

SOCIAL IMPACT ASSESSMENT

Maison Dieu Solar Farm

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29 July 2024

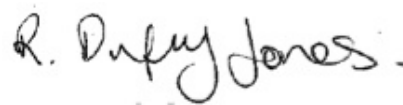
REPORT

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Dr. Rae Dufty-Jones



23 May 2024

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Acknowledgement of Country

RPS acknowledges Traditional Owners of Country throughout Australia and recognises their continuing connection to lands, water, and communities. We pay our respects to Aboriginal and Torres Strait Islander cultures, and to Elders past, present, and emerging.

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GLOSSARY AND ABBREVIATIONS

Term	Definition
ABMP	Agricultural Biosecurity Management Plan
ABS	Australian Bureau of Statistics
Accessibility	How people access and use infrastructure, utilities and facilities, whether provided by a public, private, or not-for-profit organisation
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEMO	Australian Energy Market Operator
AEP	Annual Exceedance Probability
AHIMS	Aboriginal Heritage Information Management System
Amenity and character	The soundscape (noise), air quality, and visual amenity of an area which contribute to enjoyment for residents and the community and create a recognisable and distinctive character.
Application	An application seeking development consent/approval for a State significant project or an application to modify an approved State significant project consent/approval (including concept plans) under the <i>Environmental Planning & Assessment Act 1979</i> .
Applicant	The entity seeking development consent/approval, Terrain Solar Pty Ltd
AS	Accommodation Strategy
BAR	Bushfire Assessment Report
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCD	Biodiversity Conservation Division
BDAR	Biodiversity Development Assessment Report
BEMOP	Bushfire Emergency Management Operations Plan
BESS	Battery Energy Storage System
BSAL	Biophysical Strategic Agricultural Land
CALD	Culturally and linguistically diverse
CBD	Central business district
CBF	Community Benefit Fund
CNMP	Construction Noise Management Plan
Community	Community refers to the composition, cohesion, character, how the community functions, resilience, and people's sense of place. Anyone affected by or interested in the Project, including individuals, community groups, Aboriginal and Torres Strait Islander communities, culturally and linguistically diverse communities, and stakeholder groups.
Community infrastructure	Community infrastructure include both physical infrastructure (for example, community facilities) and non-physical infrastructure (for example, programs and utilities) which help individuals, families, groups and communities meet their social needs, maximise their potential for development and enhance community wellbeing. Community infrastructure includes schools, childcare centres, places of worship, medical / healthcare infrastructure and recreational areas (such as public open space) and correctional facilities.
Community values	Community values relate to aspects of a community that are important to residents for quality of life and well-being. They include physical elements such as parks, landscapes and connectivity, and intangible quality such as sense of place and community cohesion
Connectivity	Connectivity is when people have the ability to move through and beyond their community to access a range of places and utilities, safely and conveniently.
CRM	Customer Relationship Manager
CSEP	Community and Stakeholder Engagement Plan
CSP	Community Strategic Plan

Term	Definition
CTMP	Construction Traffic Management Plan
Culture	Culture, both Aboriginal and non-Aboriginal, is a term that refers to shared beliefs, customs, practices, obligations, values and stories, and connections to Country, land, waterways, places, and buildings. The term represents the diverse and expansive intangible aspects of social life.
Cwlth	Commonwealth
DCP	Development Control Plan
DDA	<i>Disability Discrimination Act 1992 (Cwlth)</i>
Decision-making systems	The extent to which people can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms.
Demographic profile	The range of different groups existing in a particular populace, as distinguished by factors such as age, ethnicity and social background.
Distributive equity	This takes into account how different groups will experience social impacts differently (particularly vulnerable and marginalised groups, future generations compared with current generations, and differences by gender, age and cultural group).
Disturbance footprint	Maximum hectares extent of the potential impact area of the Project's disturbance
DPHI	Department of Planning, Housing and Infrastructure (formerly department of Planning and Environment (DPE))
DRP	Decommissioning and Rehabilitation Plan
EDC	Estimated Development Cost
EIS	Environmental Impact Statement
Engagement	Actions to engage the community in the assessment of the project and actions to encourage engagement.
EP&A Act	<i>Environmental Planning & Assessment Act 1979</i>
ESCP	Erosion and Sediment Control Plan
ESD	Ecologically Sustainable Development
First Nations Australians	The term is used to refer to Aboriginal and Torres Strait Islander peoples, acknowledging the diversity of Australia's First Peoples.
FMD	Foot and Mouth Disease
FTE	Full-Time Equivalent
GADDC	Guidance on the Assessment of Dust from Demolition and Construction (Institute of Air Quality Management, 2014)
GHG	Greenhouse gas
GREP	Government Resources Efficiency Policy
GW	Gigawatt
GWh	Gigawatt hours
Health and wellbeing	Physical and mental health especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, access to open space and effects on public health
HV	High voltage
HVO	Hunter Valley Operations
ICN	Industry Capability Network
IRSD	Index of Relative Socio-Economic Disadvantage
LALC	Local Aboriginal Land Council
LCVIA	Landscape Character and Visual Impact Assessment
LEC	Land and Environment Court
LEP	Local Environmental Plan
LGA	Local Government Area
Livelihood	People's capacity to sustain themselves through employment

Term	Definition
LOTE	Language Other Than English
LRET	Large-scale Renewable Energy target
LSPS	Local Strategic Planning Statement
Mitigation	Actions or measures to reduce adverse social impacts of the project. Mitigations may be to enhance or achieve a positive social outcome or actions or measures that must be taken to minimise, manage or reduce social impacts.
ML	Megaliters
MNES	Matters of National Environmental Significance
MP	Member of Parliament
MW	Megawatt
NSW	New South Wales
OEMP	Operational Environmental Management Plan
People	Individuals, households, groups, communities, organisations and the general public.
Project	Construction and operation of Maison Dieu Solar Farm
Project Area	The area to which the development application largely applies
PV	Photovoltaic
RAPs	Registered Aboriginal Parties
Receiver	Assessment location
RET	Renewable Energy Target
REZ	Renewable Energy Zone
RPS	RPS AAP Consulting Pty Ltd
SA3	Statistical Area 3
SAL	Suburb and Locality
SC	Singleton Council
Scoping Report	A report submitted by the Applicant to the Department of Planning and Environment, accompanied by a request for SEARs.
SEIFA	Socio-Economic Indexes for Areas
SEARs	Secretary's Environmental Assessment Requirements
SIA	Social Impact Assessment (this document)
SIA Guideline	Social Impact Assessment Guideline for State Significant Projects, NSW Department of Planning, Industry and Environment (2022).
SIMP	Social Impact Management Plan
SIS	State Infrastructure Strategy 2022-2042
SLCP	Social Licence Commitments Plan
SLSPS	Singleton Local Strategic Planning Statement 2041
Social impact magnitude	Social impact magnitude considers the extent of people affected, the duration of impacts, the intensity or scale of impacts, the sensitivity of those affected, and their level of concern or interest if the impact is not mitigated or enhanced.
Social impacts	Social impacts are defined by the NSW Department of Planning and Environment (2022) as a consequence experienced by people, due to changes associated with a State significant project. Social impacts can involve changes to people's way of life, community, accessibility, livelihoods, surroundings, culture, health and wellbeing and the extent to which they can have a say in decisions that affect their lives (decision making systems).
Social impact significance matrix	The social impact significance matrix allows for the significance of a potential impact to be assessed by comparing the magnitude of impact against the likelihood of the impact occurring.
Social locality	The social locality considers the nature of the project, the characteristics of affected communities and how positive and negative impacts may be reasonably

Term	Definition
	perceived or experienced by different people. It is not defined by a predefined geographic boundary, but rather has regard for the nature of the project and its impacts.
SRET	Small-scale Renewable Energy Target
SSD	State Significant Development
Stakeholder group	A group or organisation that represents several people with an interest in a State significant project.
SUA	Significant Urban Area
Surroundings	Ecosystem services such as shade, pollution control, erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity.
SWMP	Soil and Water Management Plan
TCP	Traffic Control Plan
Technical Supplement	The Technical Supplement supports the <i>Social Impact Assessment Guideline – State significant projects</i> (Department of Planning, Industry and Environment, 2022).
TfNSW	Transport for New South Wales
TS	Threatened Species
TIA	Traffic Impact Assessment
VPA	Voluntary Planning Agreement
Vulnerable group	A group of people with the inability or limited ability to withstand or adapt to change due to characteristics of the group they are a part of. This SIA considers the following factors as indicators of vulnerability: socio-economically disadvantaged persons, people who need assistance with core activities such as self-care, movement and communication due to a disability, older persons (65+ years) and very young (0 -4 years), culturally and linguistically diverse (CALD) people (language barriers and low English proficiency), people who need assistance with core activities such as self-care, movement and communication due to a severe or profound disability, the unemployed, those with no access to private vehicle, low levels of educational attainment (Year 9 school leavers and below), low income households and people living in social or community housing.
Way of life	How people live, how they get around, how they work, how they play, and how they interact each day.

1 INTRODUCTION

1.1 Project Applicant

RPS AAP Consulting Pty Ltd (RPS) was engaged to conduct a Social Impact Assessment (SIA) of the Maison Dieu Solar Farm at Maison Dieu, near Singleton in NSW (Project) by Terrain Solar Pty Ltd (Applicant).

The impacts and proposed mitigation from a social perspective due to the proposed construction, operation and decommissioning phases of the Project are addressed in this SIA in accordance with the relevant regulatory requirements and guidelines (this assessment).

This SIA supports a State Significant Development (SSD) Development Consent application under Part 4, Division 4.7 of the Environmental Planning and Assessment Act 1979 (SSD-48160216), as an appendix to the Environmental Impact Statement (EIS) for the Project. The relevant Secretary's Environmental Assessment Requirements (SEARs) are listed in **Table 1–1** which also indicates where each is addressed.

The following guidelines have been considered in this SIA:

- *Social Impact Assessment Guideline for State Significant Projects* (NSW Department of Planning and Environment, 2023) (the SIA Guideline);
- *Large-Scale Solar Energy Guidelines* (DPE, 2022) (Solar Guidelines);
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010); and
- *Undertaking Engagement Guidelines for State Significant Projects* (NSW Department of Planning and Environment, 2022).

Regulatory submissions to SEARs and community issues and where each is addressed in this SIA are listed in **Table 1–2** and **Table 1-3**, respectively.

Table 1-1 SEARs and Where Addressed

SEAR	Where addressed
Social Impact – including an assessment of the social impacts in accordance with the SIA Guideline and consideration of construction workforce accommodation.	Whole of this report.
Engagement – During the preparation of the EIS, you should consult with the relevant local, State or Commonwealth Government authorities, infrastructure and service providers, community groups, affected landowners and any exploration licence and/or mineral title holders. In particular, you must undertake detailed consultation with affected landowners surrounding the development, Singleton Council, and relevant government agencies. The EIS must: • detail how engagement undertaken was consistent with the <i>Undertaking Engagement Guidelines for State Significant Projects</i> (DPIE, 2021); and • describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, an explanation should be provided.	• Section 4 specifies engagement prior to and during the preparation of the EIS. • Section 4 states how community consultation has influenced project outcomes. • Section 4 details the engagement with all relevant stakeholders. • Section 7 covers how the issues raised through engagement and the other components of the methodology may affect the social locality due to the construction and operation of the project. • Section 8 dictates the monitoring and management framework required for the project's construction and operation to mitigate socio-economic impacts over the project's lifetime.

Table 1-2 Regulatory Submission to SEARs and Where Addressed

Regulator	Submission	Where addressed
Department of Regional NSW – Mining, Exploration & Geoscience – Geological Survey of NSW (MEG-GSNSW)	Notes that the Project Area is covered by a coal assessment lease (AL34) and concern is held by MEG-GSNSW and Hunter Valley Operations (HVO) that potential sterilisation of coal resources may be caused by the Project. Further engagement has thus been encouraged with HVO.	Section 4.1
Singleton Council	“Community Engagement <i>All neighbours should be suitably engaged. There are a number of stakeholders such as the neighbouring mines and the Wanaruah Aboriginal Land Council who should be consulted with. The proposed development has the potential to disrupt short term accommodation during the construction phase and the EIS should address this and seek to engage the community around timeframes etc.</i>” - Singleton Council has also requested that consultation with Ausgrid occur.	Section 4

Table 1-3 Community Engagement Issues and Where Addressed

Engagement Issue	Where addressed
Visual - impacts from glare and reflection potentially impacting properties, reducing visual amenity.	Section 7.2.1.5
Environmental and land - concerns around biodiversity management of flora and fauna and decommissioning of the Project.	Section 7.2.1.1
Engagement - concerns around understanding the development process and sustained engagement with the broader community, not just associated landholders.	Section 4
Traffic – concerns around congestion on roads, traffic safety, and road suitability for construction traffic.	Section 7.2.3
Housing – concerns around additional pressure on local accommodation.	Section 7.2.4
Hazards – concerns around potential fire hazards.	Section 7.2.1.2
Social – arrangements around community benefit schemes and creation of local jobs and business opportunities.	Section 7.3.3
Noise and dust – concerns around operational noise and cumulative impact of dust during construction.	Section 7.2.6 and 7.2.1.3
Water – concerns around impacts of water use during operation and construction.	Section 7.2.1.4

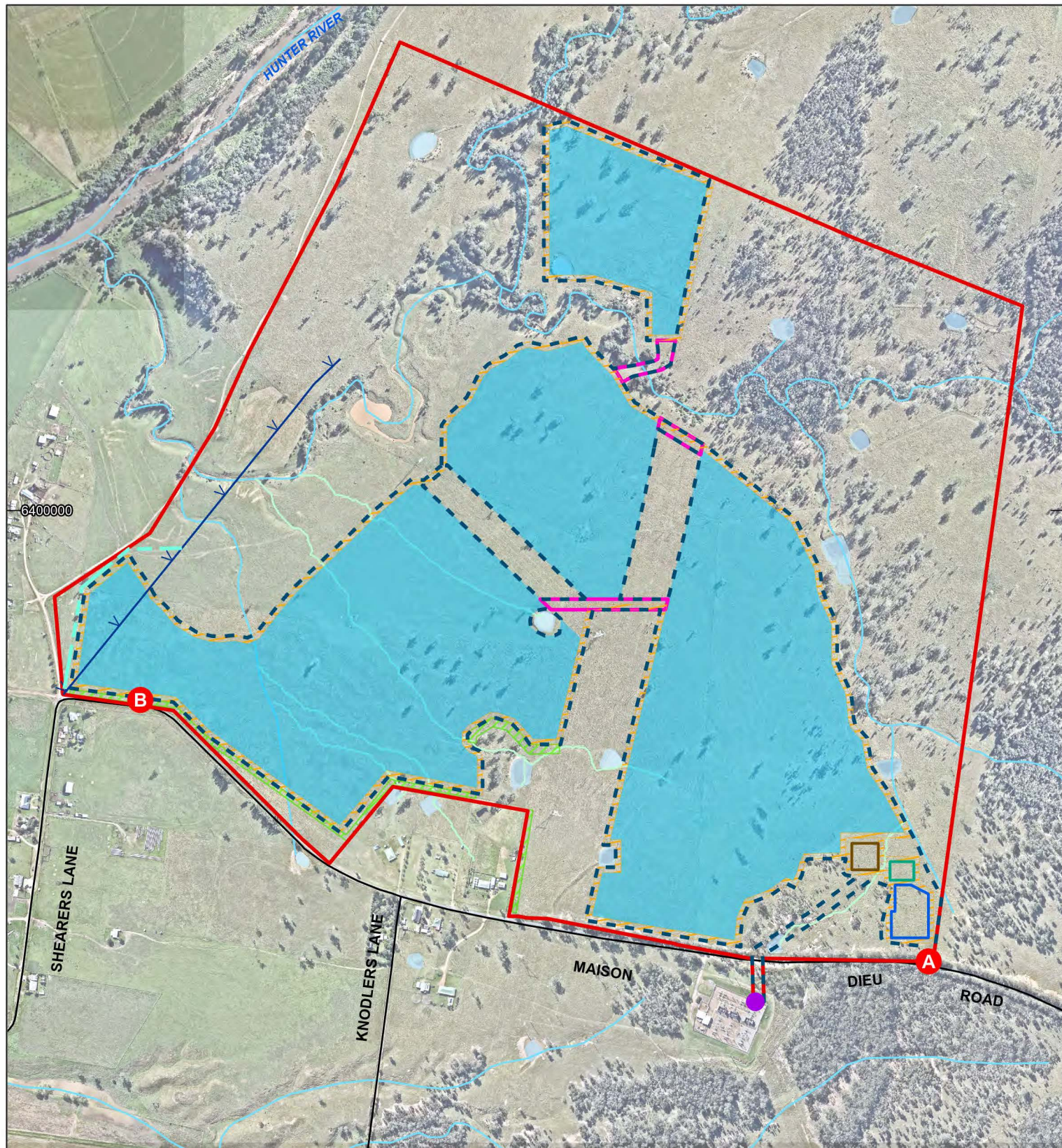
1.2 Project description

The Project will involve the construction, operation and decommissioning of a photovoltaic (PV) solar farm, Battery Energy Storage System (BESS) and associated infrastructure.

The Project is shown on **Figure 1-1** and generally includes:

- Construction:
 - Up to 18 months with up to 150 Full Time Equivalent (FTE) personnel;
 - Hours of work generally between 7 am to 6 pm, Monday to Friday and 8 am to 1 pm, Saturday;
 - Pre-construction activities and site establishment;
 - Civil works and access upgrades;
 - Major components transported via Port of Newcastle or Port Botany;
 - PV array construction utilising external equipment;

- Installation and use of temporary infrastructure (including office, parking, amenities, laydown, waste storage, stockpile, power supply, fencing, communications, services and utilities);
- Ancillary activities (including import of gravel, sand and aggregate; and water);
- Rehabilitation; Operation:
 - Approximately 110,000 PV solar panels with a total capacity of 60 MWac;
 - BESS with a capacity of 40 MW / 80 MWh;
 - Electrical infrastructure including:
 - Solar PV power conversion units with inverters;
 - Substation compound and switching station;
 - Electrical reticulation grid and infrastructure connecting to the existing Ausgrid Singleton Substation;
 - Site access and external transport;
 - Other associated infrastructure (including retained temporary construction infrastructure and its maintenance);
 - Internal and external ancillary activities;
 - 24 hours a day, 7 days a week with up to five FTE personnel;
- Decommissioning:
 - Individual components are expected to operate for up to 30 years, after which:
 - Replace the existing project components within the project description and impacts assessed in this EIS and continue operations in consultation with relevant associated holders; or
 - Seek relevant approvals should technological advances not confirm the viability of Option 1; or
 - Decommission the Project and rehabilitate the site.



Legend

Existing environment

- Road
- 1:25000 Watercourses
- Intermittent concentrated flow paths
- Existing 11kV Powerline

Existing Dams

Components

- Project Area
- Disturbance Footprint
- 11kV Distribution Line Relocation

APZ

BESS

O&M

Substation

Access Track and/or Underground Cable

Solar Array

Vegetation Screening

Site Entry

Ausgrid Singleton

Substation / Grid Connection Point

CONCEPTUAL PROJECT LAYOUT OVERVIEW

CLIENT: Terrain Solar Pty Ltd
PROJ: AU213007278
LOCATION: Maison Dieu

DATA SOURCES
CLIENT, RPS, NSWSS, Nearmaps 6/05/2022, Maxar

MAP: Project Layout
VERSION: B
DATE EXPORTED: 24/07/2024
TECHNICIAN: NATALIE WOOD

0 100 200 300 m
SCALE 1:10,000
A4 SIZE / Projection: GDA2020 MGA Zone 56

FIGURE 1-1:



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1.3 Purpose and outline of this document

Consent for the Project will be sought under Part 4 Division 4.7 of the EP&A Act. The EIS has been prepared to support the development application addressing the SEARs in full.

This SIA has been developed with consideration of the SIA Guideline. The assessment considers potential impacts to people's way of life, community, accessibility, culture, health and wellbeing, livelihoods and the extent to which people have had a say in the decision-making process for the Project. For the purposes of this assessment, 'people' refers to individuals, households, groups, communities, or organisations.

The SIA:

- Has been prepared to address the relevant SEARs, as listed in **Table 1–1**;
- Responds to the concerns raised by the community and other stakeholders during the engagement for the Project, as summarised in **Table 1–2** and **Table 1–3**;
- Describes the existing social baseline conditions of potentially affected communities and groups within the project's social locality;
- Assesses the potential social impacts and benefits of constructing and operating the Project;
- Recommends measures to enhance, mitigate and manage the social impacts identified.

The methodology for the SIA is detailed within **Section 2**.

2 METHODOLOGY

This SIA assesses the potential social impacts and benefits that may arise from the construction and operation of the Project. Potential cumulative impacts to communities resulting from other major projects occurring in proximity to the Project are also considered. The following details the methodology used within this assessment.

2.1 Approach to the Social Impact Assessment

The SIA process has been guided by the SIA Guideline and *Technical Supplement: Social Impact Assessment Guideline for State Significant Projects* (Department of Planning and Environment, 2023) (Technical Supplement). The SIA Guideline sets out the framework to identify, predict, and evaluate likely social impacts to people, as well as the approach to minimise or enhance the impact.

2.2 Characterising social impacts

The SIA Guideline defines social impacts as “the consequences that people experience when a new project brings change” (DPE 2023, p.11). Social impacts can involve both positive and negatives changes that can occur as a result of a project. **Table 2-1** shows the eight social impact categories defined in the SIA Guideline. The aim of the categories is to ensure projects are assessed from the perspectives of people and that they deliver socially sustainable outcomes.

Table 2-1 Social Impact Categories

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

2.3 Assessment methodology

Stages in the preparation of this SIA are shown in **Figure 2-1**. The detailed methodology for each stage in the SIA process is outlined below.

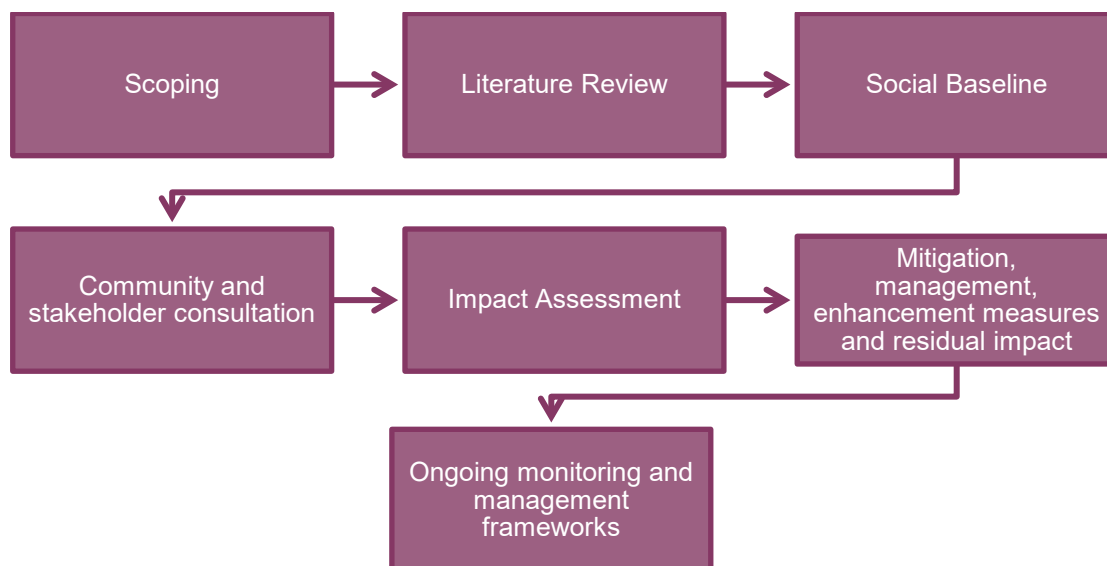


Figure 2-1 SIA Stages

2.3.1 Phase 1: Scoping

The 'Maison Dieu Solar Farm Scoping Report' (EMM, August 2022) (SR) was prepared to support the SSD Application for the project, and to assist the formulation of the SEARs by the NSW Department of Planning and Environment.

A preliminary environmental risk assessment was carried out as part of the Scoping Report in accordance with the principles of ISO 31000:2009 Risk Management – Principles and Guidelines (Standards Australia / New Zealand, 2009). The assessment was based on the following:

- A preliminary technical assessment;
- Community and stakeholder consultation;
- Previous experience; and
- Professional judgement of potential risks, and their consequence, likelihood, and significance.

The assessment analysed potential social impacts and their possible effects within the construction and operation phases of the development. This assessment is based on the outcomes of the preliminary stakeholder engagement and environmental assessment for the EIS, SR and community profile details.

Potential social impacts identified within the SR were both positive and negative. Key positive impacts identified include increased opportunities for employment and occupational training and increased economic flow into the local community. Key impacts that have the potential to have a negative effect include changes to accessibility for local properties due to construction traffic and traffic management, impacts on the availability of social infrastructure and changes to the amenity of the rural landscape from impacts including increased noise and visual change. The potential issues identified during the scoping phase have been reviewed and confirmed in this SIA, including in response to refinements to the project description.

2.3.1.1 Approach

The following approach was carried out for the SIA scoping in accordance with the SIA Guideline:

- Determined the scale and level of social impact assessment required, taking into consideration the following:
 - Complexity of the project, including the highly engaged stakeholder groups;
 - Local and regional context;
 - Geographical extent of potential impacts;
 - Current and planned major development across the social locality; and
 - The lack of highly urbanised areas with significant residential communities.
- Identified the specific project activities that could have social impacts;
- Identified each category of social impact, and whether the project activities might cause some form of impact (positive or negative, tangible or intangible etc.) within that category;
- Considered and used existing data (including impacts, benefits, and consultation outcomes) from similar comparable projects;
- Considered combined and cumulative social impacts from other projects currently underway or planned for future delivery, in and around the social locality;
- Considered whether social impacts (with and without mitigation/enhancement) are likely to be material having regard to the extent of people affected, duration of impacts, intensity/scale of impacts, sensitivity of the people affected, and their level of concern or interest;
- Planned and applied relevant research methods to investigate impacts (including comparative studies, desktop research – review of recent regional/local plans, visual survey and mapping, and stakeholder meetings); and
- Identified preliminary mitigation / enhancement measures.

2.3.1.2 Level of assessment and data requirements

Outcomes of the SIA scoping process helped identify that a standard level of assessment was required to evaluate the significance of the Project's social impacts. A standard level of assessment is required where a project is unlikely to result in significant social impacts, including cumulative impacts.

This level of assessment requires primary and secondary data, including targeted consultation and potentially targeted research with stakeholders likely to be directly affected by the project, to investigate social impacts.

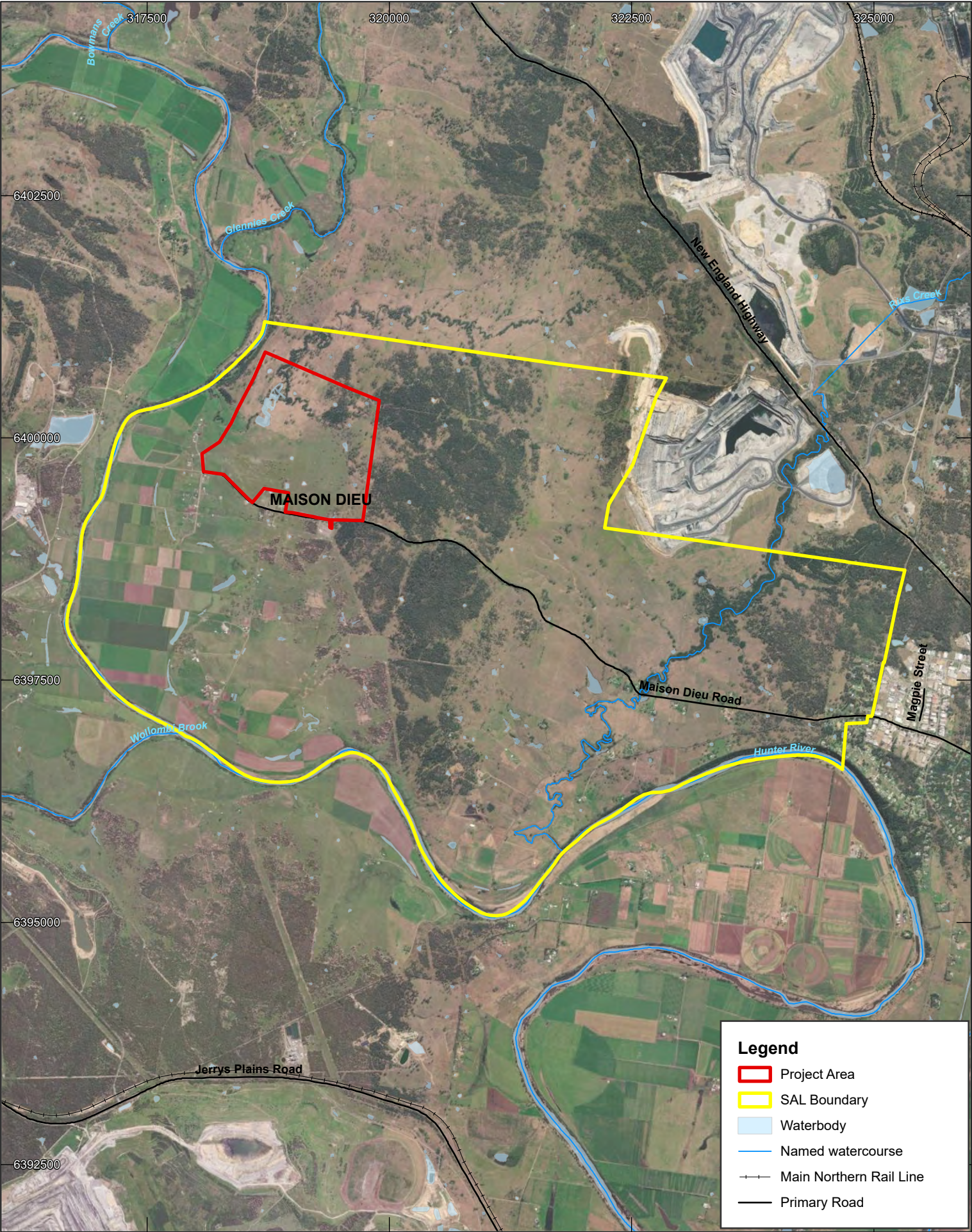
Section 4 details stakeholder engagement undertaken to date, and **Section 2.4** provides a summary of primary and secondary data used for this SIA. This process enabled this SIA to identify potential project design refinements (see **Section 7.1**), while providing the evidence-based approach necessary to apply potential mitigation, management, and enhancement measures (see **Section 8.2**).

2.3.1.3 Social locality definition and Project Area

The social locality defined within this SIA is the suburb of Maison Dieu, categorised as a Suburb and Locality (SAL) within the ABS Census 2021. The selection of this social locality was informed by:

- The scale and nature of the project;
- People and communities that may be affected including vulnerable groups and marginalised populations;
- Urban form, land use and natural features of the landscape; and
- Socio-economic attributes of existing communities.

An image of the Maison Dieu SAL is provided in **Figure 2-2** of the social locality.



SOCIAL LOCALITY

CLIENT: Terrain Solar Pty Ltd
PROJ: AU213007278
LOCATION: Maison Dieu

DATA SOURCES
CI, RPS, NSWSS, Maxar

MAP: Social
VERSION: B
DATE EXPORTED: 23/05/2024
TECHNICIAN: NATALIE WOOD

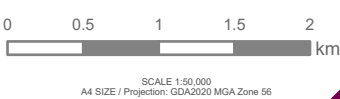


FIGURE 2-2:



IMPORTANT NOTE
1. This plan was prepared for the sole purpose of the client for the specific purpose of producing a photographic overlay plan. This plan is strictly limited to the purposes and does not apply directly or indirectly and will not be used for any other application purposes, use or matter. The plan is presented without the assumption of a duty of care to any other person (other than the Client) ("Third Party") and may not be relied on by the Third Party.
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PROJECT PATH: C:\OnedrivePortal\OneDrive - RPS Group\MaisonDieuSF03_Projects\AU213007278_EIS\Figures.aprx

2.3.2 Phase 2: Literature review

Local and State Government strategies, policies and plans applicable to the social impact assessment were reviewed to gain insight into community values, aspirations, and local priorities. Where available, community engagement outcome reports for projects within the social locality were reviewed for awareness of local issues and community sentiment.

The review enabled the strategic context and the visions and aspirations for people and places within the social locality of Maison Dieu, the Suburb of Camberwell, the Singleton Local Government Area (LGA), and the Hunter Statistical Area 3 (SA3).

2.3.3 Phase 3: Social baseline

This stage involved describing the existing social characteristics, values, and conditions of the social locality. A community profile was developed for Maison Dieu to gain an appreciation of the diversity, dynamics, and social constructs within the social locality. A comparison of these statistics was provided against the Suburb of Camberwell, the Singleton LGA and the Hunter Regional SA3 for regional context. This provided a baseline from which potential impacts of the project could be identified and assessed. The areas of Maison Dieu and Camberwell have been identified in terms of Suburbs and Localities in accordance with Australian Bureau of Statistics (ABS) data.

The following activities enabled the social baseline to be developed:

- Analysis of ABS Census data (2021) to prepare community profiles;
- Analysis of REMPLAN community data to identify proportions of social housing and GRP;
- Analysis of the SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) to measure relative disadvantage; and
- Analysis of Google Maps, Bing Maps, and NationalMap to gather information on the community infrastructure, local features and community values of Maison Dieu and the Singleton LGA.

2.3.3.1 Indicators of vulnerability

The SIA Guideline emphasises the importance of identifying vulnerable or marginalised groups within the social locality. This is to ensure the assessment recognises and responds to the positive and negative impacts that may be perceived or experienced by different people and communities both during construction and once the project is operational. Indicators used in the social baseline to identify vulnerable or marginalised people and places within the project's social locality are listed in **Table 2–2**. The social baseline is provided in **Section 5**.

Table 2-2 Indicators of Vulnerability

Category	Indicator	Data
Cultural diversity	Country of birth	% Country of birth / born overseas
	Proficiency in English	% Of households where a non-English language is used
Housing and households	Social / community housing tenancy	% People renting – social housing
	Low-income households	% Households with income below \$650 per week
	Lone person households	% Lone person households
Housing stability / Transience	Lived at different address 1 year ago	% Different address to 1 year ago
	Lived at different address 5 years ago	% Different address to 5 years ago
Disability support	Need for assistance (disability)	% People in need for assistance
Identity	First Nations Australians	% People of Aboriginal or Torres Strait Islander origin
	Very young persons	% People aged 0 – 4 years
	Older persons	% People aged 65+ years
Socio-economic disadvantage	Unemployment rate	% People aged 15 years+ looking for work
	Education	% People who left school in Year 9 or below

Category	Indicator	Data
	Vehicle ownership	% Dwellings with no vehicle
	SEIFA Index of Relative Socio-Economic Disadvantage (IRS D)	IRS D Score, decile and percentile

2.3.3.2 Distributive equity

Distributive equity considers how different groups will experience social impacts differently. This relates to vulnerable and marginalised groups, future generations compared with current generations, and differences between different gender, age, and cultural groups. The assessment of social impacts and benefits in **Section 7** considers how different sectors of the community may experience impacts differently.

2.3.4 Phase 4: Community and stakeholder consultation

This SIA has been informed by community and stakeholder consultation activities carried out by bdinfrastructure or the Applicant and the relevant technical assessments that were undertaken to inform the EIS. These activities have been carried out alongside the Project's design and EIS preparation and are discussed below. Further detail is provided in Section 5 of the EIS.

2.3.4.1 Advertising

Advertising in local newspapers, both digital and print, was undertaken to broaden the audience exposed to project information. Advertisements were used to promote project wide communications and engagement materials, such as project specific website, engagement activities, information sessions and community surveys. Two advertisements were placed in the Singleton Argus (5 October 2023) and the Hunter River Times (20 October 2023).

2.3.4.2 Community values survey

An online community survey was undertaken by bdinfrastructure to target nearby communities (<4 km) to the Project. The survey aimed to identify social and economic impacts associated with the Project and understand community views and aspirations for the Project. The survey was advertised in local newspapers, Federal MP Dan Repacholi's weekly newsletter, kitchen table discussion guide and the Project website. The community survey was originally open from 5 October 2023 until 31 October 2023 but was extended to 15 November 2023. The survey received 6 responses.

2.3.4.3 Doorknocking campaign

The doorknocking campaign aimed to outline specific project impacts to stakeholders with the potential to be directly affected by the Project and collect their feedback directly.

Appropriate materials such as newsletters, a self-guided kitchen table discussion guide and survey forms were available to provide residents with relevant information and provide various methods for input. The campaign was conducted across 10 and 11 October 2023 and reached 86 residents.

2.3.4.4 Stakeholder Customer Relationship Manager

A stakeholder Customer Relationship Manager (CRM) is used to keep a record of communications with stakeholders during all engagement phases. This includes analysis of stakeholder sentiment and provides a record of concerns, issues and follow up actions required by the project team.

2.3.4.5 Information sessions

An information session was held online from 5:30 pm - 6:30 pm 24 October 2023. The session aimed to provide community members and stakeholder groups with an opportunity to meet the project team, learn more, provide informed feedback and ask questions. Two residents attended the session.

2.3.4.6 Newsletters

Informational Project newsletters were distributed to provide high-level information to local communities and residents and give forward notice of upcoming consultation programs. The newsletters were hand delivered to 39 residents within 2 km of the Project Area on 13 September 2023. An additional 25 residents on Maison Dieu Road and Dights Road Crossing were mailed the newsletter on 15 September 2023. Newsletters were also emailed to eight community groups on 21 September 2023. No responses were received.

2.3.4.7 Media releases

A media release with project details and information was published in the Singleton Argus. The media release printed 2 October 2023 stated, “Australian company Terrain Solar has secured 200 hectares of land at Maison Dieu where it plans to build and operate a 60-megawatt solar farm with an integrated battery energy storage system (BESS) and on-site electricity substation.” The media release was also sent to the Hunter River Times on 13 October 2023 and to 2HD and NewFM on 3 October 2023.

2.3.4.8 Fact Sheet – Self-guided Kitchen Table Discussion Guide

A ‘Kitchen Table Discussion Guide’ provided objective and factual information paired with a large infographic about solar projects in general to enable community members to engage with the project visually.

The Guide provided education around solar farm development process, impacts, outcomes, and community benefits. It also included self-directed conversation instructions for residents to interact with themselves, their families and friends.

The Guide encouraged community members to provide input during in person doorknocking activities or via the online community survey, email or phone line. The guide was distributed to 87 residents in nearby communities.

2.3.4.9 Stakeholder briefings and meetings

Briefings and face to face meetings were conducted with 5 community members during doorknocking campaigns and with State and Federal elected representatives on 13 October 2023 and 24 October 2023. The briefings aimed to provide targeted and tailored information to specific stakeholders and gather feedback.

2.3.4.10 Phone and email

Ongoing access to information and feedback for the community and other stakeholders is maintained through a dedicated project phone and email line. The phone and email services have been open since May 2022.

2.3.4.11 Stakeholder letters

Letters were used to provide specific stakeholders with notification of planning matters that affect them. This included:

- Notification of consultation periods.
- Briefing offers.
- Matters requiring notification under legislation.

2.3.4.12 Website

Maisondieusolarfarm.com.au is a bank of information relating to the Project, including publicly available documents and communications materials prepared by the Applicant. The website has been active since May 2022.

2.3.5 Phase 5: Impact assessment

2.3.5.1 Comparative analysis of solar farm projects

Comparative analysis of similar solar farm developments was undertaken to deepen understanding of the social impacts associated with solar farm / BESS projects, as well as the recommended mitigation and management measures. Social impact assessments and other relevant documentation were examined for six solar farm/BESS projects to identify similarities, differences, and patterns across the projects. These solar farms were chosen based on similarities including recency, location, size and other characteristics.

All projects were undertaken in New South Wales and are listed in **Table 2-3**. Findings of the comparative analysis are provided in **Section 6.1**.

Table 2-3 Solar farm / BESS projects reviewed

Project	Type	Status
Bonshaw Solar Farm	Solar farm with supporting infrastructure and switchyard	Determination
Wyalong Solar Farm	Solar farm with supporting infrastructure, switchyard, site office, and BESS	Determination
Tilbuster Solar Farm	Solar farm with supporting infrastructure and substation	Determination
Jindera Solar Farm	Solar farm with supporting infrastructure, switchyard, weather station, and BESS	Determination
Silverleaf Solar Farm	Solar farm with supporting infrastructure, substation and 132kV powerlines	Determination
Metz Solar Farm	Solar farm with supporting infrastructure and substation	Determination

2.3.5.2 Review of EIS technical studies

Many of the potential impacts arising from the Project have been assessed in the technical reports prepared for the EIS. Those relevant to the SIA include the following papers:

- Estimated Development Cost Report;
- Biodiversity Development Assessment Report;
- Aboriginal Cultural Heritage Impact Assessment Report;
- Historic Heritage Impact Assessment;
- Noise and Vibration Impact Assessment;
- Landscape Character and Visual Impact Assessment;
- Soils and Agricultural Impact Assessment;
- Surface Water Impact Assessment;
- Flooding Impact Assessment;
- Traffic Impact Assessment;
- Preliminary Hazards Analysis;
- Bushfire Assessment Report;
- Social Impact Assessment; and
- Route Assessment.

In preparing this report, the findings of these technical studies have been brought into consideration where appropriate, to help form an understanding of how the potential impacts of the Project could affect individuals, households, groups, businesses, and the wider community. This has then been analysed through both a negative impact (potentially requiring mitigation or management) and positive impact (potentially requiring enhancement) lens.

2.3.5.3 Assessment of social impacts and benefits

Identification and assessment of social impacts and benefits that would likely arise during construction and operation was informed by:

- Review of scoped impacts in the EIS Scoping Report;
- Review of stakeholder and community feedback collected during consultation (described in **Section 2.3.4**);
- Detailed analysis of survey data (described in **Section 4.1.3.2**);
- Review of social impacts from similar Solar Farm / BESS projects described in **Section 6**;
- Consideration of the Project's social impacts, as described in **Section 7**;
- Review of EIS technical studies; and
- SIA Guideline and Technical Supplement.

The social impact significance matrix was used to evaluate the significance of each identified impact and benefit based on its duration, extent, and sensitivity of impacted receivers. This significance assessment was conducted according to the approach outlined in the Technical Supplement and discussed below.

The social impact significance matrix shown in **Table 2–4** allows for the significance of a potential impact to be assessed by comparing the magnitude of impact against the likelihood of the impact occurring.

Table 2-4 Social impact significance matrix

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

The dimensions of social impact magnitude shown in **Table 2–5** are used to consider the extent of people affected, the duration of impacts, the intensity or scale of impacts, the sensitivity of those affected, and their level of concern or interest.

Table 2-5 Dimensions of social impact magnitude

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

Table 2–6 describes the magnitude levels for social impacts.

Table 2-6 Defining magnitude levels of social impacts

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

The likelihood scale shown in **Table 2–7** outlines the likelihood of a potential impact occurring throughout the project lifecycle.

Section 7 presents the assessment of potential positive and negative social impacts. The assessment of social impacts identifies the categories from the SIA Guideline (refer to **Table 2–1**) which are relevant to each impact.

Table 2-7 Defining likelihoods of social impacts

Likelihood level	Description
Almost certain	Definite or almost definitely expected (for example, has happened on similar projects)
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

2.3.6 Phase 6: Mitigation, management, enhancement measures and residual impact

2.3.6.1 Identify cumulative impacts

Identification and assessment of potential cumulative impacts to communities resulting from other major transport and construction/ urban renewal projects occurring in proximity to the Project have been identified. The long-term affectation of communities and stakeholders has also been considered.

The assessment of cumulative impacts is provided in **Section 7.4**.

2.3.6.2 Develop mitigation, management and enhancement measures

Appropriate mitigation measures and management strategies were identified as an outcome of the assessment of potential impacts and benefits, including the significance of these impacts and benefits. These measures and strategies have been informed by the cumulation of the research contained within this SIA for literature review, social baseline, stakeholder engagement, and the technical reports for the EIS. Mitigation measures and management strategies for the project are provided in **Section 8.2**.

2.3.6.3 Calculate residual impact

Based on the previous findings, the residual impact after mitigation, management and enhancement measures was calculated. This factored in the overall extent, type, and form of mitigation and management measures, and how they interacted with reducing or enhancing the likelihood and / or magnitude levels of each impact.

2.3.7 Phase 7: Ongoing monitoring and management frameworks

Appropriate mitigation measures and management strategies were identified as an outcome of the assessment of potential impacts and benefits, including the significance of these impacts and benefits.

The development of mitigation measures was also informed by lessons learnt from other Solar Farm / BESS projects.

Recommendations to enhance positive impacts, mitigate negative impacts and monitor ongoing impacts have also been informed by similar Solar Farm / BESS projects (discussed in **Section 6**), and the outcomes of relevant technical reports prepared for the EIS.

Mitigation measures and management strategies for the Project are provided in **Section 8.2**.

2.4 Data sources

This SIA has been informed by primary and secondary data to gain deeper insights on the social locality's contextual setting, socio-economic characteristics, community values and local features in addition to social impacts arising from comparable projects.

Primary and secondary data sources include data collected specifically for this SIA and data collected during early engagement with key stakeholders and the community. SIA-specific primary data sources are listed in **Table 2-8**, pre-SIA primary data sources are listed in **Table 2-9** and secondary data sources are listed in **Table 2-10**.

Table 2-8 SIA specific primary data sources

SIA-specific primary data sources	
Social impacts	- Community engagement activities - Meetings with regulatory stakeholders - Meetings with other stakeholders
Demographics	2021 Census data (Australian Bureau of Statistics) (ABS) - Socio-economic Indexes for Areas (SEIFA) - REMPAN community data for social housing and GRP
Community infrastructure	- Google Maps - Bing Maps - NationalMap
Broader project impacts/benefits	- Discussions with technical report authors - Discussions with EIS authors, engineers, and designers - Meetings with Singleton Council, HVO, and TfNSW

Table 2-9 Pre-SIA primary data sources

Pre-SIA primary data sources	
Social impacts	Meetings with the community
Broader project impacts/benefits	Correspondence and pre-scoping meeting with DPHI
Community sentiment	Project meeting with HVO
Stakeholder concerns	- Discussion with Bloomfield Colliery and Ashton Coal - Meeting with the Singleton Council

Table 2-10 Secondary data sources

Secondary data sources	
NSW Government strategies and plans	• NSW Net Zero Plan Stage 1: 2020 – 2030 (NSW DPE, 2020) • NSW Electricity Strategy (DPIE, 2019) • NSW 2040 Economic Blueprint (NSW Government, 2019) • Hunter Regional Plan 2041 (NSW DPE, 2022) • Staying Ahead: State Infrastructure Strategy 2022-2042 (Infrastructure NSW, 2022)
Local government strategies and plans	• Singleton Sustainability Strategy 2019 – 2027 (Singleton Council, 2019) • Singleton Local Strategic Planning Statement 2041 • Singleton Community Strategic Plan 2022 – 2032 (Singleton Council, 2022)
Comparable Solar Farm / BESS projects– SIAs and supporting documents	• Bonshaw Solar Farm EIS Section 6.10, Socio-Economic of EIS (ERM, 2019) Section 5.5, Surrounding Community of EIS (ERM, 2019) • Wyalong Solar Farm EIS Section 8.12, Socio-economic of EIS (Accent Environmental, 2018) Appendix C, Consultation of EIS (Accent Environmental, 2018) • Tilbuster Solar Farm EIS Section 8.5, Social and Economic Impacts of EIS (NGH, 2020) Section 6.3, Community Consultation of EIS (NGH, 2020) • Jindera Solar Farm EIS Section 7.6, Socioeconomic and Community of EIS (NGH, 2019) • Silverleaf Solar Farm EIS Section 6.11, Socio-economic Impacts of EIS (GHD, 2019) Section 4.6, Issues Raised of EIS (GHD, 2019) • Metz Solar Farm EIS Section 6.14, Socio-economic Factors of EIS (Eco Logical, 2017) Section 5.2, Community Consultation of EIS (Eco Logical, 2017)

2.5 Assumptions and limitations

This SIA has been based on available information at the time of writing. Assumptions made in the preparation of this SIA and limitations are noted in **Table 2-11**.

Table 2-11 Assumptions and Limitations

SIA baseline study data	
Assumptions	• Potential social impacts to communities and stakeholders have been identified using the most up to date data available at the time this SIA was prepared. • The accommodation strategy was prepared with the following assumptions: - The majority of workers required will be available locally.
Limitations	• The SIA relies on 2021 Census data, with 2016 Census data provided as a point of reference. • Some data was not comparable against all four areas of interest (Maison Dieu SAL, Camberwell SAL, Singleton LGA and Hunter SA3) • Low population in Maison Dieu has not allowed for full data availability across a series of metrics, including % of public housing.
Consultation	
Assumptions	• Community feedback received is assumed to be indicative of the social locality's general views towards the project.
Limitations	• Willingness of community to provide feedback can restrict the informing of impacts. • Maison Dieu has a small resident population and therefore limited project feedback has been obtained during community consultation.

3 LEGISLATION AND SOCIAL POLICY REVIEW

A review of legislation, social plans, and policies relevant to the social locality was carried out in the preparation of this SIA. The review provided insight into place-based visions, goals, priorities and principles and community values and aspirations to be identified.

The social locality of the Project is Maison Dieu, contained in the Singleton LGA.

3.1 Legislation, social planning, and policy documents

Legislation, documents, and strategic plans that have been reviewed and how they apply to this SIA are provided in **Table 3-1**.

Table 3-1: Summary of the legislation, social planning, and policy documents

Document	Relevance to this SIA
International	
United Nations Sustainable Development Goals	The United Nations declaration of, and commitment to the ‘Transforming our world: the 2030 Agenda for Sustainable Development’ (UN, 2015) set in place 17 Sustainable Development Goals (SDGs) with 169 distinct targets, in an effort to progress the principles of ESD and create more equitable outcomes from a socio-economic and sustainability perspective. All member states of the UN General Assembly are in agreeance to achieving the SDGs by 2030 and bringing the most disadvantaged member states and individuals to greatly improved outcomes. The Project aligns with SDG Goal 7: ‘Affordable and Clean Energy’, and Goal 11: ‘Sustainable Cities and Communities’. The Project will contribute an additional source of renewable energy to the National Energy Market (NEM) in Australia, while simultaneously reducing the power generation needed from fossil fuel sources, reducing greenhouse gas emissions and improving environmental health outcomes.
United Nations Framework Convention on Climate Change COP26	COP26 was the 26th climate change conference held by the UN in Glasgow, during early to mid-November 2021. All 197 member states of the UN agreed to the Glasgow Climate Pact, which established a series of key commitments, including ‘Recognizing the emergency’, ‘Accelerating action’, and ‘Moving away from fossil fuels’. In alignment with these commitments, the Australian federal government committed to net zero greenhouse gas emissions by 2050 and agreed to shift away from traditional fossil fuel energy generation. The Project will assist in helping Australia to meet these international commitments through generating solar power, helping replace the need for daytime fossil fuel energy generation. This will result in helping to achieve Australia’s net zero emissions by 2050 commitment.
United Nations Framework Convention on Climate Change COP21	The COP21, held in Paris during mid-December 2015, was the UN’s 21st climate change conference, which set in place the Paris Agreement. This Agreement, committed to by 194 UN member states, involved an official commitment to the following key long-term goals: • “Substantially reduce global greenhouse gas emissions to limit the global temperature increase in this century to 2 degrees Celsius while pursuing efforts to limit the increase even further to 1.5 degrees; • review countries’ commitments every five years; • provide financing to developing countries to mitigate climate change, strengthen resilience and enhance abilities to adapt to climate impacts.” (UN, 2015). • Australia is one of the signatory states to this Agreement, having set a target of a 26-28% reduction in greenhouse gas emissions (from a 2005 baseline) by 2030. This target has since been raised by a successive government to a target of a 43% reduction by 2030. The Project will assist Australia in achieving its reduction targets by generating solar energy.

Document	Relevance to this SIA
Commonwealth Government	
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	The <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) provides for the protection of Australia's natural environment, particularly matters of national environmental significance (MNES), while promoting ecologically sustainable development (ESD). The Project has been assessed under the EPBC Act as a controlled action (EPBC 2023/09638) due to listed threatened species and communities within the Project Area.
<i>Renewable Energy (Electricity) Act 2000</i>	The <i>Renewable Energy (Electricity) Act 2000</i> established the Federal Government's 'Renewable Energy Target', a scheme that aims to reduce Australia's reliance on fossil fuel energy generation and encourage the additional generation of electricity from sustainable and renewable sources. The 'Large scale Renewable Energy Target' (LRET) creates an incentivised market for renewable energy power stations across Australia. At present, the current LRET is a total of 33,000 GWh. The Project is eligible for the LRET scheme and will supply 60MWac to the National Electricity Market, equivalent to powering approximately 19,000 average homes. This will contribute to the reduction and stabilisation of energy supply and prices in the market.
<i>Climate Change Act 2022</i>	The Federal Government's Climate Change Act 2022 details the measures and mechanisms to create down-ward pressure on GHG emissions, while legislating Australia's GHG reduction targets of a 43% reduction (from 2005 levels) by 2030 and achieving net GHG emissions to zero by 2050. The Project will assist Australia in achieving its reduction targets by generating solar energy, a renewable resource, resulting in an expected yearly emissions reduction. The Project, if approved, would also be completed before the 2030 target, being able to notably contribute to these yearly emissions reductions.
Federal Government Renewable Energy Target	Established by the Renewable Energy (Electricity) Act 2000, the Renewable Energy Target (RET) is a Federal Government scheme that has been legislating in order to reduce reliance on fossil fuel energy generation and "...encourage the additional generation of electricity from sustainable and renewable sources." (Clean Energy Regulator, 2022). This target is separate into two distinct parts, being a Large-scale RET (LRET) and a Small-scale RET (SRET). Pertinent to this Project, the LRET creates an incentivised market for renewable energy power stations across Australia. At present, the current LRET is a total of 33,000 GWh. The Project is eligible for the LRET scheme and will supply 60MWac to the National Electricity Market, equivalent to powering approximately 19,000 average homes. The Project will provide non-emitting, renewable and low-cost energy to the NEM, helping to replace the primary power generation from coal-fired power and helping achieve the Federal Government's 43% emissions cut by 2030.
NSW Government	
<i>Energy Infrastructure Investment Act 2020 (NSW Government, 2020)</i>	The <i>Energy Infrastructure Investment Act 2020</i> outlines NSW objectives regarding energy infrastructure. These include co-ordinate investment in new generation, storage, network, and related infrastructure and to improve the affordability, reliability, security, and sustainability of electricity supply. Division 1 of the Act identifies provisioned Renewable Energy Zones (REZs) within NSW. The Project Area is situated within the Hunter-Central Coast REZ. The Project contributes to the objectives of the <i>Energy Infrastructure Investment Act 2020</i> by increasing clean energy production capacity and reliability of electricity supply, while building the skilled renewable energy workforce in the REZ.
NSW Net Zero Plan Stage 1: 2020 – 2030 (NSW DPE, 2020)	<i>The NSW Net Zero Plan Stage 1: 2020 – 2030</i> is the first plan developed of three to identify strategies to reach net zero in NSW by 2050. The Plan identifies four key priority areas; drive uptake of proven emissions reduction technologies, empower consumers and businesses to make sustainable choices, invest in the next wave of emissions reduction innovation, and ensure the NSW Government leads by example. Through delivering the outcomes of the Plan, the NSW Government is expected to create almost 2,400 jobs in the renewable energy sector and attract \$11.6 billion in investment, in which two thirds of the investments are expected to go to regional and rural NSW.

Document	Relevance to this SIA
	The Plan recognises that the global demand for low emissions products and services are on the rise. Solar energy is currently identified as a low-cost renewable energy source, with the cost of solar generation falling by more than 73% since 2010. Due to economic and employment opportunities involved with the solar industry, solar has been recognised as a key area for renewable energy growth within NSW. The NSW Government recognises their role in promoting the use of solar energy. With reference to the NSW Government Resources Efficiency Policy (GREP) targets, the NSW Government intend to more than double the solar target from 55,000 to 126,000 megawatt hours by 2024. The Project will contribute to the NSW Government's Net Zero Plan by producing clean, renewable energy, with a capacity of 60MWac, which will be supplied efficiently to the grid via the existing Maison Dieu Singleton Substation.
NSW Electricity Strategy (DPIE, 2019)	The 'NSW Electricity Strategy' (DPIE, 2019) is the NSW State Government's plans to deliver a reliable, affordable, and sustainable electricity within the NEM, and supports a variety of new schemes to achieve this. The most forefront of these are the declaration of five REZs across NSW, which concentrate electricity infrastructure upgrades to encourage investment from other entities. The strategy will drive \$10.7 billion in private investment, approximately 830 operational jobs, and 1,250 construction jobs each year. The NSW Electricity Strategy aligns closely with the NSW Government's Net Zero Plan Stage 1: 2020 – 2030, supporting an affordable and reliable energy grid by: • Delivering Australia's first coordinated Renewable Energy Zone in the Central-West Orana region; • Saving energy via the Energy Security Safeguard; • Supporting the development of new electricity generators; • Setting a target to increase the state's energy resilience; and • Making it easier to do energy business in NSW. The Project is in accordance with the NSW Electricity Strategy, providing private investment into renewable energy generation and an increase in BESS storage capacity that will help reduce cost of electricity within the NEM. Additionally, it will also assist in ensuring that the NEM becomes more resilient to power demands as coal fired power stations across the state are phased out over the next 15 years.
NSW 2040 Economic Blueprint (NSW Government, 2019)	The <i>NSW 2040 Economic Blueprint</i> identifies future priorities for the NSW economy to 2040 and beyond. A productive and growing manufacturing centre, incorporating renewable energy, has been identified as a key sector of NSW growing economy as well as a key contributor to the state's circular economy. Solar energy is an essential aspect of Australia's renewable energy sector, with nearly 25,000 MW generation capacity proposed and approximately 2,000 MW committed as of 2019. The implementation of battery storage is also on the rise in NSW, with approximately 4,000 MW proposed as of 2019. The Project will provide opportunity for Australian manufacturers, suppliers and contractors with a substantial estimated development cost.
Hunter Regional Plan 2041 (NSW DPE, 2022)	The 'Hunter Regional Plan 2041' (DPE, 2022) (Hunter Regional Plan) is the new strategic planning guidance for future development in the Hunter. Objective 1 of the Hunter Regional Plan is to diversify the Hunter's mining, energy and industrial capacity. The Hunter Regional Plan acknowledges that the region has the infrastructure assets and skilled workforce to support more renewable energy generation, including the required established high-voltage power lines and existing transport infrastructure. These assets place the Hunter in an important role in providing power. The Project aligns with Objective 1 of the Hunter Regional Plan through the provision of greater renewable energy generation within the region, diversifying existing energy sources, improving the region's energy efficiency, and replacing electricity that would have been generated by burning coal, effectively reducing GHG emissions. These aspects of the Project serve to improve outcomes for residents and businesses of the Hunter Region. The Project also aligns with the following objectives of the Hunter Regional Plan: • Objective 6: Conserve heritage, landscapes, environmentally sensitive areas, waterways and drinking water catchments - through strategic avoidance of areas of high environmental values, informed by extensive technical assessments.

Document	Relevance to this SIA
	- Objective 7: Reach net zero and increase resilience and sustainable infrastructure - by providing clean, reliable and stable energy throughout its entire lifetime. This in turn will aid in managing the effects of climate change by reducing greenhouse gas emission requirements for electricity and equip communities with an alternate source of power generation. - Objective 9: Sustain and balance productive rural landscapes – by enabling a multi-faceted economic land use on its local rural landscape. The solar arrays would be constructed at a height which allows the Applicant to consider grazing of sheep or other smaller livestock around and underneath the array, allowing the Project Area to maintain its historical agricultural use. This promotes upscaling of productivity without the acquisition of more land, providing additional income streams for farmers.
Staying Ahead: State Infrastructure Strategy 2022-2042 (Infrastructure NSW, 2022)	The <i>State Infrastructure Strategy 2022-2042</i> (SIS) details Infrastructure NSW's advice on the needs and priorities of NSW infrastructure for the coming 20 years and beyond. Key target areas include to boost economy-wide productivity and competitiveness and achieve an orderly and efficient transition to Net Zero. The Strategy highlights the importance of REZs as a key part of achieving both above objectives to increase renewable energy capacity and firming capacity. The decline in cost in solar generation specifically makes solar a viable source of renewable energy for NSW, and the continued investment into solar at the level required is crucial in replacing retiring firm sources of generation. The Project will contribute to the reduction and stability of electricity prices by increasing the supply of solar generated energy in the Hunter Central Coast REZ.
Local Government – Singleton Council	
Singleton Sustainability Strategy 2019 – 2027 (Singleton Council, 2019)	The <i>Singleton Sustainability Strategy 2019 – 2027</i> focuses on four of the United Nations Sustainability Development Goals (SDGs) and details long-term objectives for Singleton in these areas. Three out of four SDGs directly relate to outcomes of the Project. Goal 7: Affordable and Clean Energy involves working with the community to achieve reduction in Greenhouse Gas Emissions through new economic opportunities. This is essential in creating more sustainable inclusive communities and developing resilience to environmental issues. The Strategy outlines the need for continual investment in renewable energy by Council and the community to achieve this. Goal 11: Sustainable Cities and Communities, involves driving sustainable design and development. This involves managing the environment in a sustainable way to mitigate challenges brought by increased urbanisation by improving resource use and reducing pollution. The Project will contribute to the transition to renewable energy, reducing the region's dependency on coal fired electricity production, which will in turn reduce pollution levels on land, in water and in the atmosphere. Goal 12: Responsible Consumption + Production, involves resource efficiency maximised through avoidance, reduction, reuse, repurpose and recycling. To achieve this, the investment in a circular economy is essential. The Project promotes a circular economy by producing renewable energy and providing the potential to continue operations once the predicted 30-year operational lifespan comes to an end. A waste management plan will be prepared prior to the Project's construction with reuse and recycling as priority actions.
Singleton Local Strategic Planning Statement 2041	The Singleton Local Strategic Planning Statement 2041 (SLSPS) (Singleton Council 2020) (SLSPS) is Singleton's primary local strategic plan for land uses in the Singleton LGA to 2041. The SLSPS is 20-year framework for future land uses and development, detailing the desired planning objectives and actions for the Singleton LGA. The SLSPS's strategic vision involves the Singleton LGA to be internationally recognised as a mining centre of excellence, transitioning to a more diverse and innovative economy, refocusing on post-mining development outcomes, and preparing for long-term population growth. Priority 4.1 of the SLSPS identifies that creating an industry base that is innovative, resilient and productive is key for building on the future sustainability of the LGA's economy.

Document	Relevance to this SIA
	The positions around this priority that relate to renewable energy generation are that: • Emerging opportunities for economic diversification in the LGA will be investigated; and • Land use planning constraints and opportunities for renewable energy will be investigated. The Project is aligned with the SLSPS as it aims to support continual economic development and industrial diversification in the Singleton LGA. The Project provides the LGA with the opportunity to capitalise on existing and future energy transmission and storage infrastructure and create more sustainable outcomes for the region. Potential impacts from the Project will be managed and mitigated to minimise effects on surrounding land uses as far as practicable.
Singleton Community Strategic Plan 2022 – 2032 (Singleton Council, 2022)	The Singleton Community Strategic Plan 2022 – 2032 details the community's vision for Singleton over the next 10 years. Engagement involved over 2,000 responses from the Singleton community. One of ten priority themes identified throughout the engagement phase is to evolve away from mining. The Plan has identified that an increased uptake of renewable energy and responding to the changing environment are key opportunities to create an environment supportive of positive environmental and economic change. The Project supports the transition away from mining and provides opportunity for local workers and businesses, bringing considerable capital investment to the region.

4 COMMUNITY AND STAKEHOLDER CONSULTATION

This section provides a summary of community and stakeholder consultation activities and outcomes relevant to this SIA in relation to the Project.

All consultation undertaken to the time of writing, along with all future consultation to be conducted during the EIS process, has been and will be done in accordance with the following guidelines as described in **Section 1**. Regulator names are as they were at the time of engagement.

4.1 Consultation prior to preparation of the EIS

This phase involved informing and engaging with stakeholders about the project and identifying key concerns. This facilitated a better understanding of stakeholder values, potential project impacts, and created avenues for meaningful participation in future phases.

The Applicant undertook stakeholder and community consultation during the scoping report phase. Consultation incorporated the following relevant parties as detailed in the Scoping Report:

- DPE (now DPHI);
- The community;
- Mining companies; and
- Singleton Council.

A summary of key interactions is provided in **Table 4-1**. Further records of engagement are provided throughout the remainder of this section. **Table 4-2** provides a summary of regulatory input to the SEARs.

Table 4-1: Stakeholder and community engagement during Project scoping

Stakeholder	Date	Type/s of engagement	Outcome/Issues raised
DPE (now DPHI)	12 – 27 April 2022 14 April 2023	Correspondence, pre-scoping meeting	Introduction of the Project and request of a pre-scoping meeting was sent to the DPE via email on 12 April 2022. The pre-scoping meeting was held on 27 April 2022, which assisted in understanding DPE's requirements for the Project.
Community	January 2023 - present	Project information letters, face-to-face meetings, telephone conversations	Key issues raised within face-to-face meetings included impact on visual amenity, noise, impacts from construction traffic, impacts of property values and impact on groundwater from planting of screening vegetation near boundary. Responses to engagement varied from being unresponsive to information letters, to being broadly supportive of the Project.
HVO	3 - 26 May 2022	Project information letter, project meeting	Preliminary concerns to the potential sterilisation of future coal resources within the project site. No further concerns raised post meeting.
Bloomfield Colliery	2 August 2022	Discussion followed by project letter.	No concerns raised.
Ashton Coal	2 August 2022	Discussion followed by project letter.	No concerns raised.
Singleton Council	9 May 2022	Meeting	Matters discussed included potential impacts on biodiversity and Aboriginal heritage values, impacts from the project's construction workforce on short term accommodation availability and short-term housing affordability in the region and Singleton Council policy requirements in relation to voluntary planning agreements (VPA).

Table 4-2: Summary of regulatory input for Maison Dieu Solar Farm SEARs

Stakeholder group	SEARs feedback	Comment / issue / concern
NSW Department of Planning and Environment (DPE) – Biodiversity and Conservation	NSW DPE did not provide project specific advice. However, standardised recommendations have been provided. A Biodiversity Assessment Report (BDAR) must be prepared to assess biodiversity impacts relating to the proposed development. Water and soils, flooding and coastal erosion must also be mapped as well as an assessment of impacts in accordance with relevant policy and legislation to ensure compliance for proposed development.	• Biodiversity • Water and soils • Flooding and coastal erosion
NSW Department of Planning and Environment (DPE) – Crown Lands	NSW DPE stated that as no Crown land, roads or waterways are affected by potential development, no advice was given.	• N/A
NSW Department of Planning and Environment (DPE) – Water	NSW DPE recommended the following: • A description of the watercourses located within the vicinity of the development, including Strahler Stream Order as mapped by Spatial Services NSW, and appropriate riparian setbacks in accordance with the <i>Guidelines for riparian corridors on waterfront land</i> • Details of water supply requirements and arrangements for the life of the project (both construction and operation) • An assessment of the likely impacts (including flooding) on surface water and groundwater resources and measures proposed to monitor, reduce and mitigate these impacts • A description of erosion and sedimentation issues, through the development of an Erosion and Sediment Control, in consultation with DPE Water • Consideration of any relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans.	• Watercourses within Project Area • Riparian setbacks • Water supply requirements • Impacts on surface water and ground water • Erosion and sedimentation • Consideration of relevant guidelines
NSW Department of Primary Industries (DPI)	NSW DPI recommended the following: • Identify agricultural land sharing opportunities for the operation, including groundcover management • The inclusion of a description of the final land use and landform, indicators which may be used to guide the return of the land back to agricultural production, along with the expected timelines for the rehabilitation program • The soil survey to include baseline information to support the determination of rehabilitation goals • An agricultural biosecurity management plan detailing construction and operational risks and controls in relation to pests, weeds, and diseases should be required	• Agricultural land sharing opportunities • Final land use and landform • Soil rehabilitation • Agricultural biosecurity management

Stakeholder group	SEARs feedback	Comment / issue / concern
NSW Fire and Rescue (FRNSW)	FRNSW advised there is insufficient information available regarding the fire safety and emergency response management aspects of the project. FRNSW requests to be consulted and given the opportunity to review and provide comment regarding the proposed fire and life safety systems at the preliminary and final design phases of the project.	- Insufficient information - Request for consultation
NSW Department of Planning and Environment (DPE) – Heritage	NSW DPE advised of their satisfaction with the draft SEARs with regards to Aboriginal cultural heritage and has no further comments.	N/A
Department of Regional NSW (DRN) – Mining, Exploration and Geoscience (MEG)	DRN MEG advised there are no additional comments regarding the draft SEARs. Concerns were raised regarding the project and potential resource sterilisation and encourages the Applicant to continue further engagement with HVO.	Potential resource sterilisation
NSW Rural Fire Service (RFS)	NSW Rural Fire Service advised that a bush fire assessment report shall be prepared which identifies the extent to which the proposed development conforms or deviates from the relevant provisions of <i>Planning for Bush Fire Protection 2019</i> .	Bush fire assessment report
Singleton Council	Council has requested the following to be addressed: - State Environmental Planning Policy (Transport and Infrastructure) 2021: Ausgrid will need to be consulted. - State Environmental Planning Policy (Resilience and Hazards) 2021: Potential contaminated land, being farmland and proximity to the mine sites. Lithium battery storage and potential contamination with regards to this type of development must be addressed - State Environmental Planning Policy (Primary Production) 2021: Draft State Significant Agricultural Land Map to be considered. (Draft) Hunter Strategic Plan 2041: This document is currently in the draft stage and addresses the need to diversify. This will need to be considered. - Singleton Sustainability Strategy 2019–2027: This focuses on the United Nations SDGs. The proposed development should show how it drives Singleton to a sustainable future. - Net Zero and Federal requirements: Address how the project will be in line with the NSW and Federal Governments guidelines and policies (also any draft policy) towards net zero emissions and climate change. - Flood: The site is partially located in an historical flooding area, namely the 1949 & 1955 floods. - Bushfire: Site is bushfire prone. Development as per Planning for Bushfire Protection 2019.	- Adherence to SEPP and regional plan requirements - Net Zero and Federal requirements - Flood - Bushfire - Biodiversity 88b instrument - Traffic - Accessibility - Heritage - Riparian land and other watercourses - Earthworks and drainage - Community engagement - Air and noise - Waste management - Decommissioning - Mine subsidence - Council engagement regarding traffic and impacts of short-term housing.

Stakeholder group	SEARs feedback	Comment / issue / concern
	• Biodiversity: The site contains a number of Threatened Ecological Communities. A Season BDAR will be required. Updated NSW State Vegetation Map from June 2022 to be used. Koala Study to be undertaken. • Singleton High Biodiversity Values: Singleton Council is currently creating High Biodiversity Values mapping, which could impact certain areas on the site. • 88b Instrument: There are a number of easements relating to transmissions lines, water, and right of carriage ways. The appropriate authority must be contacted for potential impacts and variation to these covenants. • Traffic: Management during the construction, noting there are to be over 300 workers on site, carparking, access, management, during the life of the project (up to 8 staff), potential impacts on the Maison Dieu and New England Highway intersection that needs to be addressed, particularly during construction phase • Accessibility: Potential accessibility requirements under Australian Standards and Singleton Development Control Plan 2014. • Heritage: The site is located opposite a Heritage Item located on Lot 2 DP 876447. This is a local heritage item listed as "1141 - Archerfield and outbuildings" under the Singleton Local Environmental Plan • Aboriginal Heritage: Highly likely there is Aboriginal Heritage on site. AHIMS and Aboriginal Heritage Study required. Aboriginal knowledge holder observes the initial removal of the A horizon soils at the construction site to identify if there are Aboriginal objects at risk of harm. • Riparian Land and other watercourses: There is Riparian Land and Watercourse mapped land on site. Further to this these are a number of lower order stream all which go to the Hunter River. This will need to be addressed, including potential extra run off due to large hard surface areas. • Earthworks and Drainage: Under the Local Environmental Plan and Development Control Plan both of these items will need to be addressed. • Community engagement: All neighbours should be suitably engaged. There are a number of stakeholders such as the neighbouring mines and the Wanaruah Aboriginal Land Council who should be consulted with. The proposed development has the potential to disrupt short term accommodation during the construction phase and the EIS should address this and seek to engage the community around timeframes etc. • Air and Noise: Acoustic and Air Quality impacts to be addressed, this includes	

Stakeholder group	SEARs feedback	Comment / issue / concern
	potential impacts the Heritage listed neighbouring property. - Waste Management: Waste Management Report detailing the waste produced during construction and during the life of the project, what is to be recycled/reused and where is it sent. - End of Life decommissioning: The process of decommissioning and the management plan to remediate the site (including revegetation). How the waste will be processed; this includes the shorter battery life. - Mine Subsidence: The lots are located in the Patrick Plains Mine Subsidence District this must be addressed. Council would like to see the Applicant actively engage Council particularly with regards to the traffic impacts and the impacts of short-term housing.	
Transgrid	Transgrid has advised there is no comment.	N/A
Transport for NSW	Transport for NSW has requested that a Traffic Impact Assessment (TIA) be prepared in accordance with the Austroads Guide to Traffic Management Part 12, the complementary TfNSW Supplement and RTA Guide to Traffic Generating Developments. TfNSW recognises that in determining the application under the <i>Environmental Planning and Assessment Act 1979</i> , it is the Consent Authority's responsibility to consider the environmental impacts of any roadworks which are ancillary to the development.	- Traffic Impact Assessment - Consideration of environmental impacts of roadworks ancillary to development

4.2 Consultation during preparation of the EIS

4.2.1 General community and stakeholder engagement activities

bdInfrastructure was engaged by the Applicant to undertake a variety of community engagement activities that were utilised to form the consultation process, the methods for which were established utilising the Project's Community and Stakeholder Engagement Plan (CSEP). The tools and activities are provided as part of Chapter 5 of the EIS and are detailed in **Section 2.3.4**.

Feedback from various NSW Government agencies and other key stakeholders which were incorporated into the SEARs by DPHI was also reviewed which enabled a foundational understanding of stakeholder-specific views, issues and concerns relevant to the potential social impacts of the Project. A summary of the regulatory submission to SEARs is provided as part of the feedback from regulatory stakeholders in **Table 1-2**.

4.2.2 Summary of key regulatory issues

Table 4–3 provides a summary of the key regulatory issues which were raised relevant to the EIS during consultation carried out as part of the preparation of the EIS.

Table 4-3 Regulatory Engagement Feedback

Regulator	Detail	Issues Raised
Singleton Council	Issues raised in meeting held 11 October 2023	- Traffic impacts considering Singleton Bypass commencing 2024. - Accommodation for workers - It was suggested accommodation needs could be minimised by procuring a local workforce. - VPA requirements
Singleton Council	Issues raised in project briefing 14/12/23	- Opportunity to engage with a large variety of council committees, stakeholders and community. - Concerns about the cumulative impact of the project and other construction/roadworks including: - Construction for the Singleton bypass. - Heavy traffic moving from east to west. - All projects heading to the NE REZ area and west Orana must use Singleton. - The accommodation and housing stock in Singleton is close to capacity as many properties and land are owned by mining operations and most remain unused. The same mining operations regularly book local accommodation. - Workforce accommodation and transport to site during construction. Council was clear that a local workforce and planned transport from accommodation to site will significantly reduce housing pressures. - Clarity around how the project contributes to Singleton's local economy and opportunity for VPAs. - The opportunity to reskill workers from closing mines to renewable energy purposes. - Condition and use of the land at project completion. - Whether the project footprint covers any Biophysical Strategic Agricultural Land (BSAL)
Singleton Council	Advised via phone call 19/12/2023	- Discussed route for heavy vehicles being inbound via Maison Dieu Rd off New England Highway and Magpie St, outbound only via Magpie St. - Council sees no issue with heavy vehicle route. - Council expects that the businesses along Magpie St will be notified when there is expected to be an increase in traffic along this street. This can occur closer to construction commencing. Council can assist with this through their business notification systems. - Access to site will be done under traffic management. - Council sees no issue with this and noted that end of Maison Dieu Road is not very busy. - Council noted that approval is required for B-doubles along part of the route, but no concern with that. Council Traffic Engineer who answered phone deals with all the permits and will provide closer to construction.
Singleton Council	Meeting held 08/05/2024	- Discussion on the VPA offer provided by the Applicant. - Ensure a climate change scenario is included in the flooding assessment. - To consult with the SC Traffic Engineer on the finalised TIA.
Singleton Council	Phone call 21/05/2024	Advised TIA was being finalised and share anticipated vehicle numbers
DPE	Issues raised in meeting held 16/10/2023	- Revision letter will need to be provided to sit alongside SEARs for Project changes. - Accommodation arrangements will need to be agreed upon with Singleton Council - Breakdown of accommodation should be provided in EIS (provided in Section 3.5.6.1 of EIS). - TfNSW should be engaged with.
DPHI	Issues raised in meeting 16/05/2024	- Visual assessment needs to consider adjacent landowners. - Consultation with adjacent landowners needs to be ongoing.

Regulator	Detail	Issues Raised
DPE BCD	Advice for surveys from meeting 17/08/2023:	- Large eared pied bat – BCD advised artificial habitats such as culverts and gutters should be considered and assessed. - Systematic surveys and transects – ensuring consultation with BCD before surveys to avoid issues later. Advised transects are dependent on vegetation density. Advised to confirm widest spacings applied and why appropriate.
DPE BCD	Advice for surveys from meeting 13/11/2023:	- Targeted survey effort will be required for the bilateral assessment for the spotted-tailed quoll (<i>Dasyurus maculatus</i>). There is a known population in Muswellbrook. - Plot field data sheets and plot field data (MS Excel format) are required to be submitted with the BDAR. - The BDAR should treat the recorded legless lizard as <i>Delma impar</i> until a taxonomic revision is accepted under the BC Act. A nomination to list <i>Delma vescolineata</i> under the BC Act and EPBC Act is currently under review.
BCS (formerly BCD)	Meeting 11/04/2024	Meeting held to discuss Striped Legless Lizard mitigation measures.
DPE Crown Lands	Issue raised in email 15/09/2023	Confirm whether any Crown Land (including roads and waterways) is inside the project boundary or required for access, buffer areas or offsets.
DPE Water	No response	No comments or recommendations
DPE Heritage NSW	Advised via email 26/09	No comments or recommendations
DPI Agriculture	Issue raised in meeting 04/10/2023	Biosecurity Management Plan commitment - make sure risk of foot and mouth disease with contractors coming in is covered.
Department of Climate Change, Energy, the Environment and Water	Issue raised in meeting 03/09/2023	- EPBC Referral – lots of TS's identified around 5km buffer. Will all TS be covered off on? - Will there be much tree clearing required?
Fire and Rescue NSW	Advised via email 19/10/2023	No comments or recommendations.
NSW Rural Fire Service	No response	No comments or recommendations
Department of Regional NSW – Mining, Exploration and Geoscience	No response	No comments or recommendations
TfNSW	Issues raised in meeting 6/12/2023	- Project Managers of cumulative projects must be contacted to determine interactions, especially with Singleton Bypass at Maison Dieu Road. - Pinch points and any road upgrades need to be considered with an OSOM assessment. - Consider routes if shuttle bus is being used to transport workers.
Ausgrid	- Detailed enquiry response received 29/08/2023 - Meeting 01/08/2023	- Ausgrid raised no issues regarding the connection of solar farm. Proponent is required to fund all the expenses incurred in connecting solar farm with the grid. - Ausgrid will provide all relevant information that will be required to submit AEMO R0 connection application and to connect the solar farm with Ausgrid owned Singleton substation. Ausgrid scheduled fortnightly meeting to support the solar farm grid connection process.
Transgrid	Email 31/10/2023	Provided Transgrid with the September 2023 project update and asked for any questions or comments

4.2.3 Key issues and outcomes of consultation to inform SIA

The following provides a summary of the key issues and outcomes of consultation that have informed this SIA. A detailed summary of engagement with key stakeholders has been provided in **Table 4-2**, with feedback from the community engagement provided in **Table 4-3**.

4.2.3.1 Regulators

Table 4-4 provides a summary of the key social issues which were raised relevant to the EIS during consultation carried out in Phase 2.

Table 4-4 Summary of key social issues relevant to the EIS

Stakeholder group	Feedback	Area of comment / issue / concern
Singleton Council	The accommodation and housing stock in Singleton is close to capacity as many properties and land are owned by mining operations and most remain unused. The same mining operations regularly book local accommodation.	Accommodation
	Council was clear that a local workforce and planned transport from accommodation to site will significantly reduce housing pressures.	- Accommodation - Transport
	SC asked for clarity around how the project contributes to Singleton's (local) economy and opportunity for VPAs	Economics
	The opportunity to reskill workers from closing mines to renewable energy purposes was highlighted.	Socioeconomics
	Consider traffic impacts considering Singleton Bypass commencing 2024	Traffic
	All neighbours should be suitably engaged. There are a number of stakeholders such as the neighbouring mines and the Wanaruah Aboriginal Land Council who should be consulted with.	Engagement
	Highly likely there is Aboriginal Heritage on site. AHIMS and Aboriginal Heritage Study required. Aboriginal knowledge holder observe the initial removal of the A horizon soils at the construction site to identify if there are Aboriginal objects at risk of harm.	Aboriginal heritage
	Acoustic and Air Quality impacts to be addressed, this includes potential impacts the Heritage listed neighbouring property.	- Noise - Air quality - Heritage
	Council would like to see the Applicant actively engage Council particularly with regards to the traffic impacts and the impacts of short-term housing	Engagement
DPHI	Accommodation arrangements will need to be agreed upon with Singleton Council	Accommodation
	Consider routes if shuttle bus is being used to transport workers	Transport

4.2.3.2 Community

The community engagement activities and tools utilised during the preparation of the EIS and SIA included advertising, a community values survey, doorknocking campaign, establishment of a stakeholder customer relationship manager, information sessions, newsletters, media releases, fact sheet distribution, phone, email, a website, and letters. These were specifically chosen to both inform the community and trigger a level of broad consultation to receive feedback, which would be considered in any refinements to the Project as proposed. The number of responses is considered significant when compared against the suburb of Maison Dieu's overall population. Further detail on methods and dates of community engagement has been provided in **Section 2.3.4**. A list of the issues raised by the community has been collated in **Table 4-5**.

Table 4-5 Community Engagement Feedback

Engagement method	Issues Raised	Aspect
Door knocking, online survey, in-person meeting, phone and email	Glare and reflection impacting neighbouring residents	Visual
Door knocking, online survey, in-person meeting, phone and email	Reduction of visual amenity and the addition of this reduction in combination with visual impacts from existing mining projects in the area.	Visual
Door knocking, online survey, in-person meeting, phone and email	Community want input into screening options and maintenance responsibilities.	Visual
Door knocking, online survey, phone and email	The need for a broad representation of community to be engaged in the planning process.	Engagement
Door knocking, online survey, phone and email	Community is hopeful cost-of-living pressures may be eased by renewable energy.	Social
Door knocking, online survey, phone and email	Creation of local jobs and economic benefits for the community.	Social
Door knocking, online survey, phone and email	Concerns regarding potential decreases in property value due to the solar farm.	Social
Door knocking, online survey, phone and email	Questions as to whether properties will be acquired in the development process.	Social
Door knocking, online survey, phone and email	Concerns around the combination of wind direction and location of the project site potentially increasing the fire risk to homes and property.	Hazards
Door knocking, online survey, phone and email	Safety concerns for children due to solar panel heat attracting hazardous pests, specifically snakes.	Hazards
Door knocking, online information session	Increased traffic along Maison Dieu Road increasing congestion and safety hazards for road users and children (particularly during school hours at 8 am and 4 pm).	Traffic
Door knocking, online information session	Concerns about parking impacts for residents during construction.	Traffic
Door knocking	Dust and noise impacts are considered normal due to their proximity to mines; however, concerns were raised about cumulative impact to the noise and dust of the mines during construction.	Air quality Noise
Door knocking, online information session, email and phone	Community values agricultural use of the land rather than solar farming or mining. Preference for sheep grazing amidst the solar panels where possible. Counter views raised that sheep may be hard to farm in the area due to wild dogs and lack of sheep facilities.	Land use
Door knocking	Indigenous involvement during both the construction and operation phases of the project.	Aboriginal heritage
Door knocking	Concerns the Project may impact any Indigenous communities and their use of the land. Community wants to know this has been considered and addressed.	Aboriginal heritage

Engagement method	Issues Raised	Aspect
Project briefing	Engagement should cover a variety of council committees, stakeholders and community members impacted by the Project.	Engagement
Project Briefing	Concerns about potential fire hazards from batteries and solar panels putting properties and the local land at risk.	Hazards

4.2.3.3 Aboriginal Community

Local Aboriginal Land Councils (LALCs), Aboriginal Corporations and Registered Aboriginal Parties (RAPs) were consulted during the engagement process. The Project newsletter, which provided high-level information about the Project and gave forward notice of upcoming consultation programs was sent to three Aboriginal Corporations / LALCs.

Further Aboriginal community consultation was undertaken as part of the ACHAR under the 'Aboriginal Cultural Heritage Consultation Requirements for Proponents' (DECCW, 2010). (ACHCRs). 20 individuals and groups responded to advertisements or letters sent out by RPS stating that they wished to be consulted during the ACHAR process. The Aboriginal representatives were informed about the Project, asked for input on the assessment methodology, involved in test excavation and sent the draft ACHAR for review, according to the four stages of the ACHRs. Additional detail on Aboriginal community engagement is provided in Section 6.2 of the EIS.

5 SOCIAL BASELINE

This section describes the existing social baseline of the social locality displayed in **Figure 2-2**. An overview of the demographic profile of the social locality for the Project is presented, followed by demographic characteristics, economic and employment data, vulnerable groups, socio-economic disadvantage, local features, and community infrastructure. This section also considers existing and future major development and population projections to provide an overview of the potential future characteristics of each precinct.

The social locality of Maison Dieu is transforming, as with the other precincts residing in the Singleton LGA, with land use predominantly dedicated to mining transitioning to focusing on renewable energy, particularly wind and solar. This will allow for positive economic and environmental change, including increased availability to clean and affordable energy and an increase in job prospects for the locality.

5.1 Social locality community profile

5.1.1 Overview

This section provides insights into the demographic and economic characteristics of the SAL of Maison Dieu, including indicators of vulnerability. Local features and community infrastructure are also addressed within this section. Camberwell (NSW), Singleton LGA and the Lower Hunter SA3 have been used for comparative purposes.

Maison Dieu is a relatively small, rural social locality surrounded by agricultural and mining land uses. The population is slightly declining, with a relatively low percentage of the population at working age. Machinery operators and drivers make up the largest occupation group, closely followed by technicians and tradespeople. The mining industry contributes greatly to employment in the locality, with dairy and beef cattle farming being the next most prominent industries of employment. (ABS, 2021)

The employment landscape in Maison Dieu is expected to change with the transition to renewable energy underway, as the need for skilled workers in the renewable energy industry grows. The Project's delivery will contribute to the upskilling of local technicians and tradespeople where feasible and will assist in growing the renewable energy workforce in the changing employment environment.

5.1.2 Population

- The social locality of Maison Dieu has a population of 175, a slight decline of 3.3% from 2016.
- The social locality of Camberwell has a population of 102, an increase of 18.7% from 2016.
- The Singleton LGA has a population of 24,577, an increase of 6.5% from 2016.
- The Lower Hunter SA3 region has a population of 97,927, an increase of 10.5% from 2016.

5.1.3 Economic

- 61.4% of Maison Dieu residents are of working age, significantly lower than Camberwell (74.5%) and relatively consistent with the Singleton LGA (64.6%) and the Lower Hunter SA3 (63%).
- As of the 2021 census, Maison Dieu's unemployment rate was 3.4%, greater than Camberwell (0%) and relatively consistent with the Singleton LGA (3.7%) and lower than the Lower Hunter SA3 (4.8%).
- The GRP for the Singleton LGA has more than doubled over the previous six years, generating \$8.931 B in 2022 compared to \$4.186B in 2017.
- The primary occupation category of Maison Dieu is machinery operators and drivers, which make up 24.1% of the workforce. Technicians and Trades Workers are also heavily prevalent, equating to 20.5% of the workforce, similar to that of the Singleton LGA (18%), and the Lower Hunter SA3 (18.1%).
- The primary industry of employment in Maison Dieu is coal mining at 13.3% of the population. Dairy cattle farming (6.0%) and beef cattle farming (4.8%) are also prevalent. Coal mining is also the top industry of employment in the broader Singleton LGA at 20% of the population. The next most prevalent industry of employment in the Singleton LGA is defence at 4.1%.

5.1.4 Education

- 12.3% of Maison Dieu residents left school at Year 9 or below, a higher rate compared to the Singleton LGA (9.8%) and the Lower Hunter SA3 (11.1%) and less than Camberwell (13.8%).
- 15% of residents of Maison Dieu reported having completed tertiary level education at the time of the 2021 census, with none holding university qualifications. 16.1% of Singleton residents have completed tertiary education in 2021, with 7.2% being at a university or other higher education.

5.1.5 Transport

- Households without a private vehicle can indicate a greater dependency on active and public transport options. However, 100% of Maison Dieu residents own at least one motor vehicle, consistent with Camberwell (also 100%), and greater than the Singleton LGA (95.4%) and the Lower Hunter SA3 (94.6%).

5.1.6 Housing

- Separate house dwellings comprise 100% of Maison Dieu's dwelling structure, consistent with Camberwell (100%) and far greater than the Singleton LGA (88.6%) and the Lower Hunter SA3 (90.7%).
- 11.8% of Maison Dieu residents live at a different address to one year ago, a slightly lower rate than the Singleton LGA (14.8%) and the Lower Hunter SA3 (13.9%) and significantly lower than Camberwell (23%).
- 26.1% of Maison Dieu residents live at a different address to five years ago, a slightly higher rate compared to Camberwell (21%) and significantly lower rate than the Singleton LGA (40.8%) and the Lower Hunter SA3 (39.4%).

5.1.7 Vulnerable communities

5.1.7.1 Culturally and linguistically diverse (CALD) community members

- 15.4% of Maison Dieu residents were born overseas, slightly greater than the Singleton LGA (14.6%) and the Lower Hunter SA3 (12.6%) and much lower than Camberwell (24%).
- Maison Dieu has a 0% proportion of households where a non-English language is used, consistent with Camberwell (also 0%), much lower than the Singleton LGA (5.1%) and the Lower Hunter SA3 (4.4%).

5.1.7.2 Older persons and very young children

- The social locality of Maison Dieu has an elderly population of 13.1%, greater than Camberwell (6.1%), relatively consistent with the Singleton LGA (14.1%) and the Lower Hunter SA3 (16.3%).
- Maison Dieu has a greater number (9.7%) of very young children (aged 0-4 years) compared to Camberwell (4.9%), the Singleton LGA (6.2%) and the Lower Hunter SA3 (6.4%).

5.1.7.3 Social and community housing

- 0% of Maison Dieu residents live in social and community housing, compared to 3.3% of residents in the Singleton LGA.

5.1.7.4 Lone person households

- Maison Dieu has a lesser amount of lone person households (17%) compared to Camberwell (25.8%), the Singleton LGA (22.5%) and the Lower Hunter SA3 (23.9%).

5.1.7.5 Low-income households

- 9.3% of Maison Dieu residents earn less than \$650 total household weekly income, greater than Camberwell (0%) and significantly lower than the Singleton LGA (15.1%) and the Lower Hunter SA3 (17.7%).

5.1.7.6 First Nations Australians (Aboriginal and Torres Strait Islanders)

- Maison Dieu is comprised of 3.4% First Nations Australians, significantly lower than Camberwell (14.7%), the Singleton LGA (8.3%) and the Lower Hunter SA3 (9.4%).

5.1.8 Socio-economic disadvantage

The SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) is an indicator to measure relative disadvantage and is derived from Census variables like low income, low educational attainment, unemployment, and dwellings without motor vehicles. No data has been displayed for the Lower Hunter SA3 due to a lack of available data at this census scale.

As of 2021, the suburb of Maison Dieu receives a score of 979, a higher (and thus more advantaged) score than the suburb of Camberwell (929), and lower than the Singleton LGA (998). Maison Dieu lies within the 2nd quintile, indicating that the suburb is within the top 40% most disadvantaged of all suburbs and localities in Australia.

5.1.9 Local features and community values

An overview of local values and features for the Maison Dieu social locality is provided in **Table 5-1**.

Table 5-1: Maison Dieu - local features and community values

Value/Feature	Description
Local amenity and character	The locality of Maison Dieu is bordered by the Hunter River from the northwest to the west. Land use is predominantly mining and agricultural.
Access and connectivity	Maison Dieu Road runs through the centre of the Maison Dieu locality from the east to west to the New England Highway. Other primary roads include Dights Crossing Road from east to south, and Knodlers Lane running from the west to south.
Environmental features	Key bodies of water that run through the locality are Rixs Creek and the Hunter River, along with a number of farm dams and minor tributaries of the Hunter River. The Project Area is characterised by undulating and low rolling hills, with most of the land having been previously disturbed and/or pasture.
Community cohesion	Maison Dieu is a rural farming community. The locality contains a mountain bike park with 10.2 km of trails, providing opportunities for both physical activity and social interaction. In the nearby locality of Singleton, there is a large number of churches and education facilities where people gather. The Singleton Diggers RSL Club provides a meeting place for community groups and a hub for meetings / events. There are plenty of places, clubs and facilities promoting physical activity and social cohesion in Singleton such as the Singleton Clay Target Shooting Club, Gliding Club, the Singleton Rugby Club and Singleton Showground.

5.1.10 Community infrastructure in and near Maison Dieu

Community infrastructure in proximity to Maison Dieu and distance from the Project Area is provided in **Table 5-2**.

Table 5-2: Maison Dieu and surrounds - community infrastructure

Infrastructure / facility	Location	Description	Approximate distance
Education			
TAFE NSW - Singleton	York St, Singleton	A vocational college in the centre of Singleton.	11.7 km (4.5 km outside of locality)
Australian Christian College	Kelso St, Singleton	A co-educational Christian school for ages preschool to year 12 in southern Singleton.	11.9 km (5.1 km outside of locality)
Singleton High School	York St, Singleton	A public high school in the centre of Singleton.	11.1 km (4.3 km outside of locality)
Recreation / sport facility			
Maison Dieu MTB Park	Maison Dieu Rd, Maison Dieu	A mountain biking park consisting of approximately 10km of singletrack.	6.8 km
Singleton Gym and Swim Centre	Civic Ave, Singleton	An aquatics and leisure facility incorporating a health club, multiple swimming pools, a hydrotherapy pool sauna and spa.	10.6 km (3.8 km outside of locality)
Pirtek Park, Singleton Rugby League Field	Dunolly Rd, Singleton	A stadium, arena and sports venue utilised by the Singleton Rugby League Club and other local sport teams.	9.4 km (2.8 km outside of locality)
Open space, parks and reserves			
Apex Houston Lookout	Hambledon Hill Rd, Singleton	Previously farmland, donated to be used as a lookout. The viewing platform is located 60 metres over the Hunter River and looks west towards the mine	9.0 km (2.6 km outside of locality)
Rose Point Park	Rose Point Rd, Singleton	A park incorporating bicycle paths, picnic tables, an all-abilities playground, open recreation area and a sensory garden.	9.6 km (3 km outside of locality)
McDougalls Reserve	Lachlan Ave, Singleton Heights	A small suburban park comprised of open space and vegetation including a paved pathway to move through the park.	8.5 km (2.2 km outside of locality)
Health			
Singleton Heights Medical Practice	Blaxland Rd, Singleton Heights	A family medical practice providing medical services including general medicine, skin cancer checks, health assessments and chronic disease management.	9.0 km (2.5 km outside of locality)
Raworth Medical	Laurel Lne, Singleton	A medical centre offering general and family health services, skin checks, health assessments, care plans, acupuncture, mental health services and immunisations.	10.3 km (3.5 km outside of locality)
Singleton Doctors	Gowrie St, Singleton	A medical practice located in Singleton Plaza specialising in a variety of medical services including family health, surgical procedures, immunisations, and diabetes care.	10.2 km (3.9 km outside of locality)

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Infrastructure / facility	Location	Description	Approximate distance
Community and cultural facility			
Singleton Baptist Church	Bridgman Rd and Gardner Cct, Singleton Heights	A Baptist church that runs home groups, sermons, weekly prayer groups, a men's ministry and a women's ministry.	9.2 km (3.7 km outside of locality)
Singleton Evangelical Church	Elizabeth St, Singleton	An Evangelical church that runs weekly prayer and facilitates a number of social gatherings and small group meet ups to foster bible study.	10.5 km (3.7 km outside of locality)
Generate Church	Campbell St, Singleton	A modern Christian church offering weekly services.	10.5 km (3.7 km outside of locality)

6 REVIEW OF COMPARABLE PROJECTS

This section sets out the findings of a review of secondary evidence from comparable Solar Farm / BESS projects across NSW, in order to inform the magnitude and likelihood of impacts set out in this SIA.

Specifically, the perceived or experienced social impacts from comparable projects are considered along with responses and mitigation measures, to develop insights relevant to the delivery of the project.

Social impact assessments carried out for the following comparable projects have been reviewed and a summary provided below.

Bonshaw Solar Farm

- Section 6.10, *Socio-Economic* of EIS (ERM, 2019)
- Section 5.5, *Surrounding Community* of EIS (ERM, 2019)

Wyalong Solar Farm

- Section 8.12, *Socio-economic* of EIS (Accent Environmental, 2018)
- Appendix C, *Consultation* of EIS (Accent Environmental, 2018)

Tilbuster Solar Farm

- Section 8.5, *Social and Economic Impacts* of EIS (NGH, 2020)
- Section 6.3, *Community Consultation* of EIS (NGH, 2020)

Jindera Solar Farm

- Section 7.6, *Socioeconomic and Community* of EIS (NGH, 2019)

Silverleaf Solar Farm

- Section 6.11, *Socio-economic Impacts* of EIS (GHD, 2019)
- Section 4.6, *Issues Raised* of EIS (GHD, 2019)

Metz Solar Farm

- Section 6.14, *Socio-economic Factors* of EIS (Eco Logical, 2017)
- Section 5.2, *Community Consultation* of EIS (Eco Logical, 2017)

6.1 Findings from comparative analysis of other Solar Farms

Findings from the desktop review of social impacts from comparative Solar Farms are summarised in **Table 6-1**. A summary of the parameters is provided and the relevance to the Project is discussed in **Table 6-2**. **Table 6-3** provides relevant Community concerns, **Table 6-4** provides potential social impacts and **Table 6-5** shows resultant mitigation measures.

Table 6-1 Project Overviews – Other Solar Farms

Bonshaw Solar Farm	Wyalong Solar Farm	Tilbuster Solar Farm	Jindera Solar Farm	Silverleaf Solar Farm	Metz Solar Farm
• 200 MW solar farm • Site area of 353 ha • 630,000 PV modules • 4,800 string inverters • Up to 300 MWac BESS • Switch yard to be connected to 330kV substation • Underground or overhead cabling for connection between arrays and inverters and transformers • Operations and maintenance infrastructure • New internal road network • New access point to site • Temporary facilities during construction	• 100 MW solar farm • Site area of 259 ha • Up to 350,000 PV modules • Metal mounting structures • Aboveground and underground DC cabling • Central inverters, transformers and switchgear • Battery storage area • Underground AC cabling from PCU to solar farm substation • Synchronous condenser to adjust conditions on electrical transmission power grid • Main step-up transformer and equipment • Permanent access road leading to office and substation • Potential lithium-ion battery with capacity of 25 MW and 50 MWh	• 150 MW solar farm • Site area of 310 ha • Approximately 405,888 PV modules • Installation of up to 30 Power Conversion Units • Electrical cabling • Outdoor 330 kV substation • Onsite energy storage facility • Monitoring container • Storage container • IB (Combiner) boxes • Internal access road and upgrades • Perimeter security fencing and tracks • Construction of 11 watercourse crossings • Security camera poles	• 150 MW solar farm • Site area of 327 ha • Network of PV modules • BESS with maximum capacity of 30MW and 60 MWh • Electrical cables and conduits • Inverter stations • Weather station • On-site high voltage substation • Control room and storage facility • Overhead transmission line infrastructure • Internal access tracks • Other associated ancillary infrastructure	• 120 MW solar farm • Site area of 450 ha • Approximately 440,000 PV modules • 132 kV overhead power lines • Between 25 and 30 inverter and transformer stations • Onsite cabling and electrical connections between solar arrays and panel inverters • A step-up substation to increase voltage to 132 kV • Cables and trenches • Internal access • Perimeter security fencing	• 100 MW solar farm • Site area of 507 ha • Approximately 400,000 solar panels • Up to 50 central inverters • Above and/or below ground onsite cabling and electrical connections • Onsite access tracks • Substation • Support buildings alongside substation • Perimeter fence

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Table 6-2 Relevance to the Project – Other Solar Farms

Bonshaw Solar Farm	Wyalong Solar Farm	Tilbuster Solar Farm	Jindera Solar Farm	Silverleaf Solar Farm	Metz Solar Farm
• Similar infrastructure • Recent project (approved 2020) • BESS incorporated in scope (300 MW) • 360 km	• Similar Project Area • Similar MW capacity • Recent project (approved 2019) • 370 km	• Similar infrastructure • Very recent project (approved 2022) • 240 km	• Similar infrastructure • Recent project (approved 2020) • BESS incorporated in scope (30 MW/60 MWh) • 540 km	• Similar MW capacity • Very recent project (approved 2022) • Similar site area • 275 km	• Similar MW capacity • Recent project (approved 2017) • Similar site area • 225 km

Table 6-3 Community concerns – Other Solar Farms

Bonshaw Solar Farm	Wyalong Solar Farm	Tilbuster Solar Farm	Jindera Solar Farm	Silverleaf Solar Farm	Metz Solar Farm
• Heat island effects • Visual amenity	• Visual amenity • Vegetation • Future landscape plan	• Visual amenity • Work opportunities during construction phase • General impacts (biodiversity, hydrology, visual, waste and contamination and fire)	• Accommodation availability due to influx of workers • Pressure on local services • Land use • Land value • Biodiversity • Rezoning of land • Loss of subdivision potential • Loss of purchase potential for agriculture • Fire risk and impacts • Hazards from batteries and health risk • Foreign investment and lack of community benefits	• Construction traffic • Generation of dust • Duration of construction • Noise • Alternative access routes • Flooding • Substation location • Height of panels • Panel glare • Impacts on local air field	• Operational noise • Landscape and visual impacts specifically reflection • Additional fire and flood risk

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Table 6-4 Social impacts – Other Solar Farms

Bonshaw Solar Farm	Wyalong Solar Farm	Tilbuster Solar Farm	Jindera Solar Farm	Silverleaf Solar Farm	Metz Solar Farm
- Increased employment opportunities (local and external workers) - Minor negative impacts due to temporary loss of agricultural land during construction - Diversification of employment opportunities - Long-term positive traffic impacts - Community benefits fund (CBF)	- Increased employment opportunities (local and external workers) - Upskilling local workforce - External workforce stimulating the local economy - Short term pressure on accommodation and other local services - Temporary loss of agricultural land - Alteration of visual character - Potential opportunity for tourist attraction	- Stimulation of local economy due to the influx of local and external workers - Adverse construction impacts - Temporary increase in dust levels during construction - Diversification of employment opportunities - Facilitation of investment opportunities	- Increased employment opportunities - Stimulation of local economy through increased demand for local accommodation, goods and services - Adverse traffic impacts - Change in rural landscape character and visual amenity - Pressure on services due to influx of workers	- Stimulation of local economy due to accommodation and retail expenditure - Increased demand for local services - Minor increase in full time jobs - Loss of agricultural land - Surrounding land value decrease	- Increased employment opportunities (local and external workers) - Construction noise - Adverse traffic impacts - Change in site character - Reduction in farming related income - Diversification of employment opportunities - Potential tourist attraction - Potential local recycling opportunities to increase economic benefits

Table 6-5 Mitigation measures – Other Solar Farms

Bonshaw Solar Farm	Wyalong Solar Farm	Tilbuster Solar Farm	Jindera Solar Farm	Silverleaf Solar Farm	Metz Solar Farm
- Ongoing use of site for livestock grazing during operation to mitigate potential loss of strategic agricultural land - Traffic Control Plan to manage local traffic impacts - CBF	- Managing community expectations - Informing stakeholders of potential impacts - Providing project related updates - Registering and responding to complaints and feedback	- Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities and materials - Liaison with local representatives regarding accommodation options for	- Implementation of Community Consultation Plan - Liaison with local industry representatives to maximise the use of local contractors, manufacturing	Implementation of Community Consultation Plan including community updates on project progress, protocols to inform relevant stakeholders of potential impacts and	- Implementation of Community Consultation Plan - Liaise with local representatives - Buy local to stimulate local economy

Bonshaw Solar Farm	Wyalong Solar Farm	Tilbuster Solar Farm	Jindera Solar Farm	Silverleaf Solar Farm	Metz Solar Farm
• 'Buy local' to stimulate local economy • Accommodation sourced locally for workers to stimulate local economy and increase demand for local services		staff to minimise adverse impacts on local services • Liaison with local tourism industry representatives to manage potential timing conflicts with local events • Implementation of Community Consultation Strategy to manage impacts to community stakeholders	facilities and materials • Liaison with local representatives regarding accommodation options for staff to minimise adverse impacts on local services • Liaison with local tourism industry representatives to manage potential timing conflicts with local events	protocols to allow the community to express concerns relating to the project particularly in the construction and decommissioning phases	• Implement measures to reduce risk associated with increased traffic volumes • Implements measures to reduce noise impacts

6.2 Summary – Other Solar Farms

Social impacts assessed were both adverse and positive. Common concerns included impacts relating to construction including traffic and access, pressure on local services and loss of agricultural land. These impacts are relevant to the Project and the lessons learned from analysing these projects have been applied, particularly around preparing appropriate mitigation measures to address community concerns and perceived impacts.

All SIAs noted that the prevalence of many of the impacts are of a temporary nature, especially in the case of traffic, noise, and agricultural impacts. The investment into local services from increased patronage at hospitality and refuelling services provided boosts to the local economy. The loss of agricultural land in most cases is temporary and offset through landholder agreements.

The diversification and an increase in employment opportunities were recognised as a positive social impact in nearly all projects analysed. All projects recognised the benefit local economic stimulation through continuous investment opportunities, requirement for local services and the influx of local and external workers. One project recognised the opportunity for local recycling opportunities of materials in the decommissioning phase, and some recognised the potential for the solar farm to be listed as a tourist attraction to encourage visitors to the area.

Most socio-economic and SIAs recognise the importance of thorough and continual stakeholder engagement, through a Stakeholder Engagement Plan and/or through other measures including consultation with local representatives and a channel for feedback and complaints. Other common mitigation measures include using local businesses wherever possible and utilise local resources and implement a community benefit fund (CBF).

The Land and Environment Court (LEC) case 'IT Power (Australia) Pty Ltd v Mid-Western Regional Council [2023] NSWLEC 1800' was considered in the preparation of this SIA. The appeal in this case was against the refusal of a 10MW solar energy generation facility known as Burrundulla Mini Sustainable Energy Park (DA0288/2019). DA0288/2019 was refused by Mid-Western Regional Council, primarily due to the unacceptable visual impact of the proposal on visually sensitive land along the main entrance corridor to Mudgee. Although the Applicant argued that the visual impact of the proposal would be minimal and the broader public benefits would be great, the LEC dismissed the appeal and refused the proposal.

Although the Project is similar to DA0288/2019 in that it is a solar farm near a town and will visually impact some residents, it differs in that it is located on the far reaches of Maison Dieu Road, a relatively quiet local road, about 12 km from the CBD, and will not impact the visual appeal of the town of Singleton. The primary entrance corridors for Singleton are along the new England Highway, Queen Street and Putty Road, which will not be visually impacted by the Project. The social impact of the visual changes related to the Project is expected to be substantially less than that of DA0288/2019 for these reasons. The visual impact of the Project has been extensively considered in the Landscape Character and Visual Impact Assessment (LCVIA).

These measures have been considered in the development of mitigation measures for this SIA and are discussed in **Section 7**.

7 SOCIAL IMPACT ASSESSMENT

7.1 Design refinements

The design has been developed over the course of scoping and the preparation of the EIS and SIA, based on site assessment, regulator and community feedback to avoid and minimise social impacts where possible, improving overall social outcomes. **Table 7-1** provides a summary of the elements of the Project design that have been refined, upon consultation with regulators and key stakeholders, to achieve improved social outcomes.

Table 7-1 Design refinements made for Maison Dieu Solar Farm

Design element	Refinement
Project Area	Reduction from 500 ha to 203 ha. This refinement resulted in reduced potential environmental and social impacts. The reduction in Project Area protected areas of biodiversity value and habitat, avoided culturally significant Aboriginal heritage sites that would have otherwise been inside the Project Area and affected by the Project.
Disturbance Footprint	The initial 352 ha SR Project Site was reduced to a 90 ha Disturbance Footprint in order to avoid Aboriginal sites, areas of high biodiversity value, flood prone land and areas of high capability land and soil. The initial refinement was made as a result of technical studies revealing potential environmental impacts and recommending mitigating actions throughout 2023. A project refinement letter was submitted to the Department of Planning and the Environment on 13 November 2023. Further refinements were made in early 2024 to reduce the solar array. This decision was made to avoid flooding impacts as a result of the release of the Singleton Flood Risk Management Study and Plan (Draft) 2022. A total avoidance of 79.46 ha of land within the 1% Annual Exceedance Probability (AEP) and 53.21 ha of Category 1 Bushfire Prone Land (BPL) was achieved between the SR Project Site and the current Disturbance Footprint.
Panel Size	The solar panel size was reduced from double portrait, which has a height of 5 m, to single portrait, which was a maximum height of 2.7m. This reduction combined with setback restrictions and implementation of vegetation screening allows the visual impacts to be kept to a low level for all dwellings.
Selection of BESS technology and location	Lithium-ion phosphate batteries with safety and fire protection features such as shut-down separator, tear-away tab, vent and thermal interrupt were selected to minimise chance of thermal runaway and fire. Vent covers of BESS constructed of non-combustible material and not located above battery packs to minimise chance of fire propagation.
Construction Workforce	Reduction from 300 FTE to 150 FTE due to reduced size of Project. Traffic Impact Assessment has confirmed this workforce will not cause significant adverse impacts on the local road network, nor will it impact parking for residents nearby. The accommodation strategy will aim to manage the social impact of housing requirements arising from the construction workforce once exact sourcing and timing of other projects is known.
Landscaping	Additional landscaping and tree planting was proposed in accordance with the Large-Scale Solar Energy Guideline (NSW DPE, 2022) and the accompanying Technical Supplement – Landscape and Visual Impact Assessment (NSW DPE, 2022). With the additional vegetation screening proposed in the Project's landscape plan, the visual impacts to all dwellings were reduced to "low".

7.2 Social Impact Assessment – Construction Phase

This section discusses the potential social impacts and benefits that may occur to different sectors of the community as a result of construction of the Project (see summary provided in **Table 7-2**). Each of these impacts are categorised in accordance with **Section 2.2** of this SIA. **Table 8-3** in **Section 8.4** illustrates the residual impacts following the implementation of the recommended mitigation measures.

7.2.1 Risks to the environment

The overall benefit of producing clean, renewable electricity that would otherwise have been generated by the polluting process of burning coal is expected to far outweigh the environmental risks (Silva, Laranjeira & Soares, 2021). However, the environmental risks of an activity are site specific, and it is important to consider the potential environmental impacts of the Project and social impacts that may arise.

Research suggests that environmental degradation has tangible consequences on human health (Donohoe, 2003). The overall environmental risks of the Project will be avoided or minimised through effective mitigation measures, devised as a result of numerous technical studies by qualified experts. The following environmental risks have been considered as key risks that could have social impacts:

7.2.1.1 Biodiversity

The Project requires the land within the Disturbance footprint to be cleared and excavated for infrastructure to be built. While the majority of the Disturbance Footprint is previously cleared agricultural land, there are threatened species and Threatened Ecological Communities (TECs) present. Community engagement identified the community's concern for fauna and flora that use the site for grazing and the level of surveying for wildlife presence. Biodiversity Assessment Method (BAM) accredited ecologists were employed to assess the Project, develop the BDAR and create the best possible strategies to avoid and minimise biodiversity impacts.

The Project layout was originally informed by ecologist's field investigations and has been further reduced as a result of ongoing surveys during the development of the BDAR and EIS. The final layout avoids the majority of the highest condition native vegetation and habitat including Plant Community Type (PCT) 3231, highest quality habitat for Brushed-tailed Phascogale, Grey-headed Flying Fox and the threatened microbats detected. A relatively newly discovered species of legless lizard, *Delma vescolineata*, was found to be present within the Project Area. The *Delma vescolineata* was assessed in the BDAR as Striped Legless Lizard, in consultation with the Biodiversity Conservation Division (BCD), due to its lack of listing in the BC Act and BC Act. The Disturbance Footprint has been reduced to cover only 19.5% of the total Striped Legless Lizard habitat within the BDAR study area, with management measures for the species proposed.

7.2.1.2 Hazards / Bushfire

Large-scale BESS's can present ignition risks if risk-based design is not implemented. Ignition of the Project would have negative social implications, such as loss of infrastructure / electricity supply, damage to homes and property if the fire were to spread beyond the Project Area and risks to life. The landholders closest to the Project Area would be at the highest risk of being negatively impacted.

The Project layout has been designed considering fire prevention, with the Applicant adopting recommendations from an Accredited Bushfire Practitioner who compiled the Bushfire Assessment Report for the Project. The Project complies with Planning for Bushfire Protection (NSW RFS, 2019) and the bushfire risk of the Project is considered acceptable.

7.2.1.3 Air Quality

'Guidance on the Assessment of Dust from Demolition and Construction' (GADDC) (Institute of Air Quality Management, 2014) details the potential impacts of construction dust to receivers and was used to inform methodology and impact assessment in the EIS. The key concern is health impacts from the generation and presence of dust and other pollutants associated with earthmoving and construction. The landholders closest to the Project Area would generally experience the greatest potential impacts.

The social locality of Maison Dieu experiences reduced air quality due to the presence of many large, open-cut coal mines operating concurrently. Overall, the short-term, minor air quality impacts that will occur during construction will be outweighed by the benefit of lowered reliance on coal fired electricity, which pollutes the atmosphere with oxides of carbon, sulphur and nitrogen, particulates and other pollutants (U.S. Energy Information Administration, 2022).

The additional dust generation from the Project's construction is not expected to have a significant social impact due to the existing environment's long-term affectation by mining dust. Once the Project is operational, there will be negligible dust and greenhouse gas emissions associate with the Project from up to

five staff vehicles on site per day. Air quality impacts will be minimised through the mitigation measures suggested in the EIS.

7.2.1.4 Water usage and Sediment Runoff

The construction of the Project will increase potential rates of erosion and transport of sediment from the Project Area due to the disturbance of surfaces, removal of vegetation, tracking of heavy vehicles across unsealed access tracks, earthworks, trenching and stockpiling of materials. The risk of water pollution from erosion and sediment runoff will be managed in accordance with the best practice guidance provided in 'Managing Urban Stormwater: Soils and Construction – Volume 1' (Landcom, 2004) (The Blue Book). A Soil and Water Management Plan (SWMP) will be prepared containing the mitigation measures provided in the EIS. The risk of social impacts related to erosion and sediment runoff is expected to be relatively low with management measures in place.

According to the Maison Dieu Surface Water Impact Assessment, water usage for Project-related activities will peak during construction, with an average total demand of 23.4 ML per year. This will reduce to 5.7 ML per year during operation.

7.2.1.5 Visual

Solar farm projects inherently affect the landscape character and visual amenity of the site they are constructed on and the surrounding visual catchment. Landscape sensitivity levels and the magnitude of change can be assessed under the NSW Large-Scale Solar Energy Guideline Technical Supplement (NSW DPE, 2022). Under the Maison Dieu Solar Farm Landscape Character and Visual Impact Assessment (Iris Visual Planning and Design, 2024), all the relevant landscapes surrounding the Project Area were assessed to be impacted at a low or negligible level. With appropriate mitigation measures such as planting, the visual impact to all dwellings was also determined as low.

7.2.2 General construction activities affecting amenity

Construction activities will cause a number of changes to local amenity in Maison Dieu, including increased noise, dust, impacts to the landscape and visual differences. Some receivers are more susceptible to amenity reducing impacts including nearby residents/landholders, the Aboriginal community and the broader community.

Construction is expected to take up to 18 months to complete, with site establishment, clearing and earthworks to be completed within the first seven months.

The locality will experience an increase in noise as a result of the Project, with months 4-8 of construction generally being the loudest. Works will generally occur between standard hours under the Interim Construction Noise Guideline (ICNG), from 7am to 6pm weekdays and from 8am to 1pm Saturdays, with no work to occur on Sundays or public holidays (unless otherwise approved). Noise and dust impacts to amenity will occur during these hours, although landscape and visual impacts will be ever present. Increased noise and dust may impact on people's daily routines and reduce quality of life in the short-term. Noise and dust may cause nearby residents to feel the need to close their windows and stay inside. This may also reduce people's motivation to perform certain recreational activities and use certain modes of transport such as walking and cycling. Increased noise may also impact people's routines, especially shift workers who are attempting to sleep during daytime hours. The mining industry is the most prominent industry of employment in the Maison Dieu social locality, so some nearby residents are likely to be shift workers. According to the Noise and Vibration Impact Assessment for the Project, noise modelling predicted 11 non-associated receivers and three associated receivers to experience construction noise between 1 dB and 21 dB LAeq (15 min) beyond the relevant noise management levels. All are within Hunter Valley Operations' Zone of Management, meaning they are already affected by environmental impacts from the mining project. The Noise and Vibration Impact Assessment assumed no mitigation measures are in place and works will occur at the nearest point of the Project Area to each receptor.

The landscape of the Project Area will change during construction, although land and terra forming will be kept to a minimum. Sensitive receivers will experience visual impacts from the Project. With appropriate vegetation planting and visual screening around the PV array, the visual impact to all receivers will be low, under Technical Supplement – Landscape and Visual Impact Assessment (DPE, 2022) and the Solar Guidelines. Planting will not be effective immediately upon commencement of construction, as vegetation

establishment takes time. Construction fencing will be in place initially, shielding the view of excavation, exposed dirt and construction machinery. Shade cloth will be placed along southern sections of the security fence to mitigate glare impacts until vegetation is adequately established.

The Project will impact the amenity of the locality for Aboriginal groups and individuals. An Aboriginal Cultural Heritage Assessment Report (ACHAR) was undertaken by Ozark Environment & Heritage. The ACHAR, alongside a test excavation program with the assistance of RAPs, discovered and recorded numerous previously unrecorded Aboriginal sites. The reduction of the Project Area and solar array resulted in the avoidance of culturally significant Aboriginal heritage sites from the Project Area. There are ten sites within 50 m of the disturbance footprint. Exclusion zones will be established at these sites, which will be demarcated during construction and included on all relevant site plans during operation to avoid potential harm. The sites are not accessible due to the private ownership of the land. The landscape will change due to earthworks and there is the potential for undiscovered sites to be damaged. The ACHAR field survey and test excavation were carried out and an unexpected finds protocol will be in place to mitigate this risk.

Potential sediment runoff from the Project Area during the construction would impact people's health and wellbeing if not properly controlled. Due to the historical agricultural land use of the Project Area, stormwater runoff into natural waterways during construction has the possibility of containing contaminant bearing sediment. This would put local residents' properties, health and livelihoods at risk and could cause long-term damage in areas of concentration. People use the Hunter River for recreation and irrigation and would be exposed to sedimentation in the water. Exposure to water pollution can cause health impacts including cardiovascular conditions, gut issues, cancer and other diseases (Department of Health and Aged Care, 2022). The Surface Water Impact Assessment recommended management measures which will minimise the likelihood of pollution and sedimentation, in line with Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004) (the 'Blue Book').

Overall, the impacts incurred by construction activities, including noise, air quality, cultural and visual may affect people's quality of life, daily routines, health, and livelihoods. Some receivers are more susceptible to amenity reducing impacts, such as proximate residents / landholders, Aboriginal groups and the wider community within the social locality. The management measures provided in the assessments of relevant impacts in the EIS will be in place to minimise construction impacts to amenity as far as feasible.

7.2.3 Changes to access

During construction, the suburb of Maison Dieu will see a significant increase in both the number of light and heavy vehicles accessing the local area. According to the Traffic Impact Assessment (TIA) of the Project, there is expected to be a maximum of 76 additional light vehicle trips (75 cars and one shuttle bus) in peak hours and a maximum of 8 heavy vehicle trips per day during peak construction times.

Maison Dieu Road is a local, rural collector road that provides both access points to the Project Area. Maison Dieu Road was noted in the TIA to be in good condition and have sufficient capacity to carry the additional traffic.

Road users in the local area and the wider community of Maison Dieu will be subject to levels of traffic that are unfamiliar to the local network (Maison Dieu Road and Magpie Street) This can increase the risk of accidents and may cause a slight increase in trip times for the local community in peak hours, especially as there is no alternative access to the wider road network from the suburb of Maison Dieu. To offset this, a Construction Traffic Management Plan (CTMP) will be developed to provide appropriate traffic control measures, provide a delivery schedule and manage traffic and deliveries entering the site. The CTMP will manage the increase in traffic, and the delivery schedule will ensure that heavy vehicle deliveries are staggered throughout the day where practical, to avoid adverse noise and traffic impacts. Section 6.9 of the EIS contains community consultation measures which will mitigate the social impacts of traffic changes in the locality.

Physical survey and route analysis confirmed that no modifications to any roads will be required for the delivery of OSOM (Over Size Over Mass) materials.

7.2.4 Accommodation

The majority of the construction workforce will be able to be sourced locally with the skills required similar to mining for the majority of the workforce (i.e. Muswellbrook, Singleton or Lower Hunter) and largely travel the major highways daily (as does the mining workforce).

Due to the short duration of the project and its small size; no accommodation commitments (i.e. camps or other new accommodation) are required other than development of an 'Accommodation Strategy' prior to commencement of construction.

The Accommodation Strategy will update detail on the actual cumulative impacts from other projects at that time and confirmation of any required strategies. It will include commitments to:

- Confirm status of projects;
- Confirm actual likely accommodation impacts;
- Commitment to local training and workers (where they have the skills) relevant to the short project duration;
- Industry collaboration to draw workers to the area, where required which would in turn draw a semi-permanent resident workforce to the area;
- Maintain relationships and partnerships with industry capability network (ICN), economic development and industry groups, training providers and local councils to maximise training and recruitments of locals where possible;
- Commitment to a local procurement strategy;
- Commitment to maintain interested workers database;
- Work with First nations and Aboriginal businesses.
- Commitment to monitor and evaluate the program above.

7.2.5 Employment

During construction of the Project, the communities of the suburbs of the Singleton LGA and the Hunter SA3 are expected to benefit from increased construction employment and training opportunities.

Construction of the project is expected to require up to 150 FTE personnel during peak periods, including trade and construction personnel. Other specialised personnel are also expected to attend the project at various intervals throughout the construction period. Additional direct jobs would involve the project management, contract management, function and administrative staff involved in the Project. There would also be additional indirect jobs created as a result of increased demand within the construction industry for materials and plant and equipment. Construction would lead to increased job and income generation opportunities available to residents across the Lower Hunter SA3 during the 18-month construction period.

As a part of the community survey conducted for the Project, an element identified as a benefit was the creation of new employment opportunities within the local community, in the short, medium, and long term. The creation of new employment opportunities within the construction industry as a result of the project would be capable of facilitating local employment for parts of the Maison Dieu community for over a year long period.

Currently, the available labour pool of Maison Dieu is limited, with only 3.4 % of people unemployed, though during engagement members of the community expressed a desire to see youth have improved access to learning specialised skills and find job opportunities in the local area.

To help assist in progressing this goal, a Project procurement and workforce development strategy (Workforce Strategy) will be developed. The Workforce Strategy would include creating a framework for approaching the hiring and upskilling of workers sourced from the local community during construction and operation, including training regimes around working in a renewable energy infrastructure context.

The Workforce Strategy, along with the expected job generation both direct and indirect, is expected to contribute to employment, training, and future job security opportunities for residents within Maison Dieu and beyond to the wider region, improving wellbeing and supporting local livelihoods. It will additionally continue to capitalise on the high rates of technicians and trades workers (18.1%) and labourers (11.8%) within the Lower Hunter SA3 as a whole.

7.2.6 Noise

According to the Maison Dieu Solar Farm Noise and Vibration Impact Assessment (Muller Acoustic Consulting, 2024), there are 34 potentially sensitive residential receivers and one potentially sensitive industrial receiver within 2 km of the Project Area (28 of which are in 'zones of management' for mining companies due to predicted exceedances of noise and/or air quality criteria as a result of mining activities). Five of the potentially sensitive residential receivers are Project-related.

In a worst-case modelled scenario when works are occurring at the nearest possible location, 11 non-associated receivers are predicted to experience construction noise beyond the Noise Management Levels determined using the Interim Construction Noise Guideline, during Standard Construction Hours, with a maximum exceedance of 21 dB LAeq(15min). No exceedances of the 'Highly Noise Affected Management Level' at 75 dB LAeq(15min) are predicted to occur at any time. No exceedances of any management levels are predicted during operation. A Construction Noise Management Plan will be implemented with effective control measures to minimise the impact to sensitive receivers. No exceedances were predicted as a result of construction road traffic noise modelling.

7.2.7 Construction Social Impacts Summary

Table 7-2 provides a summary and significance assessment of the potential social impacts associated with the construction of the Project.

Table 7-2 Summary of construction social impacts

Summary of social impact	Stakeholders affected	SIA Category	Magnitude	Likelihood	Significance
Likely decrease in local biodiversity from land clearing and construction activities, impacting on local flora and fauna, reducing the quality of the surroundings, and impacting on health and wellbeing.	- Associated landholders - Non-associated landholders - Regional Community	- Health and wellbeing - Surroundings	Moderate	Likely	High (Negative)
Local landscape and vistas being affected by construction, affecting views and consequently surroundings for local residents.	- Associated landholders - Non-associated landholders	- Surroundings - Community	Moderate	Almost certain	High (Negative)
Increase of construction traffic, especially during peak delivery times, has the potential to impact on accessibility for local residents and delay traffic at intersections near and along the New England Highway.	- Associated landholders - Non-associated landholders - Local community - Commuters	Accessibility	Low	Almost certain	Low (Negative)
Concerns around concentrated electrical infrastructure, potentially creating a large fire hazard in the local area.	- Associated landholders - Non-associated landholders	Health and wellbeing	Moderate	Unlikely	Medium (Negative)
Relatively small increase in water use during construction limiting water resources available within the local area.	- Associated landholders - Non-associated landholders	Livelihoods	Low	Likely	Low (Negative)
Safety concerns from local landholders around high number of external construction workers, potentially causing conflict and impacting on health and wellbeing.	- Associated landholders - Non-associated landholders	- Decision making systems - Community	Minor	Possible	Medium (Negative)
Potential for sediment entering into waterways, impacting upon residents downstream from the Project. This could be disruptive to people's health and wellbeing, along with impacting livelihoods for people undertaking agricultural practices.	- Associated landholders - Non-associated landholders - Residents downstream from the project area	- Health and wellbeing - Livelihoods	Major	Very unlikely	Low (Negative)
Increase in noise, vibration, dust, and visual changes has the potential to impact on local land holders, which has the potential to disrupt daily routines and damage enjoyment of the immediate environment in the short-term. Some stakeholders may be more vulnerable to these changes, notably older people, people with disability, children, and individuals with existing health conditions.	- Associated landholders - Non-associated landholders	- Way of life - Health and wellbeing - Surroundings	Moderate	Almost certain	High (Negative)

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Summary of social impact	Stakeholders affected	SIA Category	Magnitude	Likelihood	Significance
Increased pressure on local road system causing quicker dilapidation from construction traffic, impacting upon accessibility for residents and landholders within the local area.	- Associated landholders - Non-associated landholders - Commuters	Accessibility	Low	Likely	Low (Negative)
Employment opportunities in construction activities for skilled and unskilled labour, supporting livelihoods and wellbeing. This includes diversification of employment and potential for development of additional renewable relevant construction skill sets.	Skilled and unskilled workforce in the region	Livelihoods	Moderate	Almost certain	High (Positive)
Potential for poor waste management practices by construction workforce, possibly being stored incorrectly or too close to nearby landholders, affecting surroundings and leading to a strained community sentiment.	- Associated landholders - Non-associated landholders - Construction workforce	- Community - Surroundings	Minor	Possible	Medium (Negative)
Low levels of local unemployment potentially requiring construction workforce from surrounding areas, possibly impacting on community sense of belonging.	Regional community	Community	Minor	Likely	Medium (Negative)
Potential for damage to local Aboriginal artefacts, relics or objects, damaging local cultural values and removing agency of choice from local Aboriginal groups on what to do in the event of an unexpected find.	- Aboriginal community - Local Wanaruah peoples	- Culture - Decision making systems	Moderate	Low	Medium (Negative)

7.3 Social Impact Assessment – Operation Phase

This section discusses the potential social impacts and benefits that may occur as a result of operation of the Project, a summary of which is provided in **Table 7-3**. Each of these impacts is categorised in accordance with **Section 2.2** of this SIA. **Table 8-4** illustrates the residual impacts following the implementation of the recommended mitigation measures.

7.3.1 Visual and glare

During operation, the visual impact of the Project will have the most significant effect on the amenity of the social locality due to the majority of noise, vibration and dust ceasing once construction is complete. Impacts to visual amenity were investigated as part of the LCVIA and all visual impacts were predicted to be low under the Technical Supplement – Landscape and Visual Impact Assessment (DPE, 2022) and the Solar Guidelines. The Applicant has committed to vegetation planting and screening around the southern edge of the Project Area to mitigate visual impacts at sensitive receivers. This will also act to enhance the visual amenity of the area for visitors and workers.

Once the PV array is installed and operational, there will be some glare which may affect the locality. This will affect nearby residents and users of Maison Dieu Road. Vegetation screening will mitigate the impact of the glare. The Solar Glare Hazard Analysis conducted as part of the LCVIA determined a low glare effect will occur at one dwelling with mitigation measures in place. There will also be a glare effect on surrounding roads, with 175 hours per year of glare risk with mitigation in place for Maison Dieu Road.

7.3.2 Aboriginal heritage significance

Aboriginal groups and individuals may experience a perceived loss of amenity in the locality, due to alteration of the landscape.

7.3.3 VPA

The Applicant has engaged with Singleton Council regularly throughout the preparation of the EIS, with multiple meetings and email correspondence. The Applicant has committed to entering a VPA with Singleton Council and lodged a written offer of terms in May 2024. VPA payments can be used to support local projects and programs, which may include community, educational and environmental initiatives. The Project will also contribute to Council and community in the form of rates payments.

7.3.4 Future land viability and production

During community engagement, concerns were raised by residents about the state of the land upon completion of Project decommissioning. The Project Area prior to construction is productive agricultural land, featuring 22 ha of Class 3 - High Capability land under NSW Government Land and Soils Capability mapping. The community presented some doubts that the land would be returned to its pre-developed state at the end of the Project's operational life.

A Soil and Agricultural Impact Assessment was undertaken for the Project in November 2023. The assessment determined the land would be returned to its pre-development state assuming appropriate management measures are carried out, including a soil stripping and resspreading strategy. The majority of the LSC Class 3 land is avoided by the PV array and will not be impacted, as it occurs over a creek line.

Primary production is a large contributor to the economy of the local and broader social locality. The gross value of agriculture for the Singleton Shire LGA for the last agricultural census year of 2020 – 2021 is estimated as \$48,382,626 (ABS, 2022). The Soil and Agriculture Impact Assessment assumed the complete removal of the Project Area as agricultural land, which would result in the loss of potential agricultural primary productivity to the estimated value of up to \$34,812 per year for the duration of the Project and the removal of up to \$75,848, per year in secondary productivity. The Applicant will consider the implementation of agrisolar, which is running sheep within the Project Area, grazing under and around the PV array.

Table 7-3 Summary of operation social impacts

Summary of social impact	Stakeholders affected	SIA Category	Magnitude	Likelihood	Significance
Possible decrease in visual amenity from glint and glare off solar panel structures, reducing the quality of the local surrounds. Addressed in Glint and Glare Assessment as part of Landscape, Character and Visual Impact Assessment, according to Large-Scale Solar Energy Guideline (DPE, 2022).	- Associated landholders - Non-associated landholders - Local community	- Health and Wellbeing - Surroundings	Low	Unlikely	Low (Negative)
Concern over potential for the decommissioning of the solar farm to permanently damage agricultural potential of the project area, impacting future livelihoods and ways of life in the local area. Addressed by Soils and Agriculture Impact Assessment in accordance with Large-Scale Solar Energy Guideline (DPE, 2022).	Associated landholders	- Livelihoods - Way of life	Moderate	Unlikely	Medium (Negative)
Potential for sterilisation of potential future coal resources from length of Project lifetime, possibly impacting on livelihoods late in the Project's life.	Regional community	- Way of Life - Accessibility	Moderate	Very unlikely	Low (Negative)
Direct employment opportunities for skilled workforce over the long term, improving long-term job security and livelihoods.	Regional community	Livelihoods	Minimal	Almost certain	Low (Positive)
Potential failure to negotiate a Community Benefits Scheme oriented towards the Maison Dieu community, removing community agency and not realising the opportunity to mitigate impacts and positively influence ways of life, livelihoods, and accessibility.	- Local community - Non-associated landholders	- Community - Decision-making systems - Way of life - Livelihoods - Accessibility	Major	Unlikely	Medium (Negative)
Ambient noise creation from the operation of the solar farm and BESS, potentially reducing wellbeing for nearby receivers. Any noise created by operation would not exceed any relevant criteria according to the Noise and Vibration Impact Assessment.	- Associated landholders - Non-associated landholders	Health and Wellbeing	Minor	Very unlikely	Very low (Negative)
Disruption to potential future agricultural activities within the project area after decommissioning, impacting way of life. Soil	Associated landholders	Way of life	Minor	Unlikely	Medium (Negative)

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Summary of social impact	Stakeholders affected	SIA Category	Magnitude	Likelihood	Significance
stripping strategy in Soil and Agricultural Impact Assessment intends to prevent degradation of agricultural land and restore agricultural capability of the Project Area after decommissioning.					
Additional renewable energy to the grid, alongside with battery storage, greatly benefiting ongoing health and wellbeing, community, and way of life when contextualised against reducing carbon emissions.	Regional community	- Health and wellbeing - Community - Way of life	Major	Almost certain	Very High (Positive)
Additional investment and community benefits experienced as a result of the VPA. Payments can be used to support local projects and programs, which may include community, educational and environmental initiatives	- Regional community - Non-associated landholders	- Livelihoods - Way of life	Major	Almost certain	High (Positive)

7.4 Cumulative impacts

A number of key developments are currently ongoing, have been proposed in proximity to, or have interactions with, the Maison Dieu Solar Farm. Those that have the potential to result in cumulative social impacts have been discussed where applicable in **Section 7.2** and **Section 7.3** above.

While new developments will have cumulative construction and operational social impacts, major projects are also closing and entering decommissioning in the area. With Lidell Power Station closed and the four other coal power stations in NSW scheduled for closure by 2040, renewable energy projects will be required to mitigate the cumulative social impacts of these closures. Energy supply and storage is needed to replace that of the power stations and additional employment and investment is required to attenuate the forthcoming loss. Renewable energy facilities such as the Project will provide opportunities required to mitigate these impacts.

Table 7-4 presents a summary of these projects and the potential social impacts that may result (as of February 2024). Overall, there is potential for construction of the project to overlap with or occur concurrently with other projects in the LGA. As discussed in **Section 7.2**, this has the potential to extend and compound impacts resulting from construction activities, such as increased noise, vibration, dust, and traffic. This may affect residents, visitors and workers close to construction areas. This can result in construction fatigue, which can affect some individuals' quality of life and wellbeing.

Table 7-4 Summary of projects that may result in cumulative social impacts

Project	Status	Potential cumulative impacts
Hunter Valley Operations – North (5.5 km from Project Area)	Extension of operations proposed from 2025 until 2050. If not approved, mine will enter closure period. Currently at exhibition stage.	There will be little to no change in mining scale or intensity. Operations will continue and the pit will continue to grow and move. The key potential cumulative impacts are traffic, noise and dust, although these will remain the same as background levels prior to the Project's construction. There will be positive social benefits, such as continued employment for mine workers and investment in the community. Should mine extension not be approved, there will be negative economic impacts, with loss of employment, income and investment in the area. The presence of a new renewable energy Project in the locality will mitigate some of the negative social impacts of mine closure by providing employment opportunities and investment.
Hunter Valley Operations – South (2.5km from Project Area)	Extension of operations proposed from 2030 to 2045. If not approved, the mine will enter closure period. The extension application is currently under assessment.	Cumulative impacts occurring from the Hunter Valley Operations South include traffic, noise and dust. These impacts will remain steady until 2030. If the mine is closed, impacts will drop off with closure. If the extension is granted, the annual extraction rate will reduce, and some areas approved for mining will remain undisturbed, indicating a potential reduction in cumulative impacts. There will be positive social benefits, such as continued employment for mine workers and investment in the community. Should mine extension not be approved, there will be negative economic impacts, with loss of employment, income and investment in the area. The presence of a new renewable energy Project in the locality will mitigate some of the negative social impacts of mine closure by providing employment opportunities and investment.
Rix's Creek North (5km from Project Area)	Extension of operations proposed from 2035 to 2050. Currently in the 'Prepare EIS' phase.	Bloomfield Collieries Pty Ltd, the operator of Rix's Creek North, is applying to continue operations from 2035 (the current closure date) to 2050. The continuation project will also include the relocation of a 4 km section of the New England Highway and other minor modifications. Cumulative impacts including additional noise, dust and traffic, above preexisting levels would be associated with construction works for the relocation of the New England Highway, should the continuation project be approved.

Project	Status	Potential cumulative impacts
		The Project is located approximately 5km from the section of highway to be relocated to make way for the mine continuation. The Project's delivery traffic will not be utilising the same stretch of the New England Highway. Construction of the Project is expected to be complete prior to the works associated with the Rix's Creek North Continuation Project, therefore no cumulative social impacts are expected.
Rix's Creek South (3.5km from Project Area)	Operational	Rix's Creek South Coal Mine will continue to operate as normal until 2035. It will then undergo closure and rehabilitation. Rix's Creek South is approximately 3km from the Project and could have some cumulative impacts during the Project's construction, predominantly noise and dust. Any potential noise impacts from the Project will be managed through the Construction Noise Management Plan. Cumulative project impacts on dust and air quality are expected to be short term, minor and managed through appropriate mitigation measures outlined in the EIS.
Bridgman Solar Farm (8km from Project Area)	Prepare EIS. Construction date unknown.	Bridgman Solar Farm is a proposed SSD adjacent to Rix's Creek North Coal Mine to the east. The Project may have some cumulative traffic impacts if approved. Delivery vehicles for both projects would potentially use the same route up until the New England Highway / Maison Dieu Road intersection. This may cause increased traffic congestion and trip times, leading to higher stress in workers and individuals using roads nearby. Relevant project managers will be contacted closer to construction to manage potential traffic impacts.
Bowmans Creek Wind Farm (27km from the Project Area)	Approved. Construction expected late 2024.	Bowmans Creek Wind Farm is a proposed SSD located 10km east of Muswellbrook with up to 60 wind turbine generators. Some of the Project Area extends into the Singleton LGA. Bowmans Creek Wind Farm is expected to have cumulative environmental and social construction impacts with the Project. Wind farm construction generally requires a large number of oversize and overmass vehicles, which will share a section of the Project's delivery route. The Project will potentially contribute 3 oversize overmass vehicles during the same period. These vehicles require escort and will increase trip times for local road users. Relevant project managers will be contacted to manage cumulative traffic and social impacts.
Singleton Bypass (8km from the Project Area)	Construction has commenced. Scheduled to open to traffic late 2026.	The Singleton Bypass provides a bypass along the western side of Singleton before connecting back to the existing New England Highway north of Magpie Street. This would likely reduce traffic volumes through Singleton and increase the spare capacity within the existing New England Highway / Magpie Street signalised intersection. There is potential for the Project's construction to coincide with the proposed roundabout at the New England Highway / Maison Dieu Road intersection. There may be some increase in trip times for residents and users of the New England Highway / Maison Dieu Road intersection due to overlap of construction traffic. This may interrupt the routines of residents and could lead to additional levels of stress. If construction timing of the two projects aligns, the Applicant will liaise with TfNSW at the time with regard to management of traffic interactions during construction and operation. Cumulative traffic impacts are expected to be minimal and effectively managed.

Project	Status	Potential cumulative impacts
Hexham Straight Widening Project (65km from Project Area)	Construction has commenced. Expected to be open to traffic in 2026.	The 6 km straight of the Pacific Highway (Maitland Road) is being widened with an additional lane in both directions, bridge upgrades and other improvements. Construction is occurring within standard ICNG construction hours as well as night works between 7 pm and 5 am Sundays to Thursdays. If the Project's construction were to coincide with the construction of the Hexham Straight Widening Project, there may be an increase in trip times and traffic delays due to delivery vehicles using the road to access the Project Area from Port of Newcastle. However, the Project's impact is expected to be minimal due to the low trip generation, as described in the TIA.
M1 Pacific Motorway Extension to Raymond Terrace (62km from Project Area)	Construction has commenced. Scheduled to be open to traffic in 2028.	The M1 Pacific Motorway Extension to Raymond Terrace is a State Significant Infrastructure project to provide 15km of dual carriageway bypassing Hexham and Heatherbrae, extra interchanges, a new bridge and additional flood mitigation. The M1 Pacific Motorway Extension will overlap with the delivery route for the Project on Maitland Road and the New England Highway near Hexham. This may cause delays and increases in trip times with delivery vehicles taking this route from Port of Newcastle. The Applicant will liaise with relevant project managers to manage potential traffic impacts prior to commencement of construction.
Port of Newcastle to Central West Orana REZ (5km from Project Area)	Construction expected to commence late 2024.	EnergyCo and TfNSW have entered a Memorandum of Understanding (MoU) with the aim to complete road upgrades to provide for the safe transport of equipment from ports to renewable energy projects occurring in REZs. Upgrades are planned to facilitate an oversize overmass haulage route from the Port of Newcastle to the Central West Orana REZ. The proposed route for the port to REZ upgrade shares a large portion of the Hunter Expressway with the project's delivery route. This could cause delays and increased trip times, as construction periods for the Project and the port to REZ upgrades are likely to occur simultaneously. Relevant project managers will be engaged with to manage traffic and social impacts prior to construction.
Hunter Transmission Project	Construction scheduled 2026, operating early 2028	EnergyCo's Hunter Transmission Project is a proposed 500 kV overhead transmission line, connecting Bayswater Power Station to Eraring Power Station. The transmission line will be approximately 115 km in length, with the revised corridor opposite the Hunter River, approximately 1.4 km west of the Project Area. The construction of Maison Dieu Solar Farm may coincide with the construction of Hunter Transmission Project. Relevant project managers will be communicated with to mitigate cumulative social impacts such as increased traffic and noise.

8 MITIGATION AND MANAGEMENT FRAMEWORK

8.1 Approach to mitigation and management

Detailed and appropriate communication and consultation with the community and other key stakeholders would play a key role in managing the potential social impacts during construction and operation. Effective communication and engagement are fundamental to reducing risk and minimising potential impacts of construction and operation.

The Applicant will continue to engage with stakeholders and the wider community during the pre-construction and construction phases of the Project. To facilitate this, a Community and Stakeholder Engagement Plan will be developed to provide processes and protocols to ensure that the community and stakeholders:

- Are appropriately informed with accurate and accessible information;
- Are given responses in a timely fashion to concerns and issues;
- Are provided with opportunities for input and feedback, where appropriate.

To accompany the CSEP, a project-specific engagement plan will be developed to provide the requirements for engagement activities over the course of the Project. This would include:

- Communications with affected stakeholders, including but not limited to local landholders, TfNSW, 'CSE' Regional Operations Management team or project managers of projects with potential cumulative impacts and Singleton Council.
- Maintaining and fostering contact avenues for vulnerable groups to access feedback and complaint mechanisms; and
- Processes for communication Project progress updates and notification of delays and Project specific activities that may interrupt social aspects in the short term over construction.

Further information about consultation during project delivery is provided in the Chapter 5 of the EIS.

8.2 Recommended social impact mitigation and enhancement measures

Utilising the assessment in **Section 7**, **Table 8-1** below details the mitigation and enhancement measures that have been identified as suitable for the Project during construction and operation. These mitigation and enhancement measures have been prepared based upon the findings from community and stakeholder engagement (**Section 4**) and lessons from comparable projects (**Section 6**).

Table 8-1 Recommended social impact mitigation measures specific to the Project

Impact / Issue	Measure	Phase
Future Engagement	Preparation of a CSEP to be included in the CEMP, to provide processes and protocol for: • Appropriately informing stakeholders with accurate and accessible information • Giving responses in a timely fashion to concerns and issues • Providing opportunities for input and feedback.	Pre-construction, Construction
	Preparation of a Community Engagement Plan (CEP), including the following: • Continued engagement with regulatory agencies to address issues raised during construction, as needed • Ongoing consultation with the wider Maison Dieu community, including Project updates and public notices • Maintaining of the Project's communication methods for engagement, including phonline, voicemail and email inbox • Maintaining of the Project website to provide easy to access Project updates to the community	Pre-construction, Construction

Impact / Issue	Measure	Phase
	Implementation of a complaints mechanism system to ensure there is a procedure for the proper actioning of any complaints received	Pre-construction, Construction
Future employment benefits and upskilling	Preparation of a Project procurement and workforce development strategy to create a framework for approaching the hiring and upskilling of workers sourced from the local community.	Pre-construction, Pre-operation
Community benefits from the Project	Preparation of a VPA, to be further consulted with the community of Maison Dieu and agreed with Singleton Council. The VPA contributions may be used to contribute to the following: - Transport infrastructure, including road and safety upgrades, - Community infrastructure, including funding for new community buildings, - Contributions to local community groups, including volunteer and charity organisations. The delivery of social licence commitments will be continuously monitored and evaluated throughout the life of the Project.	Operation

Social impacts that have resulted from construction and operation of the Project would also be managed and mitigated through a series of other measures that have been recommended within other EIS technical reports. The key measures proposed that are relevant to the SIA are summarised below in **Table 8-2**.

Table 8-2 Strategies recommended from EIS and its appendices

Strategy	Description
Construction Environmental Management Plan (CEMP)	Management of all construction environmental impacts discussed within the EIS will be addressed in the CEMP. The CEMP will provide the Contractor with a primary guide to ensure all construction activities undertaken over the course of the construction period have their environmental and social impacts managed and mitigated. This will include guidance for all relevant legislative approvals required for construction to be compliant. The CEMP will additionally include a range of management plans (environmental subplans), which will provide clear guidance and processes through which mitigation measures are to be implemented and approval conditions of consent are to be satisfied. These management plans will be prepared on a case-by-case basis with each of the relevant regulatory stakeholders.
Social Licence Commitments Plan (SLCP)	The SLCP will contain directions and responsibilities that need to be carried out to build and maintain trust and social acceptance with the individuals and groups that will experience the greatest impacts of the Project. The SLCP will ensure adherence to the Social Licence Commitments under the future Project Development Agreement with Australian Energy Market Operator. This will involve a heavy community engagement aspect, to build trust over time and understand how people's views and values change over time in response to events resulting from the planning, construction and operation of the solar farm. The SLCP will include provisions for monitoring of social acceptance and management of the 'social licence'.
Operational Environmental Management Plan (OEMP)	Management of all operational environmental impacts discussed within the EIS will be detailed in the OEMP. The OEMP will provide the Contractor with a primary guide to ensure operational environmental and social impacts are effectively managed and mitigated. This will additionally include guidance for all relevant legislative approvals required for operational compliance. The OEMP will include a range of management plans (environmental subplans), which will provide clear guidance and processes through which mitigation measures are to be implemented and approval conditions of consent are to be satisfied. These management plans would be prepared on a case-by-case basis with each of the relevant regulatory stakeholders.
Decommissioning and Rehabilitation Plan (DRP)	The DRP will be prepared prior to the end of the operational life of the Project. The DRP details processes, responsibilities and management measures to ensure the safe decommissioning of all Project infrastructure and the return of the Project Area to its pre-development state. The DRP will guide the contractor in restoring the land to a state that is agriculturally productive and visually equivalent.

Strategy	Description
Construction Traffic Management Plan (CTMP)	A Construction Traffic Management Plan will document all the relevant management measures around traffic control for the Project. This will include controls for traffic flow and access, the number of Heavy vehicles permitted to enter the site in any given day, work hours, and waste arrangements. It will also provide construction traffic phasing timings in line with the expected 18-month program for the Project. This will help ensure that public circulation routes are maintained near the Project Area.
Construction Noise Management Plan (CNMP)	A Construction Noise Management Plan (CNMP) has been developed by Muller Acoustic Consulting Pty Ltd. The CNMP will be finalised and implemented during construction. The plan details processes, responsibilities, and measures to manage noise and minimise potential impacts during construction, consistent with the management approach and mitigation measures provided in the Noise and Vibration Impact Assessment. Mitigation Measures that mitigate potential noise and vibration at the source will be prioritised.
Erosion and Sediment Control Plan (ESCP)	An Erosions and Sediment Control Plan (ESCP) will be prepared for the Project, which will implement construction erosion and sediment control measures to mitigate the risk of potential water pollution from sediment runoff into nearby waterways. This will include base level equipment provisions, such as coir logs, along with specific processes for different inclement weather scenarios.
Aboriginal Cultural Heritage Management Plan (ACHMP)	An ACHMP will be prepared for the construction and operation of the Project in consultation with the RAPs and Heritage NSW. At a minimum, the ACHMP will include: • An unexpected finds protocol; • Procedures for surface artefact collection; • Cultural heritage awareness procedure for construction workforce; • An unexpected skeletal remains protocol; and • Long term management of any Aboriginal objects.
Agricultural Biosecurity Management Plan (ABMP)	An agricultural biosecurity management plan detailing construction and operational risks and controls in relation to pests, weeds, and diseases will be prepared for the Project. DPI Agriculture raised the issue of foot and mouth disease control in a project meeting with project coordinators in October 2023. Spread of the disease would have serious negative implications on primary production. Controls will address the current elevated threat of foot-and-mouth disease (FMD), a contagious animal disease that affects all cloven-hoofed animals including cattle and sheep. The ABMP will address adherence to government FMD awareness, prevention and preparedness programs and guidance.
Soil and Water Management Plan (SWMP)	A Soil and Water Management Plan will be prepared as part of the EMS. The SWMP will provide responsibilities, controls and processes for measuring the effectiveness of mitigation measures in avoiding and minimising environmental impacts to soil and water. The SWMP will also provide adaptive mitigation measures and strategies to deal with ineffective environmental impact prevention.
Accommodation Strategy (AS)	The Accommodation Strategy will detail cumulative impacts from other projects closer to construction of the Project and confirm required strategies. The accommodation strategy will: • Confirm the status of nearby projects; • Confirm likely accommodation impacts; • Commit to local training and workers (where feasible) relevant to the short project duration; • Detail opportunities for industry collaboration to draw workers to the area where required, resulting in a semi-permanent resident workforce to the area; • Maintain relationships and partnerships with industry capability network (ICN), economic development and industry groups, training providers and local councils to maximise training and recruitments of locals where possible; • provide a local procurement strategy; • Provide strategies to maintain an interested workers database; • Work with First nations and Aboriginal businesses; and • Provide actions for monitoring and evaluating the program. • Align with the Temporary and Seasonal Worker's Accommodation Toolkit (DPHI, 2023) or the relevant guideline at the time.
Project Procurement and Workforce Development Strategy (PPWDS)	A PPWDS will be prepared for the construction and operation of the Project. The development of this plan will include targets for local sourcing of materials and employees, where possible to be procured.

8.3 Monitoring and reporting

Due to the relative constrained nature and limited social impacts of the Project, a Social Impact Management Plan (SIMP) has not been recommended for ongoing monitoring and reporting of social impacts caused by the Project's construction and operation.

Overarching responsibility for the implementation and monitoring of the social impact management strategies provided in **Section 8.2** lies with the Applicant. Targeted implementation of management measures during construction activities, will be the responsibility of the Principal Construction Contractor, as part of the contractor's terms and conditions of engagement.

8.4 Assessment of residual impacts and benefits

Table 8-3 and **Table 8-4** provide a summary of the potential social impact and benefits identified in Section 7 for the pre-construction, construction, and operation of the Project. The tables demonstrate the recommended management plans for each impact, along with applicable EIS appendices which contain management plans that would additionally assist in mitigating or enhancing social impacts and benefits.

Likelihood, magnitudes, and significance of each impact has been re-assessed against the recommended measures for each social impact.

Table 8-3 Recommended management plans and measures and re-assessment of residual impacts and benefits - construction

Potential social impact	Pre-mitigation significance rating	Management plan and measures	Relevant EIS chapter / Appendix	Magnitude	Likelihood	Residual impact / benefit
Likely decrease in local biodiversity from land clearing and construction activities, impacting on local flora and fauna, reducing the quality of the surroundings, and impacting on health and wellbeing.	High (Negative)	- CEMP - BMP	- EIS Section 6.1 Biodiversity - BDAR	Moderate	Possible	Medium (negative)
Local landscape and vistas being affected by extensive construction, affecting views and consequently surroundings for local residents.	High (Negative)	Landscaping Plan	- EIS Section 6.5 Visual - LCVIA	Minor	Almost certain	Low (negative)
Increase of construction traffic, especially during peak delivery times, has the potential to impact on accessibility for local residents and delay traffic at intersections near and along the New England Highway.	High (Negative)	- CEMP - CTMP - CSEP	- EIS Section 6.9 - TIA	Minor	Almost certain	Low (negative)
Concerns around concentrated electrical infrastructure, potentially creating a large fire hazard in the local area.	Medium (Negative)	- CEMP - OEMP - BEMOP (Bushfire Emergency Management Operations Plan) - CSEP	- EIS Section 6.11 - PHA - BAR (Bushfire Assessment Report)	Minor	Unlikely	Low (negative)
Low potential for increased water use during construction limiting water resources available within the local area.	Medium (Negative)	- CEMP - OEMP	- EIS Section 6.8 Water Resources - Surface Water Impact Assessment	Minor	Unlikely	Low (negative)
Safety concerns from local landholders around high amount of external construction workers, potentially causing conflict and impacting on health and wellbeing.	Medium (Negative)	- CEMP - TIA - CSEP	- EIS Section 6.15 Social - This SIA	Moderate	Unlikely	Low (negative)
Potential for sediment entering into waterways, impacting upon residents downstream from the Project. This could be disruptive to people's health and wellbeing, along with impacting livelihoods for people undertaking agricultural practices.	Medium (Negative)	- CEMP - SWIA	- EIS Section 6.6 Soils, Land and Agriculture - EIS Section 6.8 Water Resources - SAIA - Surface Water Impact Assessment	Moderate	Very Unlikely	Low (negative)

Potential social impact	Pre-mitigation significance rating	Management plan and measures	Relevant EIS chapter / Appendix	Magnitude	Likelihood	Residual impact / benefit
Increase of noise, vibration, dust, and visual changes has the potential to impact on local land holders, which has the potential to disrupt daily routines and damage enjoyment of the immediate environment in the short-term. Some stakeholders may be more vulnerable to these changes, notably older people, people with disability, children, and individuals with existing health conditions.	High (Negative)	- CEMP - CNMP - CSEP	- EIS Section 6.4 Noise and Vibration - EIS Section 6.5 Visual - EIS Section 6.12 Air Quality - NVIA - LCVIA	Moderate	Likely	Medium (negative)
Increased pressure on local road system causing quicker dilapidation from construction traffic, impacting upon accessibility for residents and landholders within the local area.	Medium (Negative)	- CEMP - CTMP - TCP	- EIS Section 6.9 Traffic - TIA	Minor	Likely	Medium (negative)
Employment opportunities in construction activities for skilled and unskilled labour, supporting livelihoods and wellbeing. This includes diversification of employment and potential for development of additional renewable relevant construction skill sets.	High (Positive)	- CEMP - PPWDS	- EIS Section 6.14 - This SIA	Moderate	Almost certain	High (positive)
Potential for poor waste management practices by construction workforce, possibly being stored incorrectly or too close to nearby landholders, affecting surroundings and leading to a strained community sentiment.	Medium (Negative)	- CEMP - WMP	EIS Section 6.13 Waste Management	Moderate	Unlikely	Low (negative)
Low levels of local unemployment potentially requiring construction workforce from surrounding areas, possibly impacting on community sense of belonging.	Medium (Negative)	- PPWDS - CSEP	- EIS Section 6.15 Social - This SIA	Minor	Possible	Low (negative)
Potential for damage to local Aboriginal artefacts, relics or objects, damaging local cultural values and removing agency of choice from local Aboriginal groups on what to do in the event of an unexpected find.	Medium (Negative)	- CEMP - OEMP - ACHMP - UFP (Unexpected Finds Protocol)	- EIS Section 6.2 Aboriginal Heritage - ACHAR	Moderate	Possible	Medium (negative)

Table 8-4 Recommended management plans and measures and re-assessment of residual impacts and benefits - operation

Potential social impact	Pre-mitigation significance rating	Management plan and measures	Relevant EIS chapter / Appendix	Magnitude	Likelihood	Residual impact / benefit
Possible decrease in visual amenity from glint and glare off solar panel structures, reducing the quality of the local surrounds.	Medium (Negative)	- CEMP - Landscaping Plan	- EIS Section 6.5 Visual - LCVIA	Moderate	Possible	Low (negative)
Potential for the decommissioning of the solar farm to permanently damage agricultural potential of the project area, impacting future livelihoods and ways of life in the local area.	Medium (Negative)	- CEMP - DMP - BMP - Soil Stripping Strategy - WSMP	- EIS Section 6.6 Soils, Land and Agriculture - SAIA	Moderate	Low	Low (negative)
Potential for sterilisation of potential future coal resources from length of Project lifetime, possibly impacting on livelihoods late in the Project's life.	Low (Negative)	CSEP	EIS Section 5 Stakeholder Engagement	Minor	Low	Low (negative)
Safety concerns at site accesses	Medium (Negative)	- CTMP - TCP	- EIS Section 6.9 - TIA	Moderate	Unlikely	Low (negative)
Direct employment opportunities for skilled workforce over the long term, improving long-term job security and livelihoods.	Low (Positive)	- PPWDS - CSEP	- EIS Section 6.15 Social - This SIA	Minor	Likely	Medium (positive)
Failure to negotiate a Community Benefits Scheme oriented towards the Maison Dieu community, removing community agency and affecting ways of life, livelihoods, and accessibility.	Medium (Negative)	- VPA - CSEP	- EIS Section 6.15 Social - This SIA	Moderate	Unlikely	Low (negative)
Ambient noise creation from the operation of the solar farm and BESS, potentially reducing health and wellbeing for associated and non-associated landholders.	Medium (Negative)	OEMP	- EIS Section 6.4 Noise and Vibration - NVIA	Minor	Unlikely	Low (negative)
Disruption to potential future agricultural activities within the project area, impacting way of life.	Medium (Negative)	- CEMP - OEMP - BMP	EIS Section 6.6 Soils, Land and Agriculture	Minor	Unlikely	Low (negative)
Additional renewable energy to the grid, alongside with battery storage, greatly benefiting ongoing health and wellbeing, community, and way of life when contextualised against reducing carbon emissions.	Very High (Positive)	OEMP	- EIS Section 6.15 Social - EIS Section 6.12 Air - This SIA	Major	Almost certain	Very High (positive)

9 CONCLUSION

This SIA has provided an assessment of the social impacts of the construction and operation of the Project. The report has identified and addressed the key social impacts associated with the Project and provides a set of recommended mitigation and enhancement measures. The report satisfies the social impact assessment requirements as identified in the SEARs for the project and has been prepared in accordance with the requirements of the SIA Guideline.

The key positive social impacts with the potential to occur during construction are primarily related to increased employment opportunities for skilled and unskilled workforces, as well as the provision of additional renewable energy to the grid, alongside with battery storage, greatly benefiting ongoing health and wellbeing, community, and way of life when contextualised against reducing carbon emissions. This includes the Suburb of Maison Dieu and the broader Singleton LGA. The Project would support livelihoods, health and wellbeing for the local community.

The key potential construction social impacts include:

- Disruption to daily routines, health and wellbeing of nearby receivers due to an increase in noise and dust. Some receivers are especially sensitive to these impacts including shift workers and the elderly.
- Negative visual impact of the Project transforming the landscape, presence of construction equipment / machinery and reduction of the quality of surroundings in the short term.
- Reduction in accessibility of Aboriginal cultural heritage sites. However, these sites were not recorded prior to the ACHAR and are located on privately owned, fenced land.
- Presence of construction traffic on quiet local road of Maison Dieu. This is likely to increase congestion, trip times and increase stress on road users.
- Increased investment in the local area and employment of up to 150 Full time employees.
- Increased construction workers in the area potentially leading to conflict between workers and residents.

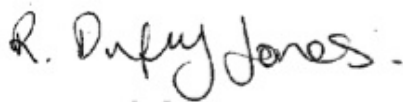
The key potential operational social impacts include:

- Altered visual amenity in some areas due to works incorporating landscaping of native vegetation, increased presence of vegetated areas within the Project Area.
- Reduced visual amenity and increased glare in some areas due to presence of PV array.
- Direct employment opportunities for skilled workforce over the long term, with five skilled full-time employees over the minimum 30-year operational life of the Project.
- Provision of additional renewable energy to the grid, alongside with battery storage, greatly benefiting ongoing health and wellbeing, community, and way of life by reducing carbon emissions.
- Reduction and stabilisation of energy prices by way of additional supply of electricity to the grid.

The positive and negative social impacts identified and assessed in this SIA would be managed and mitigated through a range of measures, including mitigation measures recommended in other EIS technical reports. The mitigation measures identified in response to potential social impacts, and to enhance positive impacts are summarised below:

- Community and Stakeholder Engagement Plan – this will dedicate ongoing consultation with regulatory stakeholders and provide Project updates and public notices to the community.
- Complaints mechanism system – this will assist in ensuring that the Applicant and the Principal Contractor will be able to keep a formal log and process around rectifying complaints where appropriate and necessary.
- Project Procurement and Workforce Development Strategy – this will define approaches to achieving workforce development and targets for local procurement of jobs and materials.

10 AUTHOR QUALIFICATIONS AND DECLARATION

The SIA for the Maison Dieu Solar Farm has been prepared by:		
Name	Rae Dufty-Jones	Luke Wiggins
Qualifications	- Bachelor of Arts – major Human Geography – Honours 1 – University of UNSW - Doctor of Philosophy – Human Geography – UNSW	- Bachelor of Environmental Science and Management - Bachelor of Business
Memberships	- Planning Institute of Australia - Geographical Society of NSW - Australian Geographical Society	Planning Institute of Australia
Recent experience	- Glover, B., Dufty-Jones, R., Itaoui, R., Marks, A., Bergan, T., and Perrone, L. (2022), Parramatta 2035: Vibrant, Sustainable, Global, Parramatta, Centre for Western Sydney, October. - Dufty-Jones, R., Itaoui, R., Perrone, L. (2022), Liveability in Western Sydney: Comparative analysis of fifteen liveability indicators for Local Government Areas in the WestInvest Program and the Greater Sydney Region, Parramatta, Centre for Western Sydney. - Dufty-Jones, R., Perry, N. and Bergan, T. (2022) Measuring and evaluating the placemaking, land use and wider economic benefits of the Metro North West Line – Interim Report. Parramatta, Western Sydney University.	- Maison Dieu Solar Farm EIS - Maud Street Intersection Upgrade REF
Declaration	I declare that this SIA contains all available information that is relevant to the social impact assessment of the development to which this SIA relates, and it is true in all material particulars and does not, by its presentation or omission of information, materially mislead.	I declare that the social locality assessment contains available information relevant to the social impact assessment and vulnerable persons, communities, and places. The information presented is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
Signature		
Name	DR Rae Dufty-Jones	Luke Wiggins
Date	23/05/2024	29/07/2024

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