



Paling Yards Wind Farm

Phase 1 Social Impact Assessment

2 February 2022

Project No.: 0578575

Document details	
Document title	Paling Yards Wind Farm
Document subtitle	Phase 1 Social Impact Assessment
Project No.	0578575
Date	2 February 2022
Version	1.0
Author	Rene Provis
Client Name	Global Power Generation Australia

Document history

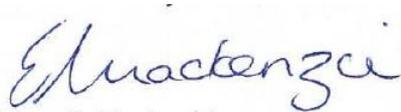
Version	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
1.0	1.1	R. Provis	L. Penny A. Antcliff M.Curtis	S. Genter	18/02/21	Draft for Client Review
1.0	1.2	L. Penny	A. Antcliff	M. Curtis	19/03/21	Final
1.0	1.3	R. Culley	E. Mackenzie K. Wilson	K. Bradfield	17/01/22	DPIE Comments

Signature Page

2 February 2022

Paling Yards Wind Farm

Phase 1 Social Impact Assessment



Elspeth Mackenzie
Project Manager



Karie Bradfield
Partner

Environmental Resources Management Australia Pty Ltd
Level 15 309 Kent Street
Sydney NSW 2000

© Copyright 2022 by ERM Worldwide Group Ltd and/or its affiliates ("ERM").
All rights reserved. No part of this work may be reproduced or transmitted in any form,
or by any means, without the prior written permission of ERM.

CONTENTS

1.	INTRODUCTION	1
1.1	Project Overview.....	1
1.2	Project Description.....	1
1.3	Purpose and Outline.....	2
2.	DEFINING THE SOCIAL LOCALITY	4
2.1	Approach to Determining the Social Locality	4
2.2	Description of the Social Locality	4
2.3	Identification of Key Stakeholder Groups.....	5
3.	SOCIAL BASELINE OVERVIEW.....	8
3.1	Land Use Context.....	8
3.2	Demographic Overview	8
3.3	3.3 Economic Overview	11
3.4	Social Infrastructure Overview.....	12
4.	PRELIMINARY SOCIAL IMPACT ASSESSMENT.....	13
5.	DESCRIPTION OF SOCIAL IMPACT MITIGATIONS ALREADY UNDERTAKEN	14
5.1	Aviation Obstacle Hazard Lighting.....	15
5.2	Flora and Fauna	15
5.3	Heritage	15
5.4	Traffic and Transport	15
5.5	Hydrology.....	15
5.6	Viewing Platform.....	16
5.7	Micrositing.....	16
5.8	Transmission Line.....	16
5.9	Blade Noise	17
6.	OVERVIEW OF STAKEHOLDER ENGAGEMENT ACTIVITIES FOR THE PHASE 2 SIA.....	18
7.	PHASE 2 SIA OUTLINE AND APPROACH	20
8.	REFERENCES	22

List of Tables

Table 2-1	Vehicular travel times from the approximate centre of the Project site	5
Table 2-2	Stakeholder Groups for Consideration in the SIA.....	5
Table 3-1	Summary of relevant ABS datasets.....	8
Table 3-2	Key demographic indicators for all ABS datasets (2016) across the Project's Social Locality	10
Table 3-3	Key industries for select ABS statistical areas (2016 Census data).....	11
Table 4-1	Preliminary Social Impact Assessment.....	13
Table 6-1	Indicative interview topics and questions for the SIA component of stakeholder engagement activities	18
Table 7-1	DPIE's Social Impact Significance Matrix	20

List of Figures

Figure 1-1	Paling Yards Windfarm Project Area	3
Figure 2-1	Paling Yards Windfarm Project Social Locality.....	7
Figure 5-1	Dwelling locations and indicative WTG layout for the purpose of preliminary noise impact assessment	17

Acronyms and Abbreviations

Name	Description
ABS	Australian Bureau of Statistics
AHIMS	Aboriginal Heritage Information Management System
CASA	Civil Aviation Safety Authority
CHMP	Cultural Heritage Management Plan
DP	Deposited Plan
DPIE	NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
GPG	Global Power Generation Australia
ha	Hectares
km	Kilometres
kV	Kilovolts
LALCs	Local Aboriginal Land Councils
LGA	Local Government Area
m	Metres
MW	Megawatts
NSW	New South Wales
OEH	Former Office of Environment and Heritage
RAPs	Registered Aboriginal Parties
SA1	ABS Statistical Area 1
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	ABS Socio-Economic Index for Areas
SEP	Stakeholder Engagement Plan
SISD	Safe Intersection Sight Distance
SSD	State Significant Development
TO	Traditional Owner
WTG	Wind turbine generator

1. INTRODUCTION

1.1 Project Overview

Global Power Generation Australia (GPG) is seeking State Significant Development (SSD) approval for the construction and operation of the proposed Paling Yards Wind Farm (the 'Project'). The proposed Project is located across three landholdings (Mingary Park, Middle Station, Paling Yards and Hilltop) that comprise approximately 4,600 hectares (ha) located in the Central Tablelands of NSW (the 'Project Area'). The Project is situated within the Oberon Local Government Area (LGA) and is approximately 59 kilometres (km) south of Oberon and 60 km north of Goulburn. The closest localities are Porters Retreat (population approximately 180) and Curraweela (population approximately 320). The location of the Project is depicted in **Figure 1-1**.

The Project contains a proposed transmission line corridor approximately 9 km in length and 70 m in width, which crosses several parcels of land. The Project Area is heavily undulated with some steep slopes. Abercrombie Road bisects the Project Area, linking the towns of Oberon and Goulburn and changing its name to Taralga Road at the crossing with the Abercrombie River just south of the Project Area (at the LGA boundary). Both are council-maintained roads. Several watercourses traverse the locality, principally the Abercrombie River that forms part of the southern boundary of the Project Area and flows west into the Lachlan River. The Project Area is adjacent to the Abercrombie River National Park, with the Wiarborough Nature Reserve to the south east and Gurnang State Forest and Blue Mountains National Park further to the east / north east.

An application was originally lodged in 2010 for the construction, operation and maintenance of up to 59 wind turbines and ancillary infrastructure, with a final Environmental Impact Statement (EIS) submitted in 2014. Community consultation and a Social Impact Assessment were undertaken to support the application (refer to **Section 5**). In June 2020, the application was withdrawn following further discussions with the Department of Planning, Industry and Environment (DPIE). It was agreed that due to the advancements in the design of wind turbine technology and the amount of time that had passed since the original submission, a new application would be for assessment based on a revised design and current legislative requirements. The new design includes a reduction in the number of wind turbines proposed.

This Phase 1 Social Impact Assessment (SIA) was prepared based on the information available at the time, and as part of the Scoping Report to be submitted to DPIE in support of an application for the Secretary's Environmental Assessment Requirements (SEARs) for the Project.

1.2 Project Description

The Paling Yards Wind Farm will comprise the following components, which are depicted in **Figure 1-1**:

- Up to 47 wind turbines, with capacity per unit of up to 6.6 MW, giving a total capacity of up to 310 MW;
- An approximate blade tip height of up to 240 m, and Maximum blade length of 83.5 m;
- Upgrades to existing local road infrastructure including several access points from Abercrombie Road;
- Internal unsealed tracks for vehicle access to turbines and infrastructure;
- An underground electrical and communication cable network linking turbines to each other and the proposed on-site substation;
- Up to three wind monitoring masts fitted with various instruments such as anemometers, wind vanes, temperature gauges and potentially other electrical equipment;

- A temporary batching plant to supply concrete for the foundations of the turbines and other associated structures;
- Obstacle lighting to selected turbines (if required);
- Removal of native vegetation and additional vegetation planting to provide screening (as required);
- A control room and facilities buildings;
- An on-site electrical substation and approximately 9 km of overhead powerlines (approximately 70 m in width and poles spacing 200 – 250 m) of up to 500kV to connect to the Mt Piper to Bannanby 500 kV transmission line (including control room and other associated grid connection facilities; and
- All associated and ancillary uses and activities.

This Project description has been used as a basis for identifying and assessing the potential social impacts captured in the Phase 1 SIA.

1.3 Purpose and Outline

This Phase 1 SIA has been prepared in accordance with the provisions of the DPIE's Draft Social Impact Assessment Guideline (DPIE 2021). As such, the purpose of this Phase 1 SIA is to provide the DPIE with a preliminary understanding of the Project's potential social impacts, and the means by which these social impacts are identified, assessed, and managed. These aspects will be further developed as part of the Phase 2 SIA within the Environmental Impact Statement (EIS).

To this end, this Phase 1 SIA identifies Project specific complexities, considering the locational, construction and operational aspects of the Project in order to define a Social Locality for the Project (refer to **Section 2**). The defined Social Locality provides the context wherein an initial social baseline can be developed (refer to **Section 3**), and preliminary social impacts can be identified (refer to **Section 4**).

In addition, the Phase 1 SIA also acts as a starting point for identifying meaningful future engagement opportunities with stakeholders. Stakeholder engagement activities specific to the SIA will be integrated into the Paling Yards Community and Stakeholder Engagement Plan (SEP). These activities will allow for greater understanding of stakeholder interests and concerns, which will be incorporated into the Phase 2 SIA.

The Phase 1 SIA is structured as follows:

- **Section 2** outlines the Project's Social Locality;
- **Section 3** provides an initial understanding the existing baseline conditions in the Project's Social Locality;
- **Section 4** provides a preliminary assessment of the social impacts that may result from the Project;
- **Section 5** describes changes to the Project design that have already occurred in response to stakeholder inputs;
- **Section 6** provides an overview of the anticipated stakeholder engagement activities that will inform the Phase 2 SIA; and
- **Section 7** outlines and approach that will be followed in delivering the Phase 2 SIA.

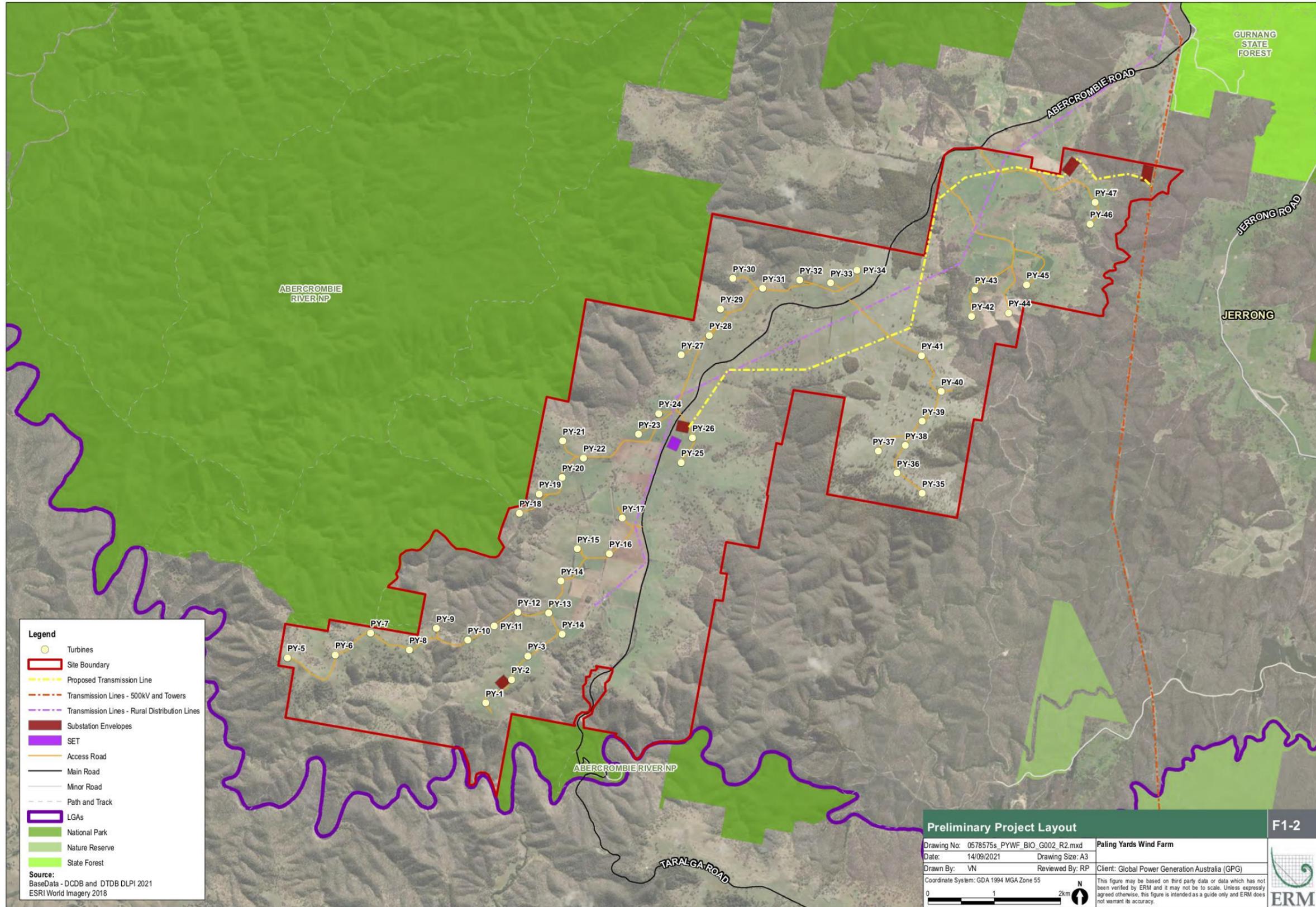


Figure 1-1 Paling Yards Windfarm Project Area

2. DEFINING THE SOCIAL LOCALITY

2.1 Approach to Determining the Social Locality

The first step in a social impact assessment is the scoping process, which helps to define the social area of influence, or Social Locality, as well as the potential interactions between the Project and people surrounding the Project who may experience impacts. For the purposes of the SIA, people include individuals, households, groups, communities, businesses, and other types of organisations. Based on our delineation of the Social Locality, there are a number of potential interactions that may occur between the Project and people surrounding the Project.

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

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

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

2.2 Description of the Social Locality

As described in **Section 1.1**, the Project is located on the southern portion of the Oberon Shire LGA (Oberon LGA), adjacent to the Upper Lachlan Shire LGA (Upper Lachlan LGA). Although the Project Area is contained entirely within the Oberon LGA, it is also accessible via Taralga Road to the south of the Project Area. Transportation (e.g. haulage routes) and other impacts are therefore also pertinent to the Upper Lachlan LGA. Town centres located in both LGAs will likely also provide goods and services to support the construction phase of the Project.

The Project Social Locality, as defined for the purposes of the SIA, is comprised of the following three components:

- The Project Area and immediate surrounding areas, located within the Australian Bureau of Statistics (ABS) Statistical Area Level 1 (SA1) No. 1106107 (containing the Project), and ABS SA1 No. 1154018 (immediately adjacent to the Project). SA1 data has been used to identify key baseline indicators for the Social Locality, where applicable. Additionally, LGA level data for the Oberon and Upper Lachlan LGAs and state level data for NSW are used to provide an understanding of the broader and comparative social context within which the Project is located.
- The transportation and haulage routes, comprising vehicular routes north via Abercrombie Road to Oberon, and south via Taralga and on to Goulburn and the Hume Highway via Taralga Road, to Crookwell via Taralga Road, Lagga-Taralga Road, and Laggan Road. Indicative travel times from the approximate centre of the Project Area are provided in **Table 2-1**.

- The surrounding towns and regional centres of Oberon, Taralga, Goulburn and Crookwell, which may provide goods and services to support the construction phase of the Project. ABS Urban Centres and Localities (UCLs) provide baseline data for these towns and regional centres. The Goulburn Mulwaree LGA has also been included to further contextualise the ABS SA1 level data for the Project area.

The Project Area and immediate surrounding areas, SA1s, Oberon and Upper Lachlan LGAs, transportation and haulage routes, and UCLs for Oberon, Taralga, Goulburn and Crookwell form the Social Locality, as depicted in **Figure 2-1**.

Table 2-1 Vehicular travel times from the approximate centre of the Project site

Town/Regional Centre	Travel distance
Oberon	63 km
Taralga	35 km
Goulburn	80 km
Crookwell	75 km

2.3 Identification of Key Stakeholder Groups

Based on this understanding of the Project's Social Locality, the stakeholder groups identified as potentially impacted by the Project are outlined in **Table 2-2**.

Table 2-2 Stakeholder Groups for Consideration in the SIA

Stakeholder	Specific Parties	Potential Interests / Concerns
Host landowners	Landowners with the potential to host infrastructure, have already engaged in discussion or have already agreed to host infrastructure.	Individual consultation, access to private land, noise and other operational impacts including impacts on livestock, visual amenity, health and safety, security, construction disruption, remuneration, land value.
Immediate neighbours	Neighbouring dwellings within 5 km turbines and along the transmission corridor.	Individual consultation, access to private land, local character, noise and other operational impacts, visual amenity, property values, health and safety, security and privacy, construction disruption, impacts of construction traffic.
Surrounding communities	Community members who live outside of a 5 km radius of turbines and the transmission corridor, including Porters Retreat, Curraweela and surrounds.	Community consultation, community wellbeing, economic benefits / impacts, impacts of construction traffic, health and safety, visual impacts, property values.
Indigenous communities	Traditional Owners (TO's), Local Aboriginal Land Councils (LALCs), and Registered Aboriginal Parties (RAPs), Aboriginal Affairs NSW, AbSec.	Impacts to and ongoing management of cultural heritage values.

Stakeholder	Specific Parties	Potential Interests / Concerns
Local Council	Oberon Council: <ul style="list-style-type: none"> ■ Cr Kathy Sajowitz (Mayor) ■ Gary Wallace (General Manager) ■ Elected Councillors ■ Planning division Upper Lachlan Shire Council (adjacent LGA) <ul style="list-style-type: none"> ■ John Stafford (Mayor) ■ Colleen Worthy (General Manager) ■ Elected Councillors ■ Planning division 	Jobs, economic impacts, opportunities for tourism and other industry benefits. Community consultation, community wellbeing, impact on local residents and businesses, economic benefits, impacts on local roads and infrastructure.
Local businesses	Local businesses, especially in tourism, agriculture, accommodation, and services which may be required by the Project	Jobs, economic impacts, opportunities for tourism and other industry benefits.
Local schools	Primary and secondary schools in Oberon, Taralga, Crookwell, and Goulburn	Community wellbeing, impact on local residents and businesses, impacts on local roads and infrastructure and school bus routes, increased student numbers due to increased workforce.
Local community organisations, religious organisations, clubs	Local business (especially tourism or agriculture), Country Women's Associations, Lions & Rotary Clubs, local action groups, tourism organisations, Central West Orana and Far West NSW Business Chamber, churches and other religious organisations	Community consultation, community wellbeing, business opportunities, social and economic impacts, environmental impacts, local Indigenous and European heritage values.

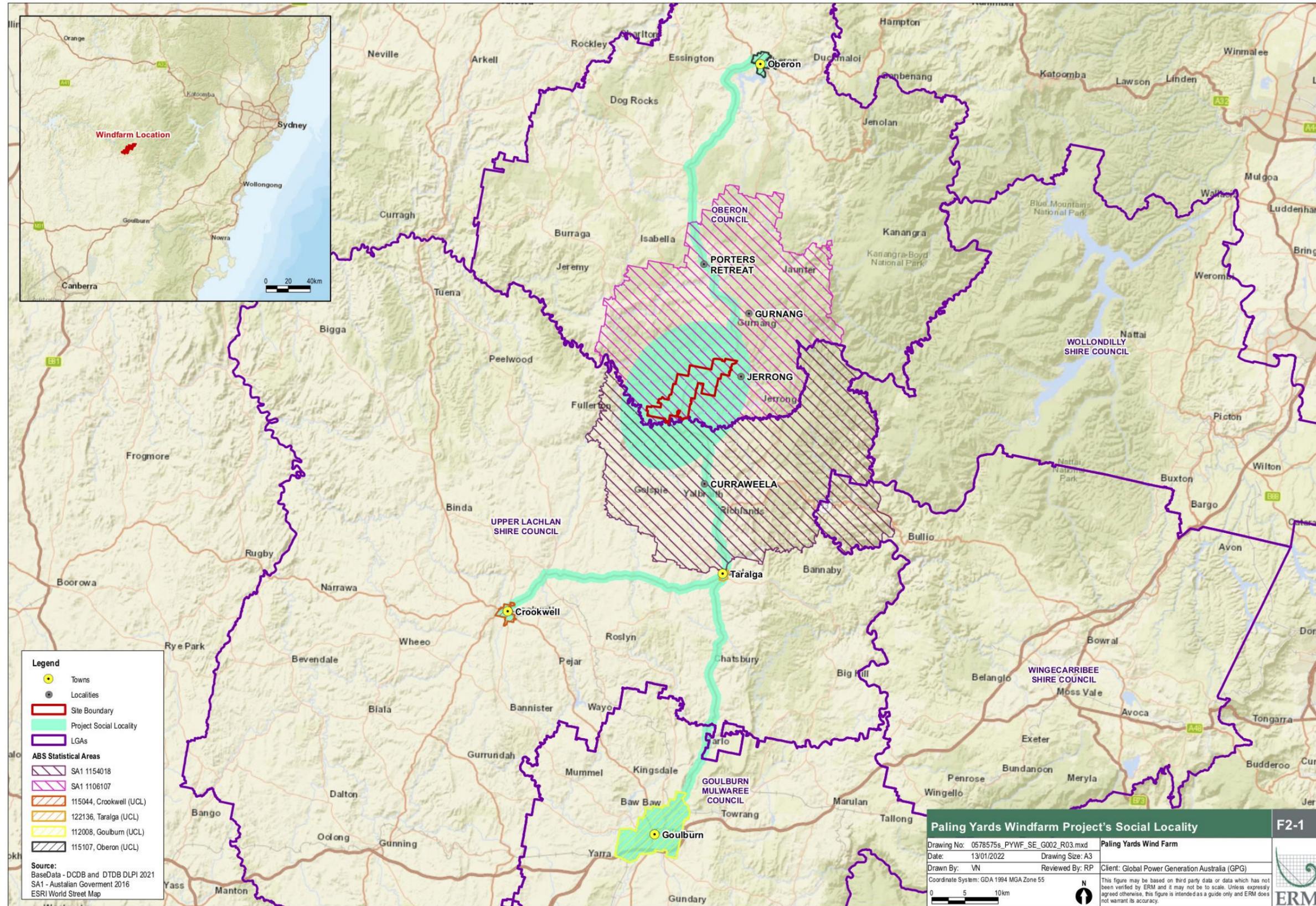


Figure 2-1 Paling Yards Windfarm Project Social Locality

3. SOCIAL BASELINE OVERVIEW

The initial social baseline (Land Use Context, Demographic Overview, Economic Overview, and Social Infrastructure Overview) presented in this section is largely based on ABS's 2016 census data and information provided by the Oberon and Upper Lachlan LGAs, supplemented by information from the neighbouring Goulburn Mulwaree LGA. In the Phase 2 SIA, additional data will also be collected by engagement with key stakeholders, where relevant, and compared against 2011 census data where appropriate to show key changes or trends in demographic data.

The Project Area's immediate surroundings comprise sparsely populated rural communities mainly employed in beef and sheep farming, and forestry related industries. The demographic profile of the area indicates a below median age population, strong indigenous representation, and a high percentage of unoccupied dwellings. The Project Area contains little to no social infrastructure and little to no commerce with the closest such services available at Taralga, approximately 35 km away.

3.1 Land Use Context

The Project occupies an area approximately 11.5 km in length and varying in width up to approximately 3 km. The 52 wind turbines are distributed over this area, while the transmission line extends a further 5 km to connect with the existing Mt Piper to Barnaby 500kV transmission line.

Land use within the vicinity of the Project Area typically comprises mixed farming with livestock and crops, forestry, and national park. The Project Area and transmission line are spread over rural properties zoned RU1: *Primary Production* under the Oberon Local Environmental Plan, 2013. The majority of the north western and a portion of the southern boundary of the Project Area is adjacent to the Abercrombie River National Park, zoned E1: *National Parks and Nature Reserves*. North of the proposed transmission line several lots are zoned RU3: *Forestry*, while to the south lots are predominantly zoned RU2: *Rural Landscape*.

3.2 Demographic Overview

Table 3-1 outlines the primary ABS datasets used to provide key demographic data across the Project's Social Locality. For the purposes of the Phase 1 SIA only 2016 ABS datasets (i.e. latest available) were considered, however, in the Phase 2 SIA, 2011 ABS data will also be used for the purposes of trend analysis.

Table 3-1 Summary of relevant ABS datasets

Location	2016 ABS Data Reference (Census)
Oberon LGA	16100 (LGA)
SA1 (in south Oberon LGA)	1106107 (SA1)
Oberon	115107 (UCL)
Upper Lachlan LGA	17640 (LGA)
SA1 (in north Upper Lachlan LGA)	1154018 (SA1)
Taralga	122136 (UCL)
Crookwell	115044 (UCL)
Goulburn Mulwaree LGA	13310(LGA)
Goulburn	112008 (UCL)
NSW	Code 1 (STE)

In addition to the above listed ABS datasets, a desktop review of data used to inform the social baseline will be provided by sources including from public health advisory bodies, principally NSW Health and local hospitals (i.e. regarding physical and mental health issues prevalent in the local community), and educational institutions, principally the NSW Department of Education and local schools. Information relating to the economic profile of the Project is also provided by ABS 2016 Census data, while information on developmental priorities and challenges in the region will be provided by local and state government planning documents, such as the Oberon and Upper Lachlan LGA's Local Strategic Planning Statements.

Table 3-2 draws on the ABS datasets listed in **Table 3-1** to provide a demographic overview of the Project's Social Locality. As outlined in **Section 2.2**, the Project Area is located within ABS Statistical Area No. 1106107.¹ This Statistical Area is the primary source providing details of the impacted community's defining characteristics and is used to provide an understanding of vulnerable groups within the Project's immediate Social Locality. The table also includes the ABS' Socio-Economic Indexes for Areas (SEIFA)² to provide an indication of comparative socio-economic advantage and disadvantage, alongside details of unoccupied dwellings, dwelling tenure, and household composition. The Project's Social Locality is characterised by aging populations in the town centres and a younger population in the ABS SA1 within which the Project is located. This area also has a much higher proportion of residents identifying as Indigenous Australian when compared to the LGA, surrounding LGAs, and the state of NSW.

¹ ABS SA1 1106107 represents the closest approximation of the Project area's locality.

² Socio-Economic Indexes for Areas (SEIFA) is a product developed by the ABS that ranks areas in Australia according to relative socio-economic advantage and disadvantage. The indexes are based on information from the five-yearly Census, available at: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/2033.0.55.001Main+Features12016?OpenDocument>.

Table 3-2 Key demographic indicators for all ABS datasets (2016) across the Project's Social Locality

Population	Median Age	Indigenous Pop. (%)	Pop. over 65 Years of Age	Median Weekly Household Income	Unemployment (%)	SEIFA (percentile in NSW)	Dwelling count (occupied/ unoccupied/ (%))	Dwelling tenure (owned outright + mortgaged / rented, %)	Household composition (families/ singles/ group, %)
Oberon LGA 16100 (LGA)									
5,301	45	3.4%	22.1%	\$1,239	5.7%	46	1,877 / 506 (21%)	72.9% / 23.4%	70.4% / 27.3% / 2.3%
SA1 (in south Oberon LGA) 1106107 (SA1)									
280	29	8.5%	8.5%	\$1,274	4.6%	42	57 / 40 (41%)	72.7% / 27.3%	63.6% / 29.1% / 7.3%
Oberon 115107 (UCL)									
2,491	42	3.6%	22.8%	\$1,109	7.9%	-	944 / 114 (11%)	65.4% / 31.2%	63.3% / 34.3% / 2.4%
Upper Lachlan LGA 17640 (LGA)									
7,695	48	2.3%	23.6%	\$1,161	3.9%	70	2,911 / 1,125 (28%)	78.8% / 17.3%	69.4% / 29% / 1.6%
SA1 (in north Upper Lachlan LGA) 1154018 (SA1)									
256	52	0.0%	33.1%	\$1,062	4.8%	45	104 / 169 (62%)	83.9% / 11.8%	69.6% / 25.5% / 4.9%
Taralga 122136 (UCL)									
336	47	0.9%	27.7%	\$909	7.5%	-	115 / 43 (27%)	65.5% / 22.4%	55.7% / 41.7% / 2.6%
Crookwell 115044 (UCL)									
2,105	51	2.7%	30.5%	\$904	4.8%	-	870 / 123 (12%)	73.5% / 23%	62.7% / 35.4% / 1.9%
Goulburn Mulwaree LGA 13310 (LGA)									
29,609	42	4.0%	19.4%	\$1,196	6.3%	40	10,948 / 1,928 (15%)	67.6% / 28.6%	68.2% / 29.3% / 2.5%
Goulburn 112008 (UCL)									
22,419	40	4.3%	19.3%	\$1,155	6.9%	-	8,423 / 1,022 (11%)	63% / 33%	65.5% / 31.9% / 2.6%
NSW Code 1 (STE)									
7,480,228	38	2.9%	16.2%	\$1,486	6.3%	-	2,604,320 / 284,741 (10%)	64.5% / 31.8%	72% / 23.8% / 4.2%

3.3 Economic Overview

Table 3-3 outlines the key industries and areas of employment for SA1s and the three LGAs (Oberon LGA, Upper Lachlan LGA, Goulburn Mulwaree LGA) included in the Project's Social Locality, and NSW as a whole.

Table 3-3 Key industries for select ABS statistical areas (2016 Census data)

Location	Key Occupations and Industries
<p>SA1 (in Oberon LGA) 1106107 (SA1)</p>	<ul style="list-style-type: none"> ■ Of the 280 residents in this SA1, 65 reported being in the workforce (including three unemployed persons). ■ The occupations reported were Managers (42.6%), Technicians and Trades Workers (13.2%), Professionals (11.8%), Community and Personal Service Workers (8.8%), Clerical and Administrative Workers (8.8%), Machinery Operators and Drivers (7.4%) and Labourers (7.4%). ■ Of the employed people in this SA1, 20.8% worked in Beef Cattle Farming (Specialised). Other major industries of employment included Sheep Farming (Specialised) (16.7%), Sheep-Beef Cattle Farming (12.5%), Log Sawmilling (6.2)% and Cafes and Restaurants (6.2%).
<p>Oberon LGA 16100 (LGA)</p>	<ul style="list-style-type: none"> ■ The most common occupations in the Oberon LGA include Managers (18.6%), Technicians and Trades Workers (14.3%), Machinery Operators and Drivers (14.2%), Professionals (12.0%), and Labourers (12.0%). ■ Of the employed people in the Oberon LGA, 4.9% worked in Log Sawmilling. Other major industries of employment included Beef Cattle Farming (Specialised) (4.2%), Sheep-Beef Cattle Farming (3.7%), Local Government Administration (3.4%) and Road Freight Transport (3.1%).
<p>SA1 (in Upper Lachlan LGA) 1154018 (SA1)</p>	<ul style="list-style-type: none"> ■ Of the 256 residents in this SA1, 126 reported being in the workforce (including six unemployed persons). ■ The occupations reported were Managers 45.7%, Professionals 16.2%, Labourers 10.5%, Technicians and Trades Workers 9.5%, Community and Personal Service Workers 7.6%, Clerical and Administrative Workers 7.6% and Sales Workers 2.9%. ■ Of the employed people in 1154018 (Statistical Area Level 1), 21.6% worked in Beef Cattle Farming (Specialised). Other major industries of employment included Aged Care Residential Services 9.3%, Sheep Farming (Specialised) 7.2%, Sheep-Beef Cattle Farming 4.1% and Shearing Services 4.1%.
<p>Upper Lachlan LGA 17640 (LGA)</p>	<ul style="list-style-type: none"> ■ The most common occupations in the Upper Lachlan Shire LGA included Managers (26.8%), Technicians and Trades Workers (13.7%), Professionals (12.8%), Labourers (11.4%), and Clerical and Administrative Workers (10.8%). ■ Of the employed people in Upper Lachlan Shire LGA, 11.1% worked in Sheep Farming (Specialised). Other major industries of employment included Beef Cattle Farming (Specialised) (4.8%), Sheep-Beef Cattle Farming (4.1%), Local Government Administration (3.6%) and Aged Care Residential Services (3.1%).
<p>NSW Code 1 (STE)</p>	<ul style="list-style-type: none"> ■ The most common occupations in NSW included Professionals (23.6%), Clerical and Administrative Workers (13.8%), Managers (13.5%), Technicians and Trades Workers (12.7%), and Community and Personal Service Workers (10.4%). ■ Of the employed people in New South Wales, 3.5% worked in Hospitals (except Psychiatric Hospitals). Other major industries of employment included Cafes and Restaurants (2.4%), Supermarket and Grocery Stores (2.2%), Aged Care Residential Services (2.0%) and Primary Education (1.9%).

3.4 Social Infrastructure Overview

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

Social infrastructure in the rural localities in the immediate vicinity of the Project Area is limited to outdoor recreation areas in the Abercrombie River National Park, such as the Bummaroo Ford campground and various trails throughout the Park. The nearest town is Taralga (population of 336) (ABS UCL), located approximately 35 km south of the Project Area. Taralga has a fortnightly GP service with a single practitioner who is otherwise based in Crookwell. Taralga hosts a public primary school, a childcare centre, a post office, Rural Fire Service, a golf club, two progress associations, and a historical society and museum. Taralga also has a range of accommodation and retail businesses including a café and agricultural supplies business.

Oberon (population of 2,491) is the nearest regional centre servicing the north of the Project Area. The Oberon Multi-Purpose Service is public hospital providing a variety of medical services, including a 24-hour emergency facility. Oberon also has a separate medical centre with general practitioners. Oberon is located in the Western NSW Local Health District, while all other regional centres within the Social Locality are located in the Southern NSW Local Health District. Emergency services based in Oberon include NSW Police, Ambulance, Fire and Rescue, Rural Fire Service (RFS), and the State Emergency Service (SES). Oberon has private and public primary schools, and a high school. A variety of religious organisations and churches are present in Oberon, including a Catholic convent, along with branches of the RSL, the Lions and Rotary Clubs, and several sporting and recreation clubs including for equestrian activities, environmental conservation, sailing, pistol shooting, cricket, quilting, needle working, and writing. The Oberon Correctional Centre is a state run minimum-security prison facility in the locality of Gurnang approximately 40 km south of Oberon. The facility is located 23 km northeast from the approximate centre of the Project Area.

Crookwell and Goulburn are regional centres to the southwest and south of the Project Area. Both regional centres are located within similar travelling distances from the Project Area (refer to **Table 2-1**). Crookwell has a population of 2,105 while Goulburn is considerably larger with a population of 22,419. Similar in size and profile to Oberon, Crookwell is the largest centre in the Upper Lachlan LGA hosting the council offices. Medical services available in Crookwell include the Crookwell District Hospital and Auxiliary, the Child and Family Health Centre, and aged care outreach services. All major emergency services are present in Crookwell: NSW Police, Ambulance, Fire and Rescue, RFS, and the SES. Crookwell has two primary schools, one public and one private, and one public high school. A wide variety of community organisations are present in the town including the Country Women's Association (CWA), progress association and historical society, Lions and Rotary Clubs, an RSL and branch of the Goulburn Legacy Club, a branch of the Red Cross, and a Men's Shed.

Goulburn is the largest regional centre and a major hub on the Hume Highway and interstate rail line connecting Sydney—Canberra and Sydney—Melbourne. Goulburn has 11 public and private primary and secondary schools servicing its population. The Goulburn Base Hospital is a major medical facility offering a wide variety of medical services, while several medical practices are also located in the town. Goulburn also has a strong presence of all major emergency services and a wide variety of community organisations and recreational facilities.

4. PRELIMINARY SOCIAL IMPACT ASSESSMENT

The social impact assessment approach utilised here follows DPIE's Social Impact Assessment Technical Supplement's guidance on evaluating the likely significance of both potential positive and negative social impacts (DPIE 2021). The Phase 1 SIA provides a preliminary desktop assessment of these potential impacts while the Phase 2 SIA that will be incorporated into the EIS will provide a detailed analysis of the potential impacts, incorporating key stakeholder feedback. An elaboration of the methodology is provided in **Section 7**. The Phase 2 SIA will elaborate potential cumulative impacts in view of recent and proposed wind farm and other large-scale projects in the Project's Social Locality.

As this is a Phase 1 SIA, this impact assessment is preliminary in nature and makes assumptions based on the desktop assessment and prior wind farm SIA experience. The identified potential impacts will be ground-truthed, supplemented by key stakeholder feedback (as outlined in Section 6), and reviewed against any changes associated with further design development subsequent to issuing the SEARs. Further development of this assessment in the Phase 2 SIA will include application of DPIE's social impact significance matrix, and an assessment of both pre- and post-mitigation scenarios.

Table 4-1 Preliminary Social Impact Assessment

Description of Impact	Impact Categories	Project Phase
Impacts on social infrastructure and availability of services due to increased population/increased demand for services	Way of life, community, accessibility, health and wellbeing	Construction
Impacts to recreational pursuits in the National Park and Conservation Reserve	Way of life, community, accessibility, health and wellbeing	Construction and Operation
Psychological impacts on people with an interest in environmental conservation (i.e. distress caused by threats of infrastructure on bats and avifauna)	Way of life, community, accessibility, health and wellbeing	Construction and Operation
Increased economic activity within the region	Way of life, livelihoods	Construction
Diversification of income streams for involved landowners	Way of life, livelihoods	Operation
Impacts to existing agricultural operations, including efficiency of aerial agricultural applications in the vicinity of Project	Way of life, livelihoods	Operation
Impacts to telecommunications	Way of life, livelihoods	Operation
Construction traffic impacts to community safety and amenity	Way of life, community, accessibility, health and wellbeing	Construction
Perceived impacts to land values	Way of life, livelihoods	Life of Project
Construction noise impacts	Way of life, community, health and wellbeing, surroundings	Construction
Operational noise impacts	Way of life, community, health and wellbeing, surroundings	Operation
Visual amenity impacts	Way of life, community, culture, health and wellbeing	Operation
Perceived health impacts, including from electromagnetic interference, shadow flicker, blade throw and noise	Way of life, community, culture, health and wellbeing	Operation

5. DESCRIPTION OF SOCIAL IMPACT MITIGATIONS ALREADY UNDERTAKEN

This section describes historical Project refinements and design changes which have been made in response to community and other stakeholder feedback, or any other Project changes which have been undertaken to mitigate potential future social impacts.

The Project was originally proposed by TME Australia in 2002, at which time wind monitoring masts were placed on site to determine the suitability of the wind resource. Contact and consultation about access and lease discussions with landholders and adjacent neighbours to the proposed wind farm site was initiated in early 2004. Union Fenosa Wind Australia Pty Ltd (later GPG) originally lodged a Preliminary Environmental Assessment in 2010 for the construction, operation and maintenance of up to 59 wind turbines and ancillary infrastructure. Consultation took place in late May and early June 2011, which included a door knock for immediate neighbouring landowners within 5-10 km of the site boundary.

An EIS was submitted in 2014, reducing the number of turbines to 55 based on community feedback and consultation. The proposed Paling Yards Wind Farm EIS was on public exhibition from 28 March 2014 to 30 May 2014. A total of 22 submissions were received as part of the exhibition process in 2014. 11 comments were submitted from government agencies and 11 comments / objections were submitted by community members. There were at least 10 nearby residents that were not supportive of the original proposal.

The key areas of interest, and number of submissions that commented based on the 2014 application and EIS, were:

- Noise and vibration (9)
- Landscape and visual (8)
- Property values (7)
- Traffic and roadworks (6)
- Environment (5)
- Flora and fauna (5)
- Health (4)
- Socio-economic (4)
- Fire / bushfire (3)
- Electricity price (3)
- Transmission line options (3)
- Turbine layout – micro-siting (3)
- Heritage (2)
- Aviation (2)
- Community Enhancement Fund (1)
- Crown Land (1)
- Cumulative (1)
- EMI/Telecommunication (1)
- Hydrology (1)
- Mineral exploration (1)

In addition to the reduction in the number of turbines, the other major changes to the design to respond to community feedback, and mitigate potential future social impacts, are summarised in the following sections. It should be noted that as part of the Project, new impact studies will be undertaken to assess the potential impacts on neighbouring residents. GPG are increasing their efforts to enter into partnership agreements with close neighbours.

In accordance with DPIE's recommendation, a new application would be submitted due to the advancements in design of wind turbine technology and the amount of time that lapsed since the original submission. This included a further reduction in the number of turbines from 55 to 47.

5.1 Aviation Obstacle Hazard Lighting

The aviation obstacle hazard lighting design was revised to accommodate the previous 55 turbine-design (down to 47 turbines as per revised layout), which according to the current micro-siting layout, would include only 23 turbines to have obstacle lighting. The obstacle hazard lighting would primarily be a requirement from the Civil Aviation Safety Authority (CASA), subject to regulation at the time of the construction, however in lieu of CASA not mandating the lighting of the turbines, GPG may elect to install lighting to reduce its risk profile unless a condition of the Development Approval prohibits turbine obstacle hazard lighting to be installed for the Project.

5.2 Flora and Fauna

The previous EIS included a draft Bird and Bat Management Strategy and a draft Biodiversity Offset Strategy. At the time it was proposed that these documents were to be revised in consultation with the former Office of Environment and Heritage (OEH), prior to construction phase.

A draft Bird and Bat Monitoring Strategy was developed and identified appropriate survey methodologies and frequency and provided guidance on bird and bat management. It provided a framework that could be used for development of a detailed Bird and Bat Management Plan for both the construction and operational phases of the wind farm, once approved.

5.3 Heritage

After consultation with the former OEH, it was proposed that a Cultural Heritage Management Plan (CHMP) be developed prior to the construction phase to include measures for subsurface test excavation at a previous identifies site on the property. Preparation of a CHMP would allow the proponent to micro-site nearby turbines to avoid potential impacts.

The test excavation would be undertaken in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW. The tasks were to involve:

- Consultation with RAPs and an offer of participation in the subsurface investigation;
- At least 14 days written notification to the former OEH and submission of the sampling strategy to the former OEH;
- Two archaeologists for approximately one to two days fieldwork;
- Completion of an Aboriginal Site Impact Recording Form for submission to the NSW Aboriginal and Heritage Information Management System AHIMS Registrar; and
- Preparation of an Archaeological Report to document results of the investigation.

5.4 Traffic and Transport

A revised assessment of the over-dimensional vehicle transportation route from the port to the Project site was undertaken and identified certain constraints. The proposed six site access roads were re-assessed for Safe Intersection Sight Distance (SISD) and native vegetation clearing, and it was recommended to relocate some of the original access roads slightly further north to achieve the required SISD and minor clearing of native vegetation.

5.5 Hydrology

The former NSW Office of Water requested that the proposal ensures all regulatory requirements are addressed prior to the commencement of activities on site. It was proposed to further investigate the options for water sharing plans and the possible temporary transfer of licence from existing licence holders in the area, or alternatively use tankers to import water from external sources. In addition, a Soil and Water Management Plan was to be prepared, in consultation with the former NSW Office of Water.

5.6 Viewing Platform

On request from Oberon Council, the proposal would also include a viewing platform within the site boundary adjacent to the Abercrombie Road corridor to allow the public to safely pull over off the road to better view the Paling Yards wind farm from the designated viewing area. The viewing platform location was to be determined in consultation with Oberon Council.

5.7 Micrositing

An indicative wind turbine layout was prepared as part of the EIS. The layout has been revised on several occasions since 2010, as a consequence of specialist studies and stakeholder input. The layout amendments included:

- Selection of the northern transmission line as the least impact option;
- Removal of the southern substation;
- *Removal of turbine P26* to reduce potential noise impact for landowners;*
- *Removal of turbines P2, P6, and P7* in response to the flora and fauna assessment;*
- *Removal of turbine P11*, associated crane pad and access track;*
- *Relocation of turbine P10* by 184m, reduced access track;*
- *Relocation of turbine P13 and P14, reduced access track, less clearing for crane pad;*
- Micrositing of the turbines to minimise local impacts;
- Changes to the location of several access tracks to further utilise the existing farm tracks and reduce the infrastructure footprint;
- More underground cabling to provide more efficient transfer of electricity and reduce the infrastructure footprint;
- A new access road to separate the wind farm construction vehicle traffic from the access used by the project involved landowners;
- Selecting a smaller wind turbine envelope size for specific locations to reduce potential noise and shadow flicker impact for the project involved landowners;
- New substations to reduce length of overhead powerlines;
- Selection of powerline poles for the northern transmission line route to minimise and avoid where possible the removal of native vegetation; and
- Revised site footprint. The north eastern end of the project has been extended and includes substation options A and B, and turbines PY42, 43, 45, 46 and 47.

** Turbine numbers refer to micrositing from site layout prior to revision in 2021, the turbines have since been renamed (PY1-PY47), see page 3.*

The proposed layout was to be further refined at the Detailed Design stage and once the final turbine type/technology was selected so as to achieve the best energy generation from the selected turbine model. It was estimated that this might have resulted in individual turbines being moved approximately 25 m to 100 m from the nominated location on the previous site plan.

5.8 Transmission Line

Concerns were initially raised by Project stakeholders in relation to the proposed powerline options, and the uncertainty around which option was to be used. The north-eastern option was selected for the Project, and comprised an approximate 9 km overhead powerline connection of to a proposed off-site electrical terminal station. The terminal station would then connect to the Mt Piper to Bannanby 500 kV transmission line that passes north-east and east of the site.

5.9 Blade Noise

In addition to the previous changes made to the design, the new turbines proposed as part of this EIS submission will incorporate new technologies that decrease the blade noise. This reduction in noise emissions is achieved through the use of serrated blade trailing edges, which reduce noise levels.

A noise assessment was carried out in late 2021 for all dwellings within 10 kilometres of a turbine under SA EPA Guidelines.

The findings of the assessment indicate that with no mitigation applied, both layout A - 6.2 MW WTGs, and B – 6.6 MW WTGs, the potential noise from the wind farm was predicted to be marginally above the criteria at 4 receptors.

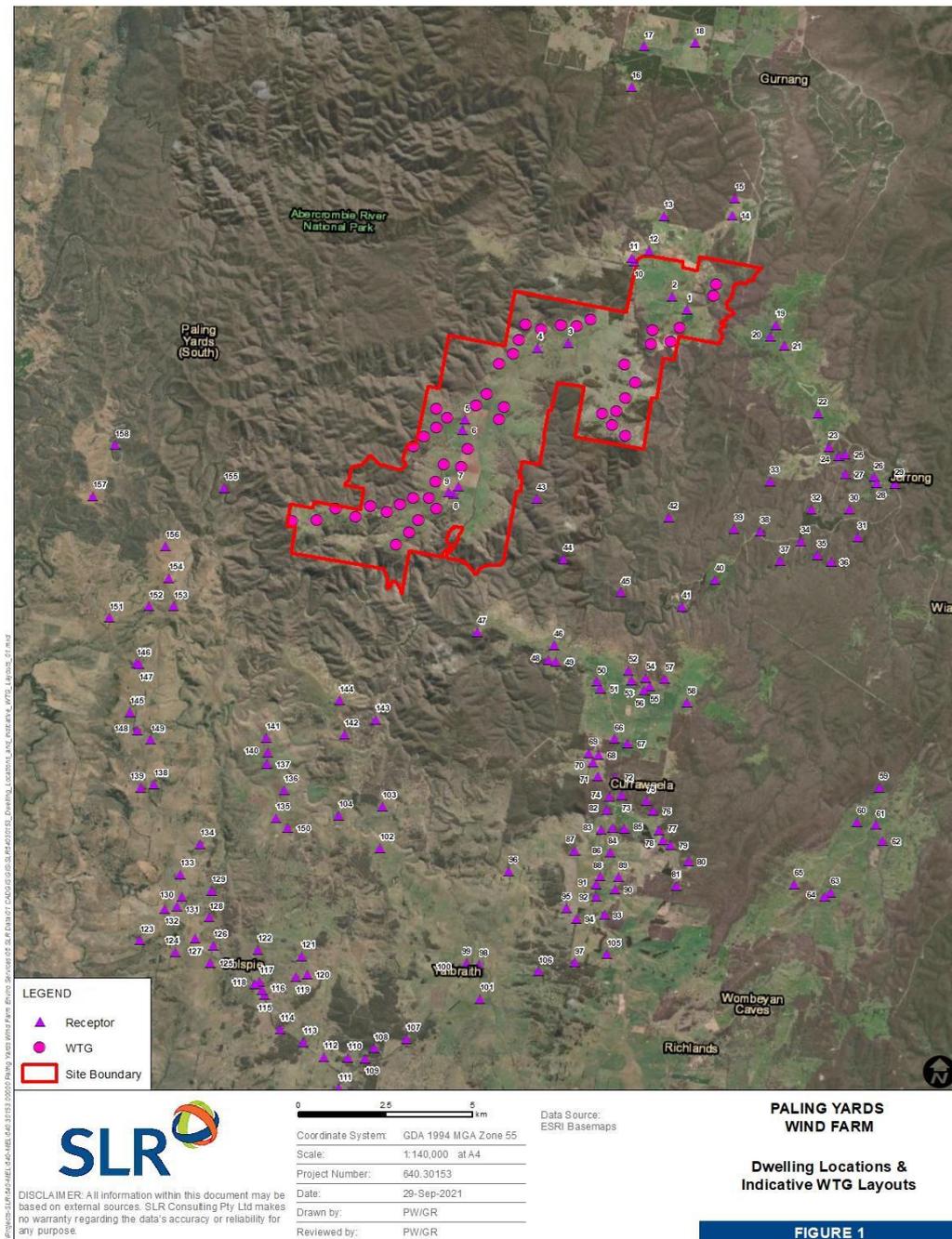


Figure 5-1 Dwelling locations and indicative WTG layout for the purpose of preliminary noise impact assessment

6. OVERVIEW OF STAKEHOLDER ENGAGEMENT ACTIVITIES FOR THE PHASE 2 SIA

Key stakeholder interviews specific to the SIA will be conducted as part of the regular and ongoing stakeholder engagement activities. The Paling Yards Community and Stakeholder Engagement Plan provides an overview of communication and engagement activities and timing, identifying key engagement rounds during 2021 when the stakeholder inputs for the SIA may be conducted.

Table 6-1 provides a list of interview topics and questions, and corresponding stakeholders, which will be required for the SIA to supplement the desktop data sources.

Table 6-1 Indicative interview topics and questions for the SIA component of stakeholder engagement activities

Stakeholders	Topics and Questions
Local residents, including: <ul style="list-style-type: none"> ■ Host landowners ■ Immediate neighbours ■ Surrounding communities 	<ul style="list-style-type: none"> ■ What do you like about living in this area? ■ How would you describe the local community? ■ How much do you currently know about the proposed Project? How do you feel about it? ■ How do you think the Project will influence or impact the local area? ■ What do you think the negative impacts of the Project are likely to be, if any? ■ Do you have any ideas on how to limit or reduce these negative impacts? ■ What do you think the positive impacts of the Project are likely to be, if any? ■ Are there benefits that you are expecting to see? ■ Do you have any ideas on how to enhance the potential benefits from the Project?
Indigenous communities, including: <ul style="list-style-type: none"> ■ Local residents ■ Traditional Owners (TOs) ■ Local Aboriginal Land Councils (LALCs) 	<ul style="list-style-type: none"> ■ In addition to the interview topics and questions posed to local residents (refer to above), if relevant, questions focussing on perceptions and understandings of historical and ongoing land use practices, including the cultural significance of particular sites and the general vicinity of the Project Area will be discussed with indigenous communities. ■ These discussions will be aimed at understanding both the tangible and intangible aspects of cultural heritage and living culture in the Project Area.
Local councils, including: <ul style="list-style-type: none"> ■ Oberon LGA ■ Upper Lachlan LGA 	<ul style="list-style-type: none"> ■ In addition to the interview topics and questions posed to local residents (refer to above), if relevant, the following questions will be asked of council representatives: ■ What is the council's view on local social and economic development challenges in the Project Area? ■ In what ways does the Project align with the council's longer-term social and economic development objectives / strategy? ■ Does the council have any programs in place to assist smaller businesses to connect with upcoming opportunities and assist with skills planning, tender writing, etc.?
Local businesses, including: <ul style="list-style-type: none"> ■ Accommodation providers ■ Contractors and trades potentially employable by the Project ■ Chambers of Commerce 	<ul style="list-style-type: none"> ■ In addition to the interview topics and questions posed to local residents (refer to above), if relevant, the following topics will be discussed with local businesses: ■ Accommodation providers: vacancy rates and general availability of short-term accommodation in the Project Area. ■ Real estate agents: vacancy rates and general availability of medium-long term accommodation in the Project Area. ■ Chambers of Commerce: local programs for matching small business trades and other skills and services with large project needs, including skills planning, tender writing, etc.

Stakeholders	Topics and Questions
Local schools	<ul style="list-style-type: none">■ In addition to the interview topics and questions posed to local residents (refer to above), if relevant, the following topics will be discussed with local schools:■ Enrolment rates, adequacy of resources provided by state education department, perceptions of positive and negative impacts of the Project on the local community.
Local community organisations, religious organisations, clubs	<ul style="list-style-type: none">■ In addition to the interview topics and questions posed to local residents (refer to above), if relevant, the following topics will be discussed with local community organisations:■ Membership trends, sense of community, perceptions of positive and negative impacts of the Project on the local community.

7. PHASE 2 SIA OUTLINE AND APPROACH

This section outlines the plan for developing the Phase 1 SIA into a Phase 2 SIA, in accordance with the requirements of the Draft Social Impact Assessment Guideline (DPIE 2021). The Phase 2 SIA will be structured according to the following sections:

1. Introduction, Project Description, Regulatory Context

This section will provide a detailed overview of the Project locale, components, stages, and history. It will also provide a detailed review of the legislative and regulatory framework applicable to the Project's SIA, taking into account relevant company policies.

2. Social Locality and Stakeholder Identification

This section will elaborate on the preliminary outline of the Project's social area of influence, or Social Locality, as provided in Section 2, above. The update will incorporate regulator and client feedback on the preliminary identification and provide an updated stakeholder list as the SIA moves into Phase 2 and more information becomes available.

3. Methodology

The impact assessment methodology to be applied in this SIA follows DPIE's (2020b) Social Impact Significance matrix, as depicted in Table 7.1. In this matrix, the likelihood level refers to the probability of a social impact's occurrence as a result of the Project while the magnitude is considered in terms of the following elements:

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

The characteristics of the magnitude of impact combine with their likelihood of occurrence to yield a rating of social impact significance, as indicated in **Table 7-1**.

Table 7-1 DPIE's Social Impact Significance Matrix

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

The social impact significance matrix depicted in Table 7.1 will be applied to yield the initial evaluation of social impacts that are likely to be experienced by different groups within the Project's Social Locality.

4. Stakeholder Engagement for SIA

This section will provide a summary of key stakeholder engagement conducted for the SIA, and also a summary of any regular and ongoing stakeholder engagement activities which are pertinent to the SIA. A preliminary indication of the key stakeholder questions and discussion topics is provided in Section 6, above. These questions and discussion topics will guide semi-structured interviews with key informants in a manner designed to elicit honest responses underpinned by free, prior informed consent of the participants. More extensive details of stakeholder engagement activities will be included in appendices where relevant.

5. Social Baseline

This section will update and expand on the preliminary social baseline outlined in Section 3, above. The preliminary desktop assessment will be supplemented and ground-truthed with data obtained during fieldwork, including from stakeholder engagement activities outlined above.

6. Expected and Perceived Impacts

This section explains the potential social impacts as identified through the preceding sections of the SIA, particularly the stakeholder inputs into the social baseline as limited by identification of the Project's Social Locality.

7. Impact Assessment and Prediction

This section will update and expand on the preliminary social impact assessment outlined in Section 4, providing an impact assessment informed by the stakeholder engagement activities outlined in Section 6. Two ratings will be provided in the impact assessment table covering pre- and post-mitigation levels of impact significance.

8. Social Impact Enhancement, Mitigation, and Residual Impacts

This section provides a summary of all of the impact assessment mitigations which have applied to the Project through all phases, including earlier phases of planning and development as outlined in Section 5. As noted, the impact assessment provided in Section 7 will include pre- and post-mitigation impact significance levels. This section elaborates the mitigation measures which may be applied to reduce the social impact significance levels for the various social impacts identified. The level of residual impacts will also be noted.

9. Monitoring and Management Framework

This section will provide an overview of the recommended monitoring and social impact management measures that are to be put in place covering both the construction and operation phases of the Project. For the post-mitigation impact significant levels to be achieved, the social impact mitigations outlined in this section will need to be implemented according to the plan outlined in this section.

10. References

List of all documents and other resources cited in the SIA.

11. Appendices

Appendices will include community profiles and other supporting information such as summaries of stakeholder engagement and primary research.

8. REFERENCES

DPIE 2021, Social Impact Assessment Guideline: State-significant Projects, Department of Planning, Industry and Environment, Sydney.

DPIE 2021, Technical Supplement: Technical Supplement to Support the Social Impact Assessment Guideline for State-significant Projects, Department of Planning, Industry and Environment, Sydney.

ERM has over 160 offices across the following countries and territories worldwide

Argentina	The Netherlands
Australia	New Zealand
Belgium	Norway
Brazil	Panama
Canada	Peru
Chile	Poland
China	Portugal
Colombia	Puerto Rico
France	Romania
Germany	Russia
Ghana	Senegal
Guyana	Singapore
Hong Kong	South Africa
India	South Korea
Indonesia	Spain
Ireland	Sweden
Italy	Switzerland
Japan	Taiwan
Kazakhstan	Tanzania
Kenya	Thailand
Malaysia	UAE
Mexico	UK
Mozambique	US
Myanmar	Vietnam

ERM's Sydney Office
Level 15, 309 Kent Street
Sydney NSW 2000

T: (02) 8584 8888

F: (02) 9299 7502

www.erm.com