australia 247, by Phil Martin

Figure 8 Map of Regional Social Infrastructure



Source: Willatook Wind Farm Pty Ltd and Ethos Urban

3.5 Policy Framework and Drivers

The following section sets out the key policy implications for the Project, based on a review of the state and local policies and strategies relevant to the proposed project.

Key policy drivers

Policy implications are summarised in Table 10 according to the following six themes that constitute key considerations for this assessment:

- Population and patterns of settlement
- Social, economic and environmental impacts of wind farms
- Local employment opportunities
- Climate change and environmental sustainability
- Open spaces
- Social infrastructure and services.

Table 10 Policy Themes and Drivers Impacting the Development

Policy theme	Key implications for social impact assessment	Relevant document(s)
Population and patterns of settlement	• Moyne Shire is characterised by agriculture, fresh seafood, manufacturing, and a healthy tourism industry, with a rich cultural history of Aboriginal people and valued environmental assets. • The community is older and lower income when compared with Victoria overall and other Councils in the area. • Moyne Shire is predominately a rural locality, comprising a number of small towns and settlements. Sustaining these small towns is important to the community, particularly through events, volunteerism, advocating for a tertiary education facility, open spaces, and path connections. • Council supports development that is concentrated in settlements where demand and capacity exist. • Hawkesdale and surrounds in particular is an appropriate area for population growth due to the existing provision of community infrastructure and services there.	*Moyne Shire Council Plan 2017-2021* *Moyne Shire Council Municipal Public Health and Wellbeing Plan 2017-2021* *Moyne Warrnambool Rural Housing and Settlement Strategy (2010)* *Moyne Shire Economic Development Strategy 2019-2029*
Wind farm development in Moyne Shire	• Local policy acknowledges that the presence of the 500kV power line in Moyne Shire attracts energy projects such as wind farms. • However, concern regarding the potential cumulative impacts of wind farm developments on surrounding communities. • Noise, visual, traffic, road, accommodation and environmental impacts are consistently raised by the community as areas of concern. • The Shire supports investigating the cumulative impacts of wind farms in the LGA and reviewing planning scheme tools to better identify where it is appropriate to construct and operate wind farms. • Council also seeks to better support businesses and the community throughout the life cycle of wind farm projects through communication, funding contributions, employment opportunities, and other initiatives. • Working with wind farm companies and affected communities to achieve wind farm projects with minimal community impact is a targeted project for Council.	*Moyne Warrnambool Rural Housing and Settlement Strategy (2010)* *Moyne Shire Economic Development Strategy 2019-2029* *Moyne Shire Council Plan 2017-2021* *Moyne Shire Council Advocacy Plan 2021-2022*

Policy theme	Key implications for social impact assessment	Relevant document(s)
Local employment opportunities	• Access to education, training, and work opportunities is a key social determinant of health. • The Great South Coast region has experienced strong job growth, however slow population growth has resulted in a skilled labour shortage, and retention attraction of young people is low. • Moyne is a rural shire, with robust agriculture, aquaculture, quarrying, and other industries. Its economy is dependent on the dairy sector in particular. • The power line, wind, and growing renewable energy investment are all considered strengths of the Shire. • Moyne Shire Council seeks to support business that is environmentally sustainable and diversifies the economy. • Wind energy generation is a growing industry, with 5 operational wind farms and another 5 pending construction (at the time of publication of the Shire's Economic Development Strategy). • There is also interest in a wind farm trail to attract wind farm tourism to the area.	*Great South Coast Regional Partnerships – Outcomes Roadmap (2019)* *Moyne Shire Council Plan 2017-2021* *Moyne Shire Council Municipal Public Health and Wellbeing Plan 2017-2021* *Moyne Shire Economic Development Strategy 2019-2029* *Moyne Shire Youth Services Priorities 2020-2022*
Climate change and environmental sustainability	• Australia is party to the Paris Accord, a comprehensive international agreement to reduce greenhouse gas emissions in an effort to minimise the impacts of a warming planet. • The current national target is a reduction of emissions by 5% from 2000 levels by 2020 and a reduction of 26-28% below 2005 levels by 2030. • The State Government has established its own renewable energy targets and adopted a Renewable Energy Action Plan to support a shift to a net zero emissions energy sector by 2050. Renewable energy generation targets are set for 25% by 2020 and 40% by 2025. • The Plan also establishes the Victorian Renewable Energy Auction Scheme to support these targets. The Scheme has since supported the installation of 158 turbines across three major wind farm projects in South West Victoria. • Moyne Shire has several of Victoria's wind energy facilities, and also home to a number of environmentally significant areas. Climate change is seen as a major challenge facing the Shire. • Council seeks to increase community use of renewable and alternative energy sources and increase understanding and awareness of environmental sustainability practices and values.	*Paris Climate Accord (2016)* *Victorian Renewable Energy Action Plan (2017)* *Moyne Shire Environmental Sustainability Strategy (2015)* *Moyne Shire Council Plan 2017-2021*
Open spaces	• The open spaces and natural beauty of the inland and coastal areas are valued and celebrated in the Great South Coast region. • The Moyne Shire community enjoys open spaces as places to unwind, exercise, and for their views to the ocean and river. • The top priority for open space improvements in the municipality is new/upgraded pathways and links between open spaces	*Moyne Shire Council Plan 2017-2021* *Moyne Shire Open Space Strategy 2020-2035*
Infrastructure and services	• Transport networks and infrastructure are critical to the prosperity, safety, and liveability of the Great South Coast region, particularly for the growing visitor and business economies. • The road network needs investment, including rehabilitation and sealing of currently unsealed roads. Community satisfaction with the road network is currently low and fixing local roads a key priority. • Other infrastructure priorities include the NBN rollout and pedestrian/cycling pathways.	*Moyne Shire Council Plan 2017-2021* *Moyne Shire Open Space Strategy 2020-2035* *Great South Coast Regional Partnerships – Outcomes Roadmap (2019)*

3.6 Scoping of Social Issues and Trends

This section summarises the findings of a desktop 'media scan' of local newspapers and social media to ascertain key community issues and trends of relevance to the proposed project.

Community issues identified through local print and social media mainly relate to the following actual or perceived impacts:

- Noise
- Access for emergency services
- Visual impact
- Impact on agriculture activities
- Impact on bird life
- Cumulative impacts
- Impact on land values.

These issues are discussed in Table 11.

3.7 Stakeholder and Community Perspectives

This section provides a summary analysis of community and stakeholder engagement undertaken in relation to the Project during the past 11 years or so, including the consultation methodology and issues raised by participants. Community feedback included a range of responses from those either in general support, neutral or in opposition to the Project, while some feedback related to specific issues. Where relevant, Proponent responses have been included.

The outline of key community issues has been based primarily on previous consultation summaries provided by the Proponent. Part of this analysis also draws on community perspectives ascertained through a consultation process (door knocks, surveys) undertaken in 2019-20, which surveyed surrounding properties.

Figure 9 shows the properties surveyed within the PSA. Noting that there were many properties that were not surveyed within the PSA either because there was not a dwelling (rural land), or the dwellings were unoccupied/ dilapidated.

This section also draws on a media scan of local newspaper and social media, to ascertain broader community perspectives impacting the Project. Additionally, a summary of issues raised by community groups who are active in relation to the proposed Project is provided at section 3.7.2. Finally, a summary of Moyne Shire Council resolutions on wind farms generally in the Shire during 2018-19 is provided at section 3.7.3, which demonstrates Councillors' perspectives.

Table 11 Media Scan of Community Issues

Impact	Summary of issues raised	Source
Noise	• Concerns that the constant noise will negatively impact the health of landowners and neighbours and excessive exposure will result in a 'pathway to disease'. • Concerns that the constant level of noise will prevent neighbours from sleeping and will impact on mental health. • Concerns that the amount of noise generated by a wind farm makes is high, especially within a rural context that is generally quieter.	• *No Willatook Wind Farm Facebook Group* • *The Weekly Times* • *Willatook Wind Farm Action Facebook Group.* • *The Warrnambool Standard* • *Wind Action* • *Defrock* • *National Wind Watch* • *Stopthesethings.com*
Access for emergency services	• Firefighting and ambulance services will not be able to access land with wind turbines, from the air or by ground.	• *National Wind Watch*
Visual impact	• Concerns that the increasing number of wind farms could damage the 'natural beauty' of the area. • Concerns regarding the density of the wind farms, and the height of the turbines. • Wind farms will make up the majority of the farming landscape and will permanently alter the identity of the region and community.	• *The Weekly Times*
Impact on agriculture activities	• Concerns that wind turbines will prevent the aerial spraying needed for weed prevention and the spreading of seeds for crops. • Concerns that farmers will not be able to muster livestock aerially. • Concerns that new planning overlays will prevent farms from building anything within 1.5km of a wind turbine. • Potential negative effect on the health of livestock	• *The Weekly Times* • *National Wind Watch* • *Shepparton News*
Impact on bird life	• There are concerns that birds could become injured or killed when flying near the wind turbines.	• *The Weekly Times*
Cumulative impacts	• Some people are not against individual wind farms, rather they are concerned about the impact of multiple wind farms in the community. • Wind farms will make up the majority of the farming landscape and will alter the identity of the region and community.	• *The Warrnambool Standard* • *National Wind Watch* • *The Weekly Times*
Impact on land values	• Concerns that landowners near the Macarthur Wind Farm will not be able to sell their land, due to the existing and proposed wind farms surrounding their land.	• *Stopthesethings.com*

Identification of key affected communities

This assessment covers both the PSA, which is expected to experience social impacts and benefits associated with the temporary construction activities and many of the future operational impacts and benefits; together with the broader SSA that is likely to experience some of the resulting impacts and benefits from each phase of the Project.

For the purposes of this SIA, the key communities to experience social impacts of the Project can be grouped as follows:

- Landowners on the site
- Neighbouring landowners within the PSA and SSA including those eligible to receive direct financial payments via the NBSP and those that are not eligible.
- Neighbouring residents (referred to in this report as 'non-involved landowners')
- Neighbouring (agricultural) businesses
- Local area workers
- Temporary construction workers
- Workers – ongoing.

Perspectives of key communities and stakeholders who have been consulted in relation to the Project are discussed below.

Consultation methodology

The Proponent has conducted a number of public engagement activities since 2010, including:

- door-knocking
- surveys
- community information sessions.

Part of the analysis that this SIA draws on to understand community perspectives was obtained through a thorough a consultation process (door knocks, surveys) undertaken in 2019-20, which surveyed surrounding properties. This process was undertaken by an independent communications and stakeholder engagement consultant commissioned by the Proponent. In addition to the door knock surveys, this consultant also assisted with these engagement activities relating to the Project:

- Review of the EES Engagement Strategy
- Development of Project newsletters
- Planning and assisting with the delivery of information days (with WP staff and technical specialists)
- The temporary shopfront in Koroit
- Design and community feedback on the NBSP.

Further detail on the consultation activities is outlined in the EES Stakeholder Consultation Plan.
A Community Engagement Committee was also established in 2010 to facilitate ongoing discussions between Moyne Shire, the Proponent and the community.

3.7.1 Key Identified Community Issues

A summary of the key issues identified by the landowners, residents and community members immediately impacted by the Project and located within the PSA are outlined below (Table 12). This includes stakeholders in support or opposition to the Project and constitutes actual and perceived impacts, both of which are valid in relation to the SIA. This section includes many of the previously identified community issues and subsequent responses by the Proponent (for the period up to 2020). Consideration of how these issues will be addressed more recently in the preparation of technical studies for the EES process are also be outlined briefly below, as well as in the SIA in Sections 4.1 to 4.8.

Table 12 Summary of Key Community Issues

Issue	Description	Response
Cumulative impacts	Cumulative noise and visual impacts associated with other existing operational, approved or proposed wind farms in the local area is potentially the issue of greatest concern.	The Proponent has increased separation distances between some dwellings and proposed wind turbine locations in response to this issue beyond that required, for example, for noise compliance. A reduction in the total number of turbines and a redesign of the layout to achieve a 1.5km buffer from all non-involved dwellings has also been adopted. <u>Notes on findings of technical studies</u> The Environmental Noise Assessment has assessed cumulative noise emissions of the Project with the existing Macarthur Wind Farm and has determined that the Project would be compliant with the applicable standard. Report also notes that noise from ancillary infrastructure (including transformers) is compliant with the applicable standard. The Landscape and Visual Impact Assessment report states that the proposed wind farm will not significantly change the character of the area. It also finds that from a technical perspective, the cumulative impact is negligible - low. The report also finds that the level of visual impact depends on community perception of wind farms, stating “that there will be some people who do not like the appearance of wind turbines. For these people, the visual and cumulative visual impact would always be high.” Evidence from community consultation suggests that the community is concerned about potential cumulative visual impact.
Acoustic impacts	Some local residents are concerned that with the existing operational Macarthur Wind Farm, the Project will lead to wind turbines being located in a larger arc around their homes leading to more frequent noise impacts with winds from different directions. Some residents are also concerned about the potential noise impacts during the construction phase of the proposed wind farm.	The Proponent has increased separation distances between some dwellings and proposed wind turbine locations, beyond what is required for noise compliance. A map of the Project layout showing noise contours has been provided to some local residents to inform further discussion. <u>Notes on findings of technical studies</u> The Environmental Noise Assessment has assessed cumulative noise emissions of the Project with the existing Macarthur Wind Farm and has determined that the Project is compliant with the applicable standard. Noise from ancillary infrastructure is also compliant with the applicable standard. Noise from construction activities and on-site quarry works will be subject to a Construction Noise and Vibration Management Plan.
Visual and landscape impacts	Some local residents particularly around the north-east area of the Project have raised the concern that with the existing Macarthur Wind Farm and other proposed wind farm projects in the local area, there will be too many wind turbines visible in the local area that could change the character of the area making it more of an industrial landscape.	The Proponent has removed four wind turbines from the south-west section of the Project to provide a larger buffer of the Orford locality as a proactive measure (not in response to feedback from local residents). The Proponent has also prepared photomontages for eight local residents in 2010 and 2011 and for four residents in 2017 that engaged on this topic from locations of their choosing. These photomontages were prepared to aid residents’ consideration of visual impacts and inform further discussions. Photomontages of the site design have also been prepared as part of the LVIA assessment.

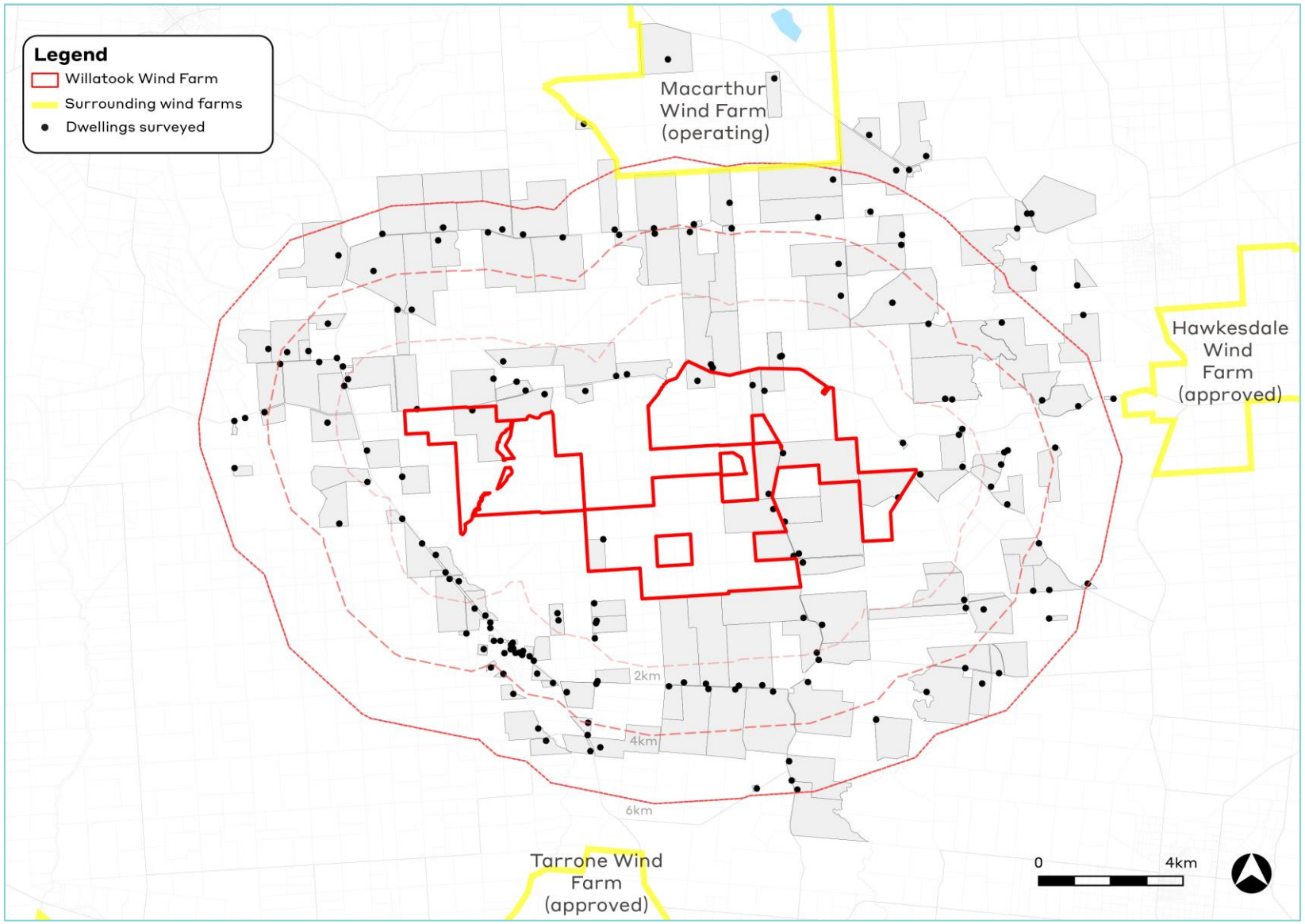
		Notes on findings of technical studies The Landscape and Visual Impact Assessment states that the proposed wind farm will not significantly change the character of the area and that from a technical perspective, the cumulative impact of the Project is negligible or low. It states that the overall visual impact from the urban areas, townships and localities (including Orford and Broadwater) is nil - negligible for townships and low for localities. The report confirms that some neighbouring properties will have views impacted by the wind farm, however noting that several residences and farm buildings were found to have established and extensive windbreaks and hedgerow around buildings therefore mitigating potential visual impacts. The report also finds that the level of visual impact depends on community perception of wind farms, stating that "that there will be some people who do not like the appearance of wind turbines. For these people, the visual and cumulative visual impact would always be high." Evidence from community consultation suggests that the community is concerned about potential cumulative visual impact.
Impacts on property values	Some local residents are concerned that the Project will devalue their properties and that their properties 'are their super', that is, the sale of their property will fund their retirement.	The Proponent provided information assessing the potential impact of wind farms on property values at open days and also within the Project booklet distributed to residents within 10km of the Project.
Aviation	A number of residents are concerned about the perceived increased fire risk from the potential impact of increased wind turbine numbers on aerial fire-fighting capabilities. Some local residents are concerned about the potential impact of the Project on their ability to apply fertiliser and weed and pest control via aerial application.	An aviation consultant was present at community open days to answer any questions. Notes on findings of technical studies The Aeronautical Impact Assessment confirms that there will be some impacts to aerial aviation activities but that the overall risk is low and no mitigating strategies are necessary.
Biodiversity	Some residents have expressed concern to the potential impacts on avifauna, in particular the local brolga population.	The Proponent undertook consultation with landowners, as well as extensive survey work which resulted in extensive buffers being applied to protect brolga populations. Notes on findings of technical studies The Brolga Assessment confirms that only a small number of brolga exist on or near the site and none were identified during the flocking season, with the closest flocking site being 28km to the north of the Project. The report found that brolgas have a low risk of collision with wind turbines.

		The Flora and Fauna Assessment determined that all listed species recorded were unlikely to be impacted significantly by the development resulting from the current development footprint and proposed design and mitigation measures. The report also confirmed that bats have a low risk of collision with the wind turbines.
Traffic	Some local residents have expressed concern relating to potential traffic generated during the construction phase of the wind turbines, and in particular damage to roads (caused by trucks).	On site quarry was proposed for the wind farm in response to community concern about the amount of traffic that would be generated during the construction phase. Notes on findings of technical studies The Transport Impact Assessment confirmed that the construction period is going to be the most intense period of site activity, with some project related impacts to the local road network. The assessment also found that the operation of the wind farm will have negligible impacts on local traffic and the broader road network.
EMI / TV reception	Some community members raised concerns relating to electromagnetic interference from the wind farms on TV and phone reception, as well as impacts to health.	Notes on findings of technical studies The Electromagnetic Interference Study confirms that there will be differential impacts to different communication channels and networks, including a potential risk of interference for television broadcasting and wireless internet, with a potential low risk of interference to radio broadcasting (FM) and mobile phones.
Renewable Energy	A number of respondents expressed how the Willatook Wind Farm would provide an important source of renewable energy for the local community and wider Victoria. For many, the benefits of the Project included a move away from reliance on coal and a reduction in carbon emissions and greenhouse gases.	No response required
Economic benefits/ local jobs growth	A number of respondents stated that a key benefit of the Willatook Wind Farm was its potential to generate jobs, and in particular local jobs. Many identified opportunities for local construction jobs, as well as broader economic prosperity and “knock on” effects for other local industries. The Benefit Scheme proposed to landowners impacted	No response required

	by the wind farm was also repeatedly mentioned as a key benefit of the Project.	
Neighbour Benefit Sharing Program	The Project is divisive in the local community, with different parts of the community in support or opposition, which is also reflected in differing positions among Moyne Shire Councillors. Various respondents noted that the neighbour benefit sharing program would provide important support for local communities within Moyne Shire. Key areas that the community wanted the benefit sharing program to support included local schools, sporting clubs, fire brigade, community facilities and youth development activities. The proposed benefit sharing program for the Project is discussed in more detail in the Section 1.2 of the report.	The Proponent's decision to implement a Neighbour Benefit Sharing Program was not mandated but based on a recognition of the potential impacts from the Project and informed by the Clean Energy Council report[1] (2019). While host landholders have always received payments for hosting renewable energy developments, neighbours traditionally have not. This can lead to divisions in a neighbourhood, which can have substantial negative impacts for local people and the Project. The NBSP and Community Benefit Fund proposed by the Proponent aim to address this issue by distributing the benefits of the development more broadly in the local community. However, it should be noted that dwelling owners or landowners who reside just outside the specified 6km catchment for eligibility, but who are impacted or perceive themselves to be impacted by the effects of the operational wind farm, may consider themselves more acutely adversely impacted through their ineligibility for direct payments (for the NBSP program specifically), however noting that the Community Benefit Fund is available for the benefit of all community members within the Moyne Shire.

[1] 'A Guide to Benefit Sharing Options for Renewable Energy Projects', October 2019, Clean Energy Council.

Figure 9 Properties (residences) surveyed in 2019-20



Source: Willatook Wind Farm Pty Ltd and Ethos Urban

3.7.2 Active Community Groups' Perspectives

Table 13 provides a list of the key community groups, either organised or informal, that have expressed opposition to the Project.

Table 13 Active local community groups

Group	Description
No Willatook Wind Farm (@nowillatookwindfarm)	• Facebook group with 284 followers (as of January 2022) • This group posts regular updates against Willatook Wind Farm and Moyne Shire Council
Willatook Wind Farm Action Group (WWAG)	• This group was formed in late 2017. • The group also has an active Facebook page with 102 followers (as of January 2022). • In addition to posting regularly on the Facebook page, the group has also organised a letter drop in the local area opposing the Project, lobbying of parliamentarians and the coverage in the local media. • The Proponent has confirmed that since the formation of the WWFAG, most local groups that previously expressed concerns are now unwilling to meet to discuss the Project at all, so engagement is limited to emails and text messages. WWFAG are believed to be completely opposed to the Project proceeding in any form. Some residents also seem to have concerns that engagement with the Proponent might be construed by planning authorities as a willingness for the Project to proceed.
Hawkesdale residents	• There has been strong community opposition to the Hawkesdale Wind Farm (and the Woolsthorpe Wind Farm) from residents in the Hawkesdale Township. There has been some community opposition from residents to the Willatook Wind Farm. This can be related to community concerns about the number of wind farms being proposed in in the Moyne Shire generally.
Complaints to the National Wind Farm Commissioner (NWFC)	• In October 2017, 15 complaints were made to the National Wind Farm Commissioner (NWFC) regarding the Project. • A significant portion of the complainants were located around the north-east area of the Project. This group expressed pre-existing issues with the Macarthur Wind Farm (MWF), some of which are ongoing. Many of these complainants have noted that if it wasn't for their experience of the Macarthur Wind Farm, they would otherwise be unlikely to object to the Project. • Nearly a third of complainants were from landowners located 8km or more from the closest proposed project turbine location.

Source: Ethos Urban and Willatook Wind Farm Pty Ltd, 2022

3.7.3 Moyne Shire Council Perspectives and Resolutions

Table 14 provides a list of key Moyne Shire Council resolutions regarding wind farms over the 2018-2020 period, which are classified in relation to key themes relevant to this SIA.

Table 14 Moyne Shire Council Resolutions Relating to Wind Farms

Theme	Key issues relevant to this assessment	Council meeting date
Transmission lines	• Council resolved to advocate on behalf of Moyne Shire residents to the Victorian Minister for Energy, Environment and Climate and the Minister of Planning to implement the recommendations from the National Wind Farm Commissioners report (March 2018) to ensure transmission lines, substations and other related electrical infrastructure be subject to appropriate and detailed planning permit requirements, as part of the overall planning permit of wind farm projects. They then requested that works be halted on any new and proposed transmission lines until planning permit requirements were implemented.	24 April 2018
	• Council resolved to request the Minister for Planning to ensure the State Government make immediate planning reforms to safeguard future planning and	26 June 2018

Theme	Key issues relevant to this assessment	Council meeting date
	development of wind farm transmission lines; specifically, the Victorian Regulatory and Planning Framework. After a workshop with key representatives, key concerns raised involved the lack of planning framework for wind farm transmission lines which may negatively impact local communities.	
	• Council adopted the position to write to the Minister for Planning to consider their request that given the significant number of wind farms that may be constructed in Moyne Shire in the future, that underground transmission lines be mandatory for all future wind farm projects in the Shire.	23 April 2019
Cumulative impact of wind farms	• Council resolved to oppose any further developments of wind farms in the region until recommendations from the National Wind Farm Commissioner's Report to Parliament (2017) are implemented. • Council also wrote to local members requesting an urgent meeting with the Planning Minister and concerned residents from Mortlake/ Hawkesdale to discuss cumulative impact of wind farms in the Shire and issues with transmission lines.	27 November 2018
	• Council resolved to reaffirm its existing position (from 27 November 2018 Council Meeting) regarding new wind farms in Moyne Shire and to seek further discussion with State Government to implement the recommendations of the National Wind Farm Commissioner's report.	5 August 2020
Setbacks	• Council resolved to request that the Minister for Planning consider amending Clause 53.32 in support of setback distances detailed in the 2018 Annual Report by the Office of the National Wind Farm Commission. These include: – A minimum setback of 1.5km from residents to the nearest turbine to support a consistent noise limit. – For turbines with a tip height greater than 200m, to have 2km setback to reduce visual and amenity impacts. • A 5km setback between wind farms and townships/city boundary to preserve amenity and provide flexibility for future planning growth.	24 Sept 2019
	• Council resolved to request the Minister for Planning that a 5km setback from the Hawkesdale town boundary be considered as part of the planning permit for the Hawkesdale Wind Farm. The Hawkesdale and District Development Action committee (HADDAC) were concerned about the proximity of the turbines to the Hawkesdale Township and requested that Moyne Shire oppose the Hawkesdale Wind Farm, especially in its current form.	28 July 2020
Community benefits	• Council provided facilitation of combined discussions between Global Power Generation, Woolnorth Wind Farms and Wind Prospect towards a more holistic approach to community funding and benefits from wind farms in Moyne Shire Council.	23 July 2019

Source: Moyne Shire Council

4 Social Impact Assessment

Having analysed the current social baseline for the development, this SIA sets out an assessment of social impacts arising from the Project and recommended responses, including measures to enhance social benefits and mitigate potentially negative impacts.

The SIA assesses impacts across the suite of factors set out through the selected SIA Framework (refer to section 2.4). A full explanation of the methodology applied in undertaking this assessment and the rating scale used is provided at section 2.4of this report.

The assessment has been based on the information available to date, and primarily represents a desktop study, informed by a review and analysis of publicly available documents relevant to the precinct, as well as information provided by the Proponent.

The assessment considers the potential impact on the community and social environment should the social impacts envisaged occur, compared to the baseline scenario of the existing use of the Project Site and social context.

This assessment also includes recommended responses to identified impacts, including both mitigation measures for potentially negative impacts and actions to enhance benefits.

4.1 Way of life

This section assesses: *People's way of life – that is, how they live, work, play and interact with one another on a day-to-day basis.*

Table 15 Impacts on Way of Life

Way of Life
Potential Impacts

The predominant existing way of life in the area is grazing and dairy agricultural activities, coupled with small community settlements.

It is understood that construction of the Project would occur over a two-year period and includes the installation/creation of up to 59 turbines and associated infrastructure (cables, substation), office, entry/exit points from local roads, a quarry and concrete batching plants (construction stage only), car parking, and internal access tracks. Construction would normally occur between specified hours; however, construction may occur outside of these hours in certain circumstances. An Environmental Noise Assessment and Transport Impact Assessment have been undertaken for the Project, which will further inform the extent of impacts and opportunities for mitigation / enhancement. The quality of the road network is an identified issue according to local policy.

The Project has an anticipated operational lifespan of approximately 25 years. The Project would be located approximately 6km from the existing Macarthur Wind Farm to the north and two wind farms (Hawkesdale and Woolsthorpe), approved but not yet constructed/operational) approximately 10km and 15km respectively to the east. An additional facility located approximately 17km to the south of the Project Site (Ryan Corner) is approved and may start construction in the near future.

The following analysis identifies social impacts on way of life taking into account community perspectives and provides enhancement / mitigation measures to minimise negative impacts and maximise benefits:

Construction Stage

- Construction activities may cause some dust, noise, vibrations, light pollution, and visual impacts (significant movement and activity at the site) disruptive to local way of life, albeit noting that the location of turbines is at least 1.5km from non-involved landowner dwellings. The scale of construction is considered substantial in the context of the site's rural setting, and therefore there is significant potential for some construction activities to impact on local way of life, particularly on surrounding landowners. The most significant impacts are likely to relate to blasting (quarry and foundations), traffic movements and stone crushing.
- Residences are sensitive receptors and therefore more vulnerable than some other land uses to impacts on how local people live, play, and interact with each other resulting from noise, dust, and vibrations associated with the construction stage, albeit as noted above wind turbines are located at least 1.5km from non-involved landowner dwellings. It is also noted that the COVID-19 Pandemic has fundamentally shifted how people use their homes, especially through increased working from home patterns; therefore, construction activities have more potential to temporarily impact on residents than in past times.
- Heavy vehicle movements associated with construction activities, particularly the transport of turbine blades, may disrupt normal patterns of movement, requiring temporary closures or diversions on local roads and/or resulting in increased traffic volumes on local roads, which may lead to deterioration of local roads and feelings of frustration and inconvenience among local residents and farmers, as well as increased travel times.
- The presence of the concrete batching plants and quarrying on the site would reduce the number of trucks moving to and from the site, in comparison to off-site batching for construction and therefore may have a mitigating impact on potential traffic impacts of construction activities.
- Construction of the facility will impact how people work through an increase and diversification of temporary local employment opportunities. It is anticipated that the construction phase will generate 185 FTE local/ regional jobs (direct and indirect) both on-site and throughout the broader regional economy.
- The Transport Impact Assessment was undertaken to measure the impact of project-related traffic on the local road network and surrounding communities. It determined that the construction period is going to be the most intense period of site activity, with most traffic located on Woolsthorpe-Heywood Road and Tarrone North Road. At peak times, the Project is expected to contribute up to 299-359 vehicle movements per day along the Woolsthorpe-Heywood Road to the east of Tarrone North Road.

Way of Life

Operational Stage

- Operation of the Project will impact how people work through an increase and diversification of ongoing local employment opportunities. It is anticipated that the Project will generate 18 FTE local/regional ongoing jobs (direct and indirect).
- It is understood that that turbine infrastructure does not significantly disrupt other farming practices (grazing, dairy), and therefore farming activities will only be marginally impacted.
- The Transport Impact Assessment was undertaken to measure the impact of project-related traffic on the local road network and surrounding communities. In terms of operation, wind farms operate with limited staff and generate minimal traffic movements and therefore the assessment found that in the longer term the impact on local traffic and the road network is negligible. The presence of new and improved tracks between turbines may also facilitate more efficient movement around the site for residents/farmers, and for emergency vehicles.
- The wind farm may impact way of life should farmers and residents within and around the site change their patterns of movement or the ways in which they work, live, and play to accommodate or avoid shadow flicker (during daytime hours). Shadow flicker has been raised as a concern by community members. The design is intended to minimise shadow flicker. This issue was investigated in the Shadow Flicker Assessment, which finds shadow flicker impacts above guideline limits will not occur for any non-participating landholders (that is, landholders who are not wind farm host landholders or landholders that have entered into a formal agreement with the Proponent).
- Residences are sensitive receptors and therefore more vulnerable than some other land uses to impacts on way of life resulting from the operational stage.
- For those landowners located in the northern portion of the site and areas north of the site near the existing Macarthur Wind Farm, the location of the Project may result in noise and visual impacts that are cumulative (or exacerbated) in nature. By the time that the Project would be constructed, this may also be true for landowners in the eastern area of the site and surrounds due to the anticipated future wind farms to the east; however, the impact is likely to be less as the wind farms are located further away (approximately 10km). The Environmental Noise Assessment has identified that the level of noise generated by the wind turbines complies with required levels, including those residences located between existing and proposed wind farms, even when considering cumulative impacts. This Assessment noted that a dwelling between two wind farms cannot be downwind of both when considering how noise carries. The cumulative impact of Willatook Wind Farm when considered alongside the Ryan Corner, Hawkesdale and Woolsthorpe wind farms does not affect compliance with required noise levels.
- Landowners located at the south and west of the Project Site and surrounds are not yet as impacted by the presence of wind farms in the area and are therefore more likely to experience way of life impacts for the first time rather than cumulative impacts. Although there is a facility under construction to the south, it is located further from the Project Site than the other existing and approved wind farms, and cumulative impacts to way of life are therefore anticipated to be minimal.
- The Landscape and Visual Impact Assessment confirms that the proposed wind farm will not significantly change the character of the area and that from a technical perspective, there is limited cumulative visual impact. The Landscape and Visual Impact finds that the level of visual impacts is dependent on community perception of wind farms. Feedback from the community identifies potential visual impacts is a key community concern. The Landscape and Visual Impact Assessment technical study sets out the following findings:
  - The overall visual impact from the urban areas, townships and localities is assessed as nil - negligible for townships and low for localities.
  - Views from elevated vantage points and landscape features such as the former volcanos, national parks and state forests, coastal areas, and recognised culturally significant locations of Budj Bim National Park and Lake Condah would not be altered in any appreciable way by the Project.
  - The level of visual impact depends on community perceptions of wind farms. The report states that “some people who do not like the appearance of wind turbines. For these people, the visual and cumulative visual impact will always be high.”
  - Topography, vegetation and structures screen or filter most views of the Project from the nearby local townships of Hawkesdale and Macarthur. (From both townships, these views would already include the

Way of Life

turbines within the operating Macarthur Wind Farm). Broadwater would have clear views of the Project over farmland, whereas Orford would be somewhat screened by timber plantations.

- Project visibility would increase from locations along public roads within 3.0km of the Project, and where topography and vegetation would allow views across the landscape.
- Views from elevated vantage points and landscape features will not be altered by the Project due to distance, and screening afforded by topography and vegetation.
- Some neighbouring (non-involved) dwellings (and their private open space) were orientated to take in views of the landscape features (which would be disrupted by the Project). It was noted that many residences and farm buildings had established and extensive windbreaks and hedgerow building which were considered to be an effective mitigation measure.
- There is limited visual impact from the quarry as it will be located more than 3km from the nearest connected/paved local road and is temporary infrastructure only.

- The existence of wind turbines and their associated infrastructure may interfere with communications systems that use electromagnetic waves as a transmission medium (e.g., television, radio, and mobile reception). This may disrupt local residents' ability to communicate and recreate, and may also disrupt local business operations, including farming. However, it is understood that these impacts are likely to be minimal. The Electromagnetic Interference Assessment confirms that there will be differential impacts to different communication channels and networks including a potential risk of interference for television broadcasting and wireless internet, with a potential low risk of interference to radio broadcasting (FM) and mobile phones.
- The Aeronautical Impact Assessment confirmed that there will be some impacts to aerial aviation activities but that the overall risk is low. Obstacle lightings on the turbines will not be required as the risk to aviation is low and no additional mitigation strategies are required. The presence of a wind farm and its associated infrastructure may impact on aviation activities, including but not limited to, aerial safety, air traffic control equipment, aerial farming practices (such as spraying of pesticides), and aerial bushfire fighting practices (water bombing).
- The various proposed forms of compensation to site landowners, neighbours, and local community groups would deliver financial compensation, which may improve the ability and ease to which individuals and households are able to live, work and recreate on a daily basis.

Enhancement / Mitigation Measures

Baseline / regulatory mitigations already in place

- Construction should be managed through compliance with a Construction Management Plan (CMP). The CMP should include strategies to minimise potential negative impacts associated with construction activities, including noise, dust, and visual impacts.
- The CMP should incorporate findings and recommendations from the Transport Impact Assessment and Noise Impact Assessment reports, so as to mitigate identified potential impacts in line with best practice standards.
- Assessment of noise from construction activities and on-site quarrying will be subject to a separate Construction Noise and Vibration Management Plan (CNVMP).
- Transport related issues, such as traffic and deterioration of local roads will be dealt with through a separate Traffic Management Plan (TMP). Preparation of a detailed TMP will be required to outline specific traffic management measures across all work phases during construction and will include measures to minimise impacts to existing road users during works and to identify maintenance and rectification works during/ post construction.
- A Shadow Flicker Assessment has been completed for the Project. The maximum occurrence of shadow flicker at neighbour dwellings is less than the maximum in the Development of Wind Energy Facilities in Victoria Policy and Planning Guidelines (July 2021).

Further mitigations identified in other technical reports

- The Transport Impact Assessment identified that road upgrades, for example sections of Woolsthorpe-Heywood Road and other appropriate traffic measurements will suitably accommodate the increased traffic generated during the construction phase. The Project's team should explore opportunities for avoiding deterioration of local roads and opportunities to improve the network

Way of Life

- The Landscape and Visual Impact Assessment recommends that landscape screening be offered for residential dwellings within 6.0km of the site where there are views of a wind turbine. The Assessment also recommends that later stages of project planning consider the final design and siting of turbines, tracks, and other associated infrastructure to consider how infrastructure can be best sited to avoid/minimise potential negative impacts.
- The Shadow Flicker Assessment proposes that the effects of shadow flicker may be reduced through a number of additional mitigation measures such as the removal or relocation of turbines, the use of smaller turbines, installation of screen structures such as planting of trees to block shadows cast by the turbines, or the use of turbine control strategies which shut down when shadow flicker is likely to occur.
- An Electromagnetic and Communications Assessment considers the potential for communications interference from the turbines and strategies for mitigation. A number of strategies are identified including increasing tower strength, installing additional towers, redirecting towers/ antennas. The Assessment also identifies the preparation of a Preconstruction Assessment of Television Reception will be prepared prior to construction to assess potential impacts of the Project on television reception.

Additional recommended social mitigations

- Explore opportunities for partnerships to enhance potential positive impacts associated with job creation during the construction and operational stages. This may include partnerships with organisations such as South West TAFE to offer special apprenticeships and programs, or the development of a local procurement strategy or social procurement strategy for employment, to target disadvantaged groups in the employment market.
- Develop a Communications and Engagement Strategy (CES) that will outline an approach to communicating with landowners, surrounding residents and businesses, and other key stakeholders. The CES should seek to communicate key project milestones and timeframes and provide a mechanism for stakeholders and the community to provide further project input/feedback. During the construction stage, the CES should align with the CMP to provide a mechanism for landowners to communicate and collaborate with construction crews throughout construction.
- The CES could also include the following additional communication and engagement measures:
  - Engaging with residents adjacent to affected roads to discuss any concerns they have and how road safety can be maintained.
  - Specifying all heavy vehicles and over-dimensional vehicle haulage routes for all work stages and communicating related traffic and road network impacts to the affected communities well in advance
  - Consulting with local schools regarding bus routes and timetables to identify suitable windows for project inactivity (curfew times), or other measures to minimise or avoid impacts to school buses
- Develop a Complaints Management Procedure that would provide a range of avenues (e.g., direct phone number, email) for community members to express their concerns or ask questions, and would enable quick resolution of issues during construction such as impacted access to properties or dust or extreme noise.
- Prepare and implement a Bushfire Management Plan that identifies measures for design, defendable space, construction, water supply and access, awareness actions, preparedness levels and fire response procedures for the site.

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

4.2 Community

This section assesses: *Their community – its composition, cohesion, stability, character, services and facilities, how it functions and sense of place.*

Table 16 Impacts on Community

Community
Potential Impacts
A small, dispersed, rural community of 55 people lives in the Willatook area. The area is currently predominantly farmland, and the workforce is primarily agricultural. There are two approved wind farms located to the east of the site, and an existing operational wind farm to the north. The townships/ localities immediately surrounding the proposal site (Orford, Hawkesdale, Willatook) are all small-scale communities with small populations and shared commercial/community facilities. There are various forms of compensation proposed for site landowners, neighbours, and the community; landowners are anticipated to receive the largest direct compensation packages for hosting infrastructure on their property. The different proposed compensation packages are discussed in detail under the Health and Wellbeing theme. The following analysis identifies social impacts on community, taking into account local perspectives and provides enhancement / mitigation measures to minimise negative impacts and maximise benefits: **Construction Stage** • The construction phase is anticipated to bring approximately 180 FTE temporary construction-related jobs (on average) to the site, which would alter the community composition by resulting in a stronger presence of workers in the area, which would be a noticeable change to the community of 54 people in Willatook. These workers will potentially visit local businesses and interact with the local community on a day-to-day basis. Even a small influx of workers would significantly impact the size and composition of the surrounding townships/ localities given their small scale. • The relationship of the construction workers with local residents and farmers may result in a temporary impact to sense of place and how the community functions. Construction workers are likely to visit nearby local towns, for example for lunch or for day trips. Local business owners may welcome this change to the community due the flow on economic benefits. • The construction phase may impact sense of place due to changes in how the area looks and feels, with a temporary presence of construction equipment, materials, increased noise, and heavy vehicles. This may be perceived as a temporary, negative impact by permanent residents. **Operational Stage** • The disruption to sense of community from construction is expected to return to pre-construction levels during the operational stage. • As the area becomes increasingly populated by wind farms and transitions from a traditional rural farming community, changes to character and sense of place are likely as the area becomes more associated with wind farms and less associated with an undeveloped farmland and a rural character. • The Project presents opportunities for wind farm tourism, which may impact sense of place and local character by attracting visitors to the area. • Tourism opportunities and the location of a landmark renewable energy project may also present opportunities for new sources of community identity and pride. These impacts are likely to be cumulative considering the location (existing and approved) of at least 3 nearby wind farms. • The Project may impact community cohesion by creating divisions between those who support the Project and those who do not and between community members who have received different benefit scheme packages from the Project or no benefit compensation at all.
Enhancement / Mitigation Measures
Baseline/ regulatory mitigations already in place • Construction should be managed through compliance with a Construction Management Plan (CMP). The CMP should seek to manage impacts from construction associated with increased activity, noise, and movement at and around the site. **Additional recommended social mitigations** • Develop a Communication and Engagement Strategy that will outline an approach to communicating with landowners, surrounding residents and businesses, and other key stakeholders. The Strategy should explore

Community
opportunities to integrate ongoing workers with the community through partnerships with existing groups and/or through local events and activities. • Explore strategies to promote the tourism and employment opportunities arising from the Project in order to foster a transitioning community identity and sense of pride. • Encourage employees to become emergency services volunteers or get involved in local community groups. • Develop and implement a guideline that gives preference to local and regional residents and businesses, including incorporating local content requirements into key project contracts to maximise local employment opportunities. • Maintain close dialogue with Moyne Shire Council to identify opportunities to encourage social interaction between workers and the local community.

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

4.3 Culture

This section assesses: *Their culture – that is, shared beliefs, customs, values and stories, and connections to land, places, buildings.*

Table 17 Impacts on Culture

Culture
Potential Impacts
The Project Site is located in an area historically known for agricultural uses and contains some areas (four places) of Aboriginal cultural heritage significance. Consultation identified connections to history and existing land and farming uses in the community. It also identified strong community value on environmental sustainability and addressing climate change. The Aboriginal Cultural Heritage Assessment found that the none of the four identified Aboriginal places (within the Project Area) are likely to be impacted by works associated with the construction or ongoing operation of the wind farm. **Construction Stage** • Where cultural heritage is present at the site, the construction stage may pose risks of damaging or loss of this heritage through accidental damage. • Cultural connections to the land may be impacted by the land use change, which will begin during the construction stage, and continue into the operational stage. **Operational Stage** • There may be potential impacts to local communities' connection to land as a result of the changed landscape, which may lead to feelings of loss. • The Project also presents opportunities to exemplify community environmental values by contributing to government targets for renewable energy production and reduction of greenhouse gas emissions. • Cumulative effects to culture and connections may result from the Project and numerous other wind farms being delivered in the area, associated with the transition of not only this site, but the broader area from one that is predominantly agricultural in character to one that is characterised by a mix of wind farms and agricultural uses.
Enhancement / Mitigation Measures
Baseline/ regulatory mitigations already in place

Culture
• Construction should be managed through compliance with a Construction Management Plan (CMP) that is integrated with a Cultural Heritage Management Plan (CHMP) to mitigate/avoid damage or destruction of identified areas or objects of cultural heritage significance. As part of the CHMP, each registered place must be protected by the creation of clearly marked no-go zones, and an ongoing finds protocol should be developed and incorporated into the CHMP. **Additional recommended social mitigations** • Prepare a Communications and Engagement Strategy (CES) to consider initiatives to celebrate the site's history as well as its transition, such as through visual signage that communicates information about the Project and/or highlights local stories and reflects local values. • The CES should also include strategies for engaging with local community groups and Aboriginal organisations to understand and preserve cultural heritage, as well as strategies for engaging with local farmers to minimise disruptions to farming activities. • Provide pre-construction and ongoing education on-site staff (e.g., via inductions) regarding local community history (including Aboriginal and European cultural heritage) which describes current connection to land, as well as the more recent agricultural history and community information to encourage respectful behaviours, and enable workers to recognise Aboriginal and European heritage to prevent accidental damage and promote the speedy reporting of heritage discovery. • Maintain close dialogue with Moyne Shire Council to identify opportunities to encourage social interaction between workers and the local community.

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

4.4 Health and Wellbeing

This section assesses: *Their health and wellbeing – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity.*

Table 18 Impacts on Health and Wellbeing

Health and Wellbeing
Potential Impacts
Landowners who host wind turbines on their land are proposed to receive an annual payment as compensation. A Neighbour Benefit Sharing Program is also proposed for the Project which would include direct payments and construction payments to dwelling owners and energy cost offset payments to residents within 6 kilometres of a constructed wind turbine (excluding those hosting infrastructure on their property, who are compensated separately). In addition, there is currently an annual sponsorship on offer to fund local groups and organisations. This initiative is anticipated to cease when the Community Benefit Fund commences (anticipated at commencement of project operation), which will contribute funds to the local community each year. The mental and physical health of the community is a priority area for Council, with Moyne Shire residents experiencing higher rates of disease and mental health issues relative to Victorian averages. The following analysis identifies social impacts on health and wellbeing taking into account community perspectives and provides enhancement / mitigation measures to minimise negative impacts and maximise benefits: **Construction Stage** • Construction activities may cause some dust, noise, vibrations, light pollution, traffic on local roads, and visual impacts (significant movement and activity at the site) which may impact physical and mental wellbeing, for example by disrupting rest/sleep patterns temporarily, causing frustration and inconvenience.

Health and Wellbeing

- Residences are sensitive receptors and therefore more vulnerable than some other land uses to these impacts. It is also noted that the community is older than the Victorian average, which suggests higher likelihood of more potential health vulnerabilities.
- A small minority of the community may believe there are negative impacts to human health from living near wind turbines. The National Health and Medical Research Council (NHMRC) concluded in 2015 that there is no 'consistent evidence that wind farms cause adverse health effects in humans' after a comprehensive review of available evidence.[2] For some people, this misbelief about the negative impacts may cause changes to wellbeing, in the form of anxiety or worry, which may commence during the development or construction phase.
- Some nearby residents may also experience worry or anxiety that affects their wellbeing about the possibility of the wind farm impacting their property value. Urbis (2016) concluded in an NSW-focused review informed by national and international data that there was 'no impact or a limited definable impact of wind farms on property values'.[3]

Operational Stage

- The Environmental Noise Assessment confirms that the Project is compliant with the required noise levels. Any disruption experienced during construction that resulted in health or wellbeing impacts is expected to dissipate during operation.
- There is potential for improved health outcomes in the broader community over the longer term associated with increased availability of clean energy.
- It is anticipated that those residents who worried about the impacts of wind turbines on their health or the impact on their property value come to the realisation that neither of these negative impacts have come to pass, and their wellbeing returns to pre-construction levels.
- It is anticipated that wind turbines may generate noise which may impact the mental and physical health of the surrounding landowners by disrupting sleep/rest patterns and the quiet enjoyment of their properties. It is noted that the Environmental Noise Assessment confirmed that the Project will comply with the required regulatory noise levels. Some residents may be more sensitive to these changes than others.
- The visual prominence of wind turbines at the site may have negative mental wellbeing impacts for those who perceive their presence to be a blight on the previously uninterrupted landscape. The Landscape and Visual Impact Assessment determined that for people who do not like the appearance of wind farms, the visual and cumulative visual impact will always be high. The assessment also confirms that there are locations where dwellings and areas of private open space have been orientated to take in views of the landscape features, which will now feature wind turbines.
- The visual impact of turbines at the site as well as multiple other nearby wind farms may result in cumulative impacts to mental wellbeing of landowners and the community associated with the visual impacts among those who highly value views of uninterrupted landscapes.
- Shadow flicker may also contribute to negative mental wellbeing (during daytime hours). The Shadow Flicker Assessment confirms that high shadow flicker impacts will occur to some nearby properties, but will not exceed guideline limits at any non-participating properties (that is, landholders that are neither wind farm host landholders nor landholders that have entered into an agreement with the Proponent).
- It is noted the Electromagnetic and Communications Assessment confirms that there will be differential impacts to different communication channels and networks including a potential risk of interference for television broadcasting and wireless internet, with a potential low risk of interference to radio broadcasting (FM) and mobile phones. The Assessment confirms that the Project may cause interference to emergency services radiocommunications and mobile phone services, in the surrounding area, however further information from the operators of those services is required to determine the likely impacts.
- The existence of wind turbines and their associated infrastructure may interfere with communications systems that use electromagnetic waves as a transmission medium (e.g., television, radio, internet and mobile reception). This may disrupt local communications in an emergency and therefore pose risks to community health and wellbeing,

[2] *NHMRC Statement: Evidence on Wind Farms and Human Health*, National Health and Medical Research Council, July 2015, accessed via https://www.nhmrc.gov.au/about-us/publications/nhmrc-statement-evidence-wind-farms-and-human-health
[3] *Review of the Impact of Wind Farms on Property Values*, Urbis, 21 July 2016

Health and Wellbeing

however these disruptions are understood as likely to be minimal. It is noted that the EMI technical reports confirms there will be differential impacts to different communication channels and networks.

- Annual revenue to be generated for the local Council from the presence of the wind farm has significant potential to contribute to facilities, services, and programs for the area which may positively impact health and wellbeing of the overall community.

Enhancement / Mitigation Measures

Baseline/ regulatory mitigations already in place

- Construction should be managed through compliance with a Construction Management Plan (CMP). The CMP is to include strategies to minimise potential negative impacts associated with construction activities, including traffic, noise, light pollution, dust, and visual impacts.
- The CMP should be integrated with a Communications/Engagement Strategy during the construction stage to provide a mechanism for landowners and the community to communicate and collaborate with the Project's team throughout construction so that health and wellbeing impacts are effectively understood and minimised.
- The Environmental Noise Assessment identified that assessment of noise from construction activities and on-site quarry works will be subject to a separate assessment in a Construction Noise and Vibration Management Plan.

Further mitigations identified in other technical reports

- The Shadow Flicker Assessment identified a number of potential additional mitigation measures including the removal or relocation of turbines, the use of smaller turbines, installation of screen structures such as planting of trees to block shadows cast by the turbines, or the use of turbine control strategies which shut down turbines when shadow flicker is likely to occur.
- An Electromagnetic and Communications Assessment has been prepared and identifies a number of strategies for mitigation to prevent communications interference from the turbines. Potential mitigation strategies included increasing tower strength, installing additional towers, and redirecting towers/ antennas. The assessment also propose the preparation of an Assessment of Television Reception prior to construction to assess potential impacts of the Project on television reception and to identify any potential mitigation measures.
- A number of technical studies recommended additional measures to avoid/ minimise visual amenity impacts (which could be then related to potential health and wellbeing impacts). These relate to consideration of the final design and siting of turbines, tracks, and other associated infrastructure.

Additional recommended social mitigations

- Prepare a Communications and Engagement Strategy (CES) to include strategies to promote community understanding, including evidence that wind turbines do not impact human health and are likely not to affect property values, and participation in the compensation programs proposed for neighbours, and the broader community during the construction and operational stages. The CES should also include a Complaints Management Procedure that would provide a range of avenues (e.g., direct phone number, email) for community members to express their concerns or ask questions.
- Implement a Bushfire Management Plan that identifies measures for design, defendable space, construction, water supply and access, awareness actions, preparedness levels and fire response procedures for the site.

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

4.5 Environment and Amenity

This section assesses: *Their environment and amenity – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources.*

Table 19 Impacts on Environment and Amenity

Environment and Amenity
Potential Impacts

The existing environment is a quiet, rural setting generally characterised by small-scale grazing and dairy agricultural properties and associated dwellings. Apart from the existing Macarthur Wind Farm, existing noise, light, and air pollution in the area is understood to be typically minimal. The existing road network is identified by some members of the community as in need of upgrades/repairs.

The following analysis identifies social impacts on environment and amenity taking into account community perspectives and provides enhancement / mitigation measures to minimise negative impacts and maximise benefits:

Construction Stage

- Construction activities may cause some dust, vibrations, noise and light pollution, and visual impacts (significant movement and activity at the site) that impacts the overall amenity of the area, potentially resulting in decreased air quality, disruption of quiet, and decreased visual amenity. In particular, the quarry may result in significant impacts to air quality, dust, vibrations, and noise levels. During night hours, light pollution is likely to be limited to the workers' compound.
- Residences are sensitive receptors and therefore more vulnerable than some other land uses to environment and amenity impacts. The COVID-19 Pandemic has fundamentally shifted how people use their homes, especially through increased working from home patterns; therefore, construction activities have more potential to temporarily impact on residents' amenity than in past times.
- The one-off construction payment would deliver financial compensation which may improve ability of site neighbours to improve the amenity of their land.

Operational Stage

- The visual prominence of wind turbines at the site may negatively impact the amenity of the area from the perspective of those landowners and community members who perceive their presence to be a blight on the previously uninterrupted landscape. The Landscape and Visual Impact determines that for people who do not like the appearance of the wind farm, the visual and cumulative visual impact will always be high.
- It is noted the Landscape and Visual Impact Assessment technical study sets out the following findings:
  - The overall visual impact from the urban areas, townships and localities is assessed as nil – negligible for townships and low for localities.
  - Views from elevated vantage points and landscape features such as the former volcanos, national parks and state forests, coastal areas, and recognised culturally significant locations of Budj Bim National Park and Lake Condah would not be altered in any appreciable way by the Project.
  - The level of visual impact depends on community perceptions of wind farms. The report states that "some people who do not like the appearance of wind turbines. For these people, the visual and cumulative visual impact will always be high."
  - Topography, vegetation and structures screen or filter most views of the Project from the nearby local townships of Hawkesdale and Macarthur. (From both townships, these views would already include the turbines within the operating Macarthur Wind Farm). In terms of localities, Broadwater would have clear views of the Project over farmland, whereas Orford would be somewhat screened by timber plantations.
  - Project visibility would increase from locations along public roads within 3.0km of the Project, and where topography and vegetation would allow views across the landscape.
  - Views from elevated vantage points and landscape features will not be altered by the Project due to distance, and screening afforded by topography and vegetation.
  - Some neighbouring (non-involved) dwellings (and their private open space) were orientated to take in views of the landscape features (which would be disrupted by the wind farm).
  - The prevalence of timber plantations, extensive and established windbreaks and hedgerow plantings were effective measures to mitigate the visual impacts of the turbines to many people in the general area.

Environment and Amenity

  - There is limited visual impact from the quarry as it will more than 3km from the nearest connected/paved local road and is temporary infrastructure only.

- Shadow flicker (during daytime hours) from turbines may also contribute to negative amenity impacts for landowners at the site and its immediate surrounds. The Shadow Flicker Assessment confirms that a number of participating landowners and neighbour dwellings will experience theoretical shadow flicker, although this will be under the guideline limits.
- During night hours, there is also potential for limited impacts to visual amenity resulting from lighting at the site, and on occasions when maintenance is required at particular wind turbines. These impacts are considered to be minimal.
- The existing landscape, including significant volcanic or other landforms, may be altered, or their features altered, to accommodate project infrastructure. From the perspective of some community members this may impact the environmental values of the site.
- The potential impacts of turbines at the site in addition to a number of other nearby wind farms may result in cumulative impacts to environment and amenity from the perspective of some landowners and community members, particularly those who highly value biodiversity and the existing landscape.
- Some community members may be concerned that potential changes to the landscape will result in changes to local flora and fauna. Specifically, they may be concerned that the presence of a significant number of turbines at the site may pose a risk to the local population of brolga and bats, which may collide with the infrastructure, or potentially resulting in habitat loss, and therefore impacting the biodiversity of the area. Both the Brolga and Flora and Fauna Assessments determined that impacts of the turbines on the local avifauna will be low:
  - The Brolga Assessment confirmed that the local brolga population is very small and the potential impacts of brolgas colliding with the turbines was very low. The Assessment also found that potential impacts to the local brolga population have been minimised through the establishment of turbine-free buffers around breeding sites, foraging areas and roosting areas and movement corridors.
  - The Flora and Fauna Assessment confirmed that all listed species recorded were unlikely to be impacted significantly by the development resulting from the current development footprint and proposed design and mitigation measures. The report also confirmed that bats have a low risk of collision with the wind turbines.
- Annual revenue generated for the local Council from the presence of the wind farm has significant potential to improve amenity of the area through investment in community infrastructure and programs.
- The various proposed forms of compensation to site landowners, neighbours, and local community groups may facilitate works and projects which improve the amenity of their properties and the general community.
- The Environmental Noise Assessment found that the noise generated by the wind farm (and associated infrastructure) will comply with the required levels.
- The Aeronautical Impact Assessment confirmed that aviation obstacle lighting will not be required on the wind turbines and therefore there will be no impact to neighbouring properties.

Enhancement / Mitigation Measures

Baseline/ regulatory mitigations already in place

- Construction should be managed through compliance with a Construction Management Plan (CMP). The CMP is to include strategies to minimise potential negative impacts associated with construction activities, including traffic, noise, dust, and visual impacts.
- The CMP should incorporate findings and recommendations from the Transport Impact Assessment and Environmental Noise Assessment reports so as to mitigate identified potential impacts in line with best practice standards.
- The CMP should be integrated with a Communications and Engagement Strategy during the construction stage to provide a mechanism for landowners and the community to communicate and collaborate with the Project team throughout construction so that amenity impacts are effectively understood and minimised.

Further mitigations identified in other technical reports

- Later stages of project planning that consider the final design and siting of turbines, tracks, and other associated infrastructure should consider how infrastructure can be best sited to avoid/minimise potential negative impacts to

Environment and Amenity
the environment and amenity during the operational stage, including appropriate buffer distances from dwellings. The technical studies recommended a number of mitigation measures to address these issues through design, including the following: − The Landscape and Visual Assessment recommends that landscape screening be offered to residential dwellings within 6 km of the site where there are views of a wind turbine. − The Flora and Fauna Assessment recommends that all wind farm infrastructure be placed at appropriate distances from likely habitats of some species (including the Swamp Skink, the Dwarf Galaxias, Yarra Pygymy Perch, the Growling Grass Frog). The Study also recommends realignment of tracks and power cabling, micro siting of infrastructure and creation of buffers has been used to mitigate any negative impacts. − The Shadow Flicker Assessment identified a number of mitigation measures including the removal or relocation of turbines, the use of smaller turbines, installation of screening structures of planting of trees to block shadows cast by the turbines, or the use of turbine control strategies which shut down turbines when shadow flicker is likely to occur. − The Brolga Assessment recommends turbine - free buffers, and improvements to Brolga breeding wetlands. **Additional recommended social mitigations** • Develop a Decommissioning Strategy for the site to facilitate its rehabilitation/ adaptive reuse as farmland or natural environment. Also consider opportunities to utilise the revenue generated (or as part of the Community Benefit Fund) from the Project for habitat restoration or other environmental initiatives. • Develop a Complaints Management Procedure that would provide a range of avenues (e.g., direct phone number, email) for community members to express their concerns or ask questions during the construction and operational phases of the Project. • Provide free vegetation screening for affected community members (within 6km of the site). The screening would be planted prior to or during construction. • Further consultation with affected residents to identify other a site-specific visual impact management to be implemented.

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

4.6 Decision-Making Systems

This section assesses: *Their decision-making systems – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose.*

Table 20 Impacts on Decision-Making Systems

Decision-Making Systems
Potential Impacts
The Project team has also appointed a dedicated local Community Engagement Officer, and their contact details are provided on the Project website. **Development Stage** • The 10 year plus development stage of the Project has included the ongoing involvement of the local community and potential participating landholders, in order to ensure the Project aligns with community expectations, and enable participation in decision-making whenever possible. • A Community Engagement Committee was established in 2010 to facilitate ongoing discussions between the Project team, Moyne Shire, and the community. The Project team has also conducted a number of public engagement activities since 2010, including door-knocking, an online survey, and information sessions.

Decision-Making Systems

- In late 2021, the Project's design was reduced from 75 turbines to 59 turbines. The design addresses environmental, social and engineering considerations and input from participating landowners.

Construction Stage

- There will be limited opportunities to participate in local decision-making processes as the approval of the wind farm will have been finalised by the Minister of Planning prior to construction. This may result in some community members feeling disappointed or like they are unable to influence their community, particularly if they opposed the wind farm.
- The Complaints Management Procedure will enable nearby residents to notify the project team of issues and concerns related to construction impacts like changed access, dust, or access needs associated with farming. This will provide the community with a clear process to resolve issues and feedback to the project team. This will go some way in enabling community members to influence and manage negative impacts during construction.

Operational Stage

- The Project has potential to deliver on values and interests that the community has already identified through previous engagement processes, including addressing climate change and creating training and employment opportunities.
- Annual revenue generated for the local Council from the presence of the wind farm has potential to strengthen the decision-making power and capabilities of Moyne Council to deliver on projects and programs for the community, such as improvements to local infrastructure, e.g., road upgrades.
- The various proposed forms of compensation will provide individuals and households with funds to use at their discretion.

Enhancement / Mitigation Measures

Baseline/ regulatory mitigations already in place

None

Additional recommended social mitigations

- Prepare a Communications and Engagement Strategy to provide a mechanism for landowners and the general community to communicate and collaborate with the Project team throughout construction phase of the Project. This should be prepared alongside a Construction Management Plan to ensure that the construction process is informed by those impacted. It should also:
  - Include regular project updates and provide opportunities for the community to share feedback throughout the Project's life cycle.
  - Include initiatives to promote community understanding and participation in the compensation programs proposed for neighbours and the community during the construction and operational stages.
  - Build on the engagement activities undertaken to date and take into consideration the needs and aspirations of the community that have already been explored, as well as existing relationships and networks within the community. Visits to the site with local residents, community groups, and other organisations throughout the operation stage may help build relationships and community ownership of the Project and ensure ongoing engagement with landowners and other stakeholders.
  - Include the preparation of a Complaints Management Procedure that would provide a range of avenues (e.g., direct phone number, email) for community members to express their concerns or ask questions.
- Consider how community-led involvement in how the Community Benefit Fund would be set-up, managed and spent to promote positive community benefit. Ongoing dialogue with community is critical - it is noted that genuine community engagement can mitigate social conflict[4] and will help create a fit-for-purpose Community Benefit Fund that really benefits the local community.

[4] 'Inadequate consultation and engagement with the community was described as a key process that has contributed to social conflict around wind farm development in Australia.' *Exploring community acceptance of rural wind farms in Australia: a snapshot*, Nina Hall, Peta Ashworth and Hylton Shaw, CSIRO Science into Society Group, 2012, p.64

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

4.7 Personal and Property Rights

This section assesses: *Their personal and property rights – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties.*

Table 21 Impacts on Personal and Property Rights

Personal and Property Rights
Potential Impacts
A total of 16 landowners would have turbines and/or associated infrastructure located on their properties as a result of the Project. Landowners are to receive payments (compensation) each year for the presence of the infrastructure, and neighbours and the community are eligible for the Neighbour Benefit Sharing Program. **Construction Stage** • Construction that disrupts farming activities may thereby impact the prosperity and economic livelihood of farming properties. However, it is understood that these impacts are likely to be minimal. • Some nearby residents may also experience worry or anxiety that affects their wellbeing about the possibility of the wind farm impacting their property value. Urbis (2016) concluded in an NSW-focused review informed by national and international data that there was 'no impact or a limited definable impact of wind farms on property values'.[5] **Operation Stage** • Some landowners have consented to the infrastructure on their land and will receive financial payments. Other landowners in proximity to the site have not played a role in the decision-making process, however, have been informed of the Project and provided with the opportunity to participate. • Properties may be impacted or perceived to be impacted by the issues raised in previous sections. A financial compensation scheme has been put in place in relation to this. • There is a perception from some landowners that the presence of the proposed wind farm, or the cumulative impact of the proposed wind farm alongside several others, has the potential to negatively impact on property values. However, research from the US, UK, and Australia indicates that property values are influenced by a range of factors and are not necessarily impacted by the presence of nearby wind farms.[6] • The Project may influence economic advantage and disadvantage in the area through the various compensation packages for landowners and the community.
Enhancement / Mitigation Measures
Baseline/ regulatory mitigations already in place None **Additional recommended social mitigations** • The Neighbourhood Benefit Sharing Program (including the Community Benefit Fund) has been proposed by the Proponent in regard to impacts to eligible dwellings.

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

[5] *Review of the Impact of Wind Farms on Property Values*, Urbis, 21 July 2016

[6] General, N.V., 2009. Preliminary assessment of the impact of wind farms on surrounding land values in Australia. Hoen, B., Brown, J.P., Jackson, T., Wiser, R., Thayer, M. and Cappers, P., 2013. A spatial hedonic analysis of the effects of wind energy facilities on surrounding property values in the United States (No. LBNL-6362E). Lawrence Berkeley National Lab. (LBNL), Berkeley, CA (United States). Laposa, S. and Mueller, A., 2010. Wind farm announcements and rural home prices: Maxwell ranch and rural Northern Colorado. Journal of Sustainable Real Estate, 2(1), pp.383-402. Sims, S. and Dent, P., 2007. Property stigma: wind farms are just the latest fashion. Journal of Property Investment & Finance.

4.8 Fears and Aspirations

This section assesses: *Their fears and aspirations – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.*

Table 22 Impacts on Fear and Aspirations

Fears and Aspirations
Potential Impacts

Previous engagement undertaken to inform local policy as well as the activities undertaken by the Project team have identified a range of community needs and aspirations relevant to the Project. There is generally community support for increasing and diversifying employment and education and training opportunities and for enhancing tourism in the area. There is also a sense of community pride in the local area's growing number of wind farms and the key role it plays in renewable energy in the State and reducing emissions.

However, there is also some apprehension to change and growing concern regarding the potential cumulative impacts of wind farms in the area for those who live nearest the existing and approved sites. Feedback collected by the project team from site landowners and neighbours indicates that support for the Willatook Wind Farm is mixed, and some landowners are concerned about visual, noise, and other negative impacts. It should be noted that the clear majority of health-related complaints received by the Australian Energy Infrastructure Commission are in relation to proposed, rather than operating wind farms.[7]

The following analysis identifies social impacts on fears and aspirations taking into account community perspectives and provides enhancement / mitigation measures to minimise negative impacts and maximise benefits:

Construction Stage

- The construction period will be the most intense period in terms of site activity and movement. Construction activities may create feelings of fear in some members of the community about the level of change occurring, for example visual changes to the landscape or natural environment, or increased traffic, or more broadly related to changing sense of community and place. In others, increased construction activity might create a feeling of optimism with the possibility for the generation of local jobs. Some of the fears expressed about wind farms may stem from broader cultural or ideological concerns related to regional development and character, which will not be resolved by this project alone, and instead are driven by much broader socio-economic change across society.[8]

Operational Stage

- The presence of a wind farm and its role in addressing climate change and providing local education and training and employment opportunities reflects community needs and aspirations identified in local policy (*Moyne Shire Environmental Sustainability Strategy*), which will be a positive impact for some in the Moyne community, and more broadly for those with a particular interest in the climate and renewable energy.
- Enhancing tourism is also a local aspiration which the wind farm could support and further.
- There is growing fear and apprehension around potential cumulative impacts of wind farms in the area, which may be exacerbated by this project. Moyne Shire resolved to oppose further wind farm development in 2018 until the recommendations in the National Wind Farm Commissioners 2017 annual report were implemented in the Victorian context. Moyne Shire forms a large proportion of the South West Victoria candidate Renewable Energy Zone (REZ). There are five operational wind farms, two under construction, three with permits but not yet constructed and three seeking permits or in the feasibility stage. If all these wind farms proceed, the Shire will host approximately 800 turbines, covering over 12 % of Moyne Shire's land area.[9] It is noted, however, that the Council's position may not represent the views of all residents in the Shire.
- There is potential for ongoing impacts to perceptions of safety in the area related to blade throwing or other accidents/incidents involving the turbines and their associated infrastructure.

[7] 'Numerous invitations have been extended to complainants to provide evidence of their medical conditions (due to wind turbines). Complaints regarding health concerns received by the Office have, in the main, provided only anecdotal evidence regarding stated health issues and perceived causality.' *Health Matters,* Australian Energy Infrastructure Commissioner, 2020, accessed via https://www.aeic.gov.au/observations-and-recommendations/health-matters

[8] 'The reasons for opposition by some participants suggest that wind farms proposals are triggering a range of underlying cultural or ideological concerns which are unlikely to be addressed or resolved for a specific wind farm development. These underlying issues include pre-existing concerns that rural communities are politically neglected by urban centres, commitment to an anti-development stance, and opposition to a 'green' or 'climate action' political agenda.' exploring community acceptance of rural wind farms in Australia: a snapshot, Nina Hall, Peta Ashworth and Hylton Shaw, CSIRO Science into Society Group, 2012, p.11

[9] Energy Projects, Moyne Shire Council, https://www.moyne.vic.gov.au/Your-Council/Advocacy/Energy-projects

Fears and Aspirations
• There is some concern/fear relating to the impacts of electromagnetic waves on other technical systems as well as on individuals, which the Project may exacerbate. Technical assessments completed for the Project confirm these impacts will be negligible to low. • There is some concern/fear for potential impacts to flora and fauna, particularly the vulnerable bird population, resulting from the wind turbines and associated infrastructure which the Project may exacerbate. Brolga and Flora and Fauna Assessments confirmed the likelihood of impacts to local Brolga and bird populations was low. • Annual revenue generated for the local Council from the Project has significant potential to enable Moyne Shire Council to deliver on community interests and aspirations, particularly helpful in a broader context of rate capping and unprecedented emergency spending related to the COVID-19 Pandemic since 2020. • The various proposed forms of compensation to site landowners, neighbours, and local community groups would deliver funds that would enable individuals, households, and groups to pursue their interests and aspirations, which is also a positive contribution to economic wellbeing within the context of the economic turmoil since the start of the COVID-19 Pandemic in 2020.
Enhancement / Mitigation Measures
Baseline/ regulatory mitigations already in place • Construction should be managed through compliance with a Construction Management Plan (CMP). The CMP is to include strategies to minimise potential negative impacts associated with construction activities as well as safety measures to ensure risks to landowners, workers, and the community are avoided/minimised. **Additional recommended social mitigations** • Prepare a Communications and Engagement Strategy (CES) that would address the following: − Provide a mechanism for landowners and the general community to communicate and collaborate with the Project's team throughout construction. − Promote community understanding and participation in the compensation programs proposed for neighbours and the community (Neighbourhood Benefit Sharing Program and Community Benefit Fund). This would build upon the engagement activities undertaken to date and take into consideration the needs and aspirations of the community that have already been explored, as well as existing relationships and networks within the community. − Develop a Complaints Management Procedure that would provide a range of communication avenues (e.g., direct phone number, email etc.) for community members to express their concerns or ask questions. • Engage with residents adjacent to affected roads to discuss any concerns that they have and how road safety can be maintained. • Implement a Bushfire Management Plan that identifies measures for design, defendable space, construction, water supply and access, awareness actions, preparedness levels and fire response procedures for the site. • Develop arrangements for community-led involvement in how the Community Benefit Fund would be set-up, managed and allocated.

Refer to Table 24 for Social Significance Rating including a summary of impacts 'without mitigation', along with an assessment of residual impacts following the implementation of responses and opportunities identified.

4.9 Summary of Mitigations

Table 23 below includes mitigation measures associated with other disciplines (such as traffic and transport, noise and vibrations, landscape and visual etc.) that influence social impacts, as well as other additional mitigation measures identified in the social impact assessment (section 4.1 to 4.8 above).

Table 23 Summary of Mitigations

Responses, Mitigations and Management Strategies	Social Factor
Baseline/ Regulatory Measures	

Responses, Mitigations and Management Strategies	Social Factor
Construction Management Implementation of a Construction Management Plan which would include the development of relevant management plans and measures to manage amenity related impacts, including noise, dust and visual impacts. It will also incorporate findings and recommendations from the Transport Impact Assessment and Noise impact Assessment reports. A Construction Noise and Vibration Management Plan would also be required.	Way of Life Health and Wellbeing Environment and Amenity Fears and Aspirations
Traffic Management Implementation of a detailed Traffic Management Plan would outline specific traffic management measures across all work phases during construction and will include measures to minimise impacts to existing road users during works and to identify maintenance and rectification works during/ post construction. <u>Required mitigations:</u> • Communicating related traffic and road network impacts to the affected communities well in advance as part of the required Traffic Management Plan. <u>Additional traffic management measures could include:</u> • Exploring opportunities for avoiding deterioration of local roads and identifying opportunities to improve the road network. • Specifying all heavy vehicles and over-dimensional vehicle haulage routes for all work stages. Complaints about traffic management will be managed through a complaints management process, outlined below under the Communications and Engagement Strategy. This process will enable the Project to respond quickly should traffic changes cause inconvenience to landholders or road users.	Way of Life Environment and Amenity
Shadow Flicker The maximum allowance of shadow flicker at neighbouring dwellings is set out in the Development of Wind Energy Facilities in Victoria Policy and Planning Guidelines (July 2021). <u>Additional measures (as identified in the Shadow Flicker Assessment) would be implemented and include:</u> • The removal or relocation of turbines, the use of smaller turbines, the installation of screen structures of planting of trees to block shadows cast by the turbines. • The use of turbine control strategies which shut down when shadow flicker is likely to occur.	Way of Life Health and Wellbeing Environment and Amenity
Environmental Several mitigation measures as identified in the technical studies (including Flora and Fauna Assessment and Brolga Assessment) would be implemented and include: • Locating all wind farm infrastructure be placed at appropriate distances from likely habitats of some species (including the Swamp Skink, the Dwarf Galaxias, Yarra Pygmy Perch, the Growling Grass Frog • Realignment of tracks and power cabling and micro siting of infrastructure • Creation of buffers • Improvements to Brolga wetlands.	Way of Life Environment and Amenity

Responses, Mitigations and Management Strategies	Social Factor
Communications and Emergency Management Several mitigation measures as identified in the Electromagnetic and Communications Assessment considers the potential for communications interference from the turbines and recommends the following strategies for mitigation would be implemented: • Increasing tower strength • Installing additional towers • Redirecting towers/ antennas • Preparing a Preconstruction Assessment of Television Reception to identify any further mitigation measures required.	Way of Life Health and Wellbeing Fears and Aspirations
Cultural Implementation of a Cultural Heritage Management Plan (CHMP) would be required to mitigate/avoid damage or destruction of identified areas or objects of cultural heritage significance. As part of the CHMP, each registered place must be protected by the creation of clearly marked no-go zones, and an ongoing finds protocol should be developed and incorporated into the CHMP.	Culture
Additional Social Mitigation	
Decommissioning / Environmental A Strategy would be developed for the decommissioning of the site to facilitate its rehabilitation/ adaptive reuse as farmland or natural environment. Opportunities to use the revenue generated from the Project or as part of the Community Benefit Fund would support other environmental initiatives and habitat restoration.	Environment and Amenity
Communications and Engagement Implementation of an overarching Communications and Engagement Strategy to facilitate ongoing consultation between the Proponent and the broader community. The Strategy will: • provide an approach for ongoing engagement with the broader community about the long-term benefits and opportunities of the Project • outline how the proponent will maintain a stakeholder database throughout the life of the Project to assist identifying and resolving project issues experienced by stakeholders efficiently, to put stakeholder ease of communication and issue resolution at the heart of stakeholder relations • outline procedures and mechanisms for the regular distribution of accessible information about or relevant to the Project • identify opportunities to provide timely, useful and accurate information regularly about construction activities, schedules and milestones • include measures to notify affected landowners and neighbours about any specific construction issues with direct impacts on properties well in advance (e.g., traffic management, out-of-hours work) and how they can easily reach the Project team with questions • detail the mechanisms for advising the community in advance of upcoming works (where necessary) and how the Proponent will work with community to mitigate the negative impacts of construction whenever possible • be reviewed and adapted based on community feedback so that the communications and engagement approach is fit for purpose and meets the needs of the community. The Proponent will develop a Complaints Management Procedure within the Strategy that will provide a range of avenues (e.g., direct phone number, email) for community members to express their concerns, flag the impacts of disruptions and work with the Project team to find solutions to disruptions, or ask questions. A complaints management procedure will:	Way of Life Community Culture Health and Wellbeing Environment and Amenity Decision Making Systems Fears and Aspirations

Responses, Mitigations and Management Strategies	Social Factor
• Outlines the process for making and recording complaints • Provide a range of avenues (e.g., direct phone number, email) for community members to express their concerns or ask questions • Specifies response and resolution procedures to ensure timely responses are provided to complaints raised • Outline roles and responsibilities within the Project team for the receipt, handling and escalation of complaints • Outlines how community members can escalate their concerns should they not receive a response that meets their expectations. The Strategy would also build on the engagement activities undertaken to date and take into consideration the needs and aspirations of the community that have already been explored, as well as existing relationships and networks within the community (discussed in 'building community partnerships section below'). Consultation will continue to be carried out with the affected landholders to understand their preferences for mitigation and management measures to be used during construction. It is recognised that the community will best know the local issues, and understand what mitigation measures will meet their needs as construction approaches. Some additional measures will include: • Consulting with local schools regarding bus routes and timetables to identify suitable windows for project inactivity (curfew times), or other measures to minimise or avoid impacts to school buses • Proactively engaging with highly impacted landholders through one-on-one methods like kitchen table sit downs or phone calls to discuss upcoming disruptions and how they can be managed minimise impacts when possible • Holding regular meetings with neighbouring residents to discuss any issues or concerns • Engaging with local farmers to minimise disruptions to farming activities, and creating a forward plan for managing disruptions around farming cycles • Maintaining the Project website to provide up-to-date information on the status of the Project during construction and operation, as well as provide a means for the community to contact the Project's team. The proponent has undertaken additional consultation with highly impacted landowners via landscape and visual dwelling assessments (at 25 neighbouring non-involved dwellings). They continue to provide opportunities for stakeholder input and engage with landholders likely to be highly impacted.	
Community Benefits Implementation of the Proponent's proposed Neighbourhood Benefit Sharing Program and Community Benefit Fund to promote community understanding and make a positive contribution to communities around the Project. The key objectives of the Program are to: • Give back to the local community in recognition of the important role they play in hosting the Project • Create community benefits and provide positive social outcomes aligned with the needs and aspirations of the Project's local community. Further engagement with the affected communities will be carried out to determine how the Neighbourhood Benefit Sharing Program, and in particular the Community Benefit Fund would be set up, managed and spent. Details of the Program and are discussed in more detail in section 1.2 of this report. It is recognised that the local community will be best placed to make decisions about the initiatives that would best meet their needs and aspirations, and the Proponent is open to any reasonable suggestion as to how the Program and Fund should be focused.	Way of Life Environment and Amenity Decision Making Systems Personal and Property Rights Fears and Aspirations

Responses, Mitigations and Management Strategies	Social Factor
Cultural Several mitigations would be implemented to minimise potential impacts to culture during the construction and operation phases of the Project. These could include the following: • Ongoing engagement with the local community and Aboriginal organisations to explore ways in which connections to local cultural heritage can be preserved and enhanced. • Celebrating the site's history as well as its transition, for example using visual signage that communicates information about the Project and/ or highlights local stories and reflects local values. • Incorporation of high quality pre-construction and ongoing education of on-site staff (e.g., via inductions) about Aboriginal history and current connection to land, as well as the more recent agricultural history and community information to encourage respectful behaviours. • Maintaining close dialogue with Moyne Shire Council to identify further opportunities to encourage social interaction between workers and the local community.	Culture
Emergency management Implementation of a Bushfire Management Plan would be outline measures for design, defendable space, construction, water supply and access, awareness actions, preparedness levels and fire response procedures for the stie, to address any concerns relating to bushfire risk.	Way of Life Health and Wellbeing Fears and Aspirations

Establishing connections with the local community
A number of mitigations outlined below would be used to enhance positive benefits to community cohesion and connection between landowners, surrounding residents and businesses and workers:
• Integrate ongoing workers with the community through partnerships with existing groups and/ or through local events. A community building opportunity register will be developed prior to construction commencement to guide and record these efforts, as part of the Communications and Engagement Strategy.
• Hosting visits to the site with local residents, community groups, and other organisations throughout the operation stage to help build relationships and community understanding and ownership of the Project and ensure ongoing engagement with landowners and other stakeholders.
• Develop strategy that outlines how the Project will promote the tourism and employment opportunities arising from the Project in order to foster a transitioning community identity and sense of pride.
• Encourage workers (both construction and ongoing) to become emergency services volunteers or get involved in local community groups, with an employment environment that enables flexibility around volunteering opportunities
• Develop partnerships with businesses, local employment agencies, training and education providers to maximise local employment and contract opportunities. These potential partnerships will be listed in the community building opportunity register. Measures could include:
  ○ Partnering with education and training organisations such as South West TAFE to offer special apprenticeships and programs
  ○ Developing a local procurement strategy for employment or contracts that gives preference to local and regional residents and businesses, including incorporating local content requirements into key project contracts to maximise local employment opportunities. This strategy will also highlight social procurement opportunities, where spending on goods and services and hiring of some personnel can be used to help disadvantaged groups. For example, spending with social enterprises or Aboriginal businesses, or hiring apprentices from disadvantaged backgrounds.
	Way of Life
	Community

Responses, Mitigations and Management Strategies	Social Factor
• Maintaining close dialogue with Moyne Shire Council to identify opportunities to encourage social interaction between workers and the local community. The approach to updating and working with Council will be outlined in the Engagement Strategy, informed by Councill's preference for how they like to receive information and work with the Project.	
Visual Surroundings Several additional visual mitigation measures as identified in the Landscape and Visual Impact Assessment are relevant for managing visual impacts for the community's surroundings. This would include free vegetation screening for residential dwellings within 6.0km of the site where there are views of a wind turbine. This screening would be planted prior to or during construction. Depending on when people apply to have this assessed, it is likely that the screening may not be fully grown (and therefore effective) during the construction phase. Further consultation to identify site-specific visual impact assessment may be required for some affected residents.	Way of Life Environment and Amenity

4.10 Social Impact Ratings

The following Table 24 provides a summary of social impacts 'without mitigation' along with an assessment of residual impacts with mitigation. Refer to section 2.4 for a more comprehensive explanation of this approach.

Table 24 Impact Ratings

Impact	Impact Dimensions			Potential Impact without Mitigation[10]				Potential Impact with Mitigation				Avoidance, minimisation or enhancement approach	Significance of residual impact
	Period	Duration	Extent	Likelihood	Magnitude	Social Significance Rating	Experience	Likelihood	Magnitude	Social Significance Rating	Experience		
Way of Life													
Amenity impacts associated with construction activities including noise, vibrations, light pollution, visual impacts. Some changes to daily activities associated with heavy vehicle movements may cause potential disruptions to residents/ landowners. Impacts also relating to the incoming construction workforce.	Construction	Temporary	Site Area, Primary Study Area	Likely	Moderate	**High**	Negative	Likely	Minor	**Medium**	Negative	Disruption to way of life may still be experienced, but negative impacts can be ameliorated, and sensitivities reduced through effective communication. The Communications and Engagement Strategy would include processes to clearly inform communities in advance about planned construction works (e.g., out of hours work, traffic management etc). It would also include a complaints management system to ensure that the community is able to provide feedback on the effectiveness of mitigation measures. Proactive communications and engagement will ensure disruptions are not a surprise, so that routines can be planned.	Potential impacts to daily life and usual routines due to changes in activity surrounding the wind farm. This will impact landholders in the primary study area for the duration of construction activities.
Potential changes to daily activities in terms of how residents live and move around the Project Site. Impacts are likely to be experienced differently by landowners/ residents. For example, some residents to the north and east of the site may be affected by the cumulative impacts from the existing and/ or proposed wind farms whereas other landowners are likely to experience impacts for first time rather than cumulative impacts. Potential changes to work associated with more diverse local employment opportunities.	Operation	Ongoing	Site Area, Primary Study Area	Possible	Moderate	**Medium**	Negative or Positive	Possible	Moderate	**Medium**	Negative or Positive	Additional measures such as regular meetings with neighbours and residents to discuss concerns, and appropriate visual screening is likely to mitigate to some extent, however potential negative impacts are likely to be experienced by some stakeholders during the operation phase, including peaceful enjoyment, farming activities, communication and recreation.	Potential impacts to daily life and usual routines due to changes in activity surrounding the wind farm. This will impact landholders in the primary study area for the duration of operation of the project. However, over time sensitivity to impacts may decrease. It is also noted those landholders who will principally experience the impact are all participating landholders (either hosting turbines or have landholder agreements).
Community													
Potential impacts to community character and sense of place, associated with influx of construction workers in a relatively low population area.	Construction	Temporary	Primary and Secondary Study Area	Likely	Moderate	**High**	Negative	Possible	Moderate	**Medium**	Negative	Disruption to community due to potential changes in character due to construction and the influx of unfamiliar workers can be ameliorated to an extent through social mitigation measures (see Table 23 for description). Some sensitivities as the level of change could be heightened during the construction phase of the Project. The Community Benefit Fund could assist in providing community input into projects that provide long term benefit to the community.	Potential changes to sense of place and community character associated with a new population. This will impact communities in the primary and secondary study areas for the duration of construction activities. Residents of the PSA will experience the most concentrated impact, whereas it will be less noticeable across the SSA.
Potential impacts to community composition and sense of place as it becomes more associated with wind farms and less associated with rural character and farming. Potential impacts to community cohesion resulting in project creating	Operation	Ongoing – 25 years	Primary and Secondary Study Area	Likely	Moderate	**Medium**	Negative	Possible	Moderate	**Medium**	Negative	Opportunity to somewhat mitigate the potential negative ongoing impacts and enhance the positive benefits of the proposed wind farm by ensuring measures to maintain cultural connection, values and stories to the site and area, as well as measures to foster connections between workers and the existing community. See	Potential impacts to community composition and cohesion due to a new workforce and differences in perceptions of wind energy/differences in compensation. However,

[10] Note that without mitigation refers to without specific social mitigation measures that are above and beyond standard impact mitigation that will be in place.

Impact	Impact Dimensions			Potential Impact without Mitigation[10]				Potential Impact with Mitigation				Avoidance, minimisation or enhancement approach	Significance of residual impact
	Period	Duration	Extent	Likelihood	Magnitude	Social Significance Rating	Experience	Likelihood	Magnitude	Social Significance Rating	Experience		
divisions between those that support the Project and those that do not, as well as between community members that have received different compensation packages from the Project (or none at all).												Table 23 for description of potential social mitigation measures.	over time sensitivity to these impacts may decrease in the PSA in particular. It is expected any divisions created during the development and construction phase will abate over time. The cumulative impact of the broader development of numerous renewable energy projects across the SSA is more notable – the project itself will not have a significant impact on Moyne Shire, but the cumulative impacts of many renewables project may impact community cohesion.
Culture													
Potential impacts to Aboriginal and European cultural heritage on site, as a result of construction activities, however this is unlikely. Note that the Aboriginal Cultural Heritage Assessment found that none of the four identified Aboriginal places within the Project Area are likely to be impacted by works associated with the construction or ongoing operation of the wind farm.	Construction	Temporary	Primary and Secondary Study Area	Unlikely	Minimal	**Low**	Negative	Unlikely	Minimal	**Low**	Negative	A complaints management systems will ensure that the community is able to provide feedback on any potential impacts to cultural heritage during the construction phase. Implementation of all protocols set out in the Cultural Heritage Management Plan (CHMP).	Potential impacts to culture associated with disrupted access to Aboriginal sites of significance. This will impact communities in the primary secondary study area for the duration of construction activities. However, there is a low chance of any interaction with cultural heritage due to project layout and strict CHMP protocols.
Potential impacts to local community connection to land and culture resulting from land use change from traditional farming. Potential cumulative effects to culture and connections may result from the Project and numerous other wind farms being delivered in the area, associated with the transition of not only the site, but the broader area from historical agricultural uses to a wind energy hub.	Operation	Ongoing	Secondary Study Area	Possible	Moderate	**Medium**	Negative	Possible	Moderate	**Medium**	Negative	There is potential to mitigate some potential negative impacts by maintaining and celebrating cultural connections to the land. Opportunities to minimise changes to community culture via local storytelling or art projects, which could be funded through the Community Benefit Fund. Some sensitivities could remain – particularly in relation to concern from some residents/ landowners about the transition of the site, as well as the broader area, from historical agricultural uses to a perceived concentration of wind farms.	Potential impacts to culture and connection to place associated with the change in land use. This may be exacerbated by other renewable energy projects in the region. This will impact communities in the secondary study area for the duration of operation of the project, though this project alone will not make a significant long-term impact on community connection to land.
Health and Wellbeing													
Potential wellbeing impacts associated with aspects of construction activity (e.g., dust, noise, vibrations, light pollution traffic on local roads, and visual impacts).	Construction	Temporary	Primary Study Area	Possible	Minimal	**Low**	Negative	Possible	Minimal	**Low**	Negative	The Communication and Engagement Strategy would to some extent mitigate potential negative impacts associated with construction activity by ensuring clear and effective communications – for example notifying residents in advance about planned works. In addition, the complaints handling process will ensure community feedback on potential construction impacts	Potential for mental and physical wellbeing impacts for immediately surrounding landowners associated with visual and noise impacts of the wind turbines. This will impact landholders in the primary study area for the duration of construction

Impact	Impact Dimensions			Potential Impact without Mitigation[10]				Potential Impact with Mitigation				Avoidance, minimisation or enhancement approach	Significance of residual impact
	Period	Duration	Extent	Likelihood	Magnitude	Social Significance Rating	Experience	Likelihood	Magnitude	Social Significance Rating	Experience		
												are followed up and mitigation measures are reviewed and amended if required.	activities. It is also noted those landholders who will principally experience the impact are all participating landholders (either hosting turbines or have landholder agreements).
Potential mental and physical wellbeing impacts for immediately surrounding landowners associated with visual and noise impacts of the wind turbines. Potential concern about impacts to health and safety (e.g., access to emergency services, noise disturbance) though this is considered to be unlikely in practice. Potential for improved health outcomes in the broader community associated with increased access to clean energy from wind project, as well as additional revenue to contribute to community services, and variation forms of financial compensation being offered to landowners, neighbours and community groups.	Operation	Ongoing	Primary Study Area, Secondary Study Area	Possible	Minimal	**Low**	Negative and Positive	Possible	Minimal	**Low**	Negative and Positive	Visual and noise impacts during the operational stage have some potential to be mitigated through design and siting. Landscaping which provides visual screening, which is above and beyond regulatory measures, will also assist with this, however it is possible that there will be some residual impact for some landowners. Potential disruptions to communications/ emergency safety due to electromagnetic waves have limited potential to be mitigated however it is understood these are likely to be minimal. Table 23 also recommends preparation of a Bushfire Management Plan to ensure adequate fire response procedures for the site.	Potential mental and physical wellbeing impacts for immediately surrounding landowners associated with visual and noise impacts of the wind turbines. This will impact landholders in the primary and secondary study areas for the duration of operation of the project. However, over time sensitivity to some perceived or feared wellbeing impacts may decrease. Those landholders who will principally experience the negative impact are all participating landholders (either hosting turbines or have landholder agreements).
Environment and Amenity													
Potential for reduced amenity in the local area due to the establishment of the construction site- visual, noise, vibration impacts, traffic etc.	Construction	Temporary	Primary Study Area	Likely	Moderate	**High**	Negative	Likely	Moderate	**High**	Negative	Some disruption to environment and amenity is likely to be experienced, but to some extent negative impacts can be ameliorated and sensitivities reduced through effective communication and responsive issues and complaints management. The Communications and Engagement Strategy will include processes to clearly inform communities in advance about planned construction works (e.g., out of hours work, traffic management etc). It will also include a complaints management system to ensure that the community is able to provide feedback on the effectiveness of mitigation measures.	Potential amenity impacts on enjoyment of surroundings associated with noise, vibration and traffic. This will impact landholders in the primary study area for the duration of construction activities. The most impacted residents in the PSA will be participating and host landholders. Impacts to them have been explained as part of ongoing consultation to form the landholder agreements.
Amenity impacts associated with potential visual prominence of turbines, potential shadow flickers and blade glint, light pollution. Some cumulative amenity impacts associated Individuals may perceive negative impacts to the environment and amenity, particularly for those that value the existing landscape. Potential changes include to local flora and fauna (such as local brolga population), and changes to landforms and features.	Operation	Ongoing	Primary and Secondary Study Area	Possible	Moderate	**Medium**	Negative	Possible	Moderate	**Medium**	Negative	Visual and noise impacts during the operational stage have some potential to be mitigated through appropriate design and siting. Some sensitivities could remain – particularly for some residents/ landowners that perceive a negative change to the landscape or experiencing cumulative visual/ noise impacts from existing wind farms. Impacts can be somewhat mitigated or enhanced as a result of the Neighbourhood Benefit Sharing Program for directly affected landowners.	Potential amenity impacts on enjoyment of surroundings due to changes to the existing landscape, light pollution, and shadowing. This will impact communities in the primary and secondary study areas for the duration of operation of the project. PSA residents will be impacted to a greater degree than SSA residents. Over time, residents are

Impact	Impact Dimensions			Potential Impact without Mitigation[10]				Potential Impact with Mitigation				Avoidance, minimisation or enhancement approach	Significance of residual impact
	Period	Duration	Extent	Likelihood	Magnitude	Social Significance Rating	Experience	Likelihood	Magnitude	Social Significance Rating	Experience		
													likely to become habituated to the changed nature of the landscape.
Decision-Making Systems													
Individuals may perceive some negative impacts regarding their ability to influence decision making, related to the approval of the wind farm and throughout the construction phase.	Construction	Temporary	Primary Study Area and Secondary Study Area	Possible	Minimal	**Low**	Negative	Possible	Minimal	**Low**	Negative	Over the development phase, the proponent conducted significant community and stakeholder engagement to enable community to inform the project design and layout. The Communication and Engagement Strategy would provide clear process to inform communities in advance about planned construction works. Potential adjustment could be mitigated through close consultation and clear communication with communities through the complaints management process.	Potential impacts on ability to be involved in local decision making associated with the planning and approval process. This will impact communities in the primary and secondary study areas for the duration of construction activities. PSA residents are likely to feel the impact more acutely.
Project may have positive impact on individuals, households and the broader community through additional rates revenue and compensation schemes, for those landholders who elected to participate either as a host or participating landholder.	Operation	Ongoing	Primary Study Area	Possible	Minimal	**Low**	Positive	Possible	Minimal	**Low**	Positive	As above, the Communications Strategy would ensure effective communication with the community to support the community through changes and to manage any potential negative impacts. Opportunities to offset potential negative impacts and maximise potential longer-term benefits could be achieved through the Neighbourhood Benefit Sharing Program, and specifically the Community Benefit Fund. Wherever possible, proactively seeking contribution to shaping project decisions, such as the format and focus of the Community Benefit Fund, to allow the community to participate in decisions.[11]	Potential benefits associated with increased revenue and compensation. This will impact landholders in the primary study area for the duration of the operation of the project. With the increasing difficultly of farming the land due globalisation, climate change and changing rural populations, an ongoing economic benefit will be a significant impact for PSA participating landholders for the 25 years of operation.
Personal and Property Rights													
Individuals may perceive negative impacts in relation to construction activities impacting the prosperity and economic livelihood of farming properties. Positive impacts include the increase and diversity of local construction jobs.	Construction	Temporary/ Ongoing	Primary Study Area	Possible	Moderate	**Medium**	Negative and Positive	Possible	Minor	**Medium**	Negative and Positive	The development of a Communications and Engagement Strategy which highlights the opportunities for local job creation, will mitigate potential negative impacts. Additional measures such as developing partnerships between local employment agencies, businesses and landowners will also demonstrate positive benefits of the Project.	Potential impacts to livelihoods associated with changing property prices, disruption to farm activity, and availability of local employment. This will impact landholders in the primary and secondary study areas for the duration of construction activities. Participating landholder will be principally impacted.
Individuals may fear or perceive negative impacts in relation to the project, or cumulative impacts of wind farms in area, to property prices and disrupting farming activities. Individuals may also perceive positive impacts in relation to increased long term employment opportunities and economic advantage resulting from	Operation	Ongoing	Primary Study Area and Secondary Study Area	Possible	Minor	**Medium**	Negative and Positive	Possible	Minor	**Medium**	Negative and Positive	As above, the Communications and Engagement Strategy will somewhat mitigate potential negative impacts by highlighting opportunities for local job creation. The Neighbourhood Benefit Sharing Program to affected landowners will offset potential negative impacts to individual properties, as well as the broader community (as part of the Community Benefit Fund).	The perceived or feared impacts related to changed property prices may not come to pass, meaning the impact will dissipate over time. Disruption to farm activity and availability of local employment will ensure over the operation of the project.

[11] Exploring community acceptance of rural wind farms in Australia: a snapshot, Nina Hall, Peta Ashworth and Hylton Shaw, CSIRO Science into Society Group, 2012

Impact	Impact Dimensions			Potential Impact without Mitigation[10]				Potential Impact with Mitigation				Avoidance, minimisation or enhancement approach	Significance of residual impact
	Period	Duration	Extent	Likelihood	Magnitude	Social Significance Rating	Experience	Likelihood	Magnitude	Social Significance Rating	Experience		
the various compensation packages available for landowners and the community.													This will impact landholders in the primary and secondary study areas for the duration of operation of the project.
Fears and Aspirations													
Potential concerns and aspirations related to perceived changes to the local area and community sense of place and belonging. Some concern about potential safety risks associated construction activities. Some landholders will experience positive impacts due to establishment of participating landholder agreements that align with economic aspirations.	Construction	Temporary	Primary and Secondary Study Area	Likely	Moderate	**High**	Negative and Positive	Possible	Moderate	**Medium**	Negative and Positive	Concerns about transformation of the area could be reduced through effective communication with the community through social mitigation measures (outlined in Table 23 for description).	Potential fears associated with perceptions of drastic change and local safety. This will impact landholders in the primary and secondary study areas for the duration of construction activities. Perceptions of safety may improve over construction, with the delivery of all appropriate safety measures.
Potential community fear associated with cumulative impacts of other wind farms occurring in area and associated fatigue. Also concerns relating to impacts associated with electromagnetic waves, impacts to local flora and fauna, perceptions of safety. Positive aspiration for contribution of the wind farm to address climate change, increase local jobs and provide tourism opportunities. Some landholders will experience positive impacts due to realisation of economic benefits that support aspirations.	Operation	Ongoing	Primary and Secondary Study Area	Possible	Moderate	**Medium**	Negative and Positive	Possible	Minor	**Medium**	Negative and Positive	Concerns about transformation of the area could be reduced through effective communication with the community (as provided by the Communication and Engagement Strategy) and include consultation and information on longer term positive benefits (see Table 23 for additional social mitigation measures). Opportunities to offset impacts and maximise potential longer term social outcomes could be achieved through the Community Benefit Fund.	Potential fears associated with the increased presence of wind farms in the region. This will impact landholders in the primary and secondary study areas for the duration of operation of the project. Likewise aspirations will be realised in relation to economic benefits for PSA landholders for the duration of operation.

5 SIA Conclusions

This SIA has considered a broad range of potential impacts arising from the construction and operation of the Project, with these impacts identified principally through the stakeholder consultation process. Key potential impacts identified are:

- Noise and visual amenity impacts
- Access for emergency services
- Impact on agriculture activities
- Impact on the natural environment, in particular impacts to avifauna
- Cumulative impacts
- Impact on land values.

Using the IAIA Social Impact Assessment Guidelines each impact has been assessed against specific social factors**,** taking into account the findings of completed specialist technical reports and the ease (or otherwise) of mitigating potential impacts.

Overall, the SIA indicates a range of positive and negative social impacts.

Key impacts identified include:

- Temporary negative impacts to way of life, community, culture, health and wellbeing, environment and amenity associated with construction activity.
- Potential impacts to environment and amenity, culture and way of life associated with the operation of the proposed Project, particularly the cumulative noise and visual impacts resulting from the nearby existing and approved wind farms.
- Social benefits of the proposal relate to the opportunities for local job generation and training opportunities from the construction and operation phases.
- The overall long-term benefits include the contribution to the local economy and use of renewable energy to help address climate change.

The social mitigation measures recommended (which are above and beyond baseline/ regulatory mitigations) include, but are not limited to, the following:

- Development and implementation of a Communications and Engagement Strategy including Complaints Management Procedure.
- Implementation of the Proponent's proposed Neighbour Benefit Sharing Program.
- Partnership building between the Proponent and businesses, employment agencies, training and education providers to maximise local employment and contract opportunities.
- Engagement between local community groups, landowners, surrounding residents, business and workers to enhance social connections and community cohesion.
- Exploring opportunities with local community groups and Aboriginal organisations to preserve and maintain local connections to cultural heritage.

6 Economic Context

The objectives of this EIA are:

- To highlight potential local and regional economic benefits arising from the Project
- To identify potential negative impacts associated with the Project
- To recommend mitigation measures to minimise potential negative impacts and maximise potential benefits.

The following methodology has been applied across Chapters 6 and 7:

- Identification of a relevant Study Area for the assessment
- Review of policies that influence investment in the renewable energy sector
- Analysis of population, labour markets, occupational structure and business structure
- Assessment of the capacity of townships in the Study Area to participate and service the Project
- Assessment of Project investment
- Assessment of Project employment (direct and indirect) for construction and operational phases
- Identification of business and industry participation opportunities
- Assessment of agricultural impacts
- Assessment of accommodation and housing impacts
- Assessment of impacts on property values
- Assessment of cumulative impacts
- Estimates of economic stimulus impacts (construction and operation phases)
- Description of proposed mitigation measures.

The following key data sources and references have been uses in compiling this EIA:

- ABS Average Weekly Earnings, May 2021
- ABS Business Counts, June 2020
- ABS Census of Population and Housing, 2016
- ABS Household Expenditure Survey, 2015-16
- ABS Tourism Accommodation, 2015-16
- Airbnb and Vrbo databases, April 2021
- Australian Energy Market Operator – 2020 Integrated System Plan, 2020
- Australian National Accounts: Input-Output Tables, 1998-99
- Cordell Connect databases, 2021
- Department of Employment – Small Area Labour Markets, December Quarter, 2020
- Department of Environment Water Land and Planning – Victoria in Future, 2019
- The Paris Agreement – United Nations, 2015

- Urbis – Impact of Wind Farms on Property Prices, 2016
- Victorian Government – Climate Change Strategy, 2021
- Victorian Government – Payment in Lieu of Rates (PiLoR), 2018
- Victorian Government – Victorian Renewable Action Plan, 2016
- Victorian Government – Victorian Renewable Energy Auction Scheme, 2017
- Victorian Government – Victorian Renewable Energy Target Auction (VRET2), 2021
- Willatook Wind Farm Pty Ltd (the Proponent) – various information as identified throughout the EIA
- www.bing.com
- www.willatookwindfarm.com.au/contractors

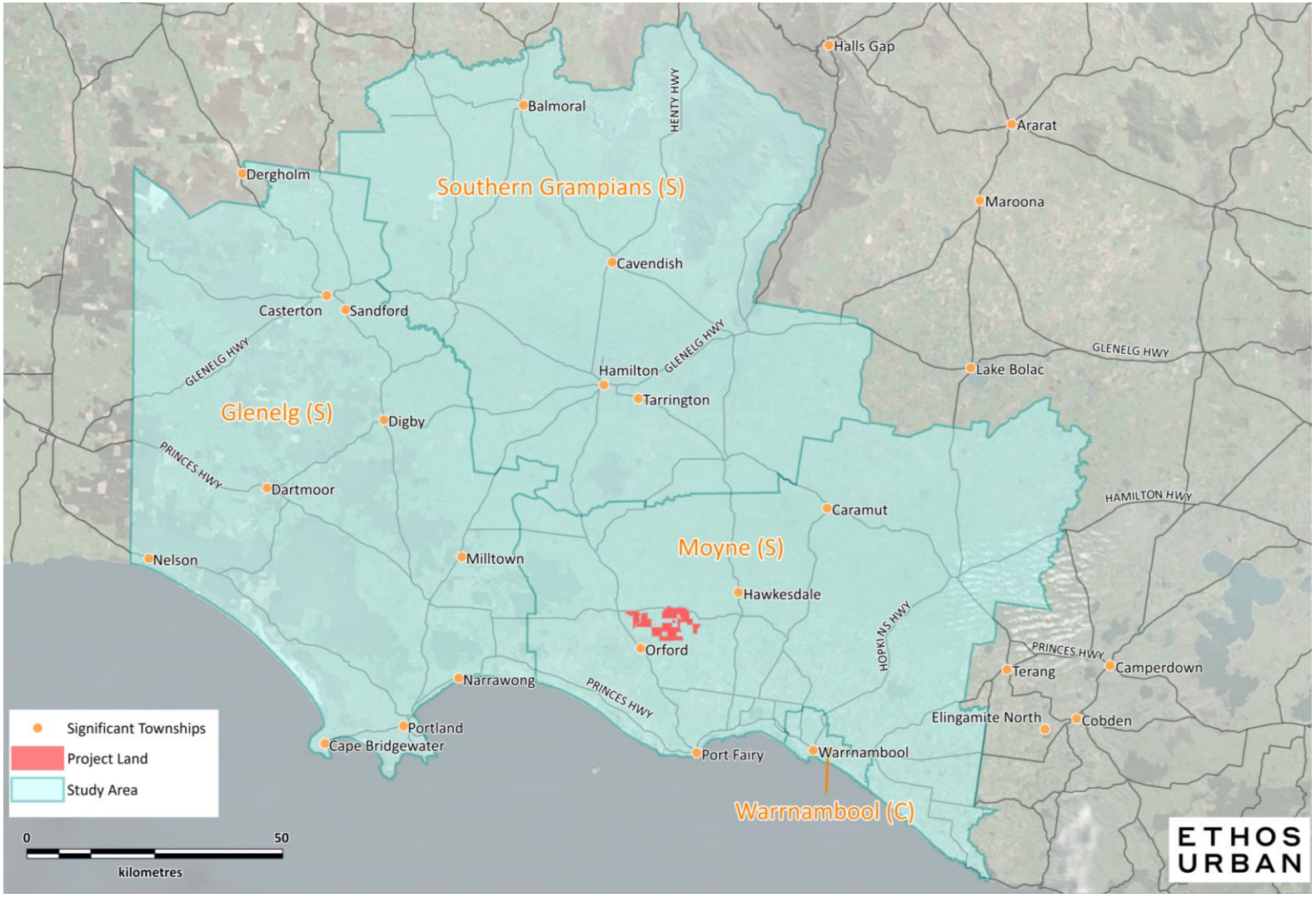
6.1 Study Area Definition (Economic)

The Study Area for the Project is defined as the Local Government Areas (LGAs) of Moyne Shire (in which the entire site is located) and the surrounding LGAs of Southern Grampians Shire (to the north), Warrnambool City Council (to the south-east) and Glenelg Shire Council (to the south-west). These LGAs are likely to derive most economic benefits from the Project, including locations such as Port Fairy, Warrnambool, Hamilton and Portland. This Study Area is illustrated in Figure 10.

For the purposes of this report local benefits and impacts refer to those associated with Moyne Shire, especially townships and settlements/localities such as Willatook, Orford, Hawkesdale, Macarthur, Koroit, and Port Fairy.

Regional benefits refer to those occurring in the remainder of the Study Area i.e., Glenelg Shire, Southern Grampians Shire and Warrnambool City.

Figure 10 Willatook Wind Farm Study Area (Economic)



Source: Willatook Wind Farm Pty Ltd and Ethos Urban with MapInfo

6.2 Policy Context

International agreements and government policy settings are important factors in influencing demand and investment in the renewable energy sector, as noted below.

The Paris Agreement

The Paris Agreement (2015) is a comprehensive international climate agreement to which Australia is a party. The Paris Agreement provides a framework for participating nations to set themselves nationally-determined contributions (NDCs), beginning in 2020 with review at five-year intervals. The agreement sets out a global consensus to limit temperature increases to below two degrees Celsius when compared to pre-industrial levels; an additional goal is to maintain this increase at less than one and a half degrees Celsius. NDCs do not have any set lower limit but are required to progress over time (beginning with the intended NDC pledged during the Paris conference), and to be 'ambitious'.

Australia's current targets are a reduction of emissions by five percent from 2000 levels by 2020, and by 26-28 percent below 2005 levels by 2030.

Victorian Renewable Energy Action Plan

The Renewable Energy Action Plan (REAP) sets out how Victoria will ensure a renewable, affordable and reliable energy supply, which uses large-scale renewable energy technology and ensures grid stability. Implementation of the REAP will support Victoria's pathway from a carbon-intensive to net zero emissions energy sector by 2050, with renewable energy generation targets set for 25% by 2020 and 40% by 2025.

The Action Plan focuses on the following key areas:

- Supporting sector growth
- Empowering communities and consumers
- Modernising our energy system.

The Victorian Government has since increased the Victorian Renewable Energy Target (VRET) to 50 per cent by 2030. The increased target of 50% by 2030 has been legislated in the Renewable Energy (Jobs and Investment) Act 2017 (Vic).

The Victorian Government established the Victorian Renewable Energy Auction Scheme in 2017 (VREAS) to support achievement of the VRET. Successful projects were announced in September 2018, with the VREAS supporting the installation of 930 MW of solar and wind generating facilities. The VRET 2020 target has now been successfully met.

The VRET 2 reverse auction (currently in process) is expected to deliver at an additional 600 MW of large scale renewable energy projects (which now include BESS facilities) in the short term, marking a significant contribution toward reaching Victoria's renewable energy target of 50% by 2030. As part of the bidding criteria, successful projects must be constructed and fully operational no later than 30 December 2024. Successful bidders are expected to be announced by mid-2022. While VRET 2 does not mandate projects to be located within a Renewable Energy Zone (see below), projects located in areas where the grid has the ability to withstand disturbances and has network capacity are preferred.

Victorian Renewable Energy Zones

In late 2020, the Victorian Government announced a $1.6 billion clean energy package (through the 2020–21 State Budget), to invest in renewables, grid infrastructure, energy efficiency and decarbonisation projects, including $540 million to establish six Renewable Energy Zones (REZs).

The Victorian Government, through its Climate Change Strategy, has committed to reduce emissions by 28% to 33% by 2025 and 45% to 50% by 2030, to help keep Victoria on track to meet our target of net-zero emissions by 2050.

With electricity generation accounting for more than half of Victoria's carbon emissions, the transition to clean energy is vital to achieve these climate change targets. The development of REZs is key to this energy transformation.

By identifying REZs, the Victorian Government aims to target investment towards strengthening the transmission network in Victoria to enable an orderly and coordinated transition to renewable energy and engage with local communities to ensure that they benefit from REZs.

Strategic investment in REZs provides a lower cost and faster way of delivering new generation to the system – helping to accelerate the process of decarbonisation and deliver affordable and reliable power.

The Victorian Government will develop the REZs to:

- ensure that communities, including Traditional Owners, are engaged in the process
- provide for the orderly, planned development of renewable energy resources
- efficiently and effectively expand the grid and connect new generation
- reduce network congestion and costs

The Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP) identified the following six Victorian REZs:

- Central North
- Gippsland
- Murray River
- Ovens Murray
- South West
- Western Victoria

The Project Site is located in the South West REZ.

6.3 Population and Demography

The population of the Study Area is forecast to reach 88,610 persons as by June 2021, with Warrnambool City accounting for 40% (35,720 persons) of the total (Victoria in Future 2019). As Table 25shows, over the period 2021-2036 population levels in the Study Area are expected to expand by a modest 0.3% per annum (pa) to 92,740 persons, driven by population expansion in Warrnambool City (0.7% pa) and Moyne Shire (0.7% pa). Population declines of 0.3% pa and 0.5% pa are projected for the shires of Glenelg and Southern Grampians respectively over the coming 15 years. Between 2021 and 2036, population growth for the Study Area is forecast to be significantly lower than Regional Victoria (1.3%) and Victoria (1.6%).

Table 25 Population – Study Area, 2021-2036

Municipality	2021	2036	Change 2021-36	AAGR 2021-36
Glenelg (S)	19,580	18,760	-820	-0.3%
Moyne (S)	17,210	19,030	1,820	0.7%
Southern Grampians (S)	16,100	15,030	-1,070	-0.5%
Warrnambool (C)	35,720	39,930	4,210	0.7%
Study Area	**88,610**	**92,740**	**4,130**	**0.3%**
Regional Victoria	**1,641,120**	**1,986,620**	**345,500**	**1.3%**
Victoria	**6,861,920**	**8,722,770**	**1,860,840**	**1.6%**

Source: *DEWLP Victoria in Future 2019*
Notes: *AAGR = Annual Average Growth Rate*
Figures rounded

6.4 Labour Force

As of December 2020 (latest available), the Study Area had an unemployment rate of 3.2%, which is significantly below the rate for Victoria of 6.4% even allowing for the impacts of COVID-19; in particular, unemployment in the Moyne Shire Council area is notably low at just 2.5% indicating a tight local labour market.

As Table 26 shows, in December 2020 the Study Area had a labour force totalling approximately 48,566 persons, including approximately 1,575 persons who were unemployed.

Table 26 Labour Force – Study Area, December 2020

Municipality	Employed	Unemployed	Total Labour Force	Unemployment Rate
Glenelg (S)	10,034	417	10,451	4.0%
Moyne (S)	9,273	233	9,506	2.5%
Southern Grampians (S)	8,429	266	8,695	3.1%
Warrnambool (C)	19,255	659	19,914	3.3%
Total Study Area	**46,991**	**1,575**	**48,566**	**3.2%**
Victoria	**3,332,800**	**228,500**	**3,561,300**	**6.4%**

Source: *Department of Employment, Small Area Labour Markets – December Quarter 2020.*
Note: *Figures rounded.*

6.5 Occupational Structure

The skills base of the Study Area is reflected in its occupational structure, as shown in Table 27.
ABS Census data for 2016 (latest available) shows 35% of Study Area workers (13,450 workers) were occupied in activities generally associated with the types of skills required for the construction of a wind farm (i.e., technicians and trades workers, machinery operators, drivers and labourers).
The Study Area's representation in these occupations is significantly higher than the State average of 28%, indicating a suitable occupational base exists to support the proposed project.

Table 27 Occupational Structure – Study Area, 2016

	Glenelg Shire		Moyne Shire		Southern Grampians Shire		Warrnambool City		Study Area		Victoria
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	***No.***	***%***	***%***
Managers	1,300	16.0%	2,130	28.0%	1,610	22.5%	1,600	10.4%	**6,640**	**17.3%**	**13.8%**
Professionals	1,110	13.6%	1,080	14.2%	1,130	15.8%	2,940	19.1%	**6,260**	**16.3%**	**23.7%**
Technicians and trades workers	**1,200**	**14.7%**	**940**	**12.4%**	**1,010**	**14.1%**	**2,220**	**14.4%**	**5,370**	**14.0%**	**13.3%**
Community and personal service workers	890	10.9%	700	9.2%	750	10.5%	1,800	11.7%	**4,140**	**10.8%**	**10.8%**
Clerical and administrative workers	800	9.8%	660	8.7%	760	10.6%	1,790	11.6%	**4,010**	**10.5%**	**13.5%**
Sales workers	680	8.3%	530	7.0%	660	9.2%	1,920	12.5%	**3,790**	**9.9%**	**9.9%**
Machinery operators and drivers	**1,020**	**12.5%**	**510**	**6.7%**	**400**	**5.6%**	**900**	**5.8%**	**2,830**	**7.4%**	**5.9%**
Labourers	**1,150**	**14.1%**	**1,050**	**13.8%**	**830**	**11.6%**	**2,220**	**14.4%**	**5,250**	**13.7%**	**9.2%**
Total	**8,150**	**100.0%**	**7,600**	**100.0%**	**7,150**	**100.0%**	**15,390**	**100.0%**	**38,290**	**100.0%**	**100.0%**

Source: *ABS Census of Population and Housing, 2016*
Note: *Figures rounded*

6.6 Business Structure

One of the more tangible benefits of an investment project is the extent to which local businesses can participate in the Project through project contracts and other service provision opportunities. ABS Business Count data for June 2020 (latest available) shows the Study Area included 1,207 construction businesses and a further 433 businesses associated with transport, postal and warehousing service, with these two sectors contributing 1,640 businesses or 17.9% of all businesses located in the Study Area.

This data is included in Table 28 and indicates a good presence of the types of firms that may be well-placed to service aspects of the Project. This opportunity is explored in more detail in the following section 7.

Table 28 Business Structure – Study Area, June 2020

	Glenelg (S)	Moyne (S)	Southern Grampians (S)	Warrnambool (C)	Study Area	
	No.	No.	No.	No.	No.	Share
Agriculture, Forestry and Fishing	832	1,194	982	262	3,270	35.7%
Mining	3	10	0	7	20	0.2%
Manufacturing	58	54	51	111	274	3.0%
Electricity, Gas, Water and Waste Services	7	3	0	14	24	0.3%
Construction	***195***	***264***	***217***	***531***	***1,207***	***13.2%***
Wholesale Trade	32	38	43	76	189	2.1%
Retail Trade	99	76	98	182	455	5.0%
Accommodation and Food Services	81	86	79	164	410	4.5%
Transport, Postal and Warehousing	***110***	***100***	***79***	***144***	***433***	***4.7%***
Information Media and Telecommunications	3	4	3	6	16	0.2%
Financial and Insurance Services	89	74	99	261	523	5.7%
Rental, Hiring and Real Estate Services	138	185	126	325	774	8.5%
Professional, Scientific and Technical Services	82	85	89	194	450	4.9%
Administrative and Support Services	34	33	28	96	191	2.1%
Public Administration and Safety	5	5	3	10	23	0.3%
Education and Training	10	13	17	39	79	0.9%
Health Care and Social Assistance	51	40	53	235	379	4.1%
Arts and Recreation Services	9	12	15	50	86	0.9%
Other Services	75	51	65	146	337	3.7%
Currently Unknown	0	0	4	4	8	0.1%
Total	**1,913**	**2,327**	**2,051**	**2,857**	**9,148**	**100.0%**

Source: *ABS Business Counts, June 2020*

6.7 Township Services Capacity

Commercial Accommodation

The ability to accommodate non-local workers (i.e., those who are not resident in the Study Area or not living within a daily commutable distance) is a key consideration for major construction projects, especially in regional and rural areas underpinned by agricultural activity that are subject to seasonal demand for labour (e.g., harvesting). Concurrent infrastructure projects also need to be considered when assessing the adequacy of accommodation for a particular construction project (refer to section 6.3).

An audit has been undertaken of commercial and private accommodation within the Study Area's major townships. These townships generally represent a maximum drivetime of 60-minute drive from the Project Site.

The Study Area has a good supply and mix of accommodation including motels, hotels, guest houses, caravan/holiday parks (including cabins). Most accommodation options are located in Warrnambool, Portland and Port Fairy (refer to Table 29), which are within relatively close proximity to the Project Site and provide a good range of support services for relocating workers; however, there are also accommodation options in smaller townships located close to the Project Site, including Cobden and Terang, which are likely to be attractive for project workers.

The following accommodation was available in the Study Area as of April 2021:

- 1,505 hotel, motel and serviced apartment rooms
- 255 cabins (caravan/holiday parks)

Accommodation requirements and impacts associated with the Project are further discussed in section 7.

Table 29 Commercial Accommodation in the Study Area, April 2021

Locality	Establishments	Rooms	Cabins
Hamilton	15	203	65
Portland	25	285	11
Port Fairy	28	231	60
Warrnambool	33	787	120
Study Area	**101**	**1,506**	**256**

Source: Ethos Urban; Various Published Sources; Airbnb and Vrbo (April 2021).

Private Accommodation

Private accommodation is often used to support construction worker needs and this could be through leasing of residential homes, either privately or through real estate agents. In this regard, the ABS Census data for 2016 indicates the Study Area has an above-average level of unoccupied dwellings.

As Table 30 shows, 16.1% of Study Area dwellings (6,220 dwellings) were unoccupied at the 2016 Census, which is well above the average for Victoria at 11.7%.

At a more local level (Moyne Shire), relatively high dwelling vacancy rates exist in the main settlements close to the Project Site, with significant capacity available in Port Fairy in view of the township's strong holiday home sector.

As Table 31 highlights, approximately 1,055 unoccupied dwellings or 36.1% of total dwellings are located in settlements within an hour's drive of the Project Site which may provide rental opportunities for local homeowners to accommodate non-local project workers.

Shared private housing accommodation is one potential option for project workers, and this is further explored in section 7.

Table 30 Unoccupied Dwellings – Study Area, June 2016

	Occupied Dwellings	Unoccupied Dwellings	Total Dwellings	Unoccupied Dwelling Share
Glenelg (S)	7,650	1,665	9315	17.9%
Moyne (S)	5,900	1,670	7570	22.1%
Southern Grampians (S)	6,325	1,295	7620	17.0%
Warrnambool (C)	12,630	1,590	14220	11.2%
Study Area	**32,505**	**6,220**	**38,725**	**16.1%**
Victoria	**2,112,700**	**2786,30**	**2,391,330**	**11.7%**

Source: *ABS Census of Population and Housing, 2016*
Note *Figures rounded*

Table 31 Unoccupied Dwellings – Moyne Shire (main settlements), June 2016

	Occupied Dwellings	Unoccupied Dwellings	Total Dwellings	Unoccupied Dwelling Share
Total (settlements within an hour of the Project Site)	**2,925**	**1,055**	**3,980**	**36.1%**

Source: *ABS Census of Population and Housing, 2016*
Note: *Figures rounded*

Data sourced from *www.airdna.co* shows approximately 995 active short-term rentals are currently advertised on Airbnb and Vrbo in the Study Area (April 2021). These active rentals have an average of 2.6 bedrooms per rental. Therefore, in the order 2,615 rooms could be available in the Study Area through the short-term rental market.

Township Services

In addition to accommodation, workers locating temporarily to the Study Area will require a wide range of other convenience services, and the Project will also need to source trade and other construction services from businesses located in the immediate region. The following paragraphs provide an overview of the services located in the main townships within Moyne Shire and across the broader Study Area.

Moyne Shire

Port Fairy

Port Fairy is a strategically important township located in the south of Moyne Shire which is very popular as a holiday destination. The township and surrounds have a population of 3,340 residents (2016 Census, Port Fairy State Suburb). Port Fairy is located approximately 25km from the southern part of the Project Site, or approximately a 20 minute drive along the Hamilton-Port Fairy Road. The relative proximity of Port Fairy to the Project Site and the wide-range of amenities provided indicate the township will be an important base for non-local workers, as well as providing a limited range of construction and support services to the Project. Port Fairy was a popular base for workers during the construction of the Macarthur Wind Farm.

Figure 11 Port Fairy

Source: www.bing.com

Key services available in Port Fairy include:

- Significant quantity and range of commercial accommodation options (see above)
- Medium-scale retail services (IGA, specialty shops, pharmacies etc)
- Cafes, bakeries, restaurants and take-away
- Entertainment (river, beaches, parks, hotels, clubs, sports and recreational activities)
- Some financial institution branches (Commonwealth Bank, ANZ, Bendigo Bank)
- Trade Supplies (Home Timber & Hardware)
- Transport and freight services (Fox's Transport Ltd)
- Fuel supplies (BP, Caltex)
- Postal Services
- Medical and Emergency Services (Port Fairy Hospital with emergency services, ambulance station, Port Fairy Medical Clinic, Port Fairy Police Station).

Koroit

Koroit is a small rural settlement located approximately 30km or a 25 minute drive from the southern part of the Project Site offering convenience for project workers locating to the town. Koroit has a residential population of 2,055 residents (2016 Census, Koroit State Suburb), but offers a limited range of amenities for workers and little in terms of inputs to the construction process.

Figure 12 Koroit

Source: www.bing.com

Services available in Koroit include:

- Some commercial and private accommodation options (see above)
- Small-scale retail services (IGA, specialty shops, pharmacy etc)
- Cafes, bakeries, restaurants and take-away
- Entertainment (Koroit Hotel, sports clubs)
- Some financial institution branches (Commonwealth Bank, ANZ, Bendigo Bank)
- Fuel supplies (BP)
- Postal Services
- Medical and Emergency Services (Jamieson Medical Clinic, Koroit and District Memorial Health Services).

Broader Study Area

Warrnambool

Warrnambool is a major regional city and the service centre for Victoria's south-west region. The city and surrounds have a population of 29,660 residents (2016 Census, Warrnambool State Suburb). Warrnambool is located approximately 45km from the southern part of the Project Site, or approximately a 40 minute drive along the Princes Freeway. While located further away from the Project Site than Port Fairy, Warrnambool is likely to be an attractive location for many project workers given the full range of amenities present, while the city is likely to contribute to construction and support services to the Project given its strong industry base. Warrnambool was a popular base for workers during the construction of the Macarthur Wind Farm.

Figure 13 Warrnambool

Source: www.bing.com

Key services available in Warrnambool include:

- Significant quantity and range of commercial accommodation options (see above)
- Major transport and freight services (Sergeant Transport, Ballie's Logistics)
- Quarries (McKinnon Quarries, Hanson Quarries)
- Major trade supplies (Bunnings, Home Timber & Hardware)
- Equipment hire (Coates, Matko Hire)
- Auto mechanics (various)
- Fuel supplies (BP, Caltex, APCO)
- Large scale retail services (shopping centres, supermarkets, Discount Department Stores, specialty shops, pharmacies etc)
- Cafes, bakeries, restaurants and take-away
- Entertainment (beaches, parks, hotels, clubs, arts centre, cinemas, sports and recreational activities)
- All major financial institution branches (Commonwealth Bank, ANZ, Bendigo Bank)
- Postal Services
- Major Medical and Emergency Services (Warrnambool Hospital with a 24 hour emergency department, range of medical clinics and services, major ambulance, police, fire and SES services.

Hamilton

Hamilton is the service centre of the Southern Grampians Region, with a population of 4,230 residents (2016 Census, Hamilton State Suburb). Hamilton is located approximately 60km from the northern part of the Project Site or approximately a 45 minute drive via the Hamilton Highway/Penshurst-Warrnambool Road. Hamilton with its country lifestyle and good range of amenities is likely to be attractive to some project workers including those seeking more affordable accommodation compared with Port Fairy or Warrnambool. Hamilton hosted many project workers during the construction of the Macarthur Wind Farm. Hamilton also has a strong industrial base to support the construction phase of the Project.

Figure 14 Hamilton

Source: www.bing.com

Key services available in Hamilton include:

- Reasonable supply of commercial accommodation options (see above)
- Major transport and freight services (O'Sullivans Transport, Hamilton-Ballarat Freight Service)
- Quarries (L.K. Quarries, Hanson Quarries)
- Major trade supplies (Home Timber & Hardware, Mitre 10)
- Equipment hire (Hamilton Hire)
- Auto mechanics (various)
- Fuel supplies (United Petroleum, Shell, BP)
- Medium scale retail services (The Hub Shopping Centre, Coles, Woolworths, specialty shops, pharmacies etc)
- Cafes, bakeries, restaurants and take-away
- Entertainment (hotels, clubs, arts centre, cinemas, sports and recreational activities)
- Most financial institution branches (NAB, Bank of Melbourne, Bendigo Bank)
- Postal Services
- Medical and Emergency Services (Hamilton Base Hospital an emergency department, Hamilton Medical Group, Manse Medical, ambulance, police, fire and SES services.

Portland

Portland is a regional town located on Portland Bay with a population of 10,800 residents (2016 Census, Portland State Suburb). Portland is located approximately 70km from the southern part of the Project Site or approximately a 60 minute drive via the Princes Highway/Hamilton Port Fairy Road. In view of its strategic port location, Portland is likely to play a key role in the transportation of equipment to the Project Site, while Keppel Prince (Victoria's only wind tower supplier) may secure contracts to manufacture, transport and install wind towers for the Project. Portland might also provide a base for some project workers, although noting the commuting distance to the Project Site is longer than alternatives (Port Fairy, Hamilton, Warrnambool etc).

Figure 15 Portland

Source: www.bing.com

Key services available in Portland include:

- Port of Portland
- Specialist manufacturing (Keppel Prince – wind tower manufacturer and installation services)
- Major transport and freight services (Norse Logistics, Porthaul, K&S Freighters, Strang International)
- Equipment hire (Coates Hire, Mibus Bros, Tutt Bryant Hire)
- Quarries (Mibus Bros)
- Major trade supplies (Home Timber & Hardware)
- Auto mechanics (various)
- Medium scale retail services (Aldi, Woolworths, IGA, specialty shops, pharmacies etc)
- Cafes, bakeries, restaurants and take-away
- Entertainment (hotels, clubs, arts centre/ cinema, sports and recreational activities)
- Most financial institution branches (ANZ, Westpac, Bendigo Bank)
- Postal Services
- Fuel supplies (BP, Mobil)
- Medical and Emergency Services (Portland District Hospital has an emergency department, Seaport Medical Group, Woolpress Medical, ambulance, police, fire and SES services.

6.8 Economic Context Summary

1. The Study Area has a resident population of around 86,740 persons in 2016, which is projected to increase to 91,060 persons by 2031.
2. The relatively low unemployment rate (3.2% compared to 6.4% for Victoria) in the Study Area (i.e., a relatively small pool of unemployed persons from which to draw) may have implications in terms of labour supply for the construction phase of the Project, particularly with regard to competing seasonal labour requirements (harvesting, tourism etc) and concurrent infrastructure projects in the region, especially other renewable energy projects. However, it is noted some 1,575 persons are currently unemployed across the Study Area.
3. Additionally, the Study Area's occupational, industry and business structures indicates that a strong base exists to service the needs of the Project, including approximately 13,500 construction-related workers (based on occupation) and 1,640 construction and transport businesses.

4. Port Fairy, Hamilton, Warrnambool, Portland and Mortlake will all have important roles to play in supporting the Willatook Wind Farm project through providing worker accommodation and services and specialist construction services to the Project. Importantly, local settlements such as Macarthur, Koroit, Hawkesdale and Penshurst are also likely to benefit from the Project in terms of accommodation and local service provision and through providing labour supply during the construction phase.

7 Economic Impact Assessment

7.1 Project Investment

The total construction cost for the Willatook Wind Farm project is estimated to be $800 million, according to information provided by the Proponent. Note, this investment value may change depending on the final design and layout of the Project. The major investment costs are associated with the purchase of wind turbines and towers, although significant investment is also required for civil, electrical and grid connection works. Additional investment will be required with regard to project management, planning and approvals, financing, insurance and other project costs. Generally, with projects of this type approximately 15% in total investment is retained in the immediate region (i.e., Study Area) which indicates approximately $120 million in a share of wages, contracts and other service provision will flow to the Study Area's economy during the construction phase. This 15% estimate is derived from examining available construction cost data from a number of built and operating wind farm projects located in regional areas (e.g., Ararat Wind Farm, Murra Warra Wind Farm, Sapphire Wind Farm).

7.2 Project Employment

Construction Phase

Project employment is assessed in terms of **Direct** jobs (i.e., site-related) and **Indirect** (or flow-on) jobs in the local and wider economies (i.e., jobs that are supported by the employment multiplier as funds circulate around the economy between various industry sectors).

Direct Construction Employment

Based on data sourced from similar-sized constructed wind farms, there is an estimated workforce requirement of 180 Full Time Equivalent (FTE) jobs over the construction phase of the Project. This is based on an average of 0.5 FTE jobs per MW of installed capacity. Note, this is an average employment figure across the construction period, with up to 270 FTE jobs anticipated at the Project's peak (which would last several months). Based on similar sized wind farm projects it is anticipated 60% of direct labour (110 FTE jobs on average or 160 FTE jobs at the peak of construction) will be sourced from within the Study Area.

Construction jobs are expected to be associated with a wide range of on and off-site activities, including:

- Structural concrete foundations
- Earthworks
- Roads and access tracks
- Fencing
- Landscaping
- Vehicle and equipment hire
- Trade services
- Security
- Office cleaning
- Waste disposal
- Building maintenance
- Foundation laying
- Electrical transformer installation
- Crane works

- Cabling
- Temporary site facilities (power, water, telecommunications)
- Transport of components/workers.

Local/regional professional services might include:

- Civil engineering
- Mechanical engineering
- Environmental engineering and specialist consultants
- Employment agencies
- Electrical engineering
- Legal and financial services.

Indirect Construction Employment

In addition to direct employment, significant employment will be generated indirectly through the employment multiplier effect. By applying an industry-standard multiplier for the construction industry of 1.6 (based on ABS Type B multipliers), the Project is estimated to generate 290 new FTE jobs over the construction period.

Indirect or flow-on jobs include those supported locally and in the wider economy (including metropolitan Melbourne, regional Victoria and interstate), as the economic effects of the capital investment flow through the economy.

Indirect employment creation within the region would include jobs supported through manufacturing, accommodation, trade supplies, fuel supplies, transportation, food and drink, catering etc. For the purposes of this assessment, it is assumed that 25% of indirect FTE jobs are supported in the Study Area, recognising strong construction, manufacturing and service sector supply chains in this region. This equates to an average of approximately 75 indirect FTE positions across the Project and 110 indirect FTE positions at the Project's peak.

Total Construction Employment

In summary, approximately 470 FTE jobs (180 direct and 290 indirect) are expected to be generated by the Willatook Wind Farm project during the construction phase.

As identified earlier, the Study Area has a relatively low unemployment rate and the labour market is subject to some seasonality, especially with regard to agricultural activities and tourism. The level of Study Area employment required at the *peak* of the Project is estimated to be approximately 270 FTE jobs (direct and indirect).

This peak requirement represents just over 2% of the Study Area's labour force who are occupied in construction-related activities (13,450 workers) and this should not present a constraint to labour supply for the Project.

Additionally, approximately 1,575 labour force participants in the Study Area are currently unemployed; therefore, the wind farm project presents new employment opportunities for such jobseekers (subject to an appropriate skill match).

Employment requirements for potentially competing infrastructure projects, especially large-scale energy projects, also need to be considered and this factor is discussed in section 7.3.

Direct Operational Employment

Operational Phase

An estimated 12 FTE jobs will be supported on an ongoing basis through the operation of the Willatook Wind Farm based on employment numbers from similar sized operational wind farms. Seventy-five percent (75%) of these direct jobs (9 FTE positions) are expected to be supported in the Study Area, with the remaining jobs located in other areas, including the operator's Head Office. Local positions would be associated with managerial, operational and maintenance activities.

Indirect Operational Employment

A number of additional jobs will also be supported indirectly through the employment multiplier effect. By applying an industry-standard multiplier for the electricity industry of 2.9 (based on ABS Type B multipliers) to the 12 FTE direct operational and maintenance jobs, a further 35 FTE permanent jobs (rounded) would be generated in the wider State and national economies, with some of these jobs generated regionally through existing supply chains and new opportunities.

Operational-related employment is for the lifetime of the Project (i.e., at least 25 years); therefore, while job creation is relatively small, it represents new long-term employment opportunities at a local, regional and state-wide level.

For the purposes of this assessment, it is assumed that 25% of indirect FTE jobs are created in the Study Area, recognising emerging renewable energy supply chains in this region. This equates to approximately 9 ongoing FTE positions.

Total Operational Employment

In summary, approximately 47 FTE jobs (12 direct and 35 indirect) are expected to be generated by the Willatook Wind Farm through its ongoing operations, with 18 FTE positions expected to be created regionally (i.e., within the Study Area).

7.3 Competing Projects

The Project may need to compete for labour, accommodation and other resources with other approved and proposed major infrastructure projects, principally renewable energy projects, in the Study Area. Identified projects include:

Table 32 Competing Major Projects within the Study Area

Project Title	Project Town	LGA	Distance from Willatook (km)	Estimated Value	Project Description	Status
Ryan Corner Wind Farm	Port Fairy	Moyne	17	$359m	218 MW 52 turbines	Approved, construction phase anticipated 2022
Woolsthorpe Wind Farm	Woolsthorpe	Moyne	17	$150m	70 MW 20 turbines	Approved, construction not yet commenced
Hawkesdale Wind Farm	Hawkesdale	Moyne	10	$180m	98 MW 23 turbines	Construction phase about to commence, completion anticipated 2022

Project Title	Project Town	LGA	Distance from Willatook (km)	Estimated Value	Project Description	Status
Darlington Wind Farm	Darlington	Moyne	70	$500m	375 MW 75 turbines	Planning stage
Mt Fyans Wind Farm	Mortlake	Moyne	50	$550m	400 MW 85 turbines	Permit application submitted

Source: Ethos Urban; Cordell Connect; Planning Victoria

The timing of some of these projects is unclear, with some yet to achieve planning approval. However, several projects are under construction with these projects likely to be completed prior to the time the construction phase of the Project commences. Given the strong industry and labour base available in the Study Area (including experienced renewable energy project contractors and workers), it is likely the construction of the Project will be able to source required labour and services even allowing for the concurrent development of other major infrastructure projects.

7.4 Industry and Business Participation Opportunities

In terms of cost efficiencies (lower transport, labour costs etc), many large construction projects located in regional areas are (where possible) serviced from within the same region with significant use of local inputs.

As identified above, the Study Area comprises 1,550 construction firms (which include individual contractors) and many other businesses associated with activities likely to be required for the Project. These include transport operators, trade suppliers, vehicle and machinery hire, and repair companies, among others.

Within the Study Area there are firms of sufficient scale to compete for project contracts and provide specialist services. For example, Portland-based Keppel Prince Engineering is Victoria's only manufacturer of wind towers and the firm also provides site preparation and installation services for wind farms. Keppel Prince provided services to the Oaklands Hill and Macarthur wind farm sites. Norse Logistics, also based in Portland, were involved in the transportation of generators, blades, gearboxes etc from the Port of Portland to the Oaklands and Macarthur sites.

In order to maximise local business participation a number of strategies should be implemented, such as widespread advertising of contracts in local media and directly through the Project website. The Proponent is compiling a database of contractors that have contacted them regarding potential work on the Project. Should planning permission be secured, the Proponent will conduct meetings in the local area inviting local suppliers along to register.

The Industry Capability Network (ICN) is another organisation that often plays an important business facilitation role for major infrastructure projects, such as the proposed wind farm. The ICN is an independent, non-profit organisation funded by the Federal Government to support business opportunities, including linking suppliers to project contracts at a local level through its ICN Gateway website where details of work packages are advertised.

Specifically, the Proponent has a set up a business register for the Project, which is expected to grow as awareness of the Project increases through EES exhibition. Companies can register their interest in providing a range of goods or services through the website https://www.willatookwindfarm.com.au/contractors.

To date, 25 companies have registered an interest in participating in the Project, including a number of local firms.

7.5 Housing and Commercial Accommodation Sector Impacts

Based on information for similar wind farm projects and discussions with the Proponent, approximately 110 non-local staff may need to be accommodated in the region at the Project's peak. On average approximately 70 non-local workers will need to be accommodated across the construction phase. These staff will comprise a range of occupations, including managers and specialist technicians. Contract lengths will vary. This highlights the need for a number of types of accommodation, which would be expected to range from higher-end options for professional staff on longer contracts, to convenient low-cost options for those on short-term contracts.

As highlighted in Section 6, the Study Area has a capacity of around 1,760 commercial rooms and cabins (mainly in Hamilton, Port Fairy and Warrnambool). Assuming each non-local worker requires individual accommodation, approximately 6% of total accommodation stock would be required at peak times to service the Project. The actual proportion would be lower on the expectation that some workers may be accommodated in private rentals (approximately 1,000 listed in the Study Area), BnBs or with family or friends. Additionally, some workers are likely to share motel rooms/cabins, private rentals etc to reduce personal costs.

It is recognised that Port Fairy is a key tourist location, especially during the summer holiday season and during major events such as the annual Port Fairy Jazz Festival. ABS Tourism Accommodation audit data (hotels, motels and serviced apartments) for the financial year 2015/16 (latest available) shows that Moyne West (SA2) had a peak occupancy of 71% in January 2016, while the broader Western Tourism Region peaked at 66% occupancy in the same month. In contrast, in June 2016 occupancy rates were just 40% for Moyne West and 41% for the Western Tourism Region.

This data indicates that adequate capacity exists in the region to accommodate the numbers of non-local workers expected at the peak of the Project, even when key tourism periods are factored in. Importantly, the influx of these workers would support higher occupancy rates and revenues for local and regional accommodation operators during off-peak seasons, and also provide opportunities for local homeowners to lease properties over the construction period.

As noted earlier, the Macarthur Wind Farm project was serviced by commercial and resident accommodation providers in the major townships (Port Fairy, Warrnambool and Hamilton) as well as in local townships/settlements such as Macarthur, Koroit, Hawkesdale and Penshurst and a similar pattern would be anticipated with regard to the Willatook Wind Farm project.

However, it is noted that commercial accommodation and housing market conditions are ever changing, and the current COVID-19 pandemic is a good example of this. The COVID-19 environment has led to an upsurge in migration from metropolitan to regional Victorian areas; associated with workers relocating to second homes/holiday homes and other households seeking a permanent move to the regions for lifestyle reasons. This situation currently applies to the Study Area, where there has been a tightening of rental accommodation (commercial and private household) over the past 18 months or so.

In this regard, the Proponent is committed to developing a Construction Workforce Accommodation Strategy (CWAS) prior to the construction phase of the Project commencing. The CWAS, which will reflect local market conditions at the time, would aim to minimise impacts on the community especially for those reliant on low cost housing as well as ensuring sufficient accommodation is available to service the tourism sector. The CWAS will be prepared in conjunction with local councils, commercial accommodation providers, private accommodation providers, real estate sector and other relevant stakeholders. Similar mitigation strategies have been used to support construction of major infrastructure projects in the State, such as the Victorian Desalination Plant and the Bogong Hydro Power Station.

7.6 Local Wage Spending Stimulus

As noted earlier, an estimated 40% of 180 FTE construction jobs (70 FTE jobs) are likely to be sourced from outside the Study Area, particularly specialist and management positions. These estimates are based on the average non-local requirement across the construction phase of the Project.

This level of employment would equate to $6.1 million in wages (2022 dollars) on the basis that each worker is employed for 12 months on the Project and at an average construction wage of approximately $88,000 including on-costs (source: ABS Average Weekly Earnings 6302.0, May 2021).

A considerable portion of these wages would be spent in the Study Area. An estimated $3.5 million in wages (2022 dollars) would likely be directed to local and regional businesses and service providers during the construction period (once 25% in average income taxes are removed). This estimate is based on reference to the ABS Household Expenditure Survey which indicates that approximately 75% of post-tax wages are likely to be spent by workers in the local and regional economies in view of the wide range of goods and services available, especially in Port Fairy and Warrnambool. This spending would be likely to include the following:

- Housing expenditure, including spending on accommodation at hotels, motels, caravan parks and private rental dwellings
- Retail expenditure, including spending on supermarket items, clothing, books, homewares etc
- Recreation spending associated with day trips and excursions, gaming (lottery, sports betting, etc), purchases in pubs and clubs (although noting that expenditures at restaurants is included in the retail category)
- Personal, medical and other services, such as local prescriptions and GP fees, household cleaning services, fuel, vehicle maintenance and so on.

This level of personal spending would support approximately 23 FTE jobs in the services sector (1 job allocated for every $150,000 of spending), including jobs in the Study Area associated with retail, accommodation, trade supplies, fuel suppliers, cafes and restaurants etc. These jobs are included in the 'indirect employment' estimates outlined in Section 7.2 above.

7.7 Impacts on Local Roads

It is likely that some local roads and intersections will need upgrading for the site to be serviced in terms of plant and equipment deliveries, quarry materials (if quarrying does not occur within the site) and the removal of materials from the site. Many of these movements will require heavy commercial vehicles and oversized loads (i.e., towers).

A section of Woolsthorpe-Heywood Road has been identified by the Proponent's traffic engineers as potentially requiring upgrading.

Increasingly for major infrastructure projects of this type, a condition for planning permit approval will be a requirement for the Proponent to upgrade specific roads and associated infrastructure servicing the Project Site, prior to the main work on the site commencing.

7.8 Impacts on Agricultural Land

The impact of the Willatook Wind Farm on agricultural activity is likely to be small, due to the following factors:

- Only a very small proportion of agricultural land, estimated at 100 ha or 2.4% of the 4,154 ha site area, will be lost to permanent infrastructure e.g., internal access roads, siting of turbines and other infrastructure requirements.
- The land is principally used for cattle and sheep grazing, and these activities can continue as normal within the Project Site (minus the 100 ha required for permanent infrastructure).
- Benefits to host landowner properties from the Project include improved access facilitated by approximately 61 km of new internal roads and 10km of upgraded existing tracks; which improves efficiency of movement across the land which in turn reduces bushfire risks decreasing the likelihood of loss of buildings, machinery, livestock, fencing etc.

- Sporadic aerial spraying occurs in this area throughout the year. An Aviation Assessment has been undertaken for the Project which confirms no impacts are anticipated on aerial spraying activities or on local airstrips.

7.9 Impacts on Land and Property Prices

Land and property values are subject to a range of complex factors and relationships which makes it difficult to isolate one particular factor as causal to price movements. Influential factors on land and property prices include:

- Supply and demand dynamics
- Economic confidence
- Interest rate movements
- Investment and capital growth potential
- Land use and transition potential
- Availability of finance/loans
- Specific characteristics of a site/property
- Environmental factors (drought, flood, bushfires).

Research has been undertaken to isolate the impacts of wind farms on property prices (e.g., Review of the Impact of Wind Farms on Property Prices, Urbis, 2016 for the NSW Government).

The Urbis report notes that over a relatively long assessment period of 2000 to 2015:

> *"There is insufficient sales data to provide a definitive answer to the question of whether wind farm development in NSW impacts on surrounding land values utilising statistically robust quantitative analysis techniques". (Executive Summary page. I).*

With regard to national and international studies, Urbis conclude:

> *"The literature review of Australian and international studies on the impact of wind farms on property values revealed that the majority of published reports conclude that there is no impact or a limited definable impact of wind farms on property values. Those studies which identified a negative impact are based in the northern hemisphere and are associated with countries with higher population densities and a greater number of traditional residential and lifestyle properties affected by wind farms. This is generally contrary to the Australian experience, with most wind farms being located in low population density environments that derive the majority of their value from productive farming purposes". (Executive Summary page. I).*

Based on the above factors and findings, it is not possible to reliably assess the impact on property and land values on surrounding properties due to the construction and operation of the Project.

7.10 Ongoing Economic Stimulus

Landowners

The Proponent advises that turbines/infrastructure will be spread across 16 host landowners, providing income returns to these farming families. Details of proposed payments are confidential.

These new income streams can be particularly important in supporting the financial sustainability of some farms, especially as primary agricultural activities are not impacted upon to any great extent (as outlined above).

Securing a guaranteed 25-year drought proofed income stream (indexed to CPI) also allows farming families more flexibility in the long-term planning for their farming operations, including succession planning. Potential exists for landowners to continue to host turbines post the initial 25-year period

(assuming the wind farm is not decommissioned) and this would provide income for future generations or new landowners.

Wage Stimulus

Additionally, an estimated 18 FTE permanent local jobs (direct and indirect) will be created through the Project (refer to section 7.2), and wage spending associated by these jobs will benefit local businesses and communities. The extent of retained local spending has been calculated in line with the methodology outlined in section 7.6.

These wage stimulus factors will inject an estimated $0.9 million into the Study Area's economy in Year 1 of operations.

7.11 Returns to Council and the Community

Council

Established under section 96(6A) of the *Electricity Industry Act 2000*, the Payment in Lieu of Rates (PiLoR) framework allows councils and electricity generators to negotiate annual payments.

The PiLoR framework was amended by the Victorian Government in October 2018 to account for solar generators coming online now and in the future. In general, financial returns to Council from renewable energy projects are considerably higher than revenue associated with rateable agricultural activities. For example, the 2018/19 PiLoR guidelines include a fixed charge of $54,400 and a variable charge of $1,225 per MW (of installed capacity).

Using this revised PiLoR framework, it is estimated Moyne Shire Council will in Year 1 receive annual revenue from wind farm operations at the site of approximately $550,000 – excluding the existing rates revenue collected from the site. Under the PiLoR guidelines, this value will then increase in line with CPI over the operational lifetime of the wind farm (i.e., 25 years).

This will be an important source of additional income for council, noting general rates are now subject to rate capping under the Victorian Government's Fair Go Rates System.

Unlike a new residential development (where Council incurs costs such as garbage collection; maintenance of parks, open space, roads, footpaths; provision of community services; etc) the cost to Council of providing resources for the wind farm site is likely to be relatively small and would be limited to road maintenance, garbage removal and the like. Therefore, the uplift in rates revenues generated from the operation of the wind farm on the Project Site will represent a net return to Council.

Importantly, this revenue can be re-invested in infrastructure and services, which will benefit the community more generally.

Neighbour Benefit Sharing Program

As noted earlier, the Proponent has developed a proposal for a Neighbour Benefit Sharing Program which is currently subject to community feedback.

The proposed Program contains the following core components:

<u>Neighbour Benefit Payment Program</u>

The Neighbour Benefit Payment would provide annual payments to the owners of eligible dwellings (i.e., non-host dwellings located within 6km of turbines) of up to $30,000 per annum, with a minimum payment of $1,000 pa. The Program would commence at the commissioning of the wind farm and continue annually for as long as the relevant turbines are operational, and payments would be linked to CPI. Payments per property would be estimated by the distance of each dwelling to constructed turbines, with the closest (within 2km) receiving the highest rate and the furthest (between 3km and 6km) receiving the lowest rate.

Additionally, all eligible participants of the Program would also be eligible for a one-off Construction Payment of $1,000, payable at the substantial commencement of construction.

Energy Cost Offset Plan

The Plan is designed to help the occupants of neighbouring dwellings (i.e., non-host properties) with the cost of electricity, with an annual value of up to $2,000 to be indexed to the Consumer Price Index, from commencement of the Program.

Community Co-Investment Program

The Program would involve a community investment body investing in a renewable energy project, acquiring rights to a portion of the Project's profit but gaining no decision making power or control over the Project. Subject to sufficient interest from the local community, this program would provide an opportunity for community members and organisations to invest in the operational project and participate in the financial benefits.

Community Benefit Fund

The Fund would comprise $1,000 per operational turbine per year indexed annually to the Consumer Price Index from commencement of the fund.

7.12 National Grid Supply Benefits

The Project has the potential to provide sufficient renewable energy to support the annual electricity needs of approximately 200,000 Victorian households (rounded).

In a regional context, the Study Area currently contains 40,000 dwellings and therefore the Project has the potential to provide the annual electricity needs of the Study Area five times over, or power approximately 8% of all Victorian dwellings. These national grid supply benefits highlight the importance of the facility from a clean electrical generation perspective, especially with regard to the Victoria's Renewable Energy Target.

7.13 Environmental Benefits

Once fully-operational, the Willatook Wind Farm will result in the reduction of an estimated 1.3 million tonnes in carbon dioxide (CO_2) emissions on an annual basis compared to the same level of electricity generation using fossil fuels.

This reduction on CO_2 emissions is the equivalent of taking approximately 465,000 cars off the road annually, based on an average of 14,000km travelled with CO_2 emissions of 200g/km (or 2.8 tonnes of CO_2 emissions per car pa).

8 EIA Conclusions

1. The Project will involve $800 million in investment during the construction phase and will support 180 direct and 290 indirect FTE positions over the construction period. Once operational, 12 direct and 35 indirect FTE jobs will be supported by the facility. Approximately $120 million of construction investment is estimated to be retained in the Study Area.

2. Allowing for the Project to be carefully managed around the Study Area's peak times for agricultural activity, tourism etc, and having regard for potentially concurrent infrastructure projects, accessing adequate labour supply should not present a major issue for the Project. The *peak* local employment requirement of 270 FTE positions (includes direct and indirect Study Area employment) represents only 2% of workers occupied in construction-related activities in the Study Area; and also noting some indirect local jobs will be spread across a wider range of sectors including retail, accommodation, food & beverage etc.

3. Competing projects may include the proposed Hawkesdale, Ryan Corner and Woolsthorpe wind farms and the proposed Tarrone Gas Fired Power Station, although this is dependent on financing and construction phase timing for these projects, especially the success (or otherwise) of VREAS applications for the wind farm projects.

4. The Project will provide significant participation opportunities for businesses and the labour force located in the Study Area, having regard for the good match of skills and resources available. In this regard, organisations such as ICN might be involved in ensuring maximum local inputs are secured, which would be in addition to the Proponent's own local sourcing initiatives. Specifically, the Proponent has a set up a business register for the Project, which is expected to grow as awareness of the Project increases through EES exhibition. Companies can register their interest in providing a range of goods or services through the website.

5. The 'external' project labour requirement would be expected to generate an accommodation requirement for 110 project workers at the peak of the Project. This represents only 6% of total commercial accommodation rooms/cabins available in the Study Area and would provide a boost to local accommodation operators. Additionally, there is significant capacity available in the private rental market providing new revenue streams for homeowners/investors.

   However, it is recognised that commercial accommodation and housing market conditions are ever changing, such as during the current COVID-19 pandemic. The COVID-19 environment has led to an upsurge in migration from metropolitan to regional Victorian areas; associated with workers relocating to second homes/holiday homes and other households seeking a permanent move to the regions for lifestyle reasons. This situation currently applies to the Study Area, where there has been a tightening of rental accommodation (commercial and private households) over the past 18 months or so.

   In this regard, the Proponent is committed to developing a Construction Workforce Accommodation Strategy (CWAS) prior to the construction phase of the Project commencing. The CWAS, which will reflect local market conditions at the time, would aim to minimise impacts on the community especially for those reliant on low cost housing as well as ensuring sufficient accommodation is available to service the tourism sector. The CWAS will be prepared in conjunction with local councils, commercial accommodation providers, private accommodation providers, real estate sector and other relevant stakeholders.

6. Non-local construction workers living in the Study Area would be expected to inject approximately $3.5 million in additional spending to local and regional economies over the construction phase, supporting around 23 FTE jobs in the service sector.

7. Agricultural land use will only be marginally affected by the Project, with existing farm activities continuing as normal with only 2.4% of the Project Site being used to host wind farm infrastructure. While sporadic aerial spraying occurs in this area; an Aviation Assessment undertaken for the Project confirms no impacts are anticipated on aerial spraying activities or on local airstrips.

8. Ongoing economic stimulus in the Study Area associated with the operation of the Project through the financial returns to host landowners, local wage spending, community fund payments and

neighbourhood benefit program payments is estimated at approximately $158.4 million over 25 years (adjusted for CPI @ 2.5%).

9. Other community benefits include improvements to host landowner properties through the construction of new internal roads (61km of new access tracks) which will improve efficiency of movement across the land from an agricultural and safety perspective; while some local roads and intersections are likely to be upgraded to service the construction of the wind farm which will provide improved and safer access for the local community.

10. The Project has the capacity to supply sufficient clean energy to power approximately 200,000 homes (approximately 8% of all Victorian dwellings) and, in the process, to reduce CO_2 emissions by 1.3 million tonnes per year.

Table 33 provides a Net Economic Benefit Assessment of the Project.

Table 33 Willatook Wind Farm – Net Economic Benefit Assessment, Study Area

Factor	Value
Negative Economic Outcomes	
Temporary loss of agricultural land (25 years)	100 ha
Loss of employment (includes direct and indirect jobs)	0 jobs
Positive Economic Outcomes	
Construction Phase	
Capital investment (2022 dollars)	$800 million; of which *$120 million (15%) is expected to be retained in the Study Area*
Construction employment (direct plus indirect jobs)	470 FTE jobs (over 24 months); including *185 FTE Study Area jobs (110 FTE direct on-site and 75 FTE indirect off-site)*
Operational Phase	
Employment	
Operational employment (direct and indirect jobs)	47 FTE jobs; *including 18 FTE Study Area jobs (9 FTE direct on-site and 9 FTE indirect off-site)*
Economic Stimulus	
Total Study Area economic stimulus associated with landowner returns, wage stimulus, Council revenue and neighbourhood benefit program payments (using base 2022 dollars, adjusted for CPI over 25 years).	$158.4 million (over 25 years)
Total Net Study Area Economic Benefits - Construction and Operational Phases (using base 2022 dollars, adjusted for CPI over 25 years).	$278.4 million (Construction period PLUS 25 years operations)

9 Project Decommissioning

Decommissioning is considered within the social impact assessment (Section 4) and economic impact assessment (Section 7), with a combined conclusion provided as follows.

The wind turbines would have an operating life of approximately 25 years, at which stage there are three main options for consideration:

- Continue to use the Project Site as a wind farm using the existing wind turbines, potentially with some refurbishment and subject to their condition at that time
- Replace the existing wind turbines with more modern wind turbines and continue to operate the wind farm
- Decommission the Project by removing all above ground infrastructure and rehabilitating hardstand areas and access tracks (except where landowners want them retained for their farm operations) so the land can be returned to agricultural use.

The decision on whether to refurbish or replace the wind turbines would be subject to an assessment of the economic viability closer to the time, and in consultation with the landowners and approval authorities.

Long-term leases have been entered into with landowners with stringent decommissioning obligations. Ongoing fees are payable to landowners until decommissioning is properly completed, providing a strong incentive for this to occur once the wind farm ceases operation.

Decommissioning activities pose a similar potential impact as construction activities. Decommissioning activities would involve large equipment (e.g., cranes, excavators and graders) and the transport of large project components from the site (e.g., wind turbine towers and blades).

Chapter 26 of the EES – Environmental Management Framework includes requirements to manage the decommissioning of the Project in a way that mitigates and manages any associated impacts.

The decommissioning process is anticipated to take approximately six months, but as during construction, activities would be concentrated at a few discrete locations in any given week. Neighbouring landowners (non-involved dwellings) and the local community would be engaged with whatever the decision on the Project's future, seeking to address any issues, minimise impacts and maximise benefits.

From a social and economic perspective, mitigation measures would be similar to those outlined for the construction phase of the Project such as a Construction Management Plan, Traffic Management Plan, Communications and Engagement Strategy, Workforce Accommodation Strategy, but noting the significantly shorter timeframes involved in the decommissioning phase.

Most above ground components of the Project can be recycled at the end of their life, including the steel towers and copper contained within each wind turbine. The ability to recycle some wind turbine components, including blades, is expected to be significantly improved (technologically and economically) by the time decommissioning of wind turbines is required.

Upon decommissioning, below ground infrastructure, including wind turbine foundations and underground cables, may be left in situ and covered with at least 500 millimetres of clean fill material. The ground surface would be rehabilitated to reflect the natural surface that existed pre-development and to avoid soil erosion.