



Edderton Solar Project  
**SCOPING REPORT**

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## 1 INTRODUCTION

EDF Renewables Australia Pty Ltd (EDF Renewables) (a subsidiary of the EDF Group) and Malabar Resources Limited (Malabar) have established a Joint Venture, Voltere Pty Ltd (Voltere), to develop the Edderton Solar Farm, Battery Energy Storage System (BESS) and associated infrastructure (the Edderton Solar Project, hereafter referred to as ‘the Project’) in the Hunter Valley region of New South Wales (NSW).

**The Project would provide approximately 800,000 Megawatt-hours (MWh) of renewable energy each year, which is enough to power at least 130,000 homes. This is equivalent to the number of homes in the Muswellbrook, Singleton, Upper Hunter and Newcastle Local Government Areas (LGAs) combined.**

The Project is located within the Hunter-Central Coast Renewable Energy Zone (REZ), in close proximity to existing regional transmission infrastructure.

The Project is a significant milestone in the development of the Hunter-Central Coast REZ, which was established by the NSW Government in late 2020. It is the largest solar project currently proposed in the Muswellbrook LGA. It would bring diversified investment to the local economy and help deliver more reliable, cheaper and cleaner energy, supporting NSW’s transition to net zero emissions.

The Project would be situated largely on land owned by Malabar, adjacent to the existing Maxwell Underground Mine (Maxwell Mine) (which is operated by Malabar), approximately 17 kilometres (km) south-southwest of Muswellbrook, NSW (Figure 1).

The Project would comprise three “power islands”, which are areas of photovoltaic (PV) solar panels, known as Mayfield, Bowfield and Plashett (Figure 2). These three power islands would have a combined power generation capacity of 350 megawatts of alternating current (MWac). A BESS would also be developed as part of the Project.

The majority of the Project is located within the Muswellbrook LGA, with a small portion located within the Singleton LGA (Figure 1).

As the Project is a development for the purpose of electricity generating works with an estimated development cost of approximately \$850 million (i.e. greater than \$30 million), approval for the Project will be sought as a State Significant Development (SSD) under section 4.36 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Voltere intends to submit an Environmental Impact Statement (EIS) and Development Application to the NSW Department of Planning, Housing and Infrastructure (DPHI) for the Project. This document is a Scoping Report and supports a request for Secretary’s Environmental Assessment Requirements (SEARs) for the EIS to be prepared for the Project.

### 1.1 APPLICANT DETAILS

Voltere (ACN 658 265 644) is the proponent for the Project. This report has been prepared by EDF Renewables on behalf of the Joint Venture.

The contact details for EDF Renewables are:

EDF Renewables Australia Pty Ltd  
Level 1, 60 Martin Place  
Sydney, NSW 2000  
Email: [australia@edf-re.com.au](mailto:australia@edf-re.com.au)

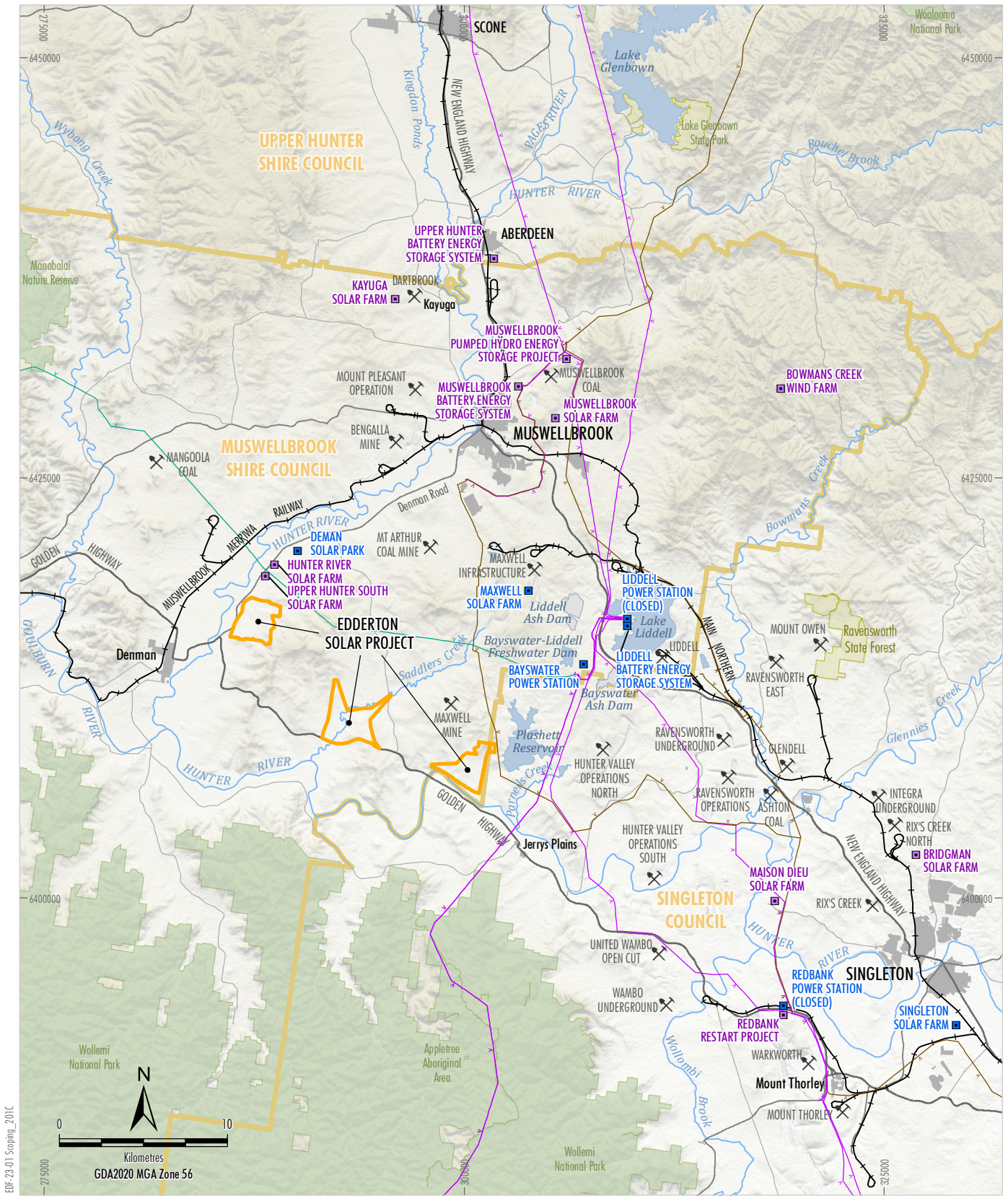
The address of the site is:

1216 Edderton Road  
Jerrys Plains NSW 2330

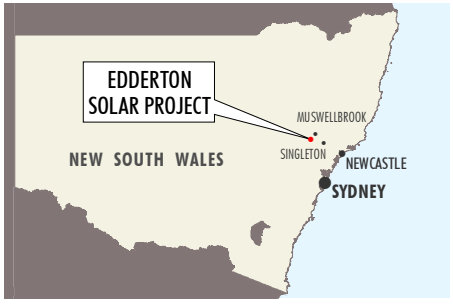
A preliminary Schedule of Lands for the provisional Development Application Area is provided in Tables 1 and 2 and shown in Attachment 1.

Further information on the Project can be found at:

<https://www.eddertonsolarfarm.com.au/>



EDF-23-01 Scoping\_201C



- LEGEND**
- Indicative PV Study Area
  - Mining Operation
  - Local Government Boundary
  - State Forest/Reserve
  - National Parks and Wildlife Estate
  - Existing/Approved Energy Generation Site
  - Proposed Energy Generation/Storage Site
  - Electricity Transmission Line
  - 132kV
  - 330kV
  - 500kV

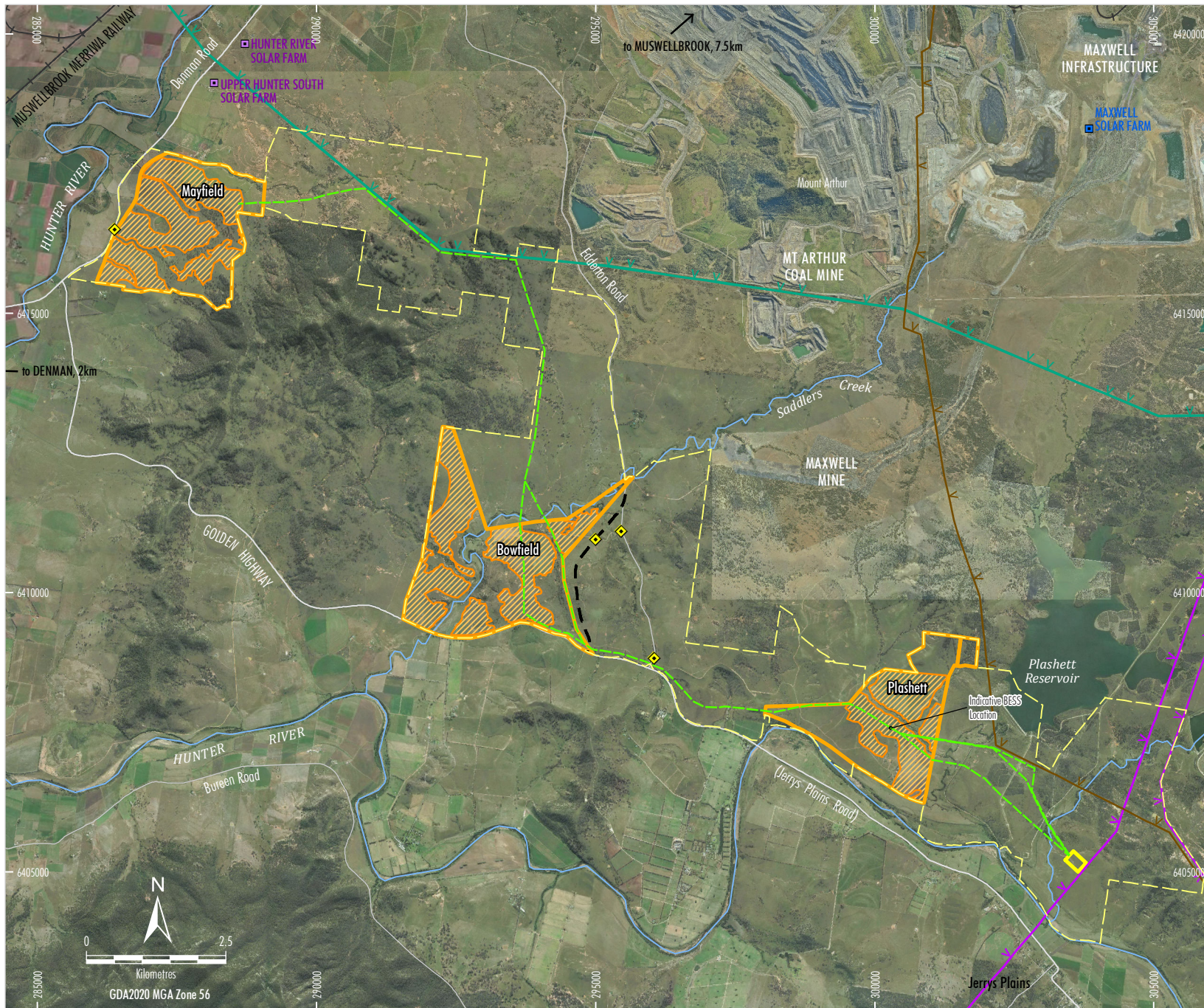
Source: EDF Renewables (2023); NSW Spatial Services (2023)



**EDDERTON SOLAR PROJECT**  
Regional Location

**Figure 1**





- LEGEND**
- Provisional Development Application Area
  - Indicative PV Study Area
  - Indicative PV Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Main Site Access Point
  - Indicative Substation Location
  - Approved Edderton Road Realignment<sup>#</sup>
  - Existing/Approved Energy Generation Site
  - Proposed Energy Generation Site
  - Electricity Transmission Line
  - 132kV
  - 330kV
  - 500kV

Source: EDF Renewables (2023); Malabar (2018); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.  
<sup>#</sup>Edderton Road Realignment approved as part of the Maxwell Underground Mine (SSD 9526).



**EDDERTON SOLAR PROJECT**  
**Indicative Project Layout**

**Figure 2**



**Table 1  
Provisional Development Application Area –  
Lots and DPs**

Tenure Type	Lot	Deposited Plan Number
Freehold	1	DP616024
Freehold	2	DP616024
Freehold	107	DP547864
Freehold	1	DP34397
Freehold	2	DP34397
Freehold	5	DP843635
Freehold	21	DP1018587
Freehold	22	DP1018587
Freehold	1	DP1112847
Freehold	1	DP1179733
Freehold	1	DP1211789
Freehold	20	DP1245080
Freehold	700	DP1255118
Freehold	701	DP1255118

**Table 2  
Provisional Development Application Area –  
Other**

Other	
Muswellbrook Shire Council or NSW Crown Lands	Various Council and Crown Public and Unformed Roads located within, between or adjacent to the above Parcels of Land, including Edderton Road.
Crown Lands	Creeks or Streams located within, between or adjacent to the above Parcels of Land
Freehold	Any Unidentified Historical Title Residues located within, between or adjacent to the above Parcels of Land.

## 1.2 BACKGROUND

**The Joint Venture between EDF Renewables and Malabar brings local and global expertise in large-scale energy development to the Hunter Valley region.**

The EDF Group (founded in France) has been involved in the global renewable energy industry for over 35 years. The EDF Group is currently the second-largest electricity producer in the world.

EDF Renewables was established in 2017 and draws on the EDF Group’s extensive experience in the electricity generation and renewable energy industry.

EDF Renewables is committed to helping Australia meet its renewable energy goals and will continue to invest in the development of new renewable projects across the country. EDF Renewables would build, own and operate the Project if it proceeds to development.

Malabar is an independent Australian-owned resources company with a number of operations based in the Hunter Valley region, including the Maxwell Mine, Maxwell Infrastructure, Maxwell Solar Farm, the Merton Vineyard (Plate 1) and other agricultural landholdings. Malabar has engaged with the community in the region for over 10 years and has a long, demonstrated history of employing locals and supporting community organisations.



**Plate 1 – Malabar’s Merton Vineyard (Not Impacted by the Project)**

Source: Malabar (2024).

### 1.3 PROJECT OBJECTIVES AND OVERVIEW

The key Project objectives are:

1. Development of a solar farm with sufficient generation capacity to support connection directly into the high-voltage network without the need for major network augmentation work.
2. Installation of PV panels in areas that maximise solar generation potential and minimise construction costs, while avoiding or minimising potential impacts on the environment and community.
3. Installation of a BESS to allow for the storage of generated electricity for deployment during peak energy demand and help to stabilise the electricity grid.

**The clean energy from this Project is critical to replace the fossil fuel energy from nearby coal-fired power plants which are already being progressively decommissioned.**

The Project involves the construction, operation and decommissioning of the proposed solar farm, BESS, internal power reticulation system and other supporting infrastructure.

The final detailed Project description (to be included in the EIS) will be informed by the outcomes of environmental assessment and stakeholder engagement. At this stage of the planning and design process, it is expected the Project would include the following activities:

- Three power islands known as Mayfield, Bowfield and Plashett which would generate a combined total of 350 MWac of electricity.
- An internal power reticulation system to connect the Mayfield, Bowfield and Plashett power islands.
- A BESS nominally located at the Plashett power island (with the ability to store power from the three power islands as well as from the electricity network).
- A 330 kilovolt (kV) line to connect the combined generation of all three power islands into the existing Transgrid 330 kV Electricity Transmission Line (ETL), located south-east of the Plashett power island.

- Internal access tracks and upgrades to existing access roads, where required.
- Site access to the Mayfield power island from Denman Road and to the Bowfield and Plashett power islands from Edderton Road.
- Associated infrastructure and services.
- Operations and maintenance buildings, offices, welfare facilities and workshop, staff amenities and parking facilities.

An indicative general arrangement of the Project is shown in Figure 2.

### 1.4 SUMMARY OF KEY AVOIDANCE, MINIMISATION AND OFFSET STRATEGIES

Key constraints and objectives for the Project design are provided in Table 3.

The power islands are predominantly cleared, open paddock grazing land, with some areas of remnant forest and open woodland. The Project would avoid and/or minimise disturbance of woodland where feasible.

The Project is strategically located in an area close to existing high-voltage transmission lines with spare capacity. This minimises disturbance associated with connecting into the grid, and avoids the need for further upgrades to the existing network.

Key biodiversity offset strategies for the Project would include development of a biodiversity offset strategy as per the NSW *Biodiversity Conservation Act 2016* (BC Act).

Additional avoidance, minimisation and offset strategies will be developed during further refinement of the detailed Project description and will be described in the EIS.

### 1.5 RELATED DEVELOPMENT

The Project is located within the Hunter-Central Coast REZ. The Hunter-Central Coast REZ has an initial intended network capacity of 1 gigawatt (GW), which is likely to increase over time with the retirement of coal-fired power stations, re-purposing of mining land and the growth of offshore wind (Energy Corporation of NSW [EnergyCo], 2024).

**Table 3**  
**Key Project Design Constraints**

Key Constraint / Objective	How Addressed in Project Design
Avoidance of higher quality agricultural land.	The Project is proposed within existing mine-owned land, minimising potential impacts to agricultural enterprises and rural residences (e.g. via acquisition or lease of privately-owned property). The Project would minimise disturbance of regionally mapped Land and Soil Capability (LSC) 3 land within the PV Study Areas.
Minimisation of disturbance of areas of higher biodiversity value and avoidance of watercourses.	The Project would maximise the use of existing cleared areas subject to historic and ongoing agricultural use and avoidance of remnant native woodland within the PV Study Areas, including land zoned C3 (Environmental Management). The PV areas would avoid 3 <sup>rd</sup> order and above watercourses (including Saddlers Creek) and flood zones.
Avoidance of operational mining areas associated with the Maxwell Mine.	The Project would minimise interaction with the adjacent Maxwell Mine, as the PV Study Areas are outside of associated Mining Lease (ML) boundaries and potential subsidence interactions with the reticulation system easement can be adequately managed.

The Project is one of 24 solar energy projects that have registered an interest in the Hunter-Central Coast REZ.

The power islands for the Project are wholly located on land owned by Malabar (Figure 3).

The internal power reticulation system easement between Bowfield and Plashett would traverse ML 1822, associated with the Maxwell Mine. A portion of the reticulation system easement between Mayfield and Bowfield would traverse Exploration Licence (EL) 5965 and ML 1593 on land owned by BHP, associated with the Mt Arthur Coal Mine.

Portions of the easement from Plashett to the existing 330 kV ETL would traverse land owned by AGL Macquarie Pty Limited (AGL) associated with the Bayswater Power Station, and land owned by Coal & Allied Operations Pty Ltd and HVO Resources Pty Ltd (HVO) associated with the Hunter Valley Operations. The Project would have no material interaction with the operations of the Maxwell Mine, Mt Arthur Coal Mine, Bayswater Power Station or Hunter Valley Operations.

EDF Renewables has commenced consultation and negotiations with these third-party landholders regarding the proposed easements (Section 5).

EDF Renewables has also lodged a connection enquiry with Transgrid in relation to connecting to its 330 kV ETL (Section 5).

It is anticipated that productive agricultural activities (e.g. low-intensity grazing) would continue to be undertaken on land owned by Malabar during operation of the Project. Opportunities for managed agricultural activities on the Project lands would continue to be investigated and will be described in the EIS.

## 1.6 PURPOSE OF THIS DOCUMENT

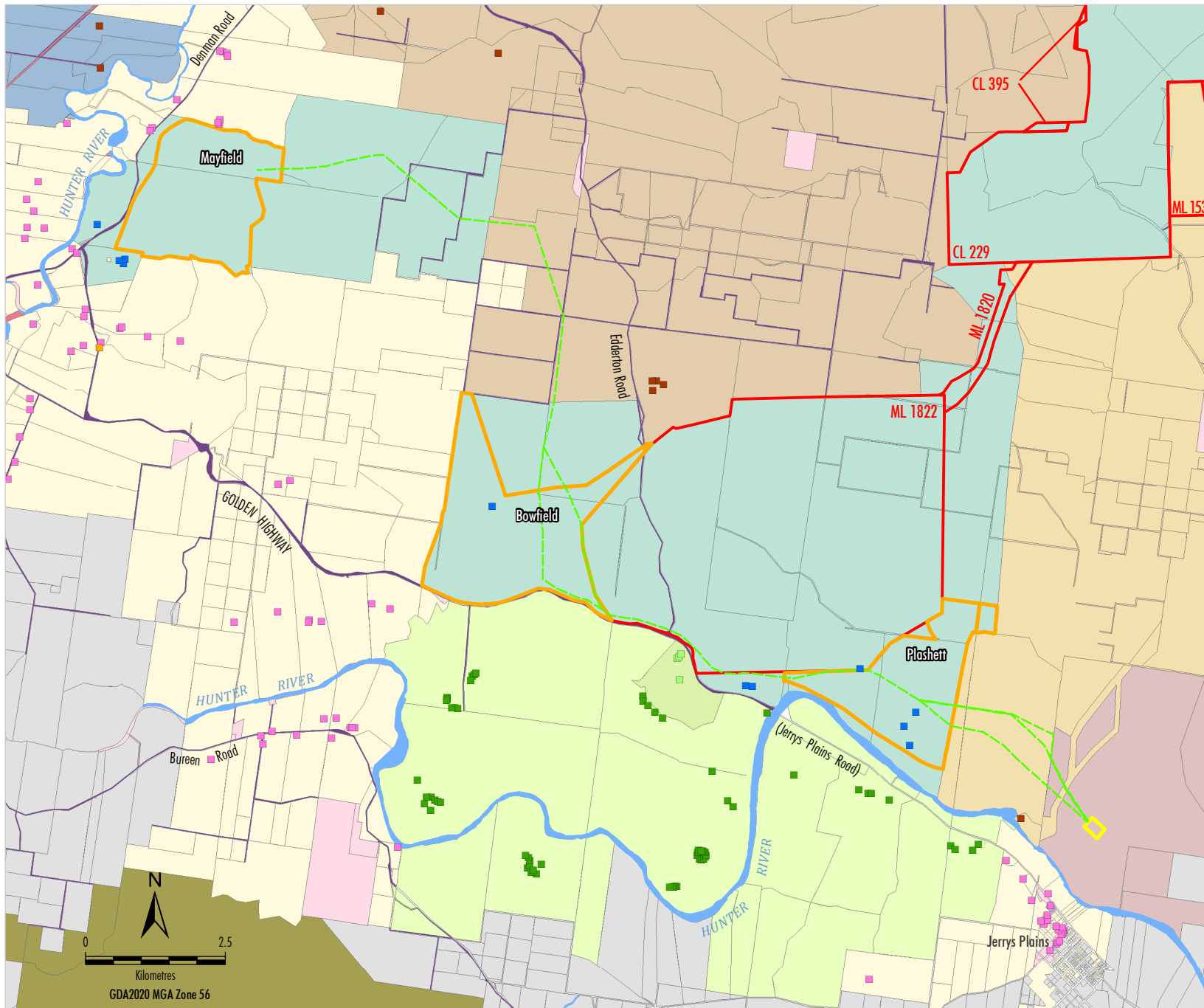
This Scoping Report provides a description of the Project to support a request for SEARs for the EIS to be prepared for the Project.

The SEARs will identify matters that must be addressed in the EIS for the Project. DPHI will prepare the SEARs for the Project in consideration of feedback received from relevant State regulatory agencies.

This document has been prepared considering the *State Significant Development Guidelines* (NSW Department of Planning and Environment [DPE], 2022a), in particular *Appendix A – Preparing a Scoping Report*, as well as the *Large-Scale Solar Energy Guideline* (DPE, 2022b).

Other relevant guidelines that have been considered in the preparation of this document include:

- *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2022c);
- *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE, 2022d) (Cumulative Impact Assessment Guideline);



- LEGEND**
- Indicative PV Study Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - Maxwell Mine Mining and Coal Lease Boundary
  - Relevant Landholder**
  - Malabar Resources Limited
  - BHP
  - HVO
  - Glencore
  - AGL
  - Council
  - Crown
  - The State of New South Wales
  - Equine Enterprise
  - Viticulture Enterprise
  - Other Privately Owned Land
  - Wollemi National Park
  - River Corridor
  - Road Corridor
  - Properties Not Identified
  - Relevant Receivers**
  - Privately Owned Dwelling
  - RFS Facility
  - Associated Dwelling
  - Other Mine-owned Dwelling
  - Equine Enterprise Receiver
  - Viticulture Enterprise Receiver
- Source: EDF Renewables (2023); Malabar (2022); NSW Spatial Services (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Land Ownership Overview**

**Figure 3**



- *Social Impact Assessment Guideline for State Significant Projects* (DPE, 2023a) (SIA Guideline); and
- *Large-Scale Solar Energy Guideline: Technical Supplement – Landscape and Visual Impact Assessment* (DPE, 2022e).

Separately, the Project would be referred to the Commonwealth Minister for the Commonwealth Department of Climate Change, Energy, the Environment and Water (Cth DCCEEW) for consideration as to whether it is a 'Controlled Action' and requires approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

## **1.7 STRUCTURE OF THIS DOCUMENT**

The remainder of this document is structured as follows:

- Section 2 Strategic Context – identifies key strategic issues, describes how the Project would fit with existing land uses in the area and outlines the strategic importance and permissibility of the Project.
- Section 3 Project Description – describes the context of the Project, and the types of activities that would be undertaken.
- Section 4 Statutory Context – identifies potentially relevant statutory planning instruments and requirements.
- Section 5 Engagement – outlines consultation with relevant stakeholders that has already been undertaken and is proposed to be carried out for the Project.
- Section 6 Preliminary Assessment of Impacts – identifies key environmental issues of relevance to the Project, outlines the proposed level and scope of environmental assessment, and identifies strategies to address the impacts identified.
- Section 7 References.
- Section 8 Abbreviations and Acronyms.

## 2 STRATEGIC CONTEXT

This section outlines the strategic context for the Project, including the strategic need for and potential benefits of the Project.

### 2.1 PROJECT JUSTIFICATION

The clean energy from this Project is critical in the replacement of fossil fuel energy from the nearby coal-fired power plants, including Liddell Power Station which closed in April 2023 and Bayswater Power Station which is progressively being decommissioned.

**The Project would provide a combined power generation capacity of 350 MWac, or up to approximately 800,000 MWh of renewable energy each year.**

The proposed Project layout of three power islands is configured to maximise potential generation capacity and has direct access to existing high-voltage transmission lines with spare capacity. This minimises disturbance associated with connecting into the grid, and avoids the need for further upgrades to the existing network.

The proposed BESS would provide the ability to store power generated by the Project as well as from the existing electricity network (via the connection to the 330 kV line) to manage intermittency of solar generation due to weather events, allow for discharge during periods of peak demand and help to stabilise the electricity grid.

The Project would provide an opportunity for diversified investment in the local economy, employment and socio-economic benefits in the Hunter Valley region.

The construction workforce would likely be sourced from personnel who reside in the Hunter Valley region due to the proximity of a local skilled workforce, avoiding the need for development of a construction accommodation camp.

Further consideration of the Project on social, environmental and economic grounds, including consideration of the principles of ecologically sustainable development, consideration of alternatives and a cost-benefit analysis, will be included in the EIS.

## 2.2 ENERGY CONTEXT

### 2.2.1 National Policy Framework

#### *Paris Agreement*

Australia's Nationally Determined Contribution (NDC) under the *Paris Agreement* communicates a greenhouse gas emission reduction target of 43 percent (%) below 2005 levels by 2030 (Commonwealth of Australia, 2022). The NDC also:

- adopts a multi-year emissions budget from 2021 to 2030;
- re-affirms the commitment to achieve net zero emissions by 2050; and
- refers to a substantial and rigorous suite of new policies across the economy to drive the transition to net zero.

#### *Australian Renewable Energy Target*

The Australian Government's Renewable Energy Target Scheme was developed under the Commonwealth *Renewable Energy (Electricity) Act 2000* and is designed to reduce greenhouse gas emissions in the electricity sector by encouraging renewable energy generation under the Large-scale Renewable Energy Scheme and Small-scale Renewable Energy Scheme.

The Large-scale Renewable Energy Target encourages investment in renewable power stations, including solar farms, to achieve 33,000 gigawatt hours of additional renewable electricity each year until 2030.

The Project would contribute to Australia reaching its renewable energy targets contributing up to approximately 800,000 MWh of renewable energy per year from a lower cost site (due to the favourable site characteristics, such as proximity to bulk transmission capacity).

### 2.2.2 State Policy Framework

The NSW Government endorses Australia's commitments to the *Paris Agreement* and will take actions consistent with the level of effort required to achieve them (Office of Environment and Heritage [OEHL], 2016).

The NSW *Climate Change Policy Framework* (OEH, 2016) outlines an aspirational long-term objective of achieving net zero emissions by 2050. The NSW Government has introduced a suite of policies and legislation to achieve this objective.

Key net zero policy and legislation in NSW include the:

- *NSW Net Zero Plan Stage 1: 2020-2030* (Department of Planning, Industry and Environment [DPIE], 2020a) (Net Zero Plan) and associated NSW *Climate Change (Net Zero Future) Act 2023*;
- *NSW Electricity Strategy* (DPIE, 2019); and
- *NSW Electricity Infrastructure Roadmap* (DPIE, 2020b), which is underpinned by the *NSW Electricity Infrastructure Investment Act 2020* (EII Act).

**The Project would generate renewable electricity and provide storage capacity to help deliver more reliable, cheaper and cleaner energy, supporting NSW's transition to net zero emissions.**

### **NSW Net Zero Plan Stage 1: 2020-2030**

The Net Zero Plan (DPIE, 2020a) provides the foundational framework for NSW to reach net zero emissions by 2050, and acknowledges the ongoing contribution of solar electricity to the economy.

The NSW *Climate Change (Net Zero Future) Act 2023* legislates whole-of-government action to deliver on the net zero emissions by 2050 target, including establishment of a Net Zero Commission to monitor, report and advise on progress.

The NSW Government is aligning its 2030 emissions reduction objectives to the projections reported in the *Net Zero Plan Stage 1: 2020-30 Implementation Update* (DPIE, 2021a) which aims to reduce emissions by 50% below 2005 levels by 2030, and the *Net Zero Plan Implementation Update 2022* (Office of Energy and Climate Change, 2022) which aims to reduce emission by 70% below 2005 levels by 2035.

### **NSW Electricity Strategy, NSW Electricity Infrastructure Road Map and NSW Electricity Infrastructure Investment Act 2020**

The *NSW Electricity Infrastructure Roadmap* and the EII Act outline the regulatory framework to coordinate investment in the transmission, generation, storage and firming infrastructure required to maintain reliability while decarbonising the NSW electricity grid.

Part 3 of the EII Act defines an Energy Security Target, which aims to achieve reliable electricity supply over the medium and long-term for NSW electricity consumers.

Part 4 of the EII Act provides for the declaration of REZs to connect renewable energy projects, electricity storage and high-voltage transmission infrastructure. The Project is located within the Hunter-Central Coast REZ. Voltere submitted an “Expression of Interest” in November 2023 to apply to be a Generator Design Partner in the Hunter-Central Coast REZ.

Part 6 of the EII Act sets out the NSW Government’s minimum investment objectives for new renewable electricity generation for the period ending 31 December 2029, being the establishment of 12 GW of additional capacity.

## **2.3 LOCAL AND REGIONAL CONTEXT**

### **2.3.1 Hunter Regional Plan 2041**

The *Hunter Regional Plan 2041* (DPE, 2022f) outlines a 20-year land use plan for the Hunter Valley region in line with key objectives, and considers potential benefits and opportunities associated with the Hunter-Central Coast REZ.

The Project would be consistent with the objectives of the *Hunter Regional Plan 2041* by:

- providing opportunities for employment in the renewable energy sector;
- generating clean and affordable electricity to support net zero emissions by 2050;
- providing electricity storage via a BESS for deployment to better manage demand; and
- minimising potential land use conflicts due to its location within the Hunter-Central Coast REZ and proximity to existing high-voltage transmission infrastructure.

The EIS will consider the *Hunter Regional Plan 2041* and demonstrate the Project achieves relevant objectives and associated performance outcomes.

### **2.3.2 Muswellbrook Shire Council Local Strategic Planning Statement 2020-2040**

The *Muswellbrook Local Strategic Planning Statement 2020-2040* (Muswellbrook Shire Council, 2020) (Muswellbrook Strategic Planning Statement) applies the objectives of the *Hunter Regional Plan 2041* to the Muswellbrook LGA and outlines key planning priorities and short-, medium- and long-term actions to achieve them.

The Muswellbrook Strategic Planning Statement acknowledges the proposed closure of existing coal-fired power stations and the advantages that existing transmission infrastructure in the Muswellbrook LGA provides to attract renewable investment in the region.

The Project would directly address Planning Priority 1 (technology and innovation) and Planning Priority 18 (adaptation to climate change) of the Muswellbrook Strategic Planning Statement.

### **2.3.3 Singleton Local Strategic Planning Statement 2041**

The *Singleton Local Strategic Planning Statement 2041* (Singleton Council, 2020) (Singleton Strategic Planning Statement) identifies the main priorities and aspirations of the Singleton community and outlines how the directions and actions from the *Hunter Regional Plan 2041* will be implemented at the local level.

The Singleton Strategic Planning Statement notes the opportunities that renewable energy present to diversify the mix of industries in the Singleton LGA, in particular the advantages associated with the distribution of electricity generated by renewable energy to the broader network and the large areas of the LGA which receive sufficient levels of solar radiation for effective solar electricity production (Singleton Council, 2020).

The Singleton Strategic Planning Statement also notes the potential constraints to renewable energy development, in particular infrastructure provision and access and impacts on and from existing land uses. EDF Renewables will work with Singleton Council on these issues through the EIS preparation process.

### **2.3.4 Other Strategic Plans**

Other strategic planning documents that will be considered during preparation of the EIS include:

- *Muswellbrook Shire 2022-2032 Community Strategic Plan* (Muswellbrook Shire Council, 2022).
- *Create Singleton 2032 – Community Strategic Plan 2022-2032* (Singleton Council, 2022).

## **2.4 KEY FEATURES OF THE SITE AND SURROUNDS**

### **2.4.1 Project Area**

The Project is located in the Hunter Valley region of NSW, approximately 17 km south-southwest of Muswellbrook, 4 km north-east of Denman and 4 km north-west of Jerrys Plains.

The power islands for the Project are wholly located on Malabar-owned land, as well as some sections of the reticulation system easement. The remaining sections of the reticulation system easement and substation for connection to the grid are located on third-party land (Section 2.6).

A preliminary Schedule of Lands for the provisional Development Application Area is provided in Tables 1 and 2, and shown in Attachment 1. The majority of the provisional Development Application Area is located within the Muswellbrook LGA, with a small portion located within the Singleton LGA.

The power islands are predominantly cleared, open paddock grazing land, with some areas of remnant forest and open woodland. The PV areas would avoid the majority of woodland areas.

Surface elevations within the power islands vary from a low point of approximately 81 metres above Australian Height Datum (m AHD) to a high point of approximately 216 m AHD.

The Hunter River runs to the south of the Bowfield and Plashett power islands and to the west of the Mayfield power island. Saddlers Creek, which would be avoided by the PV panels, runs through the Bowfield power island.

The surrounding land uses include:

- existing open cut and underground mining operations (Maxwell Mine, Mt Arthur Coal Mine, Mangoola Mine and Hunter Valley Operations);
- agricultural, equine and viticulture enterprises; and
- rural residential.

#### 2.4.2 Natural and Built Features

A preliminary investigation of environmentally sensitive areas of State significance as defined in Chapter 2 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) has identified that the provisional Development Application Area for the Project is not associated with:

- Coastal waters of the State.
- Lands identified as “coastal wetlands” or “littoral rainforest” on the Coastal Wetlands and Littoral Rainforests Area Map.
- Lands reserved as an aquatic reserve under the NSW *Fisheries Management Act 1994* or as a marine park under the NSW *Marine Parks Act 1997*.
- Lands declared as a Ramsar Wetland within the meaning of the EPBC Act.
- Lands declared a World Heritage property within the meaning of the EPBC Act.
- Land identified in an environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance.
- Land reserved as a state conservation area under the NSW *National Parks and Wildlife Act 1974*.
- Places, buildings or structures listed on the State Heritage Register under the NSW *Heritage Act 1977*.
- Land reserved or dedicated under the NSW *Crown Land Management Act 2016* for the preservation of flora, fauna, geological formations or for other environmental protection purposes.
- Land identified as being critical habitat under the NSW *Threatened Species Conservation Act 1995* or Part 7A of the NSW *Fisheries Management Act 1994*.

#### 2.4.3 Key Risks and Hazards

A preliminary hazard analysis will be undertaken for the Project, which will consider risks associated with:

- bushfire;
- flooding;
- lightning strike;
- waste management; and
- land contamination.

### 2.5 CUMULATIVE IMPACTS

A number of proposed and approved renewable energy developments are located in the vicinity of the Project. These developments are shown on Figure 1 and relevant details summarised in Table 4.

Proposed and approved renewable energy developments within the Hunter-Central Coast REZ, including those in the vicinity of the Project, are shown on Figure 4.

Other proposed or approved SSDs in the vicinity of the Project include (Figure 1):

- Maxwell Mine.
- Mt Arthur Coal Mine.
- Bayswater Power Station.
- Hunter Valley Operations.

AGL is also investigating future land uses for its Liddell and Bayswater Power Station sites.

There is limited potential for interactions between the Project and nearby developments. Notwithstanding, the EIS will consider any potentially relevant interactions with environmental matters for these projects (e.g. social, road transport) to assess potential cumulative impacts.

**Table 4**  
**Proposed and Approved Renewable Energy Developments in the Vicinity of the Project**

Project Name	Project ID	Approval Status <sup>1</sup>	Approximate Distance from Project	Type	Nameplate Rating	Potential Cumulative Impacts and Proposed Level of Assessment
Upper Hunter South Solar Farm	SSD-65996959	EIS Preparation phase	1 km north	Solar Farm	90 MW	Detailed assessment of potential cumulative road transport, visual and social impacts.
				BESS	30 MW	
Hunter River Solar Farm	SSD-38556668	EIS Preparation phase	1.5 km north	Solar Farm	84 MW <sub>p</sub> DC	Detailed assessment of potential cumulative road transport, visual and social impacts.
				BESS	60 MW <sub>ac</sub>	
Denman Solar Park	DA 2020-49	Approved but yet to commence	3.5 km north	Solar Farm	22 MW <sub>ac</sub>	Detailed assessment of potential cumulative road transport, visual and social impacts.
Maxwell Solar Farm	SSD-9820	Approved but yet to commence (operational lifespan of 30 years)	10 km north	Solar Farm	25 MW <sub>ac</sub>	Standard assessment of potential cumulative road transport and social impacts.
Liddell Battery Energy Storage System	SSD-8889679	Approved but yet to commence (operational lifespan of 20 years)	10 km north-east	BESS	500 MW	Standard assessment of potential cumulative road transport and social impacts.
Muswellbrook Solar Farm	SSD-46543209	Assessment phase	20 km north-west	Solar Farm	135 MW <sub>ac</sub>	Standard assessment of potential cumulative road transport and social impacts.
				BESS	135 MW <sub>ac</sub>	
Muswellbrook Battery Energy Storage System	SSD-29704663	Approved but yet to commence (operational lifespan of 20 years)	20 km north-west	BESS	150 MW	Standard assessment of potential cumulative road transport and social impacts.
Kayuga Solar Farm	-	Scoping Report in preparation	20 km north	Solar	80-100 MW	Standard assessment of potential cumulative road transport and social impacts. <sup>2</sup>
Maison Dieu Solar Farm	SSD-48160216	EIS Preparation phase	20 km south-east	Solar Farm	60 MW	Standard assessment of potential cumulative road transport and social impacts.
				BESS	40 MW	

**Table 4 (continued)**  
**Proposed and Approved Renewable Energy Developments in the Vicinity of the Project**

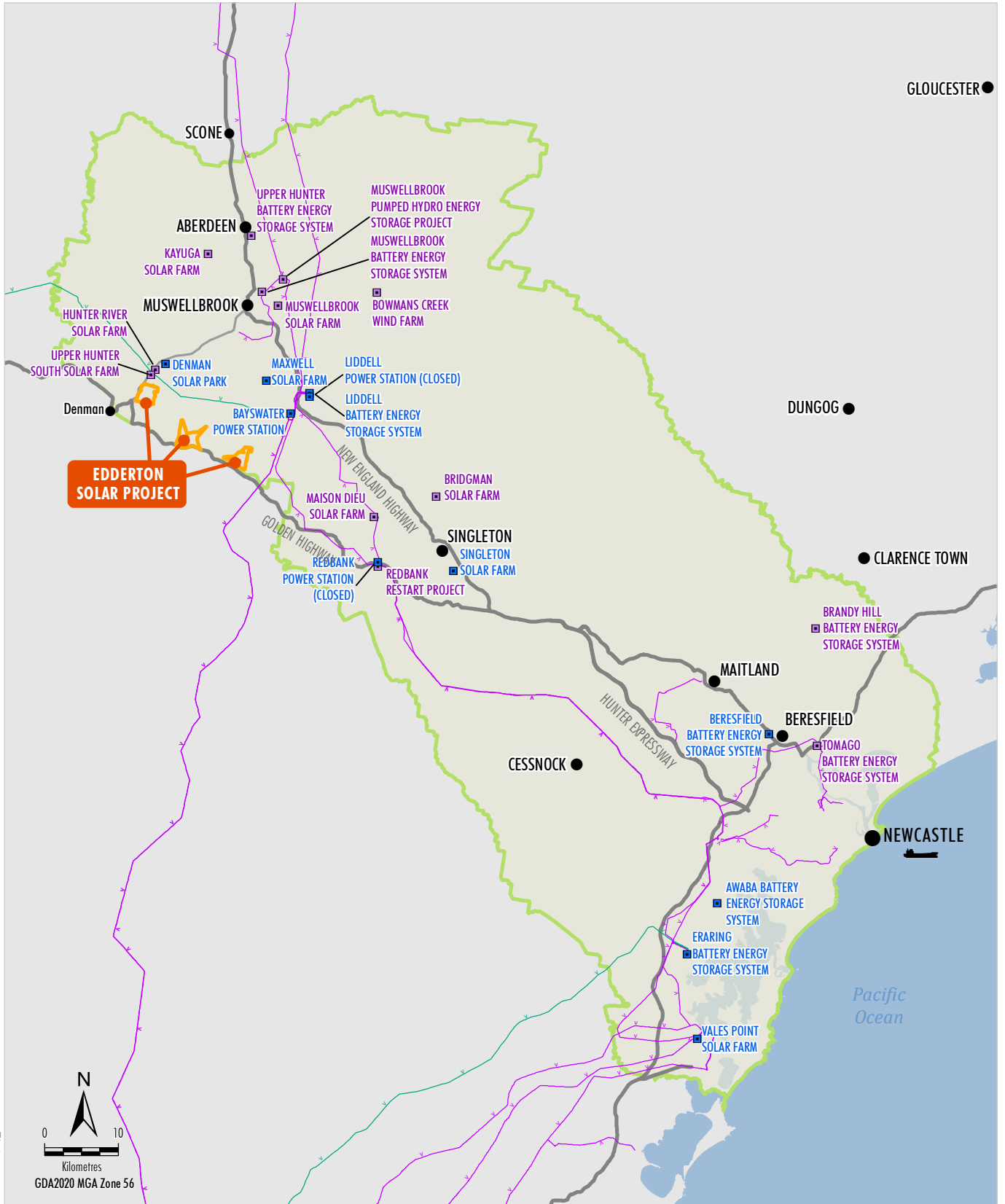
Project Name	Project ID	Approval Status <sup>1</sup>	Approximate Distance from Project	Type	Nameplate Rating	Potential Cumulative Impacts and Proposed Level of Assessment
Redbank Power Station Restart	SSD-56284960	EIS Exhibition phase	25 km south-east	Biomass Fuel Power Station	151 MW	Limited interaction expected.
Muswellbrook Pumped Hydro Energy Storage Project	SSD-65797725	EIS Preparation phase	25 km north-west	Pumped Hydro Energy Storage	500 MW	Standard assessment of potential cumulative road transport and social impacts.
Upper Hunter Battery Energy Storage System	SSD-61707209	EIS Preparation phase	25 km north-west	BESS	400 MW	Standard assessment of potential cumulative road transport and social impacts.
Bowmans Creek Wind Farm	SSD-10315	Approved but yet to commence	30 km north-east	Wind Farm	347 MW	Standard assessment of potential cumulative road transport and social impacts.
Bridgman Solar Farm	SSD-8530804	EIS Preparation phase	30 km south-east	Solar Farm	50 MW	Standard assessment of potential cumulative road transport and social impacts.
Singleton Solar Farm	Council DA	Approved	30 km south-east	Solar Farm	407 kW	Not anticipated to interact with the Project.

<sup>1</sup> Current at time of Scoping Report lodgement.

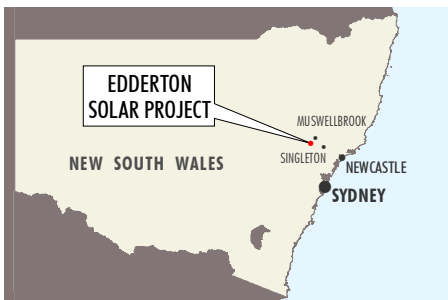
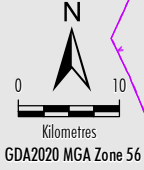
<sup>2</sup> Assessment of potential cumulative impacts for interaction of the Project and the Kayuga Solar Farm would only occur if assessment documentation is submitted.

MW = Megawatts, kW = Kilowatts, MW<sub>p</sub> DC = Megawatt peak direct current.





EDF-23-01 Scoping\_2088



- LEGEND**
- Indicative PV Study Area
  - Hunter Central Coast Renewable Energy Zone
  - Highway
  - Electricity Transmission Line
  - 330kV
  - 500kV
  - REZ Projects**
  - Existing/Approved Energy Generation/Storage Site
  - Proposed Energy Generation/Storage Site

Source: EDF Renewables (2023); NSW Spatial Services (2023)



**EDDERTON SOLAR PROJECT**  
**Proposed and Approved Renewable Energy Developments in the Hunter-Central Coast REZ**

**Figure 4**



## 2.6 THIRD-PARTY AGREEMENTS

Voltere has a land access agreement in place with Malabar for the construction and operation of the Project on Malabar-owned land.

It is expected that, should the Project be approved and developed, Voltere would seek to enter into the third-party agreements with the following:

- Transgrid: Agreement to facilitate connection to its 330 kV ETL (connection enquiry lodged).
- Third-party landholders: Agreement to construct the internal reticulation system within the proposed easements (Section 5).
- Potential lessees/licensees: Agreements regarding ongoing agricultural activities within Malabar-owned land during operation of the Project.

### 3 PROJECT DESCRIPTION

#### 3.1 OVERVIEW

The Project involves the construction, operation and eventual decommissioning of the proposed solar farm, BESS, internal power reticulation system and other supporting infrastructure.

The key characteristics of the Project are summarised in Table 5. An indicative general arrangement of the Project is shown on Figure 2. An indicative general arrangement of each of the power islands is shown on Figures 5a to 5c.

#### 3.2 DESCRIPTION

##### 3.2.1 Project Area and Layout

The Project would comprise three power islands known as Mayfield, Bowfield and Plashett, as well as an internal reticulation system to connect the power islands and facilitate connection to the grid.

The Project area is situated largely on land owned by Malabar, with some portions of the internal reticulation system located on third-party land (subject to agreement).

The Project area has largely been constrained to previously cleared land which has historically been used for low intensity agricultural activities.

The Project Development Application area is approximately 6,000 hectares (ha). The indicative PV Study Areas across the three power islands amounts to approximately 1,000 ha, with approximately 88% of this area to be used for PV panels.

The physical layout and design of the Project would continue to be refined in consideration of outcomes of key environmental assessments and the conceptual design process.

Environmental constraints within the Project area and associated avoidance, minimisation and offset measures are described in Section 1.4.

##### 3.2.2 Project Components

Key components of the Project layout would include solar PV areas, an internal reticulation system, infrastructure to allow connection to the grid (including a substation) and a BESS.

##### *Solar PV Areas*

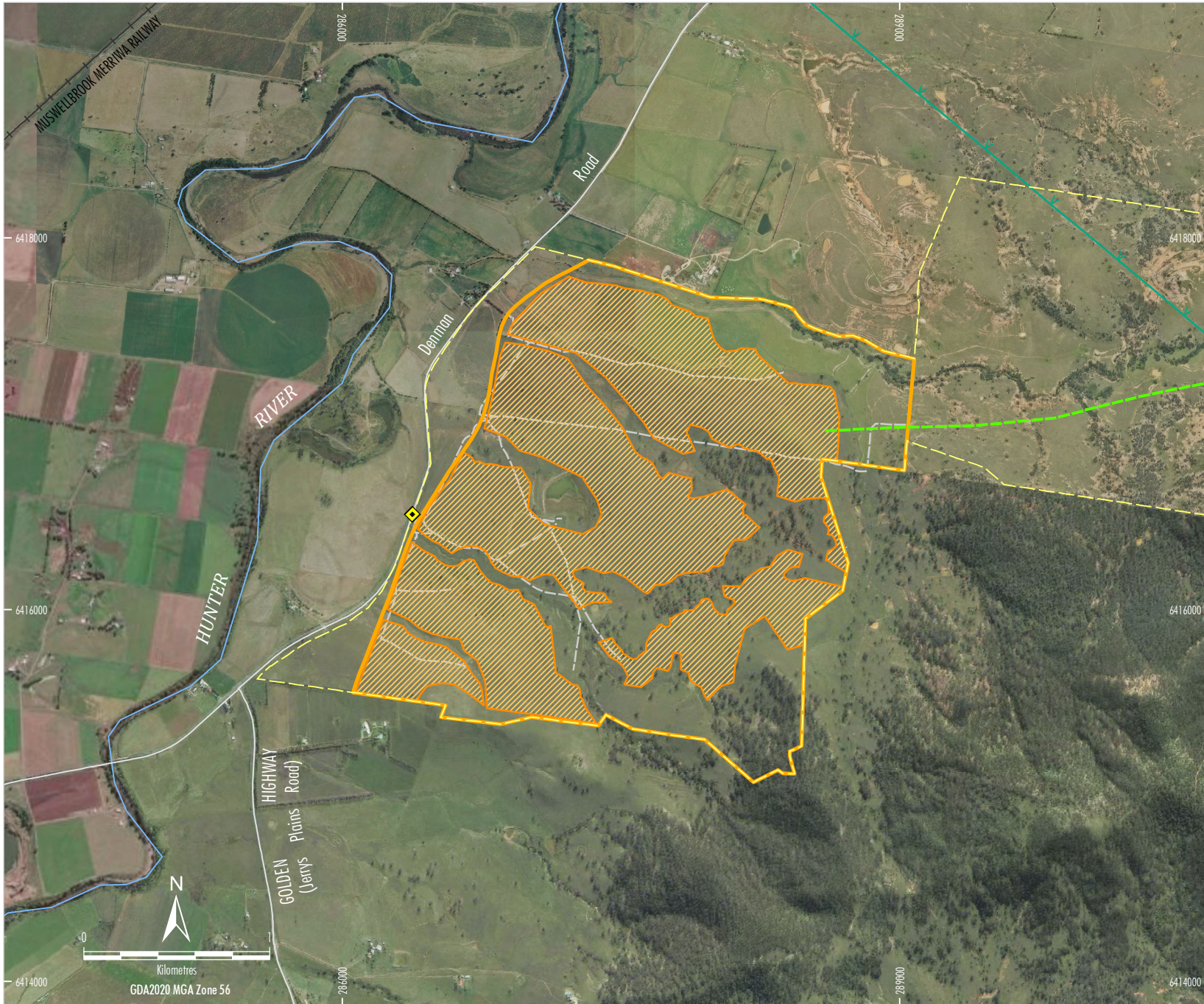
The three power islands would generate a combined total of approximately 350 MWac of electricity, or approximately 800,000 MWh each year.

**Table 5  
Summary of the Project**

Component	Project
<b>Project Area</b>	Approximately 886 ha of PV panels across three power islands (Mayfield, Bowfield and Plashett) and approximately 22 km of powerlines for the internal reticulation system.
<b>Solar PV Areas</b>	Single-axis tracking bi-facial PV solar panels up to 2.7 metres (m) in height (to be determined following further design work).
<b>Capacity</b>	Approximately 350 MWac (approximately 800,000 MWh per year*).
<b>BESS</b>	Nominally located at Plashett power island (with the ability to store power from three power islands as well as the existing electricity network). Capacity to be determined during detailed design, however indicatively 350 MW.
<b>Internal Reticulation System</b>	An internal reticulation system to connect the three power islands. 330 kV line to connect combined Project power generation to existing 330 kV ETL.
<b>Connection to Grid</b>	Combined power generation of all three islands to connect to existing 330 kV ETL via approximately 3.5 km of electricity line and an approximate 7 ha substation.
<b>Project Life</b>	Construction period of approximately 20 months. Operational life of approximately 35 years.
<b>Employment</b>	Approximately 400 to 450 full-time equivalent (FTE) roles during the construction period. Approximately 10 to 15 FTE roles during operations.

\* Based on an average of 6 hours per day of solar electricity generation, 365 days per year.





- LEGEND**
- Provisional Development Application Area
  - Indicative PV Study Area
  - Indicative PV Area
  - Indicative Main Site Access Point
  - Indicative Internal Access Road
  - Internal Reticulation System Easements Under Consideration
  - Electricity Transmission Line
  - V 500kV

Source: EDF Renewables (2023); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

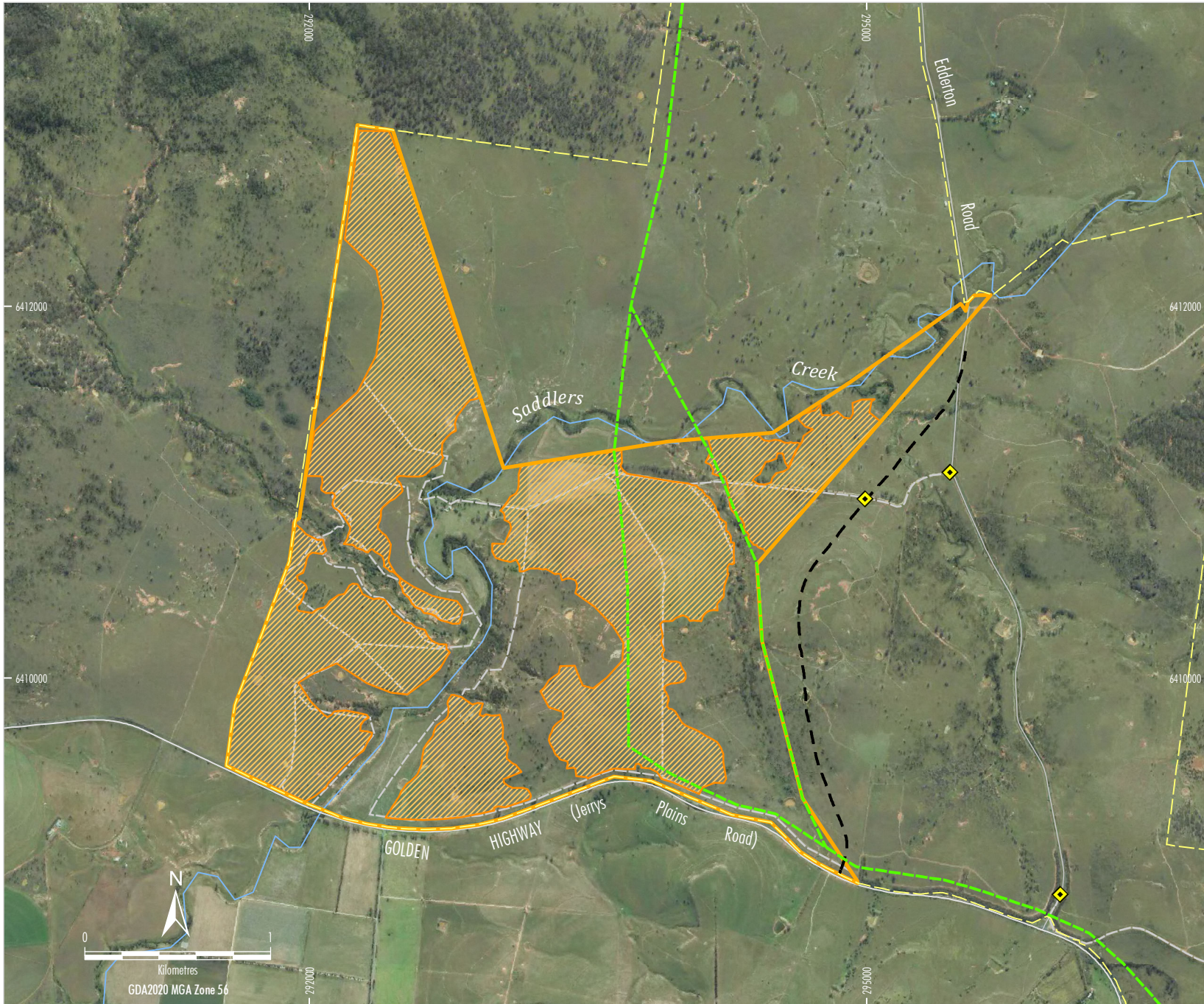
Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Indicative Project Layout**  
**- Mayfield Power Island**

**Figure 5a**





- LEGEND**
- Provisional Development Application Area
  - Indicative PV Study Area
  - Indicative PV Area
  - Indicative Main Site Access Point
  - Indicative Internal Access Road
  - Internal Reticulation System Easements Under Consideration
  - Approved Edderton Road Realignment<sup>#</sup>

Source: EDF Renewables (2023); Malabar (2018); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

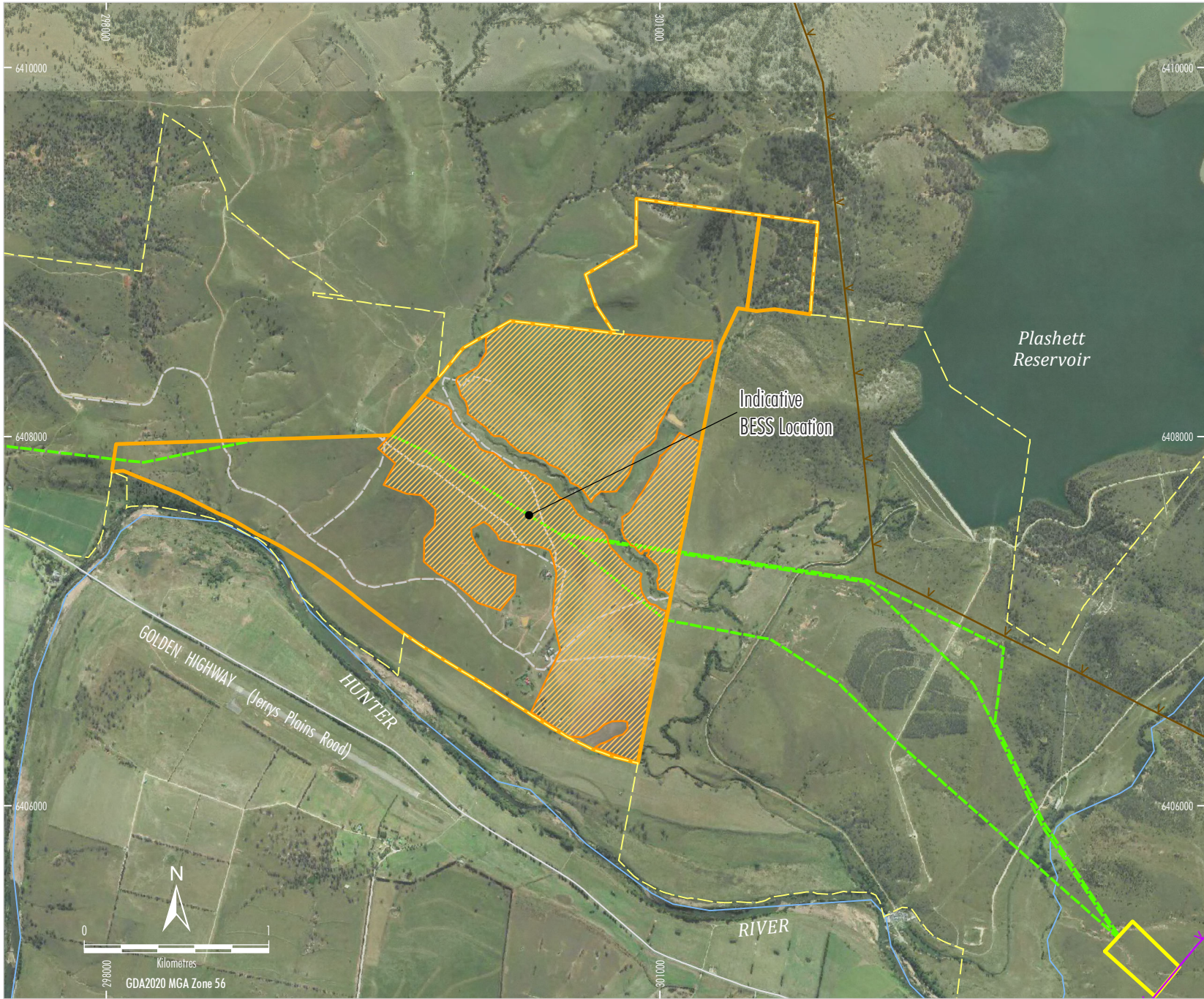
Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.  
<sup>#</sup>Edderton Road Realignment approved as part of the Maxwell Underground Mine (SSD 9526).



**EDDERTON SOLAR PROJECT**  
**Indicative Project Layout**  
**- Bowfield Power Island**

**Figure 5b**





- LEGEND**
- Provisional Development Application Area
  - Indicative PV Study Area
  - Indicative PV Area
  - Indicative Internal Access Road
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - Electricity Transmission Line
  - V 132kV
  - V 330kV

Source: EDF Renewables (2023); NSW Spatial Services (2022) Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Indicative Project Layout**  
**- Plashett Power Island**

**Figure 5c**





**Plate 2 – Indicative Solar PV Area Layout**

Source: Solar Builder (2021).

Across the three power islands, the Project is anticipated to include up to 750,000 bi-facial PV modules mounted on approximately 9,375 single-axis trackers. The modules would be a 1P arrangement up to 2.7 m in height (to be determined following further design work) (Plate 2).

Approximately 84 power conversion units (inverters) would be required to convert direct current electricity to alternating current electricity.

Underground and/or aboveground cabling would be installed for reticulation from the PV panels to the inverters and/or switchyards, prior to connection to the internal reticulation system.

The PV panel areas would also be connected via internal access tracks (including both existing and new tracks).

Internal access tracks and cabling may require construction of crossings of watercourses within the PV Study Areas. The location of internal access tracks and cabling, and number of watercourse crossings, would be determined in consideration of outcomes of key environmental assessments and the conceptual design process.

### **Internal Reticulation System and Grid Connection**

An internal reticulation system (underground and/or aboveground) would connect the Mayfield, Bowfield and Plashett power islands.

Approximately 3.5 km of 330 kV line would then connect the combined generation of all three power islands into the existing 330 kV ETL, located south-east of the Plashett power island. A substation would be constructed to support connection to the existing 330 kV ETL.

Figures 5a to 5c show more than one potential route option for the reticulation easements. Two potential routes through the Bowfield power island are under consideration to minimise potential interaction with the PV areas. Three potential routes from the Plashett power island to the existing 330 kV ETL are under consideration in consultation with the underlying third-party landowners.

Any watercourse crossings for the construction of the internal reticulation system would be temporary in nature. The final route and identification of aboveground and underground sections would be described and assessed in the EIS based on the outcomes of third-party negotiations, engineering and design, and environmental studies.

### **Battery Energy Storage System**

A BESS would be constructed for the Project to provide the ability to store power from the three power islands as well as from the existing electricity network. Storage of generated electricity in a BESS would manage intermittency of solar generation due to weather events (i.e. would allow for battery discharge during periods of peak demand and help to stabilise the electricity grid).

A BESS generally consists of battery packs (often lithium-ion, but can be other types), power electronics, control systems and transformers (where necessary) (Plate 3).

The BESS would occupy a footprint of up to approximately 10 ha within the site and would likely be located near the point of connection to the transmission network (nominally the Plashett power island).

The size and configuration of the BESS would be determined during ongoing Project design to best compliment electricity production from the Project. EDF Group has existing commercial relationships with Tier 1 battery suppliers proven in Australian energy storage applications.



**Plate 3 – Indicative BESS Layout**

Source: EDF Renewables (2024).

### Other Supporting Infrastructure and Facilities

Other supporting infrastructure and facilities associated with the Project would include:

- Internal access tracks and upgrades to existing access roads, where required.
- Associated infrastructure and services.
- Site security measures, including fencing.
- Operations and maintenance buildings, offices, welfare facilities and workshop, staff amenities and parking facilities.

### 3.2.3 Construction Activities

The Project construction period is anticipated to take approximately 20 months. Project construction activities are anticipated to commence as soon as practicable after all necessary consents, approvals and licences have been obtained and a final investment decision has been made.

The Project would generate up to approximately 400 to 450 FTE roles during the construction period. It is expected that construction of the Project would be undertaken by a third-party under a 'turnkey' contract with Voltere.

Early preparatory works would occur prior to the commencement of construction activities, including, but not limited to:

- site survey and demarcation activities;
- upgrades of existing access tracks;
- geotechnical testing to inform detailed design;
- environmental pre-clearance work;
- installation of temporary erosion and sediment controls; and
- installation of temporary buildings and site security to support construction activities.

Construction and development activities for the Project would occur between 7.00 am and 6.00 pm Monday to Friday and 8.00 am to 1.00 pm on Saturdays and would include:

- ground clearance works;
- development of internal access roads and/or upgrade of existing access roads;
- construction of any intersection upgrades of Project access points from the public road networks, if required;

- construction of laydown areas and foundations;
- delivery of Project components and construction materials;
- construction of operations and maintenance buildings, offices, welfare facilities and workshop, staff amenities and parking facilities;
- installation of mounting structures, trackers and PV panels;
- installation of inverters, electrical reticulation cables (underground and/or aboveground), switchyards;
- installation of the BESS and supporting infrastructure;
- collection of all packaging and other construction material for appropriate recycling, reuse or disposal;
- construction of an internal reticulation system (underground and/or aboveground) between the power islands;
- construction of a 330 kV reticulation system to connect the combined power generation of the Project to the existing 330 kV ETL;
- construction of a substation to support connection to the existing 330 kV ETL; and
- removal of any temporary erosion and sediment controls and temporary facilities and rehabilitation of these areas.

Any additional construction activities required due to additional Project components determined during the conceptual design process will be described in the EIS.

### 3.2.4 Operational Activities

During operations, the Project would generate and supply renewable electricity to the NSW grid. The Project would be operated by EDF Renewables and would generate up to approximately 10 to 15 FTE roles during the operational phase. Where feasible, services and suppliers for the Project operational phase would be procured from the local region.

Operational activities for the Project would include ongoing maintenance and repairs of PV panels and other infrastructure as well as general maintenance of the Project area and internal reticulation system easements, including vegetation and bushfire management activities.

**It is anticipated agricultural activities would continue to be undertaken on land owned by Malabar during operation of the Project.**

### 3.2.5 Site Access and Transport Routes

The main site access to the Project area during the construction and operational phases would be from the public road network via existing internal property access roads, as follows:

- Mayfield power island – from Denman Road.
- Bowfield power island – from Edderton Road.
- Plashett power island – from Edderton Road.

Indicative locations of each of the main site access points are shown on Figure 2 and Figures 5a to 5c. The proposed intersection arrangements for these main site access points will be described and assessed in the EIS. Any additional site access points (e.g. emergency or maintenance access) would be described in the EIS based on the outcomes of engineering, design, and environmental studies.

Access between the power islands would occur via the public road network and the main site access points.

The Maxwell Mine includes approval for the construction of a realignment of Edderton Road, which would occur during the operational phase of the Project (after construction activities are complete) (Figure 2). The EIS would also include the proposed long-term intersection arrangements for the Project to Bowfield and Plashett after Edderton Road is realigned.

### 3.2.6 Decommissioning

Following the operational life of the Project (i.e. indicatively 35 years) the Project would be decommissioned. Decommissioning activities would include removal of any above ground infrastructure and site restoration works to return the land to its pre-development land capability and use.

There is an opportunity for the Project to be reconditioned at the end of its operational life to continue renewable energy generation, or for an alternate land use. This would be subject to separate approval processes.

Waste management measures throughout the life of the Project will be outlined in the EIS.

## 3.3 PROJECT ALTERNATIVES

The location and extent of the Project is constrained by the Maxwell Underground Mine and associated Mining Leases, the extent of Malabar-owned land, proximity to existing ETL infrastructure and area required to achieve a power generation capacity able to feed into the grid.

A number of alternatives to the Project have been considered to date which have not been adopted, including:

- not proceeding with any solar PV development in the Project area (however this would not support the NSW Government's emissions reduction objectives);
- a smaller solar PV development using only one or two of the proposed power islands, which would limit the potential generation capacity, impact the economic viability of the Project and not support the investment required to connect to the Transgrid network;
- a solar PV development across the full extent of the power island study areas (e.g. resulting in disturbance of C3-zoned land, third order or higher watercourses and Class 3 agricultural land);
- a solar PV development across the full extent of Malabar-owned land; and
- use of the existing substation near Bayswater Power Station, which was discounted due to constraints at the substation and environmental constraints along any route between the Project and the substation.

The above alternatives have not been adopted, as they had potential outcomes that were not aligned with the objectives for the Project.

Further consideration of alternatives will be undertaken as a component of the EIS and will include measures to avoid, mitigate, rehabilitate and monitor the potential impacts of the Project.



## 4 STATUTORY CONTEXT

This section summarises the planning framework and statutory context relevant to the assessment of the Project.

### 4.1 POWER TO GRANT CONSENT – STATE SIGNIFICANT DEVELOPMENT

Division 4.1 of the EP&A Act creates a threefold classification of development, being:

- development that does not need consent;
- development that needs consent; and
- development that is prohibited.

As SSD, the Project falls into the classification of development that may be carried out with Development Consent under Part 4 of the EP&A Act.

Approval for the Project is sought as SSD under section 4.36 of the EP&A Act. This is because it triggers the criteria in clause 20 of Schedule 1 of the Planning Systems SEPP, as it is a development for the purpose of electricity generating works with a capital investment value of more than \$30 million. Consequently, the NSW Minister for Planning or the NSW Independent Planning Commission is the consent authority for the Project.

### 4.2 PERMISSIBILITY

The Project is predominantly located within the Muswellbrook LGA in an area regulated by the *Muswellbrook Local Environmental Plan 2009* (Muswellbrook LEP). A portion of the Plashett PV area and the reticulation easement connection to Transgrid's existing 330kV ETL lies within the Singleton LGA, and is therefore regulated under the *Singleton Local Environmental Plan 2013* (Singleton LEP).

The provisional Development Application Area includes land zoned under the Muswellbrook LEP and Singleton LEP as Zone RU1 (Primary Production) (Figure 6). The Project has been designed to avoid areas zoned as C3 (Environmental Management).

Subject to the application of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP), electricity generation and storage is not permissible under the Muswellbrook LEP and Singleton LEP in Zone RU1.

Clause 2.2 of the Transport and Infrastructure SEPP relevantly provides:

#### **2.2. Land to which Chapter applies**

*Except as otherwise provided by this Chapter, this Chapter applies to the State.*

Clause 2.7 of Transport and Infrastructure SEPP gives the Transport and Infrastructure SEPP primacy where there is any inconsistency between the provisions in the Transport and Infrastructure SEPP and the provisions in any other environmental planning instrument (subject to limited exceptions).

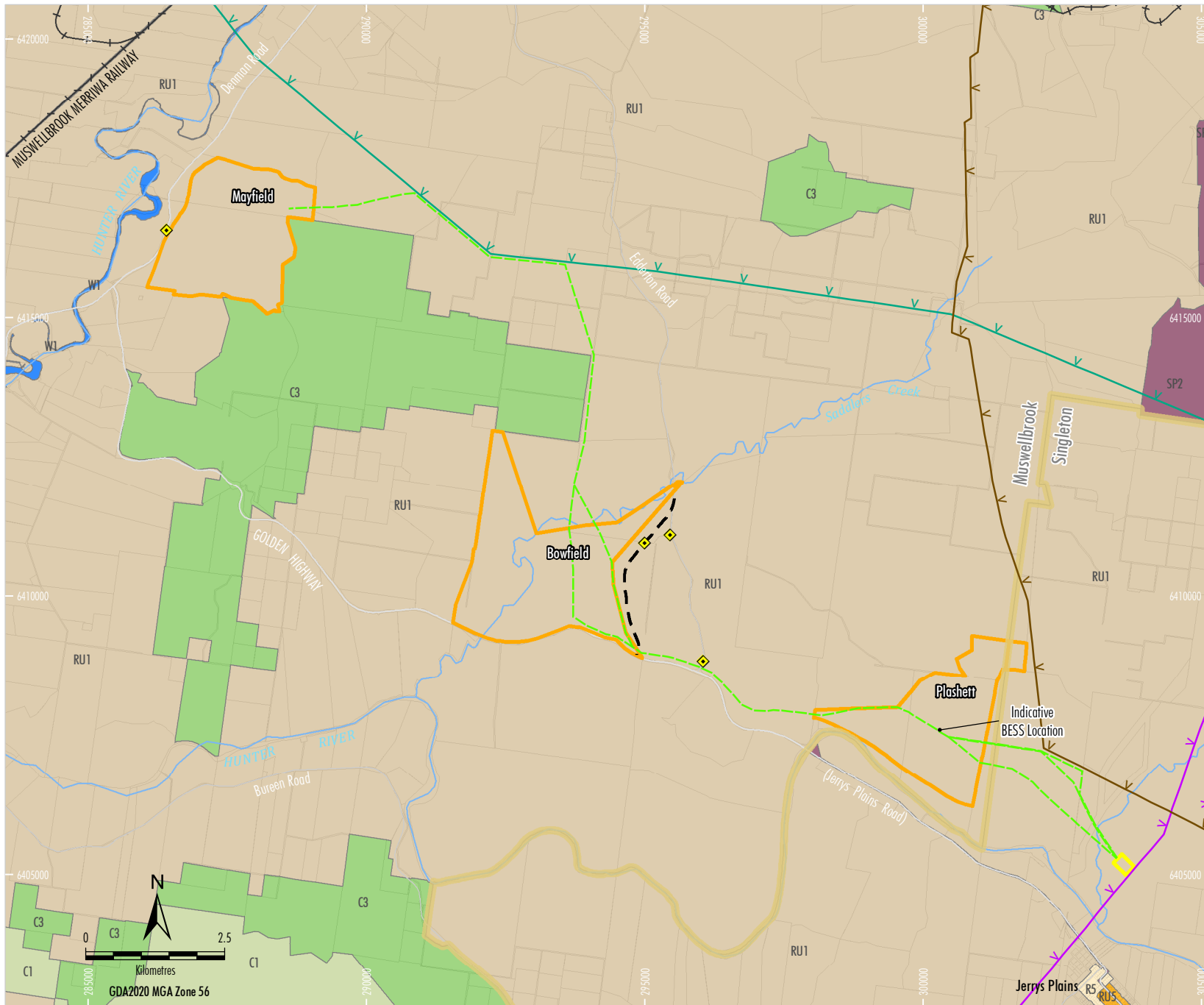
The practical effect of clause 2.7 for the Project is that, if there is any inconsistency between the provisions of the Transport and Infrastructure SEPP and those contained in the Muswellbrook or Singleton LEPs, the provisions of the Transport and Infrastructure SEPP will prevail.

Clause 2.36 of the Transport and Infrastructure SEPP states (emphasis added):

- (1) *Development for the purpose of electricity generating works may be carried out by any person with consent on the following land –*
  - (a) *in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source – on any land.*
  - (b) *in any other case – any land in a prescribed non-residential zone.*

Under the Transport and Infrastructure SEPP, “electricity generating works” includes both generating electricity and electricity storage.

Zone RU1 is a “*prescribed non-residential zone*” under the Transport and Infrastructure SEPP. Therefore, the Project may be carried out with a Development Consent.



- LEGEND**
- Indicative PV Study Area
  - Indicative Main Site Access Point
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - Approved Edderton Road Realignment#
  - Local Government Boundary
  - Electricity Transmission Line
  - 132kV
  - 330kV
  - 500kV
  - Land Zoning**
  - R5 Large Lot Residential
  - RU1 Primary Production
  - SP2 Infrastructure
  - RU4 Natural Waterways
  - C3 Environmental Management
  - C1 National Parks and Nature Reserve
  - RUS Village

Source: EDF Renewables (2023); Malabar (2018); NSW Spatial Services (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.

#Edderton Road Realignment approved as part of the Maxwell Underground Mine (SSD 9526)



**EDDERTON SOLAR PROJECT**  
Land Zoning

**Figure 6**

### 4.3 PLANNING PROVISIONS

The application of the following SEPPs will be considered in the EIS for the Project:

- Transport and Infrastructure SEPP;
- Planning Systems SEPP;
- *State Environmental Planning Policy (Resilience and Hazards) 2021* (Resilience and Hazards SEPP); and
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*.

### 4.4 PLANNING STRATEGIES

Strategic planning documents will be considered in preparation of the EIS (as mentioned in Sections 2.2 and 2.3), including:

- *NSW Climate Change Policy Framework* (OEH, 2016);
- Net Zero Plan (DPIE, 2020a);
- *NSW Transmission Infrastructure Strategy* (DPE, 2018);
- *Staying Ahead: State Infrastructure Strategy 2022-2042* (Infrastructure NSW, 2022);
- *NSW Electricity Strategy* (DPIE, 2019);
- *Hunter Regional Plan 2041* (DPE, 2022f);
- *Muswellbrook Shire 2022-2032 Community Strategic Plan* (Muswellbrook Shire Council, 2022); and
- *Create Singleton 2032 – Community Strategic Plan 2022-2032* (Singleton Council, 2022).

In accordance with clause 2.10 of the Planning Systems SEPP, Development Control Plans do not apply to SSD and are not a relevant consideration for the Project.

### 4.5 OTHER NSW APPROVALS

#### 4.5.1 Exempt Approvals

Under section 4.41 of the EP&A Act, the following approvals are not required for SSD:

- (a) *(Repealed)*
- (b) *a permit under section 201, 205 or 219 of the Fisheries Management Act 1994,*
- (c) *an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977,*
- (d) *an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974,*
- (e) *(Repealed)*
- (f) *a bush fire safety authority under section 100B of the Rural Fires Act 1997,*
- (g) *a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000.*

#### 4.5.2 Approvals That Must Be Applied Consistently

Approvals relevant to the Project, as listed below, cannot be refused if they are necessary for carrying out approved SSD as per section 4.42(1) of the EP&A Act:

- ...
- (e) *an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act),*
  - (f) *a consent under section 138 of the Roads Act 1993,*
- ...

These approvals must also be granted in a manner that is substantially the same as the SSD Development Consent.

#### 4.5.3 Biodiversity Conservation Act 2016

Section 1.7 of the EP&A Act states that the EP&A Act has effect subject to the provisions of Part 7 of the BC Act.

Section 7.9 of the BC Act states that an EIS for a project declared as SSD is to be “*accompanied by a biodiversity development assessment report unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.*”

A Biodiversity Development Assessment Report (BDAR) will be prepared for the Project in accordance with the BC Act.

#### 4.5.4 Roads Act 1993

The Project is likely to require works in the public road network, including construction of intersection upgrades of Project access points from Denman Road and Edderton Road.

Consent under section 138 of the NSW *Roads Act 1993* is required for works in the public road network.

As above, an approval under section 138 of the NSW *Roads Act 1993* cannot be refused if it is necessary for carrying out approved SSD.

#### 4.6 COMMONWEALTH ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The Project may require approval under the EPBC Act if the Commonwealth Minister considers the Project is likely to have a significant impact on Matters of National Environmental Significance (MNES).

MNES that may be relevant to the Project include listed threatened species and communities and listed migratory species.

Voltere will refer the Project to the Commonwealth Minister under the EPBC Act.

#### 4.7 PRE-CONDITIONS TO EXERCISING THE POWER TO GRANT CONSENT AND MANDATORY MATTERS FOR CONSIDERATION

Pre-conditions to exercising the power to grant consent, and mandatory considerations that the consent authority is required to consider in deciding whether to grant consent for the Project, including those relevant to the relevant SEPPs, are provided in Attachment 2.

Section 4.15(1) of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. These matters are summarised as:

- the provisions of environmental planning instruments (including draft instruments), the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), and other relevant legislation (e.g. BC Act);
- the environmental, social and economic impacts of the development;
- the suitability of the site;
- any submissions; and
- the public interest, including the objects in the EP&A Act and the encouragement of ecologically sustainable development.

Mandatory matters for consideration are described in Attachment 2. Voltere would consider these matters in the Project EIS.

EDF Renewables (on behalf of Voltere) would engage with the Muswellbrook Shire Council and Singleton Council regarding any Planning Agreement for the Project.

## 5 ENGAGEMENT

### 5.1 ENGAGEMENT OBJECTIVES

Malabar has established a positive and respectful relationship and communication channels with the local community in Muswellbrook, Denman, and Jerrys Plains through its involvement in the area over the last 10 years.

As joint venture partners through Voltere, both EDF Renewables and Malabar have engaged in effective and informed consultation with the community regarding the Project during the scoping phase and will enhance and improve existing relationships and engagement throughout the preparation of the EIS.

The Community and Stakeholder Engagement Strategy developed by the Project team aims to achieve the following objectives:

- Ensure understanding – provide clear and concise information about the Project to allow stakeholders have a diverse understanding of the Project and its key components.
- Encourage participation – deliver activities that provide opportunities for stakeholders to be involved and provide feedback.
- Partnership – work in partnership with the community to understand and address any issues that may arise during the EIS process.
- Decision-making – encourage stakeholder engagement and feedback to facilitate informed decision making regarding the Project.
- Resilience – deliver outcomes and designs that improve the resilience of the region and community.

The Community and Stakeholder Engagement Strategy complies with the NSW Government engagement requirements under relevant guidelines, including:

- *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2022c);
- *Large-Scale Solar Energy Guidelines 2022* (DPE, 2022b);

- SIA Guideline (DPE, 2023a); and
- *Social Impact Assessment Guideline for State Significant Project – Technical Supplement* (SIA Guideline – Technical Supplement) (DPE, 2023b).

The Community and Stakeholder Engagement Strategy is consistent with the International Association for Public Participation, an association that seeks to promote and improve the practice of public participation and engagement.

The Project team understands the necessity of community involvement and is committed to maximising opportunities and benefits for the local community.

### 5.2 ENGAGEMENT DURING PROJECT SCOPING

The Project team has consulted with a range of stakeholders, including State and local government agencies, operators of surrounding mining activities, energy generation and agricultural enterprises and the local community to obtain feedback on the proposed Project, the proposed assessment approach and the proposed scope of environmental assessment.

Feedback obtained through engagement with key stakeholders has provided the opportunity to identify issues of concern or interest, and to consider these issues within the Project design and the EIS.

#### 5.2.1 Engagement Conducted

To date, the Project team has consulted with the following stakeholders in relation to the Project:

- DPHI;
- EnergyCo;
- Muswellbrook Shire Council;
- Singleton Council;
- landholders within the proposed reticulation easements, namely BHP, HVO and AGL;
- nearby equine enterprises, including the operators of Coolmore Stud, Godolphin Woodlands Stud, Monarch Stud and Fernrigg Farm;
- nearby viticulture enterprises, including Hollydene Estate Wines and Small Forest (located at Malabar's Merton Vineyard);

- lessees on Malabar-owned land;
- local landholders and the broader community, including targeted engagement with landholders within a 3 km radius of the Project; and
- the Community Consultative Committee (CCC) for the Maxwell Mine;

Table 6 provides a summary of consultation undertaken with the key stakeholders listed above in relation to the Project, which has informed the preparation of this Scoping Report.

### 5.2.2 Feedback Received During Engagement and Community Sentiment

In November 2023, approximately 60 letters were distributed to landholders within a 3 km radius of the Project, providing a description of the Project and details of the community information session scheduled on 28 November 2023 in Jerrys Plains (Table 6). In January 2024, approximately 2,300 flyers were distributed to landholders within a 5 km radius of the Project, including the town of Denman, providing details of the scheduled community information session on 7 February 2024 in Denman (Table 6).

Notwithstanding the number of letters and flyers distributed, there were six attendees at the November session and approximately 10 attendees at the February session. The low attendance is considered to reflect the general community sentiment and level of interest towards the Project.

Given the Project's purpose is to assist with decarbonising the electricity grid, generally positive feedback has been received to date. Interested stakeholders expressed a desire to be informed about the development of the Project. Particular interest was shown in the mitigation measures to be implemented for the Project and the outcomes of the visual and road transport assessments.

## 5.3 PROPOSED ENGAGEMENT PROGRAM

As stated in Section 5.1, a Community and Stakeholder Engagement Strategy has been developed for the Project that will support the EIS process in accordance with the *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2022c).

Key issues raised and outcomes of the Community and Stakeholder Engagement Strategy will be reported in the EIS.

The consultation would include, but not be limited to, the following government agencies and authorities:

- DPFI;
- Muswellbrook Shire Council;
- Singleton Council;
- EnergyCo;
- NSW Department of Climate Change, Energy, the Environment and Water – Environment and Heritage Group (NSW DCCEE – Environment and Heritage Group);
- NSW Environment Protection Authority (EPA);
- Heritage NSW;
- Heritage Council of NSW;
- Transport for NSW;
- NSW DCCEE – Water Group;
- NSW Department of Primary Industries (DPI) – Agriculture;
- NSW Rural Fire Service (NSW RFS);
- Ausgrid;
- Transgrid; and
- Cth DCCEE.

The Community and Stakeholder Engagement Strategy also recognises the following key stakeholders;

- the Aboriginal community;
- Muswellbrook Chamber of Commerce;
- business groups and community organisations;
- surrounding equine and viticulture enterprises;
- Maxwell CCC; and
- local landholders.

EDF Renewables will work closely with Malabar to align with existing communication channels and pathways which include, among others, CCC meetings, newsletters, and attendance at local events. The Project team will deploy traditional face-to-face methods and consider developing and implementing digital tools to meet needs identified by stakeholders.



**Table 6  
Summary of Consultation Undertaken**

Stakeholder	Date	Summary/Issues Raised
DPHI	3 October 2023	<p>The Project team held a preliminary meeting with DPHI to provide an introduction to the Project. At this meeting, The Project team outlined plans to commence early engagement with key stakeholders. DPHI supported this engagement.</p> <p>The Project team provided an overview of the proposed location and design of the Project. DPHI recognised the strategic location of the Project and how it would build on the regional energy transition targets.</p> <p>DPHI provided initial advice regarding the Scoping Report and indicative environmental considerations for the EIS.</p>
	14 February 2024	A Scoping Meeting was held with DPHI in advance of lodgement of this Scoping Report. An overview was provided of consultation undertaken for the Project to date, along with an update on the Project design and preliminary environmental studies.
Muswellbrook Shire Council	20 October 2023	<p>The Project team held a preliminary meeting with Muswellbrook Shire Council to provide an introduction to the Project.</p> <p>Muswellbrook Shire Council raised the importance of considering cumulative impact of the Project with other surrounding projects, specifically from a traffic impact perspective. Cumulative impacts associated with the Project will be assessed in the EIS, as well as the Road Transport Assessment.</p>
	7 February 2023	<p>The Project team held a further meeting with Muswellbrook Shire Council to provide an update on the Project.</p> <p>Muswellbrook Shire Council also noted that potential visual impacts of the Project from Jerrys Plains would be a key matter for consideration. Visual impacts associated with the Project will be assessed in the Landscape and Visual Assessment as part of the EIS.</p>
Singleton Council	27 November 2023	The Project team held a Project briefing meeting with Singleton Council. No particular issues have been raised to date.
Coolmore Stud	13 November 2023	The Project team met with representatives from the Coolmore Stud to provide an introduction to the Project, as well as an overview of the planning process, consultation and project timeline. A commitment was made to continue engagement as the Project design and environmental assessments progress.
Godolphin Woodlands Stud	13 November 2023	The Project team met with representatives from the Godolphin Woodlands Stud to provide an introduction to the Project, as well as an overview of the planning process, consultation and project timeline. A commitment was made to continue engagement as the Project design and environmental assessments progress.
Monarch Stud	14 November 2023	The Project team met with representatives from the Monarch Stud to provide an introduction to the Project, as well as an overview of the planning process, consultation and project timeline. A commitment was made to continue engagement as the Project design and environmental assessments progress.
Fernrigg Farm	14 November 2023	The Project team met with representatives from the Fernrigg Farm to provide an introduction to the Project, as well as an overview of the planning process, consultation and project timeline. A commitment was made to continue engagement as the Project design and environmental assessments progress.
Blakefield Pty Ltd	November 2023 and February 2024	<p>Phone calls were made by representatives of the Project team to Blakefield Pty Ltd to provide an overview of the Project, offer a face-to-face one-on-one meeting and to explain ongoing consultation opportunities that will be available. A letter was also distributed to Blakefield Pty Ltd providing an invitation to the community information session in November.</p> <p>Representatives of Blakefield Pty Ltd attended the community information in November 2023 and February 2024 (further described below).</p>

**Table 6 (Continued)**  
**Summary of Consultation Undertaken**

Stakeholder	Date	Summary/Issues Raised
Local landholders	16 November 2023	Letters were distributed to all landholders within a 3 km radius of the Project. The letters described the Project and its key components, as well as information regarding future consultation opportunities.  The letter also provided an invitation to a community information session, as described below.
	28 November 2023	A community information session was conducted in Jerrys Plains on 28 November 2023. Representatives from the Project team attended the community information session to interact and engage with landholders to seek their feedback and input as part of the early project development phase.
	November 2023	Phone calls were made by representatives of the Project team to landholders located directly adjacent the Project to provide an overview of the Project, offer a face-to-face one-on-one meeting and to explain ongoing consultation opportunities that will be available.
	25 January 2024	Flyers were distributed to all landholders within a 5 km radius of the Project, and was also shared on the Denman Community Group Facebook Page. The flyers provided an invitation to an additional community information session as described below.  Malabar published a community newsletter in January 2024 which included an overview of the Edderton Solar Project.
	7 February 2024	A community information session was conducted in Denman on 7 February 2024. Representatives from the Project team attended the community information session to interact and engage with landholders to allow the community additional opportunity to provide feedback in relation to the Project.  Approximately 10 community members attended the information session and attendees raised the importance of considering visual impacts of the Project, as well as bushfire/lightning risks and surface water runoff.
General	16 November 2023	The Project team launched the Edderton Solar Farm website page which provides key information on the Project. The Project can be viewed via <a href="https://www.eddertonsolarfarm.com.au/">https://www.eddertonsolarfarm.com.au/</a>
	November 2023	A media release was distributed, and reported in local newspapers.
Maxwell CCC	15 November 2023	Representatives from the Project team attended the Maxwell CCC meeting to provide an overview of the Project and its benefits including: the projects strategic location, alignment to the Energy Transition and NSW Electricity Infrastructure Roadmap, local context and aligned objectives. No issues or concerns were raised during the CCC meeting.  The Project team confirmed that the Maxwell CCC will be provided with ongoing updates on the Project.



A key outcome of early engagement will be to develop an understanding of the preferred communication channels that are utilised by the community. The Project team's ongoing communication strategy will be guided by the outcomes of early engagement.

The EIS engagement program would use a variety of consultation mechanisms (informed by the community as outlined above) such as:

- public access to key documents (i.e. this Scoping Report and the EIS);
- existing community information mechanisms including:
  - community fact sheets, newsletters, drop-in sessions;
  - provision of information on the Edderton Solar Farm websites; and
  - regular updates to the Maxwell CCC;
- consultation with the Aboriginal community in consideration of the requirements of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (Department of Environment, Climate Change and Water [DECCW], 2010a);
- face-to-face meetings with near neighbours using presentations and interactive tools; and
- meetings with government agencies and other key stakeholders.

#### **5.4 SOCIAL IMPACT ASSESSMENT**

The EIS will be supported by a Social Impact Assessment (SIA) prepared in accordance with the SIA Guideline.

Attachment 3 provides the Preliminary SIA prepared by SquarePeg Social Performance Pty Ltd (SquarePeg) in consideration of the SIA Guideline. The Preliminary SIA:

- identifies the Project's area of social influence, including stakeholders that may be affected by the Project;
- establishes a social baseline; and
- identifies potential social impacts needing further investigation in the SIA and assigns a proportionate level of assessment.

## 6 PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT

### 6.1 OVERVIEW

The *Large-Scale Solar Energy Guideline* (DPE, 2022b) provides guidance on the planning framework and assessment process for State Significant large-scale energy developments, such as the Project.

The *State Significant Development Guidelines – Preparing a Scoping Report* (DPE, 2022a) include Categories of Assessment Matters to assist proponents when developing and assessing projects.

The Categories of Assessment Matters have been reviewed to identify the key potential environmental matters associated with the construction and operation of the Project. Key potential environmental matters are those aspects that would require Project-specific assessment to determine the level of potential impacts and develop measures to avoid, mitigate and/or monitor these potential impacts.

The proposed level and scope of assessments have been identified to assist DPHI with the issuing of the SEARs for the Project under clauses 173 to 178 of the EP&A Regulation. The proposed level and scope of assessments were determined based upon:

- understanding of the strategic and statutory context (Sections 2 and 4);
- the details of the Project (Section 3);
- feedback from stakeholder consultation undertaken to date (Section 5);
- *Large-Scale Solar Energy Guideline* (DPE, 2022b); and
- contemporary solar SEARs and assessments in NSW.

### 6.2 KEY MATTERS REQUIRING FURTHER ASSESSMENT IN THE EIS

The key matters identified as requiring further assessment in the EIS for the Project are provided in Table 7, including a preliminary list of study requirements to address these matters.

Suitably qualified and experienced specialists would be commissioned to conduct the studies outlined in Table 7.

Assessment of the key potential environmental matters and other potential impacts identified will include consideration of:

- the existing environment, using baseline data from surrounding development (e.g. Maxwell Mine);
- potential impacts of all stages of the Project including relevant cumulative impacts;
- measures that could be implemented to avoid, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the Project; and
- contingency plans and/or adaptive management for managing any potentially significant residual risks to the environment.

The EIS will be prepared in accordance with the SEARs to be issued by DPHI in response to this Scoping Report. Assessments for the EIS will also consider applicable policies, guidelines and plans listed on DPHI's website (<https://www.planningportal.nsw.gov.au/major-projects/assessment/policies-and-guidelines>).

**Table 7**  
**Key Matters Requiring Further Assessment in the EIS**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Where Addressed in this Scoping Report
Visual Amenity	Visual Glint and Glare	<p><b>Detailed</b> Landscape and Visual Impact Assessment (LVIA) prepared in accordance with the <i>Large-Scale Solar Energy Guideline</i> (DPE, 2022b) and the <i>Technical Supplement – Landscape and Visual Impact Assessment</i> (DPE 2022e), including:</p> <ul style="list-style-type: none"> <li>Simulation of landscape and visual impacts as a result of the Project, particularly from private residences, surrounding equine and viticulture enterprises and publicly accessible viewpoints (e.g. roads).</li> <li>Investigation of measures to mitigate the impacts of the Project.</li> </ul> <p><b>Standard</b> Glint and Glare Assessment prepared in accordance with the <i>Large-Scale Solar Energy Guideline</i> (DPE, 2022b), including:</p> <ul style="list-style-type: none"> <li>Use of the industry standard glare analysis tool to determine areas where glare will occur.</li> <li>Assessment of potential impacts as a result of glint and glare associated with the Project.</li> <li>Investigation of measures to mitigate the impacts of the Project.</li> </ul> <p><b>Focused engagement</b> with the local community and landholders concerned about potential visual impacts, as well as Muswellbrook Shire Council.</p>	Section 6.2.1
Biodiversity	Terrestrial and Aquatic Flora and Fauna	<p><b>Detailed</b> BDAR prepared in accordance with the NSW <i>Biodiversity Assessment Method 2020</i> (DPIE, 2020c) (the BAM), including:</p> <ul style="list-style-type: none"> <li>Assessment of potential impacts on any terrestrial species, populations, ecological communities or their habitats.</li> <li>Identification of measures that would be implemented to maintain or improve the biodiversity values of the surrounding region in the medium to long-term.</li> </ul> <p><b>Standard</b> Aquatic Ecology Assessment (main text) considering substantial existing baseline data and implementation of standard mitigation measures.</p> <p><b>Focused engagement</b> with NSW DCCEEW (Environment and Heritage Group).</p>	Section 6.2.2



**Table 7 (Continued)**  
**Key Matters Requiring Further Assessment in the EIS**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Where Addressed in this Scoping Report
Heritage	Aboriginal Cultural Heritage	<p><b>Detailed</b> Aboriginal Cultural Heritage Assessment (ACHA) prepared in accordance with the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW, 2010a), <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> (DECCW, 2010b) and <i>Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW</i> (OEH, 2011), including:</p> <ul style="list-style-type: none"> <li>• Assessment of impacts on items of Aboriginal cultural heritage and Aboriginal cultural values.</li> <li>• Investigation of measures to avoid, mitigate, monitor and manage the potential impacts of the Project.</li> </ul> <p><b>Focused engagement</b> with interested Aboriginal parties and NSW DCCEEW (Environment and Heritage Group).</p>	Section 6.2.3
	Historic Heritage	<p><b>Standard</b> Historic Heritage Assessment, including:</p> <ul style="list-style-type: none"> <li>• Assessment of potential impacts on non-Aboriginal cultural heritage.</li> <li>• Investigation of measures to avoid, mitigate, monitor and manage the potential impacts of the Project.</li> </ul> <p><b>Focused engagement</b> with interested stakeholders.</p>	
Transport	Traffic and parking Road and rail facilities	<p><b>Detailed</b> Road Transport Assessment, including:</p> <ul style="list-style-type: none"> <li>• Assessment of changes in traffic volumes on the surrounding road network in accordance with the <i>Guide to Traffic Generating Developments</i> (Roads and Traffic Authority, 2002).</li> <li>• Assessment of any requirements for road and intersection upgrades.</li> <li>• Investigation of measures to mitigate and/or monitor the potential incremental impacts of the Project.</li> </ul> <p><b>Focused engagement</b> with Transport for NSW and Muswellbrook Shire Council.</p>	Section 6.2.4

**Table 7 (Continued)**  
**Key Matters Requiring Further Assessment in the EIS**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Where Addressed in this Scoping Report
Land Use	Land Suitability Land Capability Land Use Compatibility	<p><b>Detailed</b> Agricultural Impact Assessment prepared in accordance with the <i>Large-Scale Solar Energy Guideline</i> (DPE, 2022b), including:</p> <ul style="list-style-type: none"> <li>Delineation of soil landscape units present in the Study Area.</li> <li>Identification of Land and Soil Capability classes in the Study Area.</li> <li>Assessment of potential impacts to agricultural enterprises and industry as a result of the Project, including consideration of water availability, change in land use and socio-economic effects.</li> <li>Land Use Conflict Risk Assessment in accordance with the <i>Land Use Conflict Risk Assessment Guideline</i> (DPI, 2011).</li> <li>Investigation of measures to avoid, mitigate, monitor and manage the potential impacts of the Project.</li> </ul> <p><b>Standard</b> Land Contamination Assessment, including:</p> <ul style="list-style-type: none"> <li>Assessment of potential for contaminated land within the Project area and identification of contaminated sites.</li> <li>Assessment of the suitability of the land for the Project.</li> <li>Investigation of required remediation works.</li> <li>Land Use Conflict Risk Assessment.</li> </ul> <p><b>Focused engagement</b> with neighbouring landholders and Muswellbrook Shire Council.</p>	Section 6.2.5
Social	Social Values	<p><b>Detailed</b> SIA prepared in accordance with the <i>Social Impact Assessment Guideline for State Significant Projects</i> (DPE, 2023a), including:</p> <ul style="list-style-type: none"> <li>Assessment of potential social impacts of the Project on the adopted social locality in consideration of impacts on surroundings, culture, livelihood, accessibility and community.</li> <li>Investigation of measures to mitigate the potential impacts of the Project.</li> </ul> <p><b>Focused engagement</b> with relevant stakeholders and Muswellbrook Shire Council and Singleton Council.</p>	Section 6.2.6
Hazards and Risks	Hazards	<b>Standard</b> Preliminary Hazards Assessment to be completed to evaluate the potential hazards of the Project in accordance with the Resilience and Hazards SEPP.	Section 6.2.7
	Environmental Risks	<b>Standard</b> Environmental Risk Assessment to be completed to identify the environmental risks associated with the Project in accordance with Australian Standard/New Zealand Standard (AS/NZS) International Organisation for Standardisation (ISO) 31000:2018 <i>Risk Management – Guidelines</i> (AS/NZS ISO 31000:2018).	
Bushfire	Bushfire Risk	<p><b>Standard</b> Bushfire Management Assessment of potential bushfire risk.</p> <p><b>Focused engagement</b> with local NSW RFS.</p>	Section 6.2.8

**Table 7 (Continued)**  
**Key Matters Requiring Further Assessment in the EIS**

Environmental/Social Matter		Proposed Level and Scope of Assessment	Where Addressed in this Scoping Report
Noise Amenity	Construction Noise Road Traffic Noise	<p><b>Standard</b> Noise Assessment, including:</p> <ul style="list-style-type: none"> <li>Modelling and assessment of potential noise impacts as a result of construction activities, including road traffic, in accordance with relevant guidelines, including the <i>Draft Construction Noise Guideline</i> (EPA, 2020), <i>Noise Policy for Industry</i> (EPA, 2017) and <i>NSW Road Noise Policy</i> (DECCW, 2011).</li> <li>Investigation of measures to mitigate and/or monitor the potential impacts of the Project.</li> </ul> <p><b>Focused engagement</b> with the local community and landholders concerned about potential impacts on acoustic amenity.</p>	Section 6.2.9
Air	Particulate Matter Gases	<p><b>Standard</b> Air Quality Assessment, including:</p> <ul style="list-style-type: none"> <li>Consideration of potential air quality impacts as a result of Project construction activities.</li> <li>Investigation of measures to mitigate the potential impacts of the Project.</li> </ul> <p><b>Focused engagement</b> with the local community and landholders.</p>	Section 6.2.9
Water Resources	Hydrology Flooding	<p><b>Standard</b> Surface Water Assessment, including:</p> <ul style="list-style-type: none"> <li>Development of an erosion and sediment control and water management strategy for the construction and operational phases of the Project.</li> <li>Confirmation that the Project avoids material interaction with flooding from the Hunter River and Saddlers Creek.</li> </ul> <p><b>Focused engagement</b> with the local community and landholders concerned about potential impacts on surface water and flooding.</p>	Section 6.2.10
Economic	Livelihood Opportunity Cost	<p><b>Standard</b> Economic Assessment, including:</p> <ul style="list-style-type: none"> <li>Description of the existing local and state economies and how the Project would contribute to these economies.</li> <li>Assessment of the economic impacts and benefits to the State of NSW and local communities.</li> </ul> <p><b>Focused engagement</b> with other industries and businesses in the area.</p>	Section 6.2.12

### 6.2.1 Visual Amenity

A Preliminary Visual Impact Assessment (PVIA) has been undertaken by Moir Landscape Architecture (Moir) (2024) and is presented in Attachment 4. The PVIA was prepared in accordance with the Landscape and Visual Assessment Technical Supplement (DPE, 2022e).

The purpose of the PVIA is to identify receptors which may have views of the Project and require further assessment as a component of the detailed LVIA to be prepared for the EIS. The outcomes of the PVIA can also be used to inform ongoing consultation.

The Project team has undertaken community engagement to support the preparation of the Scoping Report.

The potential for visual impacts at private residences and at nearby equine businesses has been raised during engagement to date.

#### **Existing Environment**

The existing visual landscape of the region includes existing open cut mining and power generation operations and viticulture (vineyards) and equine enterprises (horse studs), in addition to agricultural and rural residential properties.

The Project is located 4 km north-east of the town of Denman and 4 km north-west of the town of Jerrys Plains.

The Landscape and Visual Assessment Technical Supplement requires identification of public and private receptors within 4 km of the development as well as identification of viewpoints from public road and rail lines within 2.5 km of the development.

Moir have identified a total of 183 public and private receptors within 4 km of the Project, and 31 potential viewpoints from public roads and other public viewpoints (Attachment 4). Representative public viewpoints from Denman and Jerrys Plains have also been considered.

#### **Preliminary Visual Impact Assessment**

The Landscape and Visual Assessment Technical Supplement outlines a suite of Preliminary Assessment Tools to determine the level of assessment required for each receptor.

Viewshed mapping undertaken for the Project identified that areas to the west of Mayfield are likely to have potential views of the Project (up to 30% of the entire PV areas) (Figure 7) and areas south of Bowfield and Plashett are likely to have potential views of the Project (up to 20% of the entire PV areas) (noting areas to the north of Bowfield and Plashett are mine-owned lands).

Reverse viewshed mapping of the PV areas is shown on Figure 8. The reverse viewshed mapping demonstrates Mayfield is more likely to be potentially visible (by up to approximately 100 receptors) due to the density of receptors along the Hunter River and Denman Road, as well as the topography of the site which slopes from the north towards Denman Road. Bowfield and Plashett are less potentially visible (up to approximately 35 and 40 receptors, respectively).

It is noted viewshed and reverse viewshed mapping analysis provides an assessment based on topography only, and does not consider intervening elements such as vegetation and built structures.

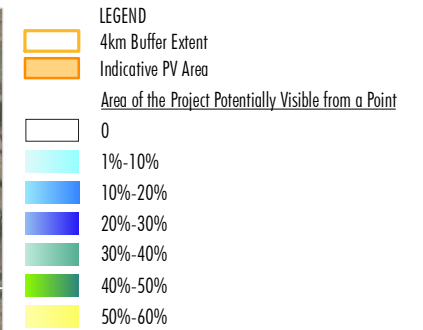
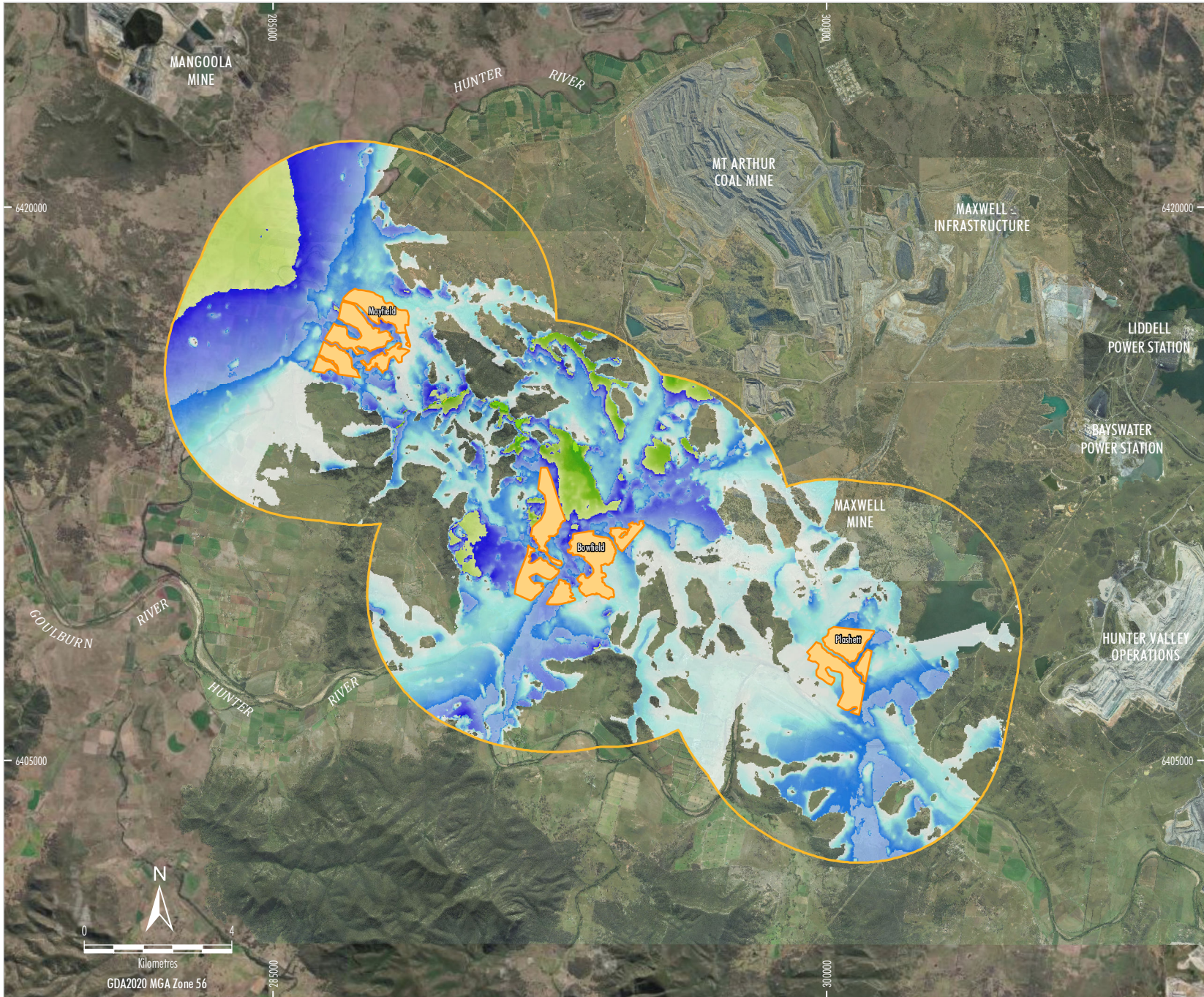
Moir (2024) have calculated the 'relative height difference', 'vertical field of view' and 'horizontal field of view' for all identified receptors. As a result, 76 (of 183) public and private receptors and 16 (of 31) public road receptors were determined to require detailed assessment. It is noted that there are 30 individual landholders associated with the 76 public and private receptors requiring further detailed assessment.

#### **Preliminary Cumulative Impact Assessment**

A number of other renewable energy developments are proposed or approved in the vicinity of the Project, five of which are within 10 km of the Project (Section 2.5). In addition, existing mining and power generation operations and electricity transmission infrastructure are located in proximity to the Project.

Moir considers it unlikely that developments located further than 10 km from the Project would be visible at the same time as the Project given the distance to these developments and infrastructure, and presence of intervening elements such as existing vegetation and natural topographic variations (Attachment 4).





Source: EDF Renewables (2023); Moir Landscape Architecture (2024); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas are indicative only and subject to change during detailed design.

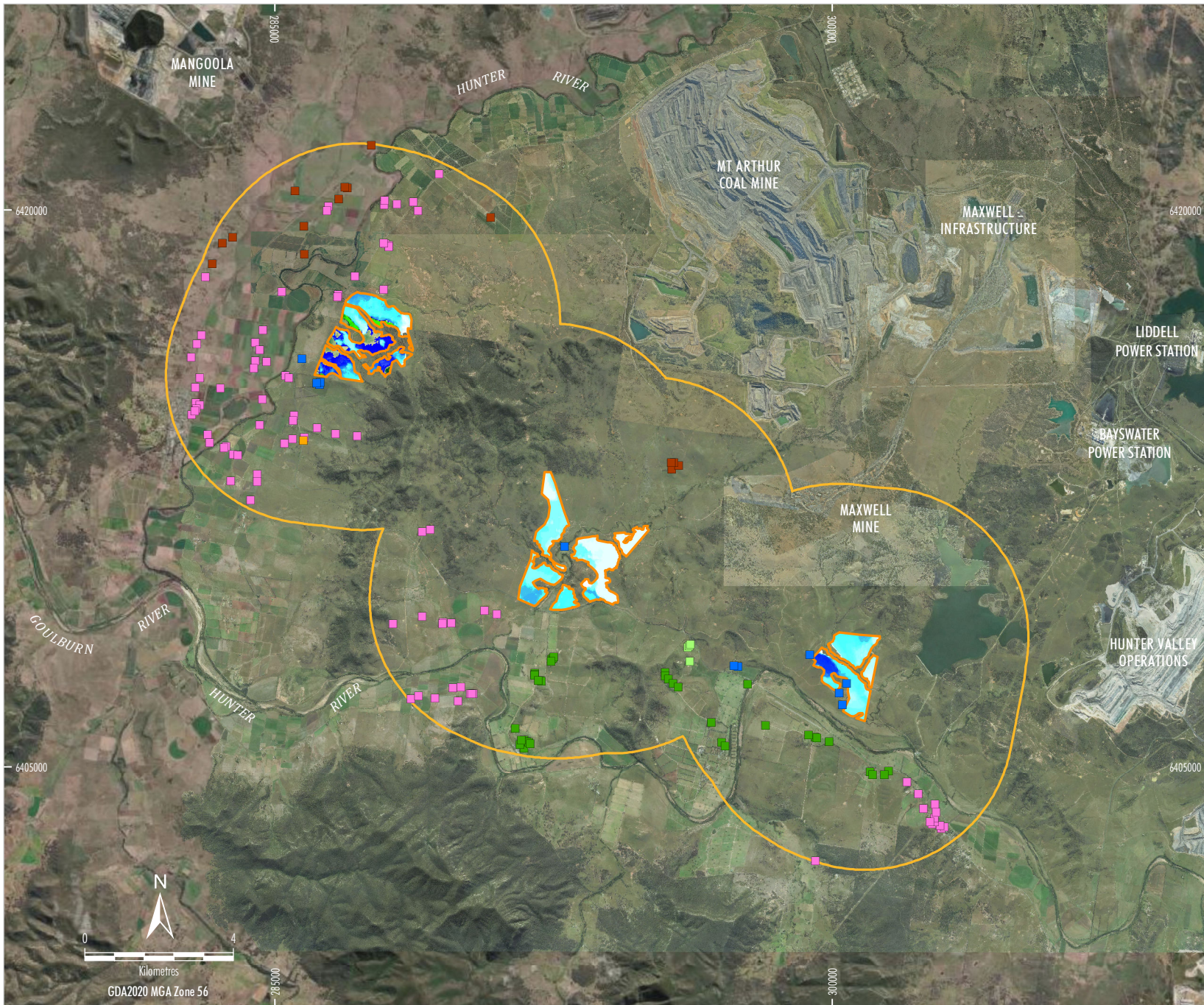
The Viewshed Mapping is a conservative screening method based on topography only. This does not take into account existing vegetation or structures that potentially provide visual screening.



**EDDERTON SOLAR PROJECT**  
**Viewshed Mapping**

**Figure 7**





**LEGEND**

- 4km Buffer Extent
- Indicative PV Area
- Relevant Receivers**
- Associated Receivers
- Private Receivers
- Other Mine-owned Receivers
- Equine Enterprises
- Viticulture Enterprise
- Council & Crown Owned
- Parts of the Project Potentially Visible from Receivers**
- No Visibility
- 1 - 22
- 23 - 42
- 43 - 62
- 63 - 82
- 83 - 102

Source: EDF Renewables (2023); Mair Landscape Architecture (2024); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas are indicative only and subject to change during detailed design.

The Viewshed Mapping is a conservative screening method based on topography only. This does not take into account existing vegetation or structures that potentially provide visual screening.



**EDDERTON SOLAR PROJECT**  
**Reverse Viewshed Mapping**

**Figure 8**



### **Proposed Methodology for the LVIA**

A LVIA will be prepared for the EIS in accordance with the Landscape and Visual Assessment Technical Supplement.

The viewpoints identified as requiring detailed assessment in the PVIA will be considered further in the LVIA, including assessment of visual magnitude, visual sensitivity and impact.

The LVIA will also include detailed assessment of the landscape character and potential glint and glare, night-lighting and cumulative impacts, as well as consideration of any mitigation measures. The LVIA will be informed by ongoing stakeholder consultation.

It is understood that Muswellbrook Shire Council and DPHI are developing a landscape character and scenic value assessment of parts of the Muswellbrook LGA, in particular along the Hunter River, Goulburn Highway and Denman Road. Outcomes of this assessment would be considered in the EIS.

Further, the Mayfield power island is located within the Dark Sky Planning Region (i.e. within a 200 km radius of the Siding Springs Observatory), as defined in the *Dark Sky Planning Guideline* (DPE, 2023c). Accordingly, the LVIA will consider potential night-lighting impacts of the Project on the Siding Springs Observatory.

#### **6.2.2 Biodiversity**

The Project area is located within the Sydney Basin Interim Biogeographic Regionalisation for Australia (IBRA) bioregion and the Hunter IBRA subregion.

The Hunter IBRA subregion is mostly undulating terrain with low slopes in the northern part of the subregion (along the Hunter River and its tributaries), with relatively rugged terrain found in the southern part of the subregion primarily associated with rock outcrops of the Triassic Hawkesbury Sandstone (Commonwealth of Australia, 2019).

### **Existing Environment**

Baseline vegetation surveys have commenced for the Project. An overview of preliminary vegetation types mapped within the PV Study Areas is provided in Figures 9a to 9c.

As a result of historic and ongoing agricultural land use, the PV Study Areas are mostly grassland with some fragmented native woodland/forest vegetation (Figures 9a to 9c). Areas which are not native vegetation comprise cropping/grazing, waterbodies, disturbed land, roads and existing infrastructure.

### **Assessment Approach**

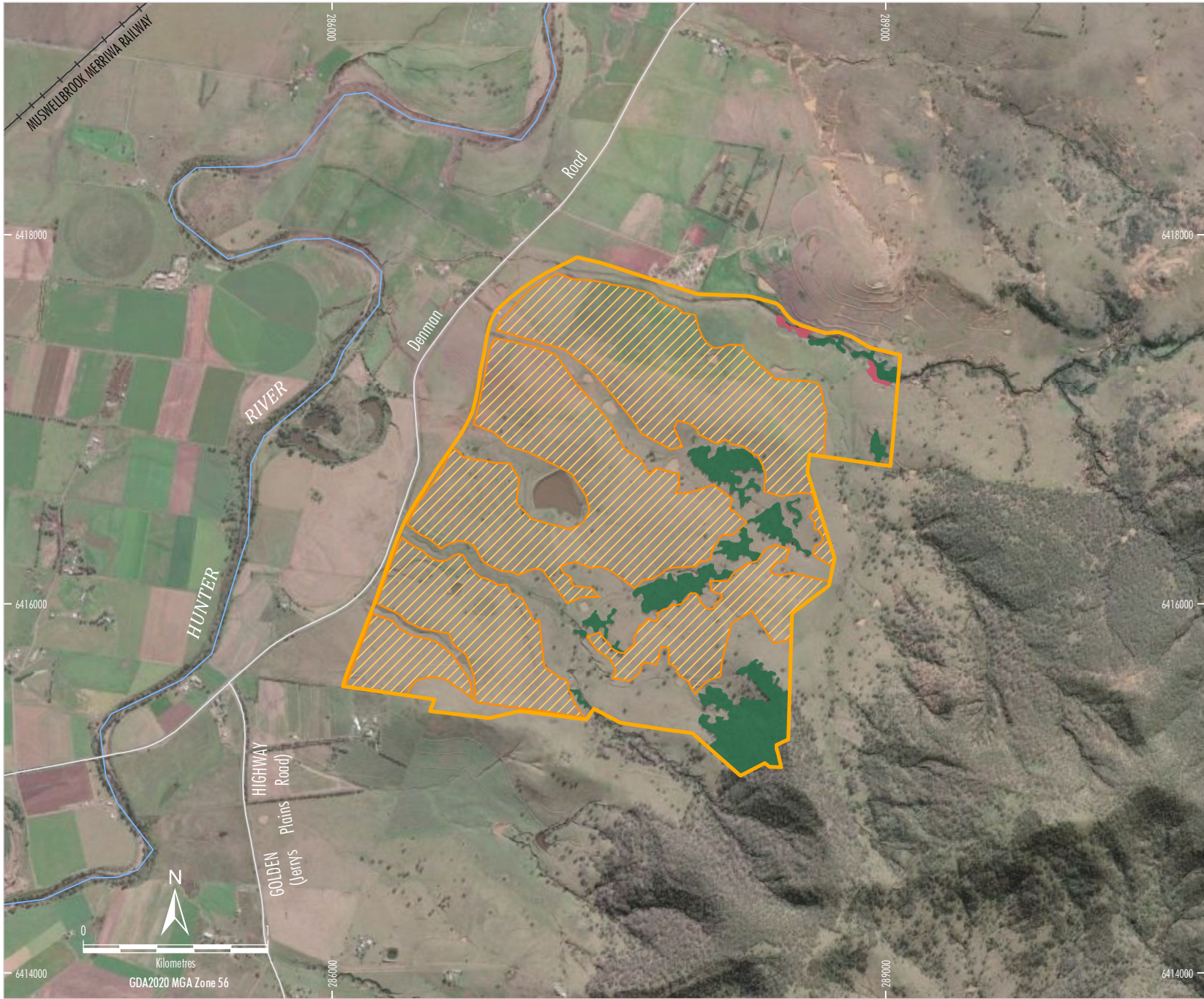
A BDAR will be prepared for the EIS in accordance with the BC Act, and the BAM.






A Land Categorisation Assessment will be undertaken to confirm any areas of Category 1 – exempt land within the Project area.

The Land Categorisation Assessment will be provided to the NSW DCCEEW (Environment and Heritage Group) for review prior to finalisation of the BDAR.

Targeted flora and fauna surveys will be undertaken to identify Plant Community Types within the PV Study Areas and internal power reticulation system easement in accordance with the BAM.

Outcomes of targeted flora and fauna surveys and potential impacts to threatened species and Threatened Ecological Communities will be assessed in a BDAR to determine the Project offset liability. The BDAR will be prepared in accordance with the BC Act and the BAM and will consider potential impacts of the Project on riparian vegetation and associated threatened species habitat due to any watercourse crossings.



- LEGEND**
-  Indicative PV Study Area
  -  Indicative PV Area
  -  Preliminary Vegetation Mapping
  -  Grassy Woodlands
  -  Forested Wetland

Source: EDF Renewables (2023); NSW Spatial Services (2023); AMBS (2024)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

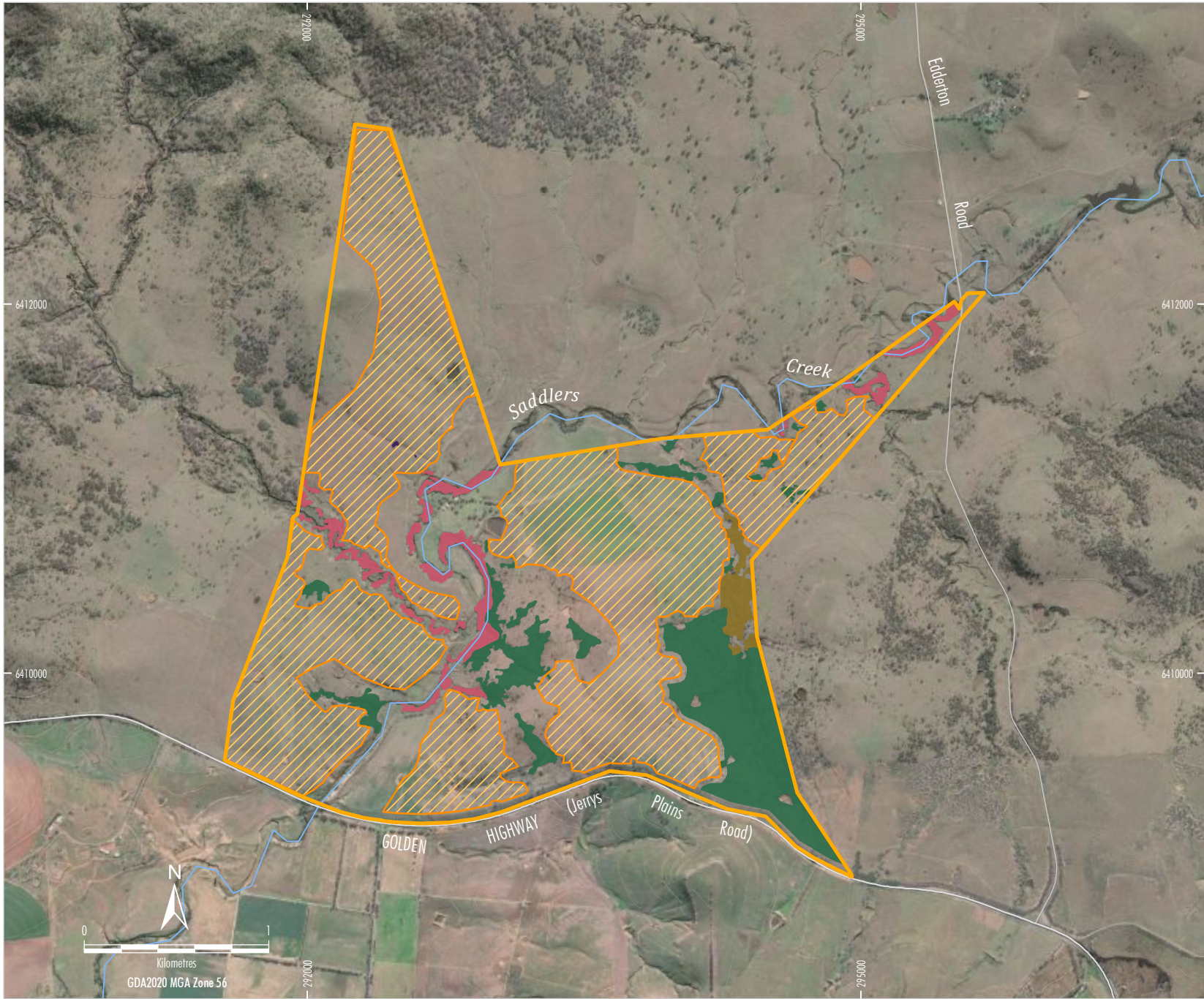
Note: PV areas are indicative only and subject to change during detailed design.









**EDDERTON SOLAR PROJECT**  
**Vegetation Overview**  
**- Mayfield Power Island**

**Figure 9a**





- LEGEND**
-  Indicative PV Study Area
  -  Indicative PV Area
  - Preliminary Vegetation Mapping**
  -  Grassy Woodlands
  -  Dry Sclerophyll Forests
  -  Forested Wetland
  -  Semi-arid Woodland

Source: EDF Renewables (2023); NSW Spatial Services (2023); AMBS (2024)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

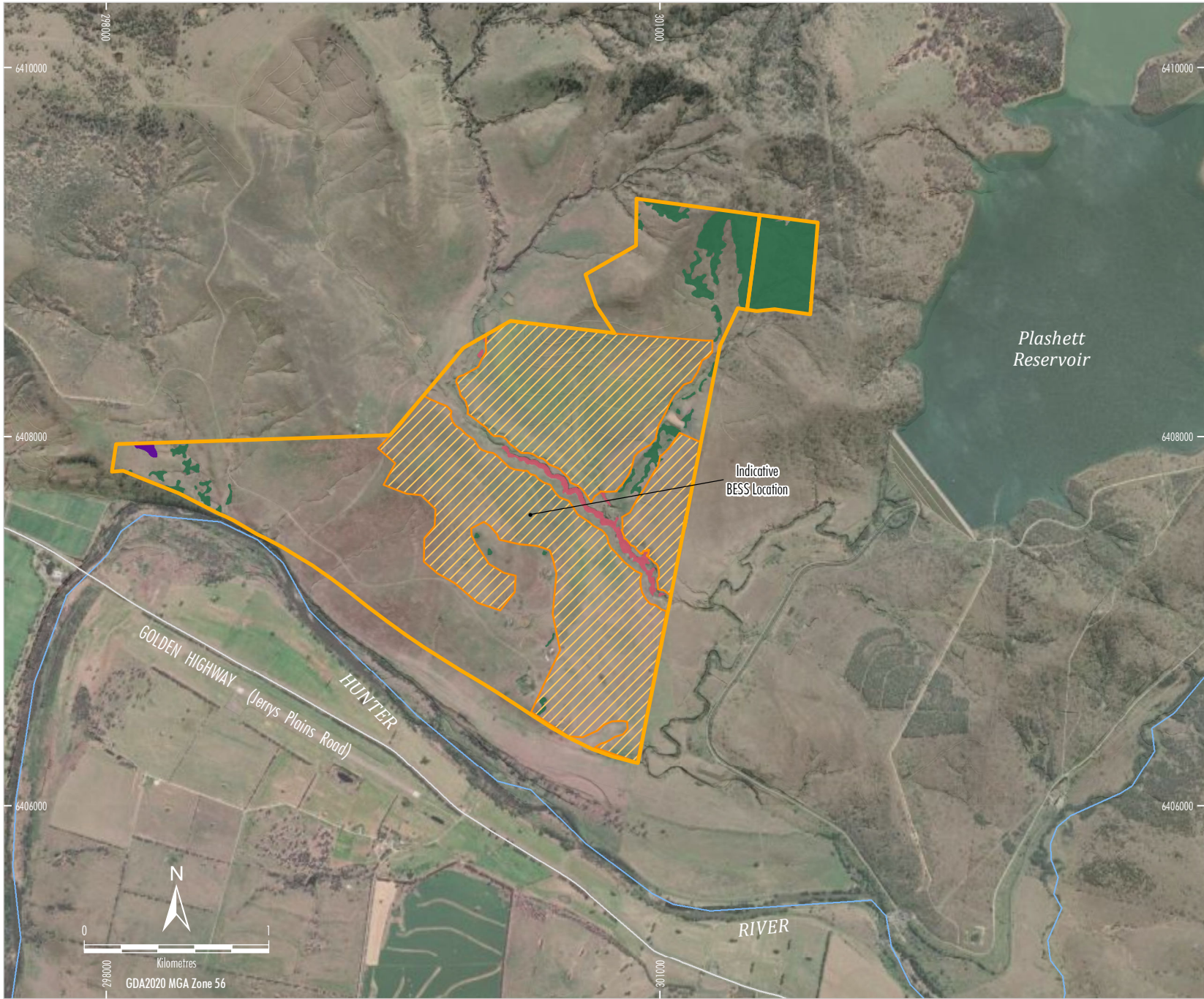
Note: PV areas are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Vegetation Overview**  
**- Bowfield Power Island**

**Figure 9b**





- LEGEND**
- Indicative PV Study Area
  - Indicative PV Area
  - Preliminary Vegetation Mapping**
  - Grassy Woodlands
  - Forested Wetland
  - Semi-arid Woodland

Source: EDF Renewables (2023); NSW Spatial Services (2023); AMBS (2024)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Vegetation Overview**  
**- Plashett Power Island**

**Figure 9c**

### 6.2.3 Heritage

#### Aboriginal Cultural Heritage

##### Aboriginal History

Early tribal maps indicate the Project area is located within the land of the Wonnarua/Wanaruah people, whose country extends from a few miles above Maitland, west to the Great Dividing Range and south to the divide north of Wollombi (Tindale, 1974).

Fawcett (1898) notes that the Wonnarua/Wanaruah people had no permanent settlements and were semi-nomadic, roaming about from place to place within their tribal district, in pursuit of game and fish, and periodically making use of the same camping grounds throughout the generations.

Modern Wonnarua/Wanaruah people retain strong cultural connections to the Hunter Valley and are actively involved in the protection and promotion of their culture for future generations (AECOM, 2019).

##### Natural Resources

A variety of natural resources would have been available to the local Aboriginal population. Several ethnohistorical records have documented the exploitation of a large and diverse range of terrestrial, avian and aquatic fauna for food and other resources (e.g. skins for clothing) by Aboriginal people occupying the Hunter Valley at contact (AECOM, 2019).

The Hunter River and Saddlers Creek, in particular, would have been focal resource areas for Aboriginal people occupying the Project area and the greater Muswellbrook area, more broadly, facilitating sustained and/or intensive occupation over thousands of years (AECOM, 2019).

##### AHIMS Search

The Aboriginal Heritage Information Management System (AHIMS) database provides information regarding previously recorded Aboriginal sites in NSW.

A detailed search of the AHIMS database has been conducted, with findings summarised in Table 8 and shown on Figure 10.

**Table 8**  
**AHIMS Search Results**

Site Type	Number
Isolated Find	218
Artefact Scatter	1
Stone Quarry	1

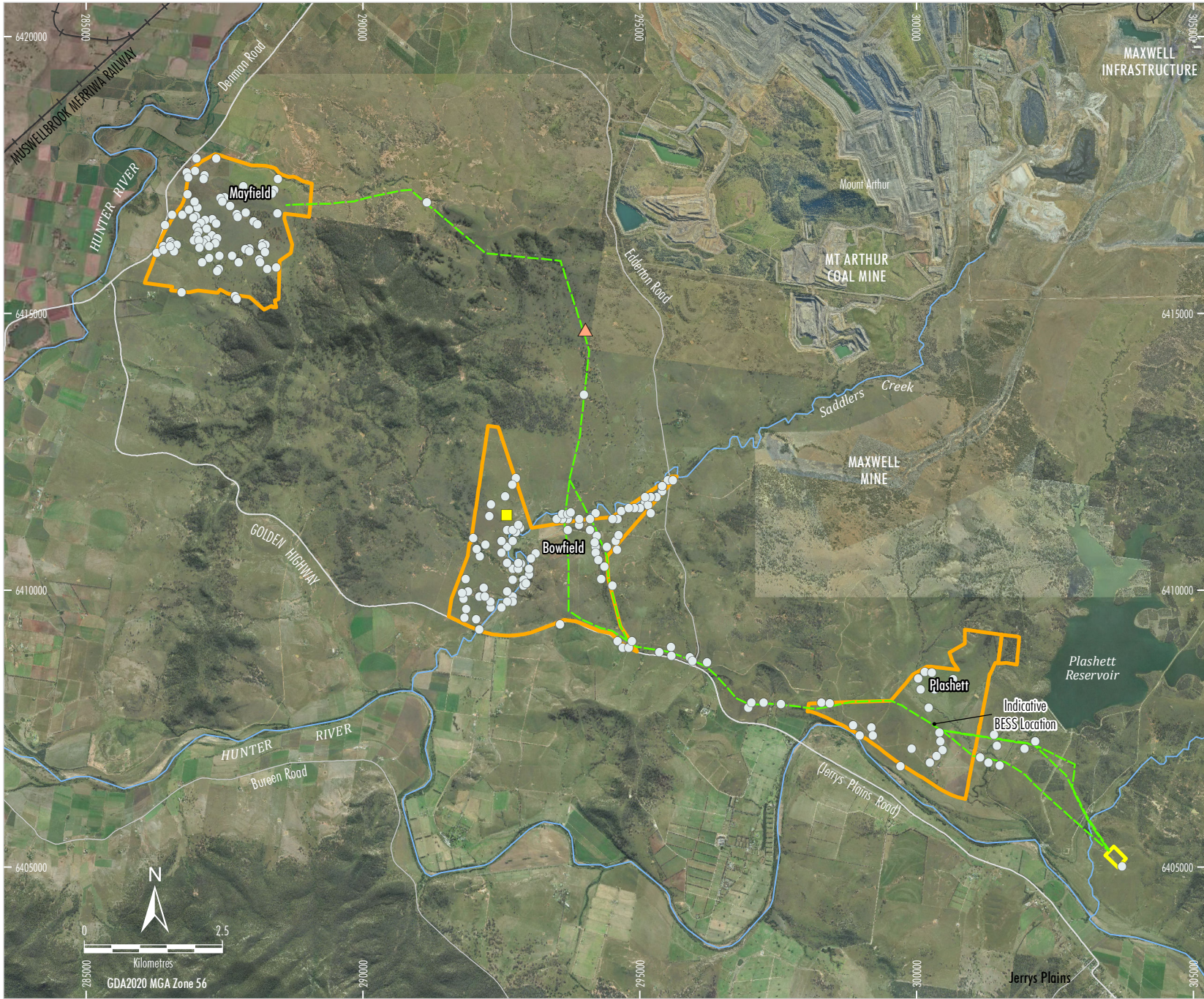
##### Assessment Approach

From the findings of the AHIMS database search, it is understood that the Project area contains known Aboriginal heritage sites and archaeological resources. It is anticipated that parts of the Project area not subject to previous Aboriginal cultural heritage surveys would also contain evidence of Aboriginal land use.

An ACHA will be prepared for the EIS in accordance with the following legislation and guidelines:

- *National Parks and Wildlife Regulation 2019.*
- *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010a).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b).
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011).
- *The Burra Charter: The Australian ICOMOS Charter for Places of Cultural Significance* (Australia International Council on Monuments and Sites [Australia ICOMOS], 2013).
- *Ask First: A Guide to Respecting Indigenous Heritage Places and Values* (Australian Heritage Commission, 2002).
- *Interim Engaging with First Nations People and Communities on Assessments and Approvals Under the Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth of Australia, 2023).





- LEGEND**
- Indicative PV Study Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - ▲ AHIMS Sites
  - Isolated Find
  - Stone Quarry

Source: EDF Renewables (2023); NSW Spatial Services (2023); DCCEEW (2024)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**

**Aboriginal Heritage Information Management System Search Results**

**Figure 10**



More detailed investigation and assessment of Aboriginal cultural heritage in the Project area will be conducted as a part of an ACHA to support the EIS and will also inform any required changes to the Project layout, if required.

The ACHA will be informed by an Aboriginal cultural heritage consultation program with interested Aboriginal parties as well as outcomes of Aboriginal cultural heritage surveys of the Project area.

### ***Historic Heritage***

#### ***Existing Environment***

The land that now comprises and surrounds the Project area has primarily been used for pastoral activities since the early period of European settlement. The Hunter Valley's fertile alluvial soils and proximity to the Hunter River (and its associated tributaries) were key determinants in the establishment and development of major pastoral properties from the mid-nineteenth century (Extent, 2019).

The Project area overlies the Muswellbrook-Jerrys Plains Landscape Conservation Area, as shown on Figure 11. The Muswellbrook-Jerrys Plains Landscape Conservation Area was registered by the National Trust of Australia (NSW) in 1985. It is noted this listing is not recognised in either the Muswellbrook LEP or the Singleton LEP and a National Trust heritage assessment listing has no legislative effect and gives rise to no statutory obligations.

#### ***Preliminary Assessment***

Extent (2019) conducted a Historic Heritage Assessment for the Maxwell Underground Project, which includes an assessment of the known historic heritage sites within and/or surrounding the Project area. A summary of these known historic heritage sites is presented in Table 9 and shown on Figure 11.

There are no World Heritage places, Commonwealth Heritage or National Heritage listed places within a 2 km radius of the Project area.

A stockyard on the Plashett property (circa late nineteenth century) has the potential to be directly impacted by the Project (Plate 4). The stockyard is in its own right of limited heritage significance, however comprises a picturesque ruin within the broader landscape (Extent, 2019).

The Plashett and Bowfield homesteads would not be directly impacted by the Project, however potential indirect impacts will be assessed in the Historic Heritage Assessment.



**Plate 4 – View of the Stockyard located on the Plashett Property**

Source: Extent (2019).

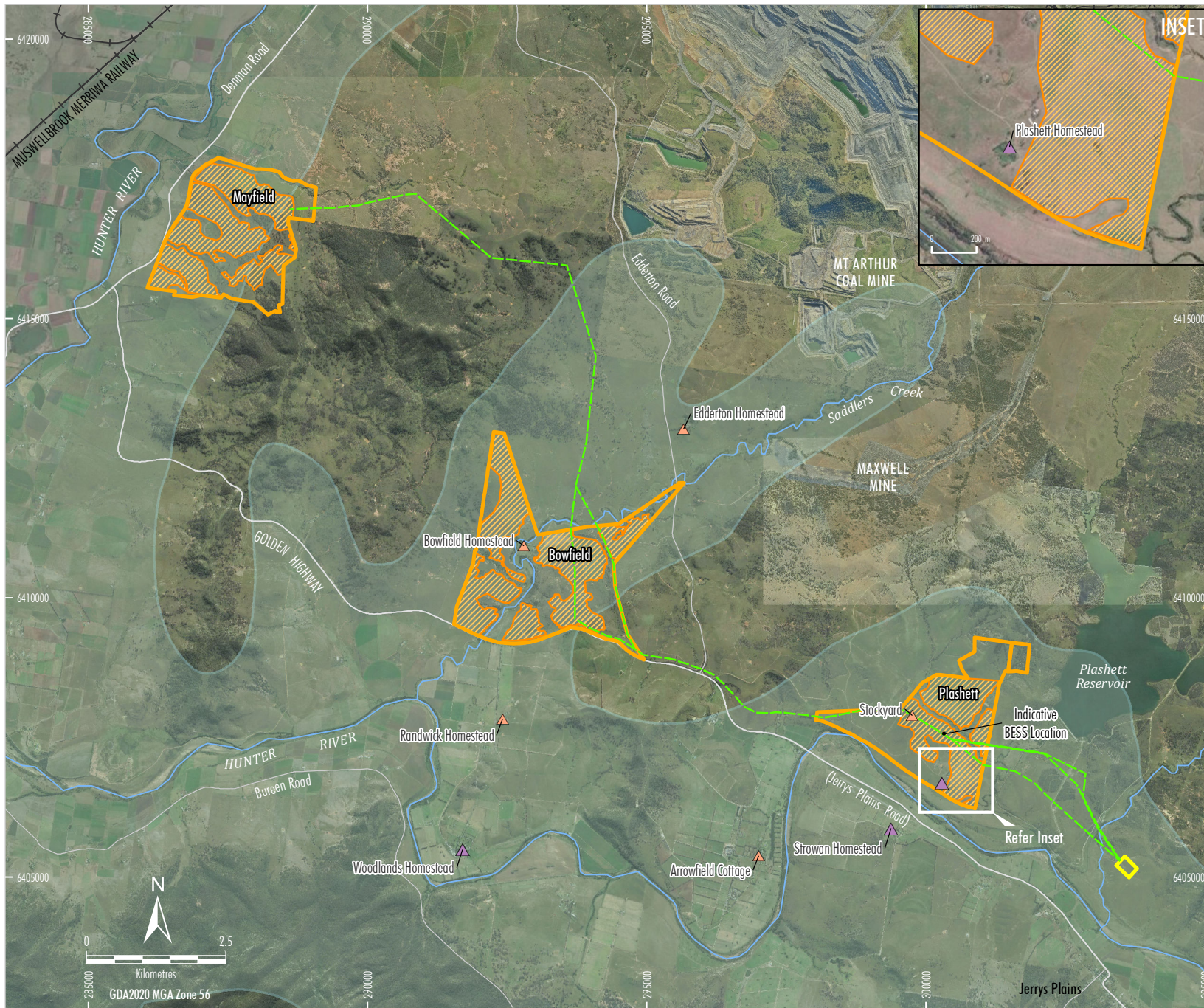
#### ***Assessment Approach***

Assessment of identified historic heritage sites and potential impacts of the Project will be undertaken in a Historic Heritage Assessment (and Statement of Heritage Impact) as a part of the EIS. The Historic Heritage Assessment will also consider the potential for unlisted or previously unidentified heritage sites and any intangible values held by the community or relevant stakeholders.

The Historic Heritage Assessment will be prepared for the EIS in consideration of the following guidelines:

- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013).
- *NSW Heritage Manual* (NSW Heritage Office and NSW Department of Urban Affairs and Planning, 1996).
- *Assessing Heritage Significance* (DPE, 2023d).
- *Guidelines for preparing a statement of heritage impact* (DPE, 2023e).





- LEGEND**
- Indicative PV Study Area
  - Indicative PV Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - Muswellbrook-Jerrys Plains Landscape Conservation Area
  - ▲ Historic Heritage Site
  - ▲ Potential State Significance<sup>#</sup>
  - ▲ Potential Local Significance<sup>#</sup>

<sup>#</sup>Subject to further assessment in the EIS

Source: EDF Renewables (2023); NSW Spatial Services (2023) Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Known Historic Heritage Sites**

**Figure 11**



**Table 9**  
**Summary of Known Historic Heritage Sites**

Heritage Site	Listing	Potential Significance Level <sup>#</sup>	Location
Plashett Homestead	Muswellbrook LEP	State	Located on the Plashett property, would be avoided by the PV panels.
Stowan Homestead	Singleton LEP	State	Approximately 1 km south of the Plashett power island.
Woodlands Homestead	Muswellbrook LEP and SHR	State	Approximately 4 km south of the Bowfield power island.
Bowfield Homestead	Not listed	Local	Located on the Bowfield property, would be avoided by the PV panels.
Edderton Homestead	Muswellbrook LEP	Local	Approximately 1.5 km north-east of the Bowfield power island.
Randwick Homestead	Not listed	Local	Approximately 1.5 km south of the Bowfield power island.
Arrowfield Cottage	Singleton LEP	Local	Approximately 3.5 km south-west of the Plashett power island.
Stockyard	Not listed	Limited/Local	Located within a portion of the Plashett power island.

<sup>#</sup> Source: Extent (2019)

SHR = NSW State Heritage Register

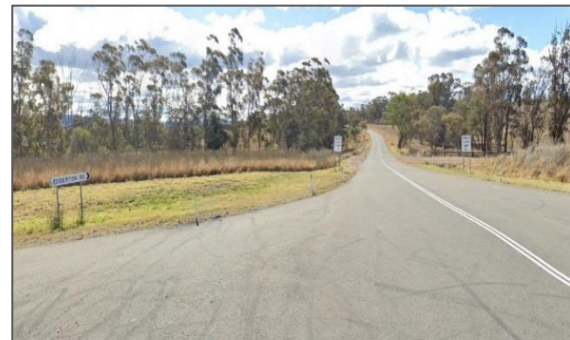
#### 6.2.4 Road Transport

##### Existing Environment

The following key roads are of relevance to the Project:

- Golden Highway (Highway 27, Route B84) – a road link between the New England Highway and the Newell Highway west near Dubbo.
- Denman Road (Main Road 209) – forms the primary connection between Denman and Muswellbrook and provides an additional road link between the Golden Highway and New England Highway.
- Edderton Road (a local road) (Plate 5) – provides a road connection between the Golden Highway in the south and Denman Road in the north.

The Maxwell Mine includes approval to realign Edderton Road around its underground mining area (Section 3.2.5). This realignment would occur during the operational phase of the Project (i.e. after construction activities are complete).



**Plate 5 – View of Edderton Road from the Golden Highway**

Source: Google Earth (2024).

##### Preliminary Assessment

Access to the Project power islands would be as follows (Figure 2):

- Mayfield power island – from an existing intersection with Denman Road.
- Bowfield power island – from an existing intersection with Edderton Road.
- Plashett power island – from an existing intersection with Edderton Road.

It is anticipated that major PV solar farm components (PV modules) would be delivered to the Port of Newcastle and transported approximately 140 km by road to the Project area.

### Assessment Approach

A Road Transport Assessment will be prepared for the EIS which will describe the existing traffic environment, assess the proposed transport routes from the Port of Newcastle to the Project site, proposed site access points and the safety and capacity of the road network, in consideration of relevant Austroads standards.

The Road Transport Assessment will be informed by consultation with relevant road authorities, where relevant (including Transport for NSW and Muswellbrook Shire Council).

### 6.2.5 Land Use

#### Land Suitability

As the Project will result in a change in land use, under the Resilience and Hazards SEPP, a Land Contamination Assessment is required to determine whether the Project area is suitable for the proposed development and whether any remediation is required to be made suitable for the Project.

A Land Contamination Assessment will be prepared for the EIS.

#### Land Capability

##### Existing Landscape Features

A review of the Australian Soil Classification Soil Type Map of NSW (DPIE, 2021b) has been undertaken and the following soil types are associated with the Project area (DPIE, 2021b):

- Sodosols: Texture contrast soils that generally have low-nutrient status. Generally, sodosols have very low agricultural potential with high sodicity leading to high erodibility, poor structure and low permeability.
- Chromosols: Strong texture contrast between surface and subsoil horizons and have moderate agricultural potential with moderate chemical fertility and water-holding capacity. They can be susceptible to soil acidification and soil structure decline.
- Dermosols: Non-texture contrast soils red, brown, yellow, grey or black and have loam to clay textures. Dermosols generally have high agricultural potential with good structure and moderate to high chemical fertility and water-holding capacity with few problems.

- Kurosols: Comprise contrasting textures, with a fertile loam topsoil overlaying an acidic clay subsoil. They generally have very low agricultural potential with high acidity (pH below 5.5) and low chemical fertility.

The LSC assessment scheme (OEH, 2012) provides land classes which indicate the physical capability of land to support different agricultural land uses.

The majority of the Project area is regionally mapped as Class 4 (moderate capability) to Class 6 (low capability) land, as shown on Figures 12a to 12c (DPIE, 2021b).

A small amount of regionally-mapped Class 3 land is located within the Bowfield power island. This would be avoided by PV panels. Portions of the proposed internal reticulation system would traverse Class 3 land.

There is no regionally-mapped Biophysical Strategic Agricultural Land (BSAL) within the indicative PV areas.

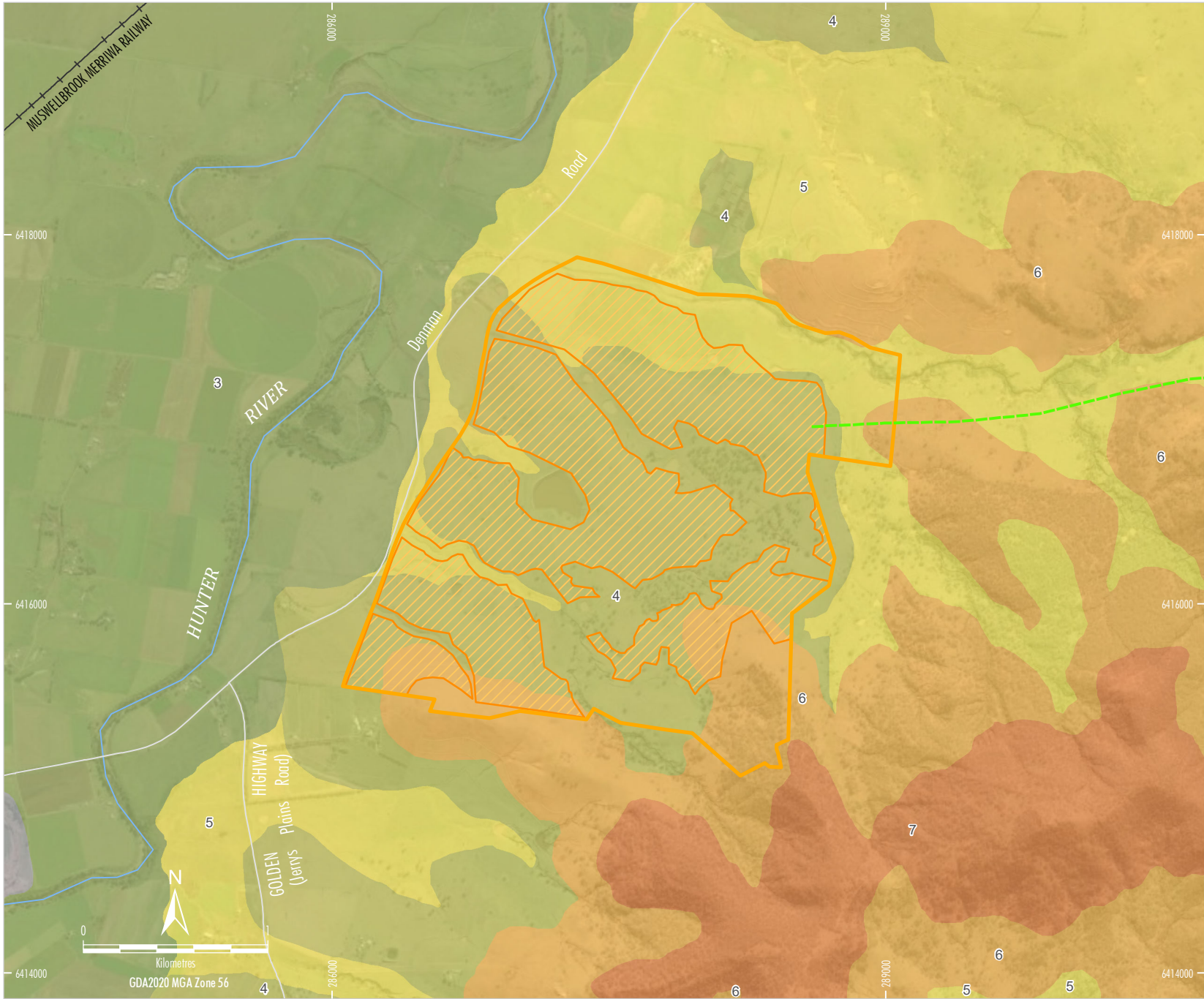
#### Assessment Approach

In accordance with the *Large-Scale Solar Energy Guideline* (DPE, 2022b), in particular *Appendix A – Agricultural impact assessment requirements* (DPE, 2022g), an Agricultural Impact Assessment will be prepared for the EIS including site verification of the soil landscapes and agricultural resources associated with the Project.

Field surveys and laboratory analysis will be undertaken to verify the LSC classes within the Project area. This would involve:

- Desktop review of existing agricultural resources information available for the Project area, including a desktop review of existing soil and geology mapping, regional BSAL mapping, rural land capability and agricultural suitability mapping.
- Field surveys (including soil test pits and soil sampling) to determine the presence and/or extent of LSC classes in the Project area.
- An assessment (including laboratory analysis) to identify soil type and fertility (in accordance with *The Australian Soil Classification Third Edition* (Isbell, 2021) and verify the LSC class of the land in accordance with the *Land and Soil Capability Assessment Scheme* (OEH, 2012).





**LEGEND**

- Indicative PV Study Area
- Indicative PV Area
- Internal Reticulation System Easements Under Consideration
- Land and Soil Capability**
- Class 3
- Class 4
- Class 5
- Class 6
- Class 7
- Not assessed

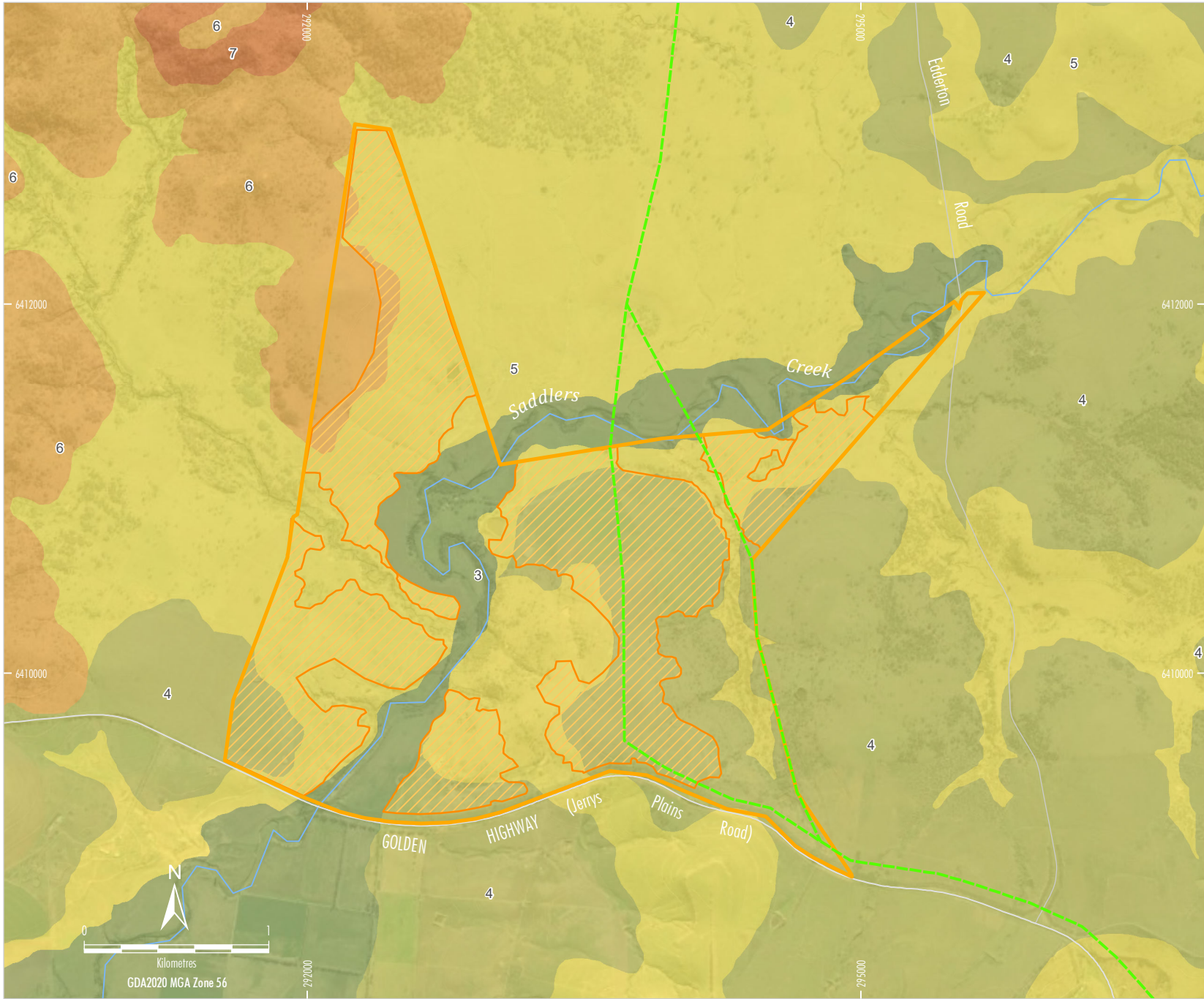
Source: EDF Renewables (2023); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.






**EDDERTON SOLAR PROJECT**  
**Regional Land and Soil Capability Mapping**  
**- Mayfield Power Island**






**Figure 12a**



**LEGEND**

-  Indicative PV Study Area
-  Indicative PV Area
-  Internal Reticulation System Easements Under Consideration

**Land and Soil Capability**

-  Class 3
-  Class 4
-  Class 5
-  Class 6
-  Class 7

Source: EDF Renewables (2023); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

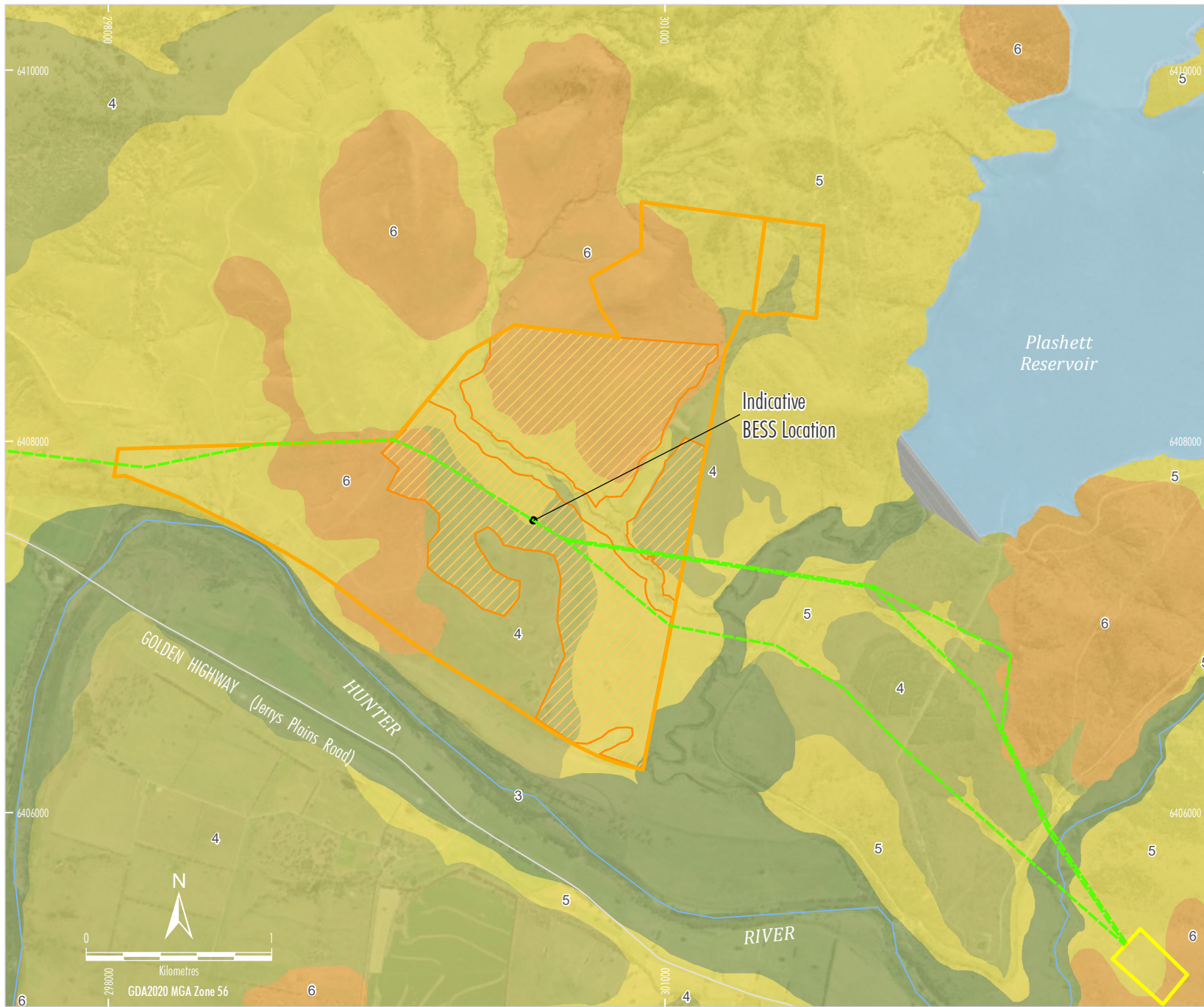
Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Regional Land and Soil Capability Mapping**  
 - Bowfield Power Island

**Figure 12b**





- LEGEND**
- Indicative PV Study Area
  - Indicative PV Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - Class 3
  - Class 4
  - Class 5
  - Class 6
  - Not assessed
  - Water

Source: EDF Renewables (2023); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
**Regional Land and Soil Capability Mapping**  
**- Plashett Power Island**

**Figure 12c**

The outcomes of LSC verification for the Project area will inform the level of assessment required (i.e. Level 2 or Level 3) for the Agricultural Impact Assessment consistent with the framework set out in *Appendix A – Agricultural impact assessment requirements* (DPE, 2022g).

**Land Use Compatibility**

The Project is located within the Upper Hunter region, which has a long history of rural land use for a variety of agriculture and industrial activities, predominantly grazing and coal mining.

Equine and viticulture enterprises exist in the vicinity of the Project and form part of recognised critical industry clusters (Figure 13). The Project would not occur on any land currently used for equine or viticulture enterprises.

A Land Use Conflict Risk Assessment will be undertaken as part of the EIS in accordance with the *Land Use Conflict Risk Assessment Guide* (DPI, 2011) to assess the compatibility of the Project with surrounding land uses during construction, operation and after decommissioning.

Exploration Licences and Mining Tenements

The Mt Arthur Coal Mine, Maxwell Mine and Hunter Valley Operations are located in the vicinity of the Project.

Table 10 outlines the current ELs and mining tenements which overlap the Project area (including the internal reticulation system).

The Project team will consult with all relevant tenement holders during the preparation of the EIS.

**6.2.6 Social Values**

A Preliminary SIA has been prepared by SquarePeg and is presented in Attachment 3. The Preliminary SIA was prepared in accordance with SIA Guideline and the SIA Guideline – Technical Supplement.

The Preliminary SIA aims to define the Project’s social locality and social baseline, and determine the level of assessment.

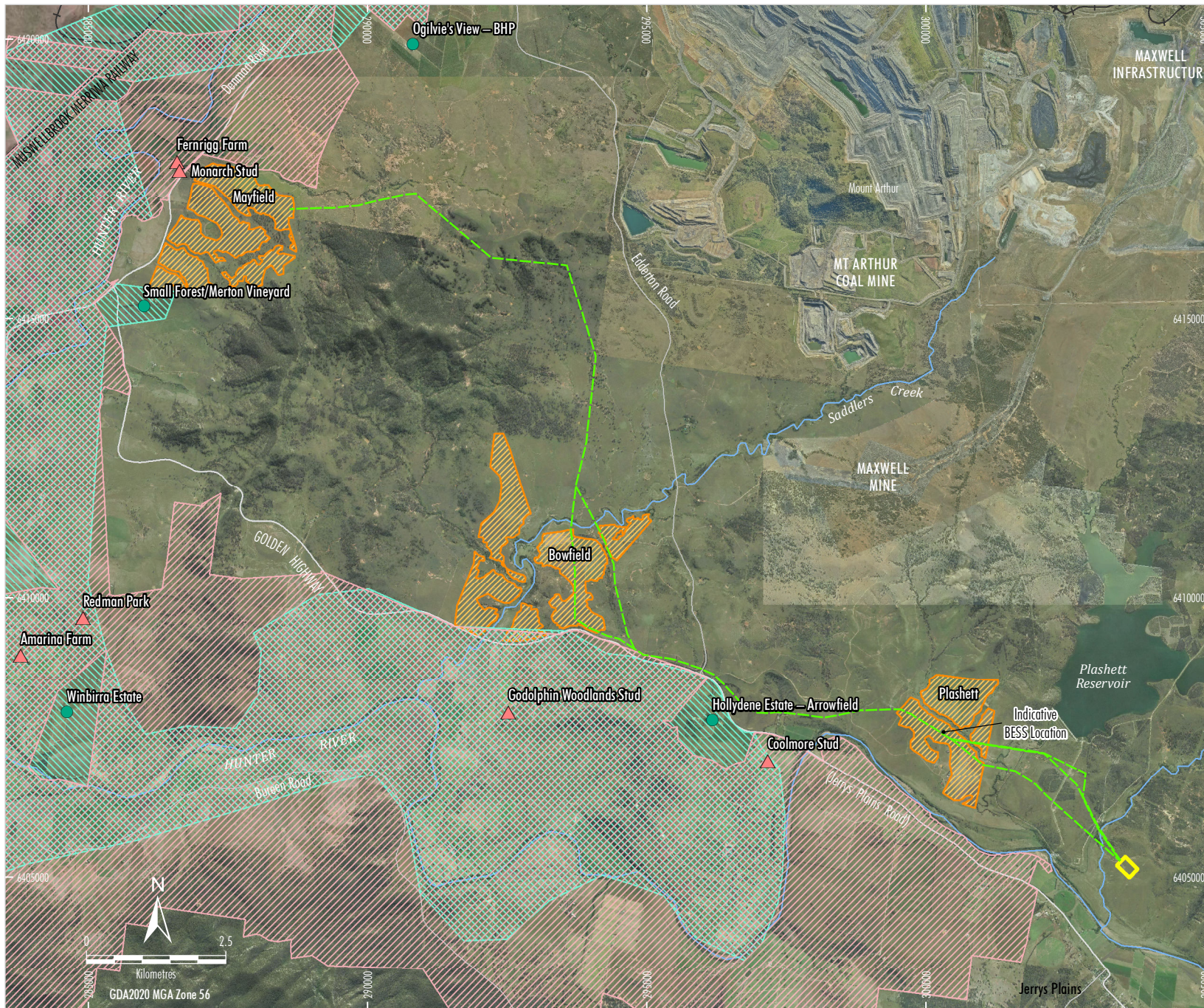
The Preliminary SIA involved:

- Reviewing feedback from proponent-led consultation.
- Outlining the social locality, likely impacts and likely affected people.
- Preparation of a preliminary social baseline for the social locality.
- Development of a methodology for the subsequent phases of the SIA to be prepared for the EIS.

**Table 10  
Mining and Exploration Titles Overlapping the Project**

Title Reference	Title Holder	Mineral	Overlapping Project Component
EL5965	Hunter Valley Energy Coal Pty Ltd	Group 9 (Coal) Group 9a (Oil shale)	Internal electricity reticulation system A small portion of Mayfield and Bowfield power islands.
EL9591	Upper Hunter Geothermal Energy Pty Ltd	Group 8 (Geothermal energy)	Bowfield and Plashett power islands Internal electricity reticulation system Substation
EL7429	Spur Hill No.2 Pty Ltd (a wholly owned subsidiary of Malabar)	Group 9 (Coal)	Mayfield power island
EL9497	Spur Hill No.2 Pty Ltd (a wholly owned subsidiary of Malabar)	Group 9 (Coal)	Bowfield power island Internal electricity reticulation system
EL9498	Maxwell Ventures (Management) Pty Ltd (Maxwell) (a wholly owned subsidiary of Malabar)	Group 9 (Coal)	
EL6705	Bloomfield Collieries Pty Ltd	Group 9 (Coal) Group 9a (Oil shale)	Internal electricity reticulation system Substation
ML1593	Hunter Valley Energy Coal Pty Ltd	Group 9 (Coal)	Internal electricity reticulation system
ML1822	Maxwell (a wholly owned subsidiary of Malabar)	Group 9 (Coal)	





- LEGEND**
- Indicative PV Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - Equine Enterprise
  - Viticulture Enterprise
  - Critical Industry Cluster Land (Equine)
  - Critical Industry Cluster Land (Viticulture)

Source: EDF Renewables (2023); NSW Spatial Services (2023); Heritage NSW (2019); Short and Thompson (2013)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
 Equine and Viticulture Enterprises  
 in the Vicinity of the Project

**Figure 13**



### **Social Locality**

The social locality of the Project is the geographic area in which social impacts of the Project are likely to be experienced (Attachment 3).

The social locality for the Project takes into consideration the following aspects of the Project (Attachment 3):

- Location of Project infrastructure in relation to surrounding administrative boundaries.
- Nature and scale of the Project (the construction workforce is modest when compared to surrounding projects in the region, predominantly mining operations).
- Built and natural features surrounding the Project, including highways, nearby towns, mining operations and premier equine and viticultural enterprises.

The Project is located between the suburbs of Denman, Dalswinton and Jerrys Plains, which are where most stakeholders would potentially experience direct amenity-related impacts (e.g. visual, noise, dust and traffic impacts).

In addition, the Project is located predominantly within the Muswellbrook LGA, with the southern extent of the Project area located within the Singleton LGA. Stakeholders who would potentially experience indirect impacts from the Project are expected to be located within Muswellbrook and Singleton LGAs (e.g. socio-economic impacts/benefits such as business participation and employment opportunities associated with the Project).

In consideration of the above, SquarePeg identified two social localities for the Project (Figure 14):

- Primary Locality: Denman, Dalswinton and Jerrys Plains Suburbs and Localities (SALs).
- Secondary Locality: Muswellbrook LGA and Singleton LGA.

### **Social Baseline**

SquarePeg undertook a review of the Australian Bureau of Statistics (ABS) 2021 Census Data (ABS, 2022) to obtain an understanding of the characteristics and social environment within the primary and social localities of the Project.

A summary of the social baseline for the Project social localities is provided in Attachment 3.

### **Preliminary Social Impact Identification**

A preliminary impact identification and assessment has been undertaken by SquarePeg for the Preliminary SIA.

The preliminary impact identification forms the basis for the proposed level of assessment to be carried out in the SIA to be included in the EIS.

Table 11 details the preliminary potential impacts identified by SquarePeg in consideration of the social baseline and components of the Project that could pose potential social impacts to the community.

### **Proposed Methodology for the SIA**

The impacts described in Table 11 will be further investigated in the SIA prepared for the EIS, including an analysis of significance and development of mitigation measures, if required.

The SIA will involve stakeholder consultation and primary data collection to gain an understanding of how potential impacts may be experienced from a stakeholder's perspective.

Consultation will also provide an opportunity for stakeholders to provide their input to impact evaluation and prioritisation of any mitigation measures (Attachment 3).

Consultation will occur with a variety of stakeholders (as described within Attachment 3), predominantly via interviews and meetings, as well as community drop-in sessions.

A cumulative impact assessment will also be undertaken in accordance with the Cumulative Impact Assessment Guideline, drawing on publicly available data about other relevant projects as well as feedback from stakeholders during consultation.





**Table 11**  
**Preliminary Potential Social Impacts of the Project**

Category	Potential Impact	Nature	Potentially Affected Stakeholder Groups	Proposed Level of Assessment in SIA
Surroundings	Construction related noise, dust and lighting impacts affect the quality of life and amenity of nearby landholders.	Negative	Nearby landholders, including vineyards and horse studs.	Detailed
	Potential visual impact of the Project, reducing aesthetic and amenity values.	Negative	Nearby landholders and residents, including vineyards and horse studs.	Detailed
Culture	Potential disturbance to Aboriginal cultural heritage sites.	Negative	Aboriginal stakeholders, particularly Aboriginal parties that register an interest in the ACHA.	Detailed
Livelihoods	Employment opportunities for local residents during construction.	Positive	Local residents, jobseekers.	Detailed
	Business opportunities for local businesses during construction, thus contributing to a diversified local economy.	Positive	Local businesses.	Detailed
	Employment and business opportunities during operations and maintenance phases.	Positive	Local residents and businesses.	Standard
	Business opportunities associated with decommissioning and rehabilitation.	Positive	Local businesses.	Standard
Accessibility	Potential for unsustainable demand for short term workforce accommodation.	Negative	Accommodation providers, vulnerable community members, tourists and other visitors.	Detailed
	Potential for construction traffic to affect accessibility, amenity and travel times for other road users.	Negative	Local residents, tourists and other visitors.	Detailed
Community	Community contributions support the vitality of local community groups.	Positive	Community organisations.	Standard

Source: Attachment 3.

## 6.2.7 Hazards and Risks

### *Preliminary Hazards Analysis*

Under the Resilience and Hazards SEPP, a Preliminary Hazards Analysis is required for potentially hazardous or offensive development. Appendix 3 of the *Applying SEPP 33 Guidelines* (Department of Planning, 2011) lists the industries that may fall within the Resilience and Hazards SEPP (former SEPP 33).

A Preliminary Hazard Analysis will be prepared for the EIS.

Although solar farms and energy storage facilities are not classed as potentially hazardous or offensive, the proposed BESS will likely utilise lithium-ion batteries which are listed as Class 9 - Miscellaneous dangerous goods. While Class 9 materials are excluded from the SEPP 33 screening test, the hazards related to these materials will be considered in accordance with the *Applying SEPP 33 Guidelines*.

### *Electromagnetic Fields*

Electricity generated and transported by the Project will produce Electromagnetic Fields (EMF) during operation and transmission. There are documented health impacts of exposure to high levels of EMF and standards have been established to protect against these effects. There has been significant research into the effects of exposure to low level EMF and there are currently no documented adverse health impacts of exposure to extremely low frequency EMF.

An assessment of potential EMF generation by the Project electrical infrastructure will be conducted as a part of the EIS to confirm compliance with relevant standards beyond the Project boundaries.

## 6.2.8 Bushfire

### *Existing Environment*

On 1 August 2002, the *NSW Rural Fires and Environmental Assessment Legislation Amendment Act 2002* amended both the EP&A Act and the *NSW Rural Fire Services Act 1997* to ensure that people, property and the environment are more protected against dangers that may arise from bushfires. Councils are required to map bushfire prone land within their LGA boundaries, which provides a trigger for the consideration of bushfire protection measures when developing land.

NSW RFS Bush Fire Prone Land (BFPL) mapping designates areas that are considered to be higher bush fire risk. Mapping is updated periodically in accordance with the *Guide for Bush Fire Prone Land Mapping* (NSW RFS, 2015).

BFPL mapping designates land that has potential to support a bushfire event or is likely to be subject to bushfire attack. BFPL vegetation categories are as follows:

- Vegetation Category 1 (highest risk for bushfire) consists of areas of forest, woodlands, heaths (tall and short), forested wetlands and timber plantations.
- Vegetation Category 2 (low bushfire risk) consists of rainforests and lower risk vegetation parcels that represent a lower bushfire risk to surrounding development and consist of remnant vegetation and land with ongoing land management practices that actively reduces bush fire risk.
- Vegetation Category 3 (medium bushfire risk) consists of grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands.

Figure 15 presents the regionally mapped BFPL relevant to the Project area. The majority of the PV Areas and internal reticulation easements are Vegetation Category 3, indicating a medium bushfire risk. There are small portions of Vegetation Category 1 within the southern extent of the Mayfield property, as well as along the internal reticulation easement north of Bowfield.

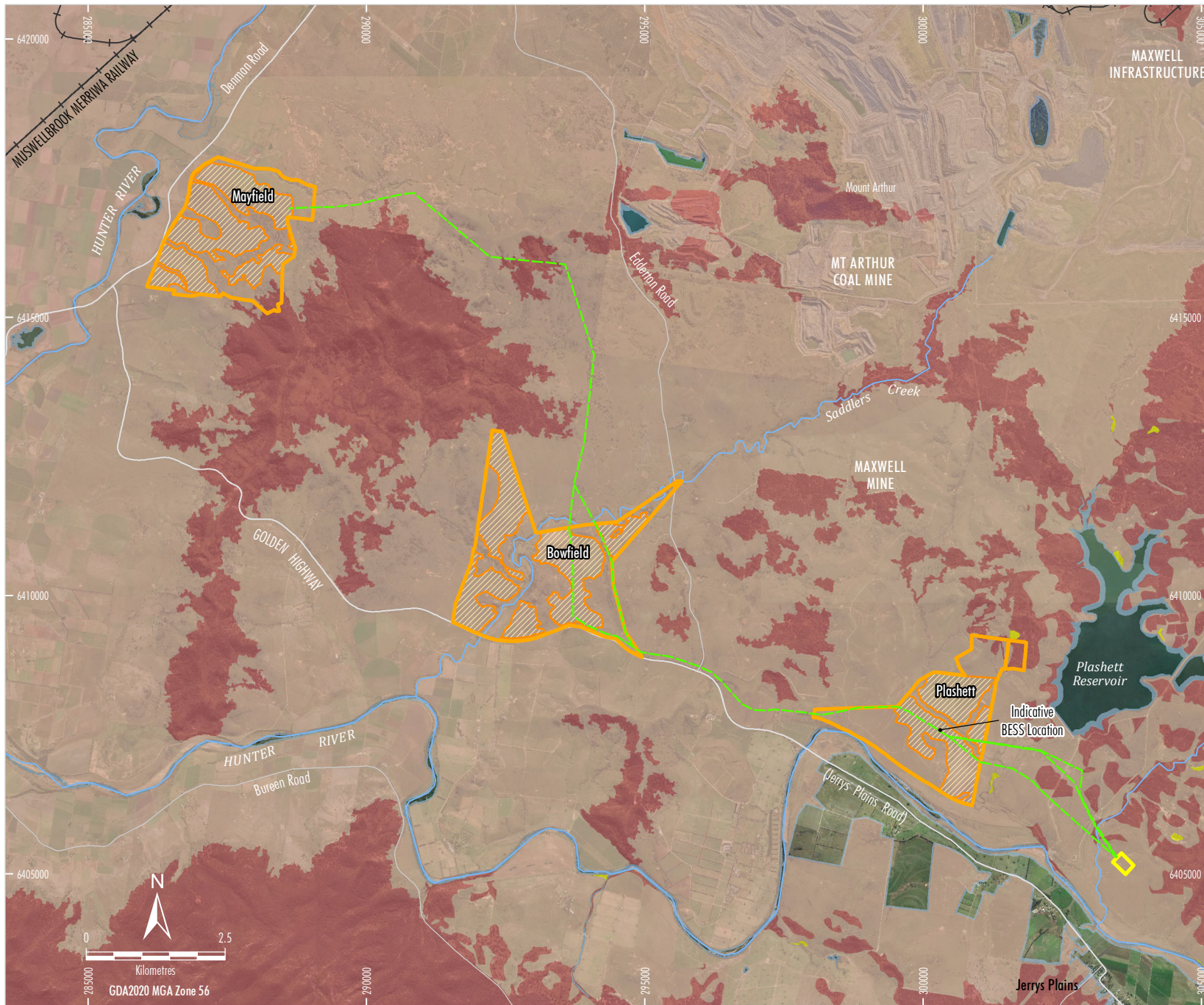
### *Assessment Approach*

A Bushfire Risk Assessment will be prepared as a part of the EIS to identify potential hazards and risks for the Project associated with bushfires. The minimisation of ignition risks and the protection of assets will be addressed in this Assessment, consistent with the *NSW Rural Fire Service Guidelines – Planning for Bushfire Protection 2019* (NSW RFS, 2019).

The primary contributors to bushfire risk that will be considered are fuels, weather, topography, predicted fire behaviour, bushfire history, distribution of suppression resources, access, water supply and values and assets.

Mitigation strategies will be considered to provide protection for the Project, the land and the community.





**LEGEND**

- Indicative PV Study Area
- Indicative PV Area
- Internal Reticulation System Easements Under Consideration
- Indicative Substation Location
- Bushfire Prone Land
- Vegetation Buffer
- Vegetation Category 1
- Vegetation Category 2
- Vegetation Category 3

Source: EDF Renewables (2023); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.

Figure 15



### 6.2.9 Noise and Air Quality

#### *Existing Environment*

Residences in the area would generally hear traffic noise from the Golden Highway and Denman Road, with some shielding due to undulating terrain. Some residences may also hear distant noise from mining activities.

The main sources of particulate matter in the area surrounding the Project include mining, agriculture, commercial and industrial (including power generation) activities (Todoroski Air Sciences, 2019).

#### *Assessment Approach*

During the construction phase of the Project, machinery, equipment and vehicle movements on access roads would generate noise.

Noise from the operational phase of the Project would be minimal, with the BESS being the primary source of noise.

A Noise Assessment will be conducted in accordance with the following guidelines:

- *Draft Construction Noise Guideline* (EPA, 2020); and
- *Noise Policy for Industry* (EPA, 2017).

Construction activities would also result in particulate matter (dust). Air quality impacts during the operational phase of the Project are expected to be negligible. The EIS will consider the potential for air quality impacts on a risk-basis and identify appropriate dust controls for the Project.

### 6.2.10 Water Resources

#### *Existing Environment*

##### Regional Hydrology

The Project is located in the Hunter River catchment. The catchment extends some 110 km to the north and 140 km to the west. The catchment has an overall size of 21,500 square kilometres.

The Hunter River flows from the northern side of the Barrington Tops (Mount Royal Range), flowing through Muswellbrook and Singleton, before draining to the Pacific Ocean at Newcastle. The Hunter River and associated floodplain lie to the south and west of the Project. The Hunter River is a regulated river supplying water from Glenbawn Dam to a range of industrial and agricultural users as well as town water supplies (Malabar, 2019).

##### Local Hydrology

The Project area is characterised by varying topography with intermittent, ephemeral waterways. Streams running through the power islands are predominately minor watercourses (1<sup>st</sup> and 2<sup>nd</sup> order streams) (Figure 16).

The main drainage feature in the vicinity of the Project is Saddlers Creek, which runs directly through the Bowfield power island and would be avoided by the PV panels. Under the Strahler stream classification, Saddlers Creek is a fourth and fifth order watercourse.

To the east of the Plashett power island lies Saltwater Creek which drains downstream of Plashett Reservoir. The Plashett Reservoir serves as an off-river water storage for the Bayswater Power Station, along with supplying water to the Jerrys Plains township.

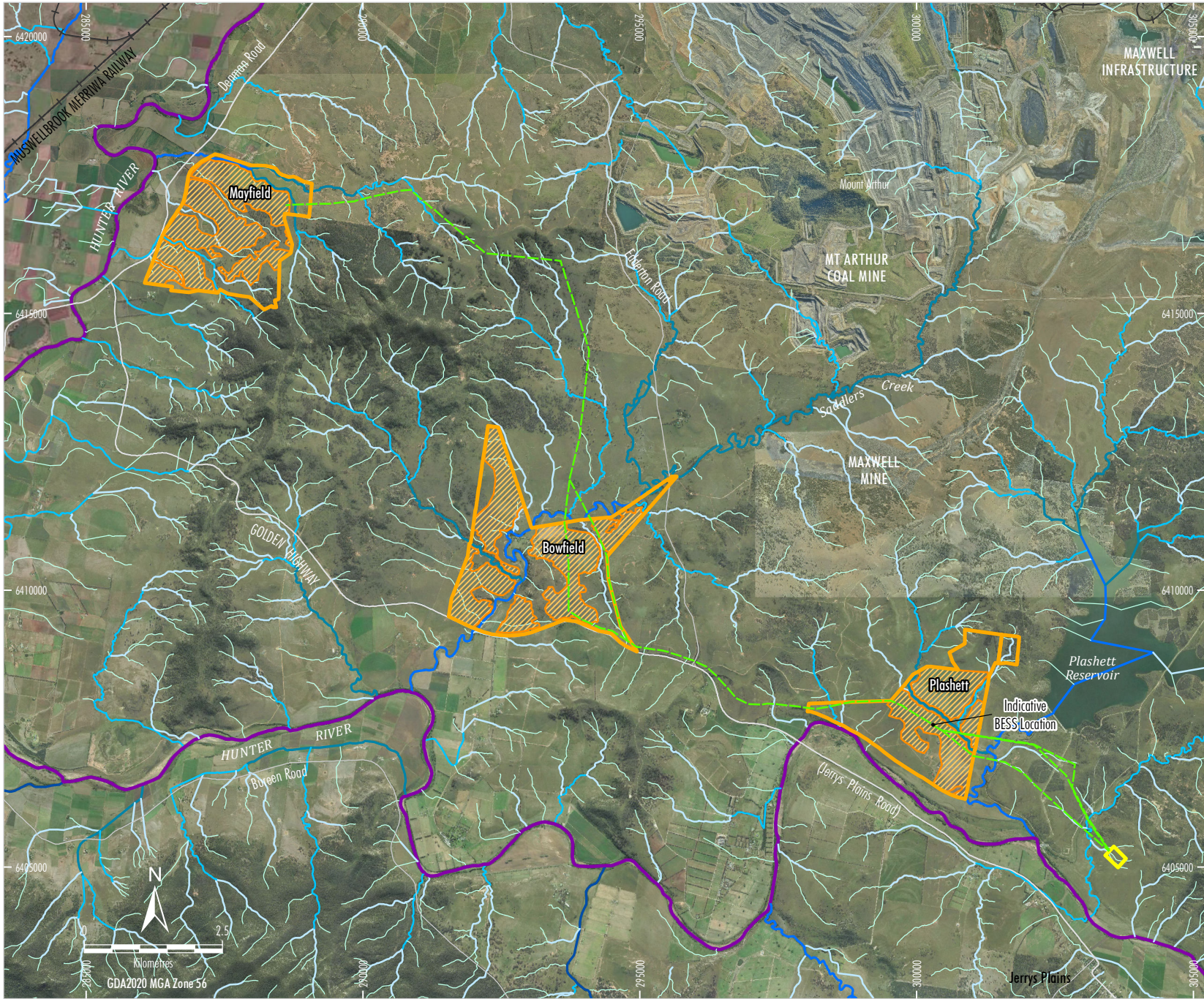
The Mayfield power island area drains via minor drainage lines and overland flow to the Hunter River.

##### Flooding

A Floodplain Risk Management Study and Plan of the Hunter River between Muswellbrook and Denman was undertaken by Royal HaskoningDHV (2018) for Muswellbrook Shire Council. The Floodplain Risk Management Study included modelling of the probable maximum flood (PMF) extent along the Hunter River adjacent to the Project.

The Mayfield power island would be located directly east and outside of the PMF extent of the Hunter River.





- LEGEND**
- Indicative PV Study Area
  - Indicative PV Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Substation Location
  - Strahler Stream Order
  - 1st Order
  - 2nd Order
  - 3rd Order
  - 4th Order
  - 5th Order
  - 6th Order
  - 9th Order

Source: EDF Renewables (2023); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)

Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.



**EDDERTON SOLAR PROJECT**  
 Watercourses

Figure 16



### **Assessment Approach**

A Surface Water Assessment will be prepared for the EIS, which will consider potential impacts of the Project on hydrology, potential for surface water runoff impacts and identify water sources required during construction and operation of the Project. The following guidelines will be considered during preparation of the Surface Water and Flooding Assessment:

- *Managing Urban Stormwater; Soils & Construction* (Landcom, 2004);
- *Controlled activities – Guidelines for outlet structures on waterfront land* (DPE, 2022h); and
- *Controlled activities – Guidelines for watercourse crossings on waterfront land* (DPE, 2022i).

#### **6.2.11 Waste Management**

Waste streams generated during the construction and operational phases of the Project will be quantified and classified in the EIS. Measures to manage, reduce, reuse, recycle and responsibly dispose of waste in accordance with the *Waste Classification Guidelines* (EPA, 2014) will be considered, as well as decommissioning of the Project and the associated waste will also be considered.

#### **6.2.12 Economic Effects**

An Economic Assessment for the Project will be prepared to support the EIS.

A cost-benefit analysis would be conducted to evaluate the potential net benefits of the Project to NSW.

The impact assessment component of the Economic Assessment will be conducted at different locality scales to assess the potential impacts and benefits of the Project on the immediate locality, as well as in NSW.

In consideration of the adopted localities, the Economic Assessment would determine the effect of a development on an economy in terms of specific indicators such as employment, income, supplier benefit and net benefit of the Project.



## 7 REFERENCES

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- Department of Planning and Environment (2022a) *State Significant Development Guidelines*.
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- Department of Planning and Environment (2022c) *Undertaking Engagement Guidelines for State Significant Projects*.
- Department of Planning and Environment (2022d) *Cumulative Impact Assessment Guidelines for State Significant Projects*.
- Department of Planning and Environment (2022e) *Large-Scale Solar Energy Guideline: Technical Supplement – Landscape and Visual Impact Assessment*.
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## 8 ABBREVIATIONS AND ACRONYMS

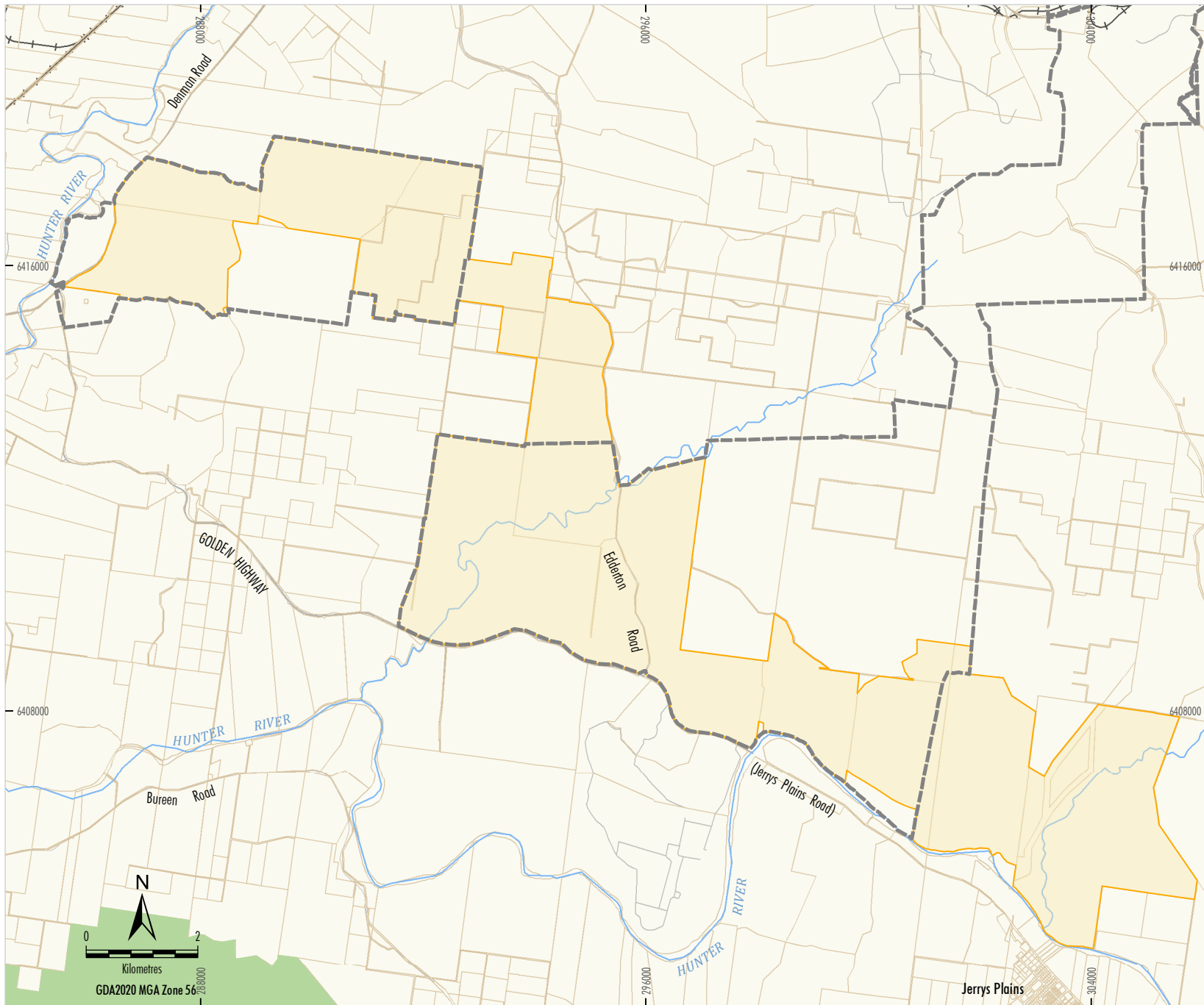
%	percent	HVO	HVO Resources Pty Ltd
AGL	AGL Macquarie Pty Limited	km	kilometres
BC Act	<i>Biodiversity Conservation Act 2016</i>	kV	kilovolts
BESS	Battery Energy Storage System	LGA	Local Government Area
CCC	Community Consultative Committee	m	metres
Cth DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water	mAHD	metres above Australian Height Datum
DPE#	Department of Planning and Environment	Malabar	Malabar Resources Limited
DPHI	Department of Planning, Housing and Infrastructure	ML	Mining Lease
DPIE#	Department of Planning, Industry and Environment	MNES	Matters of National Environmental Significance
EDF Renewables	EDF Renewables Australia Pty Ltd	Muswellbrook LEP	<i>Muswellbrook Local Environmental Plan 2009</i>
EII Act	<i>Electricity Infrastructure Investment Act 2020</i>	Muswellbrook Strategic Planning Statement	<i>Muswellbrook Local Strategic Planning Statement 2020-2040</i>
EIS	Environmental Impact Statement	MWac	megawatts of alternating current
EnergyCo	Energy Corporation of NSW	MWh	megawatt hours
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>	NDC	Nationally Determined Contribution
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2021</i>	Net Zero Plan	<i>NSW Net Zero Plan Stage 1: 2020-2030</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	NSW	New South Wales
ETL	Electricity Transmission Line	NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
FTE	full-time equivalent	OEH	Office of Environment and Heritage
GW	gigawatts	Planning Systems SEPP	<i>State Environmental Planning Policy (Planning Systems) 2021</i>
Ha	hectares	PV	photovoltaic
Hunter-Central Coast REZ	Hunter-Central Coast Renewable Energy Zone	SEARs	Secretary's Environmental Assessment Requirements
		SIA Guideline	<i>Social Impact Assessment Guideline for State Significant Projects</i>

# Now referred to as the NSW Department of Planning, Housing and Infrastructure as of January 2024.



SIA	Social Impact Assessment
Singleton LEP	<i>Singleton Local Environmental Plan 2013</i>
Singleton Strategic Planning Statement	<i>Singleton Local Strategic Planning Statement 2041</i>
SIA Guideline – Technical Supplement	<i>Social Impact Assessment Guideline for State Significant Projects – Technical Supplement</i>
SSD	State Significant Development
The Project	Edderton Solar Project
Transport and Infrastructure SEPP	<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>
Voltere	Voltere Pty Ltd
Zone C3	Zone C3 – Environmental Management
Zone RU1 Zone	RU1 – Primary Production

**ATTACHMENT 1**  
**PROVISIONAL DEVELOPMENT APPLICATION AREA**



- LEGEND**
- Provisional Development Application Area
  - Malabar-owned Land
  - Wollemi National Park

Source: EDF Renewables (2023); Malabar (2012);  
NSW Spatial Services (2023)



**EDDERTON SOLAR PROJECT**  
Provisional Development  
Application Area



**ATTACHMENT 2**  
**STATUTORY COMPLIANCE TABLE**

**Table 2-1  
Pre-conditions to Granting Consent**

Statutory Reference	Pre-condition	Relevance
<i>NSW Environmental Planning and Assessment Regulation 2021</i>		
clause 23(1)	A development application may be made by the owner of the land to which the development application relates, or another person, with the written consent of the owner of the land.	Voltere will seek landowners' consent from all relevant landowners, including, but not limited to Malabar, BHP, AGL, HVO, Muswellbrook Shire Council and Crown Lands.
<i>Muswellbrook Local Environmental Plan 2009 and Singleton Local Environmental Plan 2013</i>		
clause 5.10(7)	If applicable, a consent authority must, before granting consent to the carrying out of development on an archaeological site, notify the Heritage Council of its intention to grant consent, and take into consideration any response received from the Heritage Council within 28 days after the notice is sent.	An Aboriginal Cultural Heritage Assessment will be prepared for the Project to be included in the Environmental Impact Statement (EIS). In addition, a Historic Heritage Assessment will also be prepared for the Project and included in the EIS.  The consent authority will be required to notify the Heritage Council of the application if any archaeological sites are identified.
<i>NSW Biodiversity Conservation Act 2016</i>		
clause 7.9(3)	The EIS that accompanies a development application is to include a Biodiversity Development Assessment Report (BDAR).	A BDAR will be prepared for the Project and included in the EIS.
<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>		
clause 2.48(2)	Before determining a development application (or an application for modification of a consent) for development to which this section applies, the consent authority must— (a) give written notice to the electricity supply authority for the area in which the development is to be carried out, inviting comments about potential safety risks, and (b) take into consideration any response to the notice that is received within 21 days after the notice is given.	EDF Renewables has lodged a connection enquiry with Transgrid in relation to connection to its 330 kilovolt (kV) electricity transmission line (ETL). Voltere would seek to enter into a third party agreement with Transgrid to facilitate connection to the 330 kV ETL.  The consent authority will be required to notify Transgrid of the application.

**Table 2-1 (Continued)  
Pre-conditions to Granting Consent**

Statutory Reference	Pre-condition	Relevance
<i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i>		
clause 3.6	(1) Before a council may grant consent to a development application for consent to carry out development on land to which this Part applies, the council must be satisfied as to whether or not the land is a potential koala habitat. (2) The council may be satisfied as to whether or not land is a potential koala habitat only on information obtained by it, or by the applicant, from a person who is qualified and experienced in tree identification. (3) If the council is satisfied— (a) that the land is not a potential koala habitat, it is not prevented, because of this Chapter, from granting consent to the development application, or (b) that the land is a potential koala habitat, it must comply with section 3.7.	A BDAR will be prepared for the Project and included in the EIS. Potential koala habitat will be identified and assessed in the BDAR.
<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>		
clause 3.11	The Resilience and Hazards SEPP defines potentially hazardous industry as: <i>a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality—</i> (a) to human health, life or property, or (b) to the biophysical environment, <i>and includes a hazardous industry and a hazardous storage establishment.</i>  In accordance with clause 3.11, a person who proposes to make a development application to carry out development for the purposes of a potentially hazardous industry must prepare (or cause to be prepared) a preliminary hazard analysis in accordance with the current circulars or guidelines published by the Department of Planning and submit the analysis with the development application.	A Battery Energy Storage System (BESS) would be developed as part of the Project, constituting a potentially hazardous storage establishment.  A Preliminary Hazard Analysis will be prepared for the Project and included in the EIS.



**Table 2-2  
Mandatory Matters for Consideration**

Relevant Legislation or Instrument	Mandatory Consideration
<i>NSW Environmental Planning and Assessment Act 1979</i>	
section 1.3	<p>Relevant objects of the <i>NSW Environmental Planning and Assessment Act 1979</i> (EP&amp;A Act):</p> <ul style="list-style-type: none"> <li>• Promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.</li> <li>• Facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment.</li> <li>• Promote the orderly and economic use and development of land.</li> <li>• Protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.</li> <li>• Promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).</li> <li>• Promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State.</li> <li>• Provide increased opportunity for community participation in environmental planning and assessment.</li> </ul>
Part 3	<p>Relevant environmental planning instruments:</p> <ul style="list-style-type: none"> <li>• <i>State Environmental Planning Policy (Planning Systems) 2021.</i></li> <li>• <i>State Environmental Planning Policy (Transport and Infrastructure) 2021.</i></li> <li>• <i>State Environmental Planning Policy (Resilience and Hazards) 2021.</i></li> <li>• <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021.</i></li> <li>• Muswellbrook LEP.</li> <li>• Singleton LEP.</li> <li>• The <i>Environmental Planning and Assessment Regulation 2021</i> (EP&amp;A Regulation) (to the extent that it prescribes matters for the purposes of section 4.15(1)(a)(iv) of the EP&amp;A Act).</li> </ul> <p>This includes consideration of the likely impacts of the development, including environmental impacts on both the natural and built environments; any social and economic impacts in the locality; the suitability of the site for the development; any submissions made in accordance with the EP&amp;A Act or the EP&amp;A Regulation; and the public interest.</p>

**Table 2-2 (Continued)**  
**Mandatory Matters for Consideration**

Relevant Legislation or Instrument	Mandatory Consideration
<i>NSW Environmental Planning and Assessment Act 1979 (continued)</i>	
section 4.15	In determining a development application, a consent authority is required to take into consideration the following matters that are of relevance to the development subject of the development application, including: <ul style="list-style-type: none"> <li>• the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality;</li> <li>• the suitability of the site for the development;</li> <li>• any submissions made in accordance with the EP&amp;A Act or the EP&amp;A Regulation; and</li> <li>• the public interest.</li> </ul>
<i>NSW Environmental Planning and Assessment Regulation 2021</i>	
clause 184	For State Significant Development on land less than 200 km from the Siding Springs Observatory, the consent authority must consider the requirements of the <i>Dark Sky Planning Guideline</i> (NSW Department of Planning and Environment, 2023).
<i>NSW Biodiversity Conservation Act 2016</i>	
section 7.14(2)	The consent authority is to take into consideration the likely impact of the proposed development on biodiversity values as assessed in the BDAR.
section 7.16(3)	If consent authority is of the opinion that the Project is likely serious and irreversible impacts on biodiversity values, the consent authority is required to: <ul style="list-style-type: none"> <li>• take those impacts into consideration; and</li> <li>• determine whether are any additional and appropriate measures that will minimise those impacts if consent or approval is to be granted.</li> </ul>

**Table 2-2 (Continued)**  
**Mandatory Matters for Consideration**

Relevant Legislation or Instrument	Mandatory Consideration
<i>Muswellbrook Local Environmental Plan 2009 and Singleton Local Environmental Plan 2013</i>	
clause 2.3(2)	The consent authority <sup>1</sup> must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone.
clause 5.10(4)	If applicable, a consent authority must, before granting consent under clause 5.10 in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned.
clause 5.10(8)	If applicable, a consent authority must, before granting consent under clause 5.10 to the carrying out of development in an Aboriginal place of heritage significance, consider the effect of a proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment.
<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>	
clause 3.12	<p>In determining an application to carry out development to which this Part applies, the consent authority must consider (in addition to any other matters specified in the Act or in an environmental planning instrument applying to the development)—</p> <ul style="list-style-type: none"> <li>• current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development, and</li> <li>• whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply, and</li> <li>• in the case of development for the purpose of a potentially hazardous industry—a preliminary hazard analysis prepared by or on behalf of the applicant, and</li> <li>• any feasible alternatives to the carrying out of the development and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location the subject of the application), and</li> <li>• any likely future use of the land surrounding the development.</li> </ul>

<sup>1</sup> Clause 1.5 of Part 1 of the Muswellbrook LEP and Singleton LEP states:

*The consent authority for the purposes of this Plan is (subject to the Act) the Council.*

The Consent authority under the EP&A Act, in the case of the Project, is the Minister or the Independent Planning Commission.



**Table 2-2 (Continued)**  
**Mandatory Matters for Consideration**

Relevant Legislation or Instrument	Mandatory Consideration
<i>State Environmental Planning Policy (Resilience and Hazards) 2021 (continued)</i>	
clause 4.6(1)	<p>A consent authority must not consent to the carrying out of any development on land unless—</p> <ul style="list-style-type: none"> <li>• it has considered whether the land is contaminated, and</li> <li>• if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and</li> <li>• if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.</li> </ul>

**ATTACHMENT 3**  
**PRELIMINARY SOCIAL IMPACT ASSESSMENT**



# SOCIAL IMPACT ASSESSMENT SCOPING REPORT

**For the Edderton Solar Project**

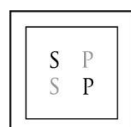


**Provided for**

VOLTERE PTY LTD


**Lead Author**

DANIEL HOLM



SQUARE PEG  
SOCIAL PERFORMANCE





Edderton Solar Project  
Social Impact Assessment Scoping Report

## EXECUTIVE SUMMARY


Malabar Resources Limited and EDF Renewables Pty Ltd (through their joint venture Voltere Pty Ltd) are preparing a Development Application for the Edderton Solar Farm, Battery Energy Storage System and associated infrastructure (the Edderton Solar Project, hereafter referred to as ‘the Project’). The Project is located within the Muswellbrook and Singleton Local Government Areas in the Hunter-Central Coast Renewable Energy Zone of New South Wales. The Project would comprise three power islands (areas of photovoltaic solar panels) known as Mayfield, Bowfield and Plashett. These three power islands would have a combined power generation capacity of 350 megawatts of alternating current. A Battery Energy Storage System would also be developed as part of the Project to share connection to the regional electricity network.

When operational the Project would generate 800,000 Megawatt-hours of electricity each year, enough to power at least 130,000 homes. As such, the Project would support New South Wales’ transition towards net zero emissions.

This document provides the Social Impact Assessment Scoping Report to support the Scoping Report for the Project and has been prepared in accordance with the New South Wales Government’s Department of Planning and Environment’s *Social Impact Assessment Guideline*. Drawing on desktop research and community and stakeholder engagement carried out by the Project proponent, this report describes potential social impacts and opportunities associated with the Project, identifies stakeholders who may experience those impacts and opportunities and defines the geographic social localities in which impacts may be experienced. It also proposes a methodology for the next phase of the Social Impact Assessment to support the EIS.

Overall, ten social impacts and opportunities were identified during this scoping study. These would affect nearby landholders and businesses – including in the viticultural and equine industries – and residents and businesses in the Singleton and Muswellbrook area. The potential impacts identified in this scoping study, and to be considered further in the second phase of the social impact assessment are:


- Construction related noise, dust and lighting impacts affect the quality of life and amenity of nearby landholders.
- Potential visual impact of the Project, reducing aesthetic and amenity values.
- Potential disturbance to Aboriginal cultural heritage sites.
- Employment opportunities for local residents during construction.
- Business opportunities for local businesses during construction, thus contributing to a diversified local economy.
- Employment and business opportunities during operations and maintenance phases.
- Business opportunities associated with decommissioning and rehabilitation.
- Potential for unsustainable demand for short term workforce accommodation during the construction phase.
- Potential for construction traffic to affect accessibility, amenity and travel times for other road users.
- Community contributions support the vitality of local community groups.



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The Project is inscribed in the transition to net zero emissions and as such is also intended to contribute to a reduction in greenhouse gas emissions, stabilisation of the electricity transmission grid, and may also contribute to reduced electricity prices.

The second phase of the SIA will analyse these potential impacts and benefits further, drawing on primary and secondary data collection and community consultation.



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## GLOSSARY AND ABBREVIATIONS

Term	Meaning
ABS	Australian Bureau of Statistics
BESS	Battery Energy Storage System
CCC	Community Consultative Committee
DPE	Department of Planning and Environment
DPHI	Department of Planning, Housing and Infrastructure
EDF Renewables	EDF Renewables Australia Pty Ltd
EIS	Environmental Impact Statement
FTE	Full Time Equivalent
IRSD	Index of Relative Socio-economic Disadvantage
kV	Kilovolt
LGA	Local Government Area
Malabar	Malabar Resources Limited
MWac	Megawatt of alternating current
NSW	New South Wales
REZ	Renewable Energy Zone
SAL	Suburbs and Localities
SIA	Social Impact Assessment



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## 1. INTRODUCTION

### 1.1 Background and Purpose

Malabar Resources Limited (Malabar) and EDF Renewables Australia Pty Ltd (EDF Renewables) have established a joint venture, Voltere Pty Ltd (Voltere), to develop the Edderton Solar Project (the Project) in the Hunter Valley region of New South Wales (NSW) within the Hunter-Central Coast Renewable Energy Zone (REZ). The Project would be situated largely on land owned by Malabar, adjacent to the existing Maxwell Underground Mine (which is operated by Malabar), approximately 17 kilometres (km) south-southwest of Muswellbrook, NSW (see Figure 1).

The Project would comprise three power islands (areas of photovoltaic solar panels) known as Mayfield, Bowfield and Plashett. These three power islands would have a combined power generation capacity of 350 Megawatts of alternating current (MWac). A Battery Energy Storage System (BESS) would also be developed as part of the Project to share connection to the regional electricity network, helping to support NSW's transition to net zero emissions.

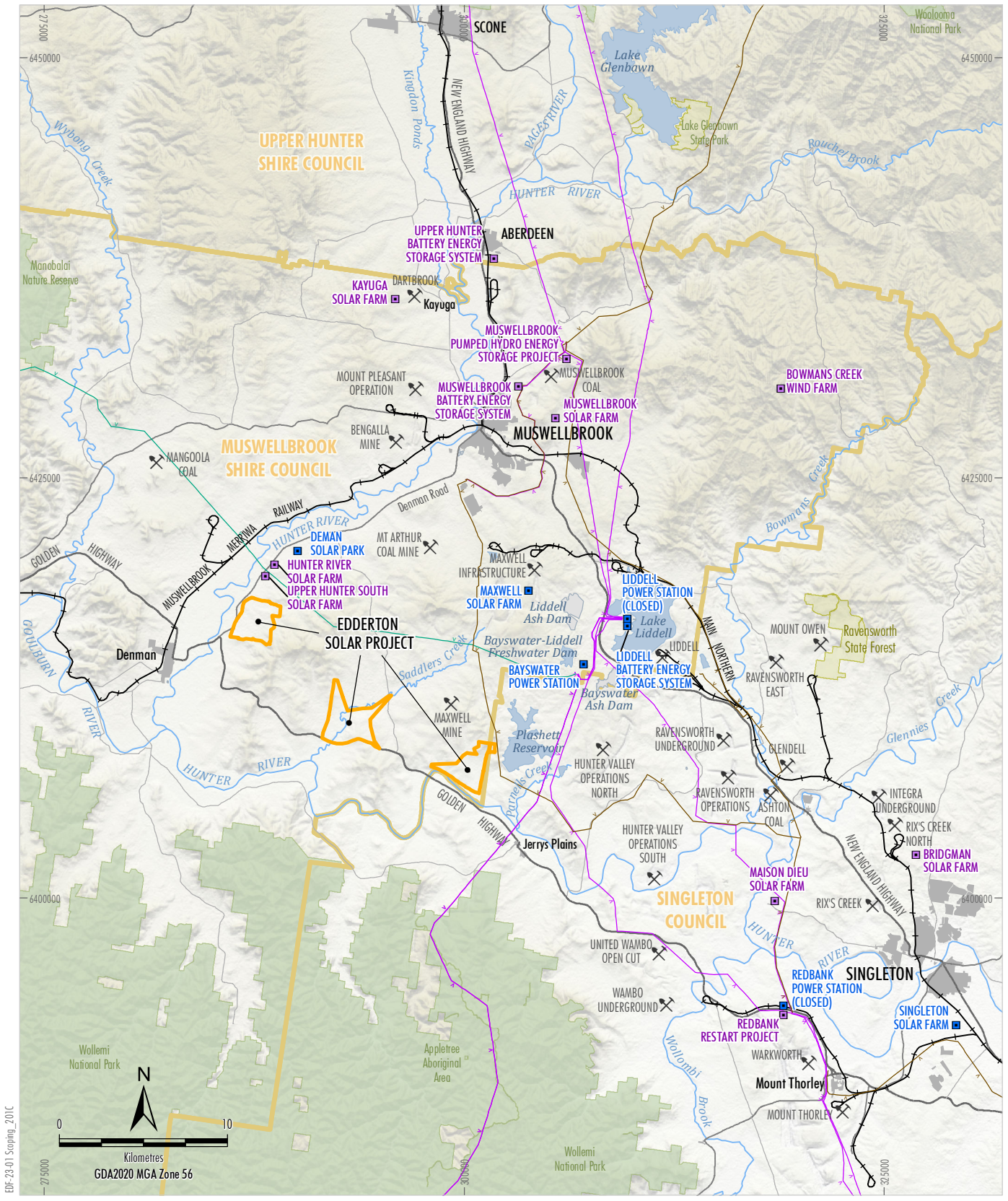
The Project would provide approximately 800,000 Megawatt-hours of electricity each year, which is enough to power at least 130,000 homes. It is anticipated that the Project would require approximately 400 to 450 full-time equivalent (FTE) construction personnel and approximately 10 to 15 FTE operations personnel.

Malabar and EDF Renewables are preparing an Environmental Impact Statement (EIS) to accompany a Development Application for the Project in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979*. Square Peg Social Performance Pty Ltd has been engaged to prepare the Social Impact Assessment (SIA) to support the Project EIS. This document is the SIA Scoping Report and its purpose is to inform the NSW Department of Planning, Housing and Infrastructure (DPHI) in its preparation of the Secretary's Environmental Assessment Requirements (SEARs) for the Project.

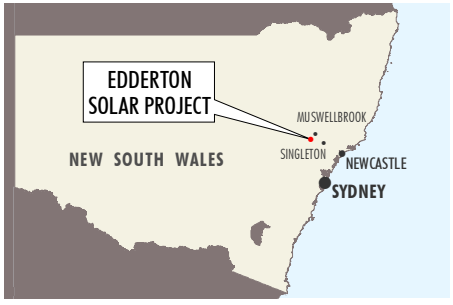
This document has been prepared in accordance with the *Social Impact Assessment Guideline* (herein referred to as the SIA Guideline) issued by the NSW Department of Planning and Environment (Department of Planning and Environment [DPE], 2023a), and its supporting *Technical Supplement – Social Impact Assessment Guideline for State Significant Projects* (henceforth the Technical Supplement) (Department of Planning and Environment (DPE), 2023b). In addition, the SIA consultation will be aligned with the requirements of the *Undertaking Engagement – Guidelines for State Significant Projects*, also issued by the DPE (Department of Planning and Environment, 2022d).

Further, The *Large-Scale Solar Energy Guideline* (Department of Planning and Environment, 2022c) provides guidance on the planning framework and assessment process for State Significant large-scale energy projects, such as the Project.





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- LEGEND**
- Indicative PV Study Area
  - Mining Operation
  - Local Government Boundary
  - State Forest/Reserve
  - National Parks and Wildlife Estate
  - Existing/Approved Energy Generation Site
  - Proposed Energy Generation/Storage Site
  - Electricity Transmission Line
  - 132kV
  - 330kV
  - 500kV

Source: EDF Renewables (2023); NSW Spatial Services (2023)



**EDDERTON SOLAR PROJECT**  
Regional Location

**Figure 1**



Edderton Solar Project  
Social Impact Assessment Scoping Report

The SIA scoping phase involves determining the size and scale of likely social impacts of the Project and the scope of the SIA. The key purpose of the SIA scoping process as described in the SIA Guideline are to (DPE, 2023a, p. 14):

- gain an initial understanding of the project’s social locality;
- gain an initial understanding of the characteristics of the communities within the project’s social locality (described as the social baseline);
- conduct an initial evaluation of the likely social impacts for different groups in the social locality and the level to which these impacts need to be assessed;
- consider potential refinements or approaches in response to likely social impacts; and
- consider the remainder of the SIA tasks, including engagement.

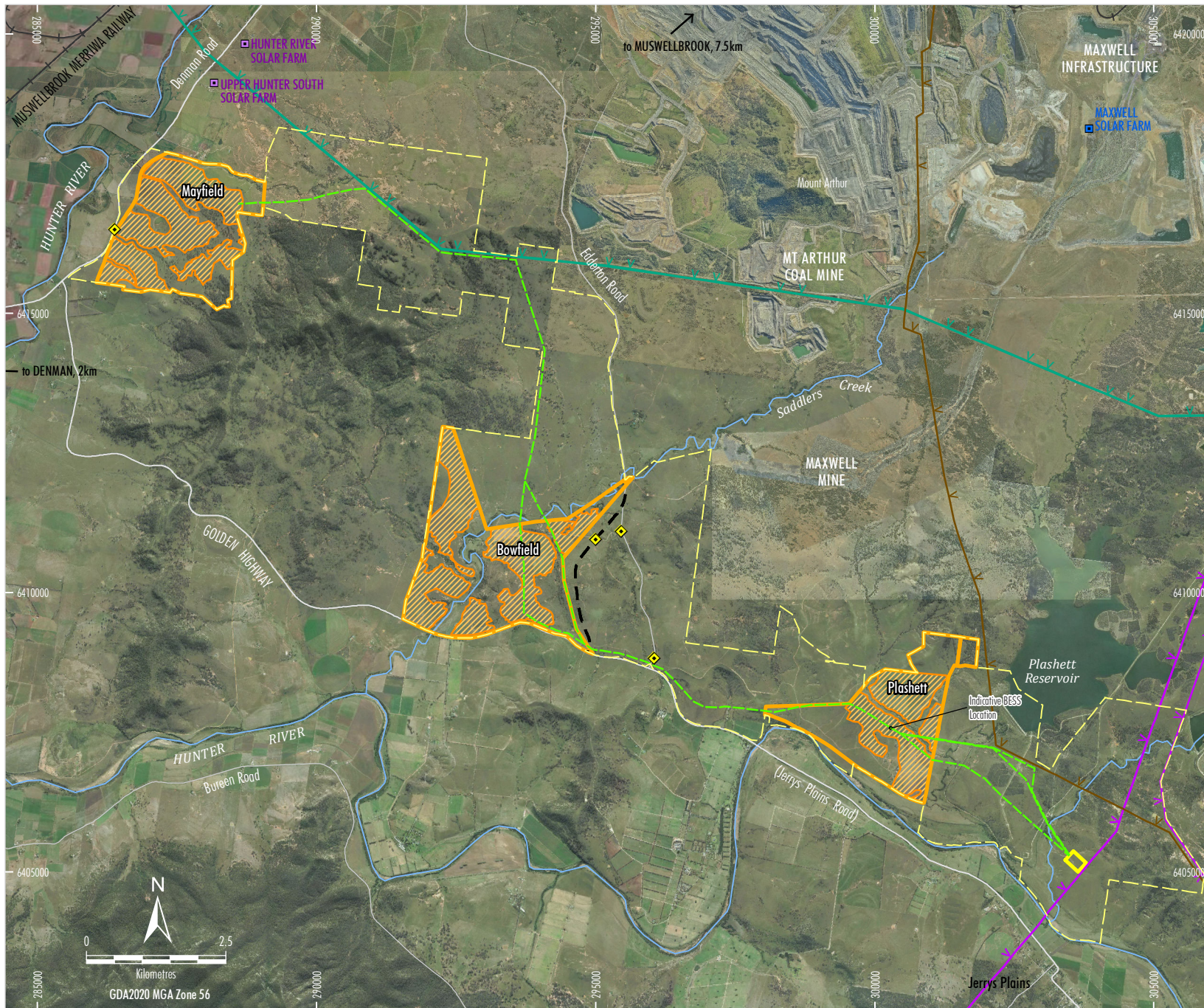
## 1.2 Project Description

The final detailed Project Description (to be included in the Project EIS) will be informed by the outcomes of environmental assessment and stakeholder engagement, however it is expected the Project would include the following activities:

- Three power islands known as Mayfield, Bowfield and Plashett which would generate a combined total of 350 MWac.
- An internal reticulation system to connect the Mayfield, Bowfield and Plashett power islands.
- A BESS nominally located at the Plashett power island (with the ability to store power from the three power islands as well as the electricity network).
- A 330 kV line to connect the combined generation of all three power islands into the existing Transgrid 330 kV Electricity Transmission Line (ETL), located south-east of the Plashett power island.
- Internal access tracks and upgrades to existing access roads, where required.
- Site access to the Mayfield power island from Denman Road and to the Bowfield and Plashett power islands from Edderton Road.
- Associated infrastructure and services.
- Operations and maintenance buildings, offices, welfare facilities and workshop, staff amenities and parking facilities.

An indicative general arrangement of the Project is shown in Figure 2.





- LEGEND**
- Provisional Development Application Area
  - Indicative PV Study Area
  - Indicative PV Area
  - Internal Reticulation System Easements Under Consideration
  - Indicative Main Site Access Point
  - Indicative Substation Location
  - Approved Edderton Road Realignment<sup>#</sup>
  - Existing/Approved Energy Generation Site
  - Proposed Energy Generation Site
  - Electricity Transmission Line
  - 132kV
  - 330kV
  - 500kV

Source: EDF Renewables (2023); Malabar (2018); NSW Spatial Services (2023)  
 Orthophoto Mosaic: Esri, Maxar, Earthstar Geographics, and the GIS User Community (2023)


Note: PV areas and Internal Reticulation System are indicative only and subject to change during detailed design.  
<sup>#</sup>Edderton Road Realignment approved as part of the Maxwell Underground Mine (SSD 9526).



**EDDERTON SOLAR PROJECT**  
**Indicative Project Layout**

**Figure 2**





Edderton Solar Project  
Social Impact Assessment Scoping Report

### 1.3 Document Structure

The remaining sections of this report are as follows:

- Section 2 describes the SIA scoping methodology.
- Section 3 outlines the stakeholder and community consultation that has informed this report.
- Section 4 describes the social localities for the SIA.
- Section 5 provides a preliminary social baseline.
- Section 6 provides the preliminary impact identification.
- Section 7 outlines a proposed methodology for the SIA to support the EIS.
- Section 8 provides a conclusion for the SIA.

Edderton Solar Project  
Social Impact Assessment Scoping Report

## 2. METHODOLOGY

The methodology for this SIA Scoping Report has been developed following the process set out in the SIA Guideline (DPE, 2023a), as well as taking into account good practice SIA literature, in particular the guideline by Vanclay and colleagues issued by the International Association of Impact Assessment (Vanclay et al., 2015).

Social impacts are generally considered to mean “all the issues associated with a planned intervention (i.e. a project) that affect or concern people, whether directly or indirectly. Specifically, a social impact is considered to be something that is experienced or felt in either a perceptual (cognitive) or a corporeal (bodily, physical) sense, at any level” (Vanclay et al., 2015, p. 2). Similarly, the SIA Guideline notes that social impacts are “the consequences that people experience when a new project brings change” (DPE, 2023a, p. 7).

Consequently, a SIA is considered to be “the process of identifying and managing the social issues of project development” (Vanclay et al., 2015, p. iv), and aims to assess projects “from the perspectives of people” (DPE, 2023a, p. 7). Various conceptualisations of social impacts exist; for the purpose of this SIA Scoping Report, the categorisations in the SIA Guideline (DPE, 2023a, p. 7) have been adopted (see Table 1 below). Importantly, the definition above and the categorisation place *people* and their *experience* of change at the centre of the notion of social impacts.

TABLE 1 SOCIAL IMPACT CATEGORIES

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

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Social Impact Assessment Scoping Report

## 2.1 Approach and Strategy

This SIA Scoping Report has followed an exploratory approach and involved multiple data sources. Commensurate with the SIA Guideline, it seeks to answer the following questions:

- 1) What are the likely social impacts associated with the Project, and how significant are these likely to be, including considering their nature and socio-geographic extent?
- 2) Who are the people that are likely to experience these impacts, and what is the nature of their communities?
- 3) How can these impacts and stakeholders best be studied for the second phase of the SIA, including engaging with relevant communities?

## 2.2 Data Sources

A wide variety of data sources have been used to develop this SIA Scoping Report. These are summarised in Figure 3 below.

FIGURE 3 DATA SOURCES

Project and proponent data	Socio-economic and demographic data	Local and regional plans	Proponent led consultation
<ul style="list-style-type: none"><li>•Project description</li><li>•Relevant EDF Renewables and Malabar publications</li></ul>	<ul style="list-style-type: none"><li>•Census and other demographic data from:<ul style="list-style-type: none"><li>- Australian Bureau of Statistics (ABS)</li><li>- Jobs and Skills Australia</li><li>- NSW Department of Communities and Justice</li><li>- NSW DPFI</li><li>- Commercial housing data providers</li></ul></li></ul>	<ul style="list-style-type: none"><li>•Community Strategic Plans for Muswellbrook and Singleton</li><li>•Hunter Regional Plan 2041</li><li>•Other publically available plans/reports addressing local and regional history as well as current economic and community issues and priorities.</li></ul>	<ul style="list-style-type: none"><li>•Face to face meetings</li><li>•Community drop-in sessions</li><li>•Maxwell CCC meeting</li></ul>


## 2.3 SIA Scoping Process

The SIA scoping phase unfolded during November and December 2023. Overall, it involved the following steps:

- 1) Project establishment and initial data gathering.
- 2) Reviewing feedback from proponent led consultation.
- 3) Describing the social locality, likely impacts and likely affected people.
- 4) Preparation of a preliminary social baseline for the social locality.
- 5) Development of a methodology for the subsequent phases of the SIA.

These steps are described further in the sections below.





Edderton Solar Project  
Social Impact Assessment Scoping Report

### **2.3.1 Project Establishment and Initial Data Gathering**

As a first step the SIA team established an understanding of the Project, its social environment and potential impacts by reviewing material relating to the Project. At this stage the SIA scoping methodology and data sources were identified, and secondary data was gathered.

### **2.3.2 Consultation**

The Proponent undertook stakeholder consultation that informed this SIA Scoping Report. Consultation involved meetings with Muswellbrook and Singleton Shire Councils, letters, phone calls and meetings to near neighbours to introduce the Project, community drop-in sessions, a presentation at the Maxwell Community Consultative Committee (CCC), and the launch of a Project website and a media release. The consultation process and outcomes are detailed in Section 3.

### **2.3.3 Determining Potential Impacts, Social Locality and Likely Affected Stakeholders**

The primary consultation data and secondary data was then analysed to identify likely social impacts associated with the Project, their spatial distribution (social locality) and who may experience these (stakeholders), this process is depicted in Figure 4. The criteria, categorisations and processes provided in the SIA Guideline and Technical Supplement provided guidance throughout this process.

#### *Identifying likely social impacts*

Likely social impacts were scoped and identified following the process described in the Technical Supplement (DPE, 2023b, pp. 7-9). Each respective impact was analysed to determine the likely significance and degree of assessment required. Likely social impacts are described in Section 6.

#### *Identifying potentially affected people*

The stakeholder categorisation provided in the SIA Guideline (DPE, 2023a, p. 29) provided the starting point in identifying people and groups who may be affected by the Project's social impacts and the preliminary impact identification and definition of social locality served to refine this.

#### *Determining the social locality*

According to the SIA Guideline a social locality should be defined for a project “depending on its nature and its impacts” and include an analysis of the scale and nature of the project, who may be affected, whether any vulnerable or marginalised people may be affected, built or natural features on or near the project, relevant social, cultural, demographic trends or social change processes, the history of the proposed project and the area (DPE, 2023a, pp. 16-18).

# Edderton Solar Project

## Social Impact Assessment Scoping Report

FIGURE 4 RECURSIVENESS OF SCOPING SOCIAL IMPACTS



The potentially affected people and the social locality are described in Section 4.

It is important to note that the definition of a social locality, likely impacts and likely affected stakeholders is a recursive process, where the various steps progressively inform each other (Figure 4). This recursiveness is likely to extend into the subsequent SIA phases. As new information emerges, stakeholders, impacts and localities may require re-consideration.

### 2.3.4 Preparing a Preliminary Social Baseline

Based on the identified stakeholders, impacts and social localities, a preliminary social baseline was then developed, seeking to describe key features of the community and its people. This included describing the history, social and economic indicators, indicators of community wellbeing and connectedness, and community and economic priorities and trends of the social locality. The preliminary social baseline is detailed in Section 5. A complete social baseline will be developed for the SIA to support the EIS.


### 2.3.5 Developing a Methodology for the SIA

Based on the data and analysis conducted during this scoping exercise, the requirements of the SIA Guideline, and good practice SIA approaches, a methodology for the SIA to support the EIS was then developed. This included identifying proposed data sources, data generation methods and analysis processes. Section 7 describes the proposed SIA methodology.

## 2.4 Assumptions and Limitations

All SIA processes and methodologies come with limitations and rely on certain assumptions. For this SIA Scoping Report, the following should be noted:

- This SIA Scoping Report has been developed to follow the approach outlined in the SIA Guideline and Technical Supplement.
- This SIA Scoping Report is exploratory and is aimed at informing the SIA to support the EIS. Findings and conclusions should be interpreted in that context.
- Secondary social, economic and demographic data about communities always have a time lag between data gathering and publication. Although this SIA Scoping Report uses the most recent data available, there is always a possibility of change occurring between the time of data gathering and publication.



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- All findings are based on the information available at the time of writing. It is possible that social, economic, demographic, cultural, environmental or Project-related information may change following the publication of this SIA Scoping Report.
- Secondary data sources have been produced using various methodologies, which themselves come with assumptions and limitations. To ensure the data is credible and robust, official sources (e.g. Government) have been prioritised, and relevant limitations have been noted.
- The statistical data provided in the preliminary social baseline sometimes consists of averages or medians. It is important to note that although this data provides a description of the population in that area, it should not be inferred that it necessarily represents all social entities within these areas.
- Consultation for this SIA Scoping Report was carried out by the proponent and feedback shared with the SIA team.
- All SIAs make statements about the future; about anticipated change processes and how these may be experienced by stakeholders. There is always an element of uncertainty associated with these change processes, and as such the findings in this report should not be interpreted as exact predictions.
- Finally, the SIA scoping process is not mechanistic, but one which relies to some extent on the judgements of the SIA practitioner. This SIA has aimed to transparently describe these judgements and the processes applied to identify them.



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### 3. STAKEHOLDER ENGAGEMENT FOR THE SCOPING REPORT

#### 3.1 Consultation Methods

The Proponent undertook consultation with stakeholders to inform them about the Project and seek their feedback during October 2023 to February 2024. Table 2 summarises the consultation undertaken to date, and APPENDIX A contains the consultation material that has been shared with community members. In total, over 30 stakeholders were directly consulted or informed about the Project during the SIA scoping phase.

**TABLE 2 CONSULTATION METHODS**

Method	Date	Detail
Meetings with Muswellbrook Shire Council	20 October 2023	Voltere held a preliminary meeting with Muswellbrook Shire Council to provide an introduction to the Project, and a subsequent meeting to inform about the indicative project layout area and provide an update on consultation undertaken.
	7 February 2024	
Meeting with Singleton Council	27 November 2023	Voltere held a Project briefing meeting with Singleton Council.
Meetings with Equine Enterprises	November 2023	Voltere consulted with nearby equine enterprises including Coolmore Stud, Godolphin Woodlands Stud, Monarch Stud and Fernrigg Farm to provide an introduction to the Project, as well as an overview of the planning process, consultation and project timeline, and encourage the stakeholders to share their interests and concerns to inform Project development including the Scoping Report.
Website	16 November 2023	A website containing project information was launched in November 2023, located at <a href="https://www.eddertonsolarfarm.com.au/">https://www.eddertonsolarfarm.com.au/</a> .
Media release	November 2023	A media release was distributed, and reported in local newspapers.
Letters, flyers and newsletters	November 2023	Letters were distributed to all landholders within a 3 km radius of the Project. The letters described the Project and its key components, as well as information regarding future consultation opportunities. The letter also provided an invitation to a community information session, as described below.
		Phone calls were made by representatives of Voltere to landholders located directly adjacent the Project to provide an overview of the Project, offer a one-on-one meeting and to explain ongoing consultation opportunities that will be available.
	25 January 2024	Flyers were distributed to all landholders within a 5 km radius of the Project and shared on the Denman Community Group Facebook Page. The flyers provided an invitation to an additional community information session as described below.
	January 2024	Malabar distributed a community newsletter which included an update about the Project.
Maxwell CCC meeting	15 November 2023	Voltere attended the Maxwell CCC meeting to provide an overview of the Project and its benefits including: the projects strategic location, alignment to the Energy Transition and NSW Electricity Infrastructure Roadmap, local context and aligned objectives. No issues or concerns were raised during the CCC meeting.
Community Drop-in session	28 November 2023	A community information session was conducted in Jerrys Plains. Representatives from Voltere attended the community information session to interact and engage with landholders to seek their feedback and input as part of the early project development phase.
	7 February 2024	A community information session was conducted in Denman on 7 February 2024. Representatives from Voltere attended the community information session to interact and engage with landholders to allow the community additional opportunity to provide feedback in relation to the Project.

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### 3.2 Consultation Findings

Table 3 below provides a summary of key themes raised during consultation undertaken to date. These key themes have informed the preliminary social impact identification outlined in Section 6.

**TABLE 3 CONSULTATION THEMES**

Key Theme	Detail	Relevance for Project/SIA
Visual	Stakeholders commented on the potential visual and glare impacts of the Project and how it would affect their amenity and sense of place.	<p>The SIA will investigate how landholders' sense of place is connected to visual amenity.</p> <p>The EIS will include a Landscape and Visual Impact Assessment. Findings from this assessment the visual impact assessment will be shared with nearby landholders for their input and validation.</p>
Land Use Compatibility	Surrounding stakeholders queried how the development would be compatible with existing land uses in the area such as agriculture (including equine businesses).	<p>The SIA will investigate how landholder's livelihood is connected to the existing land use.</p> <p>Further, a Land Use Conflict Risk Assessment will be undertaken consistent with the <i>Land Use Conflict Risk Assessment Guideline</i> (DPI, 2011) as part of the EIS to assess the compatibility of the Project with existing land uses during construction, operation and after decommissioning.</p>
Traffic	Some stakeholders commented on the potential for construction traffic associated with the Project, as well as other surrounding projects to affect the local road network.	<p>The SIA will investigate how road users accessibility will be affected by the Project.</p> <p>The EIS will include a Road Transport Assessment which will assess the local safety and capacity of the road network.</p>
Distribution of Benefits	Some local community members expressed that the impacts of the development are imposed on them whilst the benefits (e.g. lower greenhouse gas emissions and lower electricity prices) are obtained more broadly outside of the local region (e.g. by residents in Sydney). This included discussions around the appropriate mix of future energy generation sources.	The SIA will consider distributional impacts and intergenerational equity. Voltere will look at opportunities to share benefits with the local community in consultation with key stakeholders.
Environmental Management	Landholders were interested in how the site will be managed, for example in terms of bushfire and lightning risk as well as surface water management.	The EIS will include a Bushfire Risk Assessment to identify potential hazards and risks associated with bushfire. The minimisation of ignition risks and the protection of assets will be addressed in this assessment. Further mitigation and management measures will be considered to provide protection for the Project, the land and the community.

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Key Theme	Detail	Relevance for Project/SIA
Heritage Management	Some stakeholders discussed the potential for areas of Aboriginal cultural and historical significance within the Project area.	<p>A Surface Water Assessment will be included in the EIS which will consider potential impacts of the Project on the potential for surface water runoff impacts.</p> <p>The EIS and SIA will consider potential impacts to Aboriginal cultural and historical heritage.</p> <p>An Aboriginal Cultural Heritage Assessment will be conducted in consultation with the Registered Aboriginal Parties. Further, a Historic Heritage Assessment will be included in the EIS which assesses the potential impact of the Project on non-Aboriginal heritage items and places.</p>



## 4. SOCIAL LOCALITY AND POTENTIALLY AFFECTED STAKEHOLDERS

### 4.1 Defining the Social Locality

The social locality of the Project is the geographic area in which social impacts of the Project are likely to be experienced. According to the SIA Guideline, a social locality does not have a prescribed meaning but should be “construed for each project depending on its nature and its impacts” (DPE, 2023a, p. 16).

In determining the social locality for the Project, the following aspects have been considered:

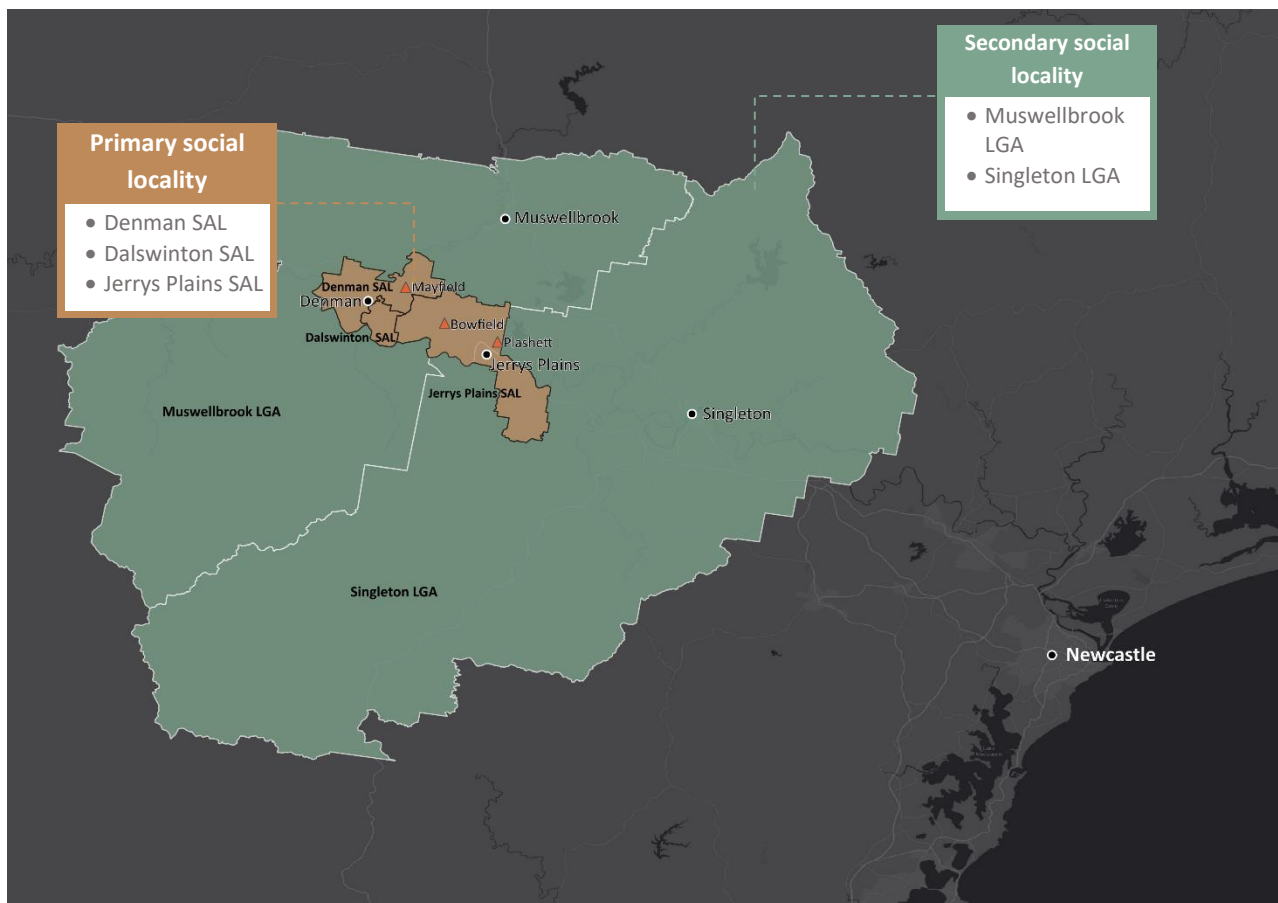
- **The location of Project infrastructure, including in relation to administrative boundaries.**  
The Project is within the Denman and Jerrys Plains Suburbs and Localities (SAL), and the SAL of Dalswinton is located directly between these. It is predominantly located within the Muswellbrook Local Government Area (LGA), but the southern extent of the Project is also within the Singleton LGA. The Project is located within the Hunter-Central Coast REZ.
- **The nature and scale of the Project.**  
The Project is a relatively large solar farm extending over three power islands, covering a total of 1,000 ha. In terms of employment, the construction workforce would also be relatively large at an estimated peak of 450 personnel, with the operational workforce much smaller. Comparing to many other projects in the region – predominantly mining projects – this is however a modest workforce.
- **Built and natural features near the Project.**  
The Project is located near the Golden Highway and Denman Road. The closest towns are Denman within Muswellbrook Shire LGA and Jerrys Plains within Singleton Shire Council LGA. There are numerous coal mines in the vicinity of the Project, including the Maxwell Underground Mine operated by Malabar, Mt Arthur Coal Mine operated by Hunter Valley Energy Coal, Mangoola Mine and Hunter Valley Operations. The nearby Liddell and Bayswater power stations are now being progressively decommissioned. The Hunter Valley is also a premier wine producing and equine industry location. Vineyards and horse studs near the Project include the Godolphin and Coolmore studs, and Hollydene Estate Wines and Malabar’s Merton vineyard. The Hunter River meanders through the area to the north, west and south of the Project.

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## 4.2 Proposed Social Localities

Taking into account the above, two social localities are proposed for the SIA; a relatively small primary social locality, and a larger secondary social locality. The primary social locality consists of the SALs of Denman, Dalswinton and Jerrys Plains. The Project is entirely comprised within the primary social locality, and most stakeholders who may experience direct, amenity related impacts such as visual amenity impacts and noise, dust and traffic associated with construction, are also located here. The secondary social locality includes the Muswellbrook and Singleton LGAs. This is where most of the socio-economic impacts such as business participation and employment opportunities associated with the Project are likely to be experienced. Impacts are however likely to be unevenly distributed across these social localities. Within the primary social locality, near neighbours are likely to experience most of the amenity related impacts. Further, given the scale of the project, and the distance to larger population centres (such as Muswellbrook and Singleton), most residents and stakeholders within the secondary social locality are likely to experience negligible – if any – impacts of the Project. Figure 5 illustrates the primary and secondary social localities for the SIA.

FIGURE 5 SOCIAL LOCALITIES



Source: Map generated using ESRI Basemap and ABS layers.

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### 4.3 Potentially Affected Stakeholders

The SIA to support the EIS would assess which stakeholders are likely to be affected by the Project. Table 4 provides a preliminary view of potentially affected stakeholders, categorised utilising the broad stakeholder categories provided in the SIA Guideline (DPE, 2023a, p. 29).<sup>1</sup>

**TABLE 4 POTENTIALLY AFFECTED STAKEHOLDERS**

Stakeholder group	Detail
Aboriginal people and groups	<ul style="list-style-type: none"> <li>• Indigenous residents within the primary and secondary social locality.</li> <li>• The Wanaruah Local Aboriginal Land Council.</li> <li>• Registered Aboriginal Parties (RAP) for the ACHA.</li> <li>• Aboriginal community organisations.</li> </ul>
Existing and in-migrating residents and businesses	<ul style="list-style-type: none"> <li>• The landholders, residents and workers in the immediate vicinity of the Project (within a 3km radius).</li> <li>• Residents in Denman and Jerrys Plains.</li> <li>• Residents and workers in the broader secondary social locality.</li> <li>• Coolmore Stud.</li> <li>• Godolphin Stud.</li> <li>• Hollydene Estate Wines.</li> <li>• Malabar’s Merton Vineyard and Small Forest Wines.</li> <li>• Monarch Stud and Fernrigg Farm.</li> <li>• landholders within the proposed reticulation easements, namely BHP, HVO and AGL</li> </ul>
Councils	<ul style="list-style-type: none"> <li>• Muswellbrook Shire Council and Singleton Council.</li> </ul>
Community, including stakeholder groups, business, cultural and environmental organisations, advocacy groups and peak bodies	<ul style="list-style-type: none"> <li>• Denman, Muswellbrook and Singleton chambers of commerce.</li> <li>• Local community and environmental organisations.</li> <li>• Local business organisations (e.g. Hunter Thoroughbred Breeders Association).</li> </ul>
Workers, contractors and suppliers	<ul style="list-style-type: none"> <li>• Potential construction contractors.</li> <li>• Future operational employees.</li> </ul>
Public and private service and infrastructure providers and regulatory agencies	<ul style="list-style-type: none"> <li>• Schools in Denman, Jerrys Plains and Muswellbrook.</li> <li>• Emergency services organisations servicing the primary social locality, including NSW Fire and Rescue, Rural Fire Brigades, Police and Ambulance.</li> <li>• NSW Health.</li> </ul>

<sup>1</sup> Note that this categorisation also includes elected representatives. These have not been included the table below as it is proposed they will be engaged outside of the SIA consultation process.



## 5. PRELIMINARY SOCIAL BASELINE

This section provides an initial description of the existing social environment for the primary and secondary social localities. In doing so it provides a preliminary baseline intended to build an understanding of the community. A complete social baseline will be developed for the SIA to support the EIS. This section has been informed by a review of local and regional plans, and an analysis of socio-economic and demographic data.

### 5.1 General Location

The Project is proposed to be located primarily within the Muswellbrook LGA in the Hunter Valley, the traditional home of people of the Wonnarua/Wanaruah language groups who inhabited the area for millennia prior to European settlement. The Hunter Valley is characterised by coal mining, equine and viticulture industries, and with the recent declaration of the Hunter-Central Coast REZ, increasingly renewable energy projects such as wind, solar and battery storage facilities.

The Project comprises three power islands to be located between the towns of Denman in the Muswellbrook Shire, and Jerrys Plains which extends into the adjacent Singleton Shire. Denman is the second largest town in the Muswellbrook LGA. The Jerrys Plains suburb crosses the boundaries between the Muswellbrook and Singleton LGAs, with the township on the Singleton side of the LGA border.

The Muswellbrook LGA covers 3,500 km<sup>2</sup> in the north-east of the Hunter Valley region, over 40% of this area are national parks with a large part of this area being Wollemi National Park in the south-west of the shire (Muswellbrook Shire Council, 2023). To the north is the Upper Hunter Shire, to the west is Mid-Western Regional LGA, and to the east is Singleton LGA. The Singleton LGA covers an area of 5,000 km<sup>2</sup> and much like Muswellbrook, has nearly 40% of its area covered by national parks, sharing some of Wollemi National Park as well as Yengo National Park (Singleton Shire Council, 2023). Singleton LGA is surrounded by Lithgow and Hawkesbury LGAs to the south, Cessnock and Maitland LGAs to the east, and Dungog and Upper Hunter LGAs to the north.

### 5.2 Demographic and Socio-Economic Baseline

#### 5.2.1 Population

At the time of the 2021 Census there were approximately 2,300 residents in the suburbs of the primary social locality (Denman, Dalswinton and Jerrys Plains). Denman is the larger of the suburbs, with approximately 1,800 residents. Approximately 400 people reside in Jerrys Plains, and Dalswinton has 57 residents.

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With respect to the secondary locality, Muswellbrook is the smaller of the LGAs with just over 16,000 residents and Singleton has approximately 24,000. Both LGAs have grown over the last 20 years, with Muswellbrook increasing by 10% and Singleton by 19%. Population projections to 2041 suggest that the Muswellbrook and Singleton LGAs will experience relatively modest population growth, or a minor decline.

At 8% and 12% respectively, the Indigenous population in Singleton and Muswellbrook LGAs is higher than the NSW proportion (3%). Both the primary and secondary social localities are more homogenous on other indicators with 77% to 88% of the population being born in Australia, and 81% to 93% speaking English only at home, compared to 65% and 68% for the same indicators across NSW (see Table 5).

**TABLE 5 KEY DEMOGRAPHIC INDICATORS**

	Primary social locality			Secondary social locality		NSW
	Denman	Jerrys Plains	Dalswinton	Muswellbrook Shire	Singleton Shire	
Population	1,821	447	57	16,357	24,577	8,072,163
Median age	43	34	36	37	37	39
Indigenous population	8%	7%	-	12%	8%	3%
Born in Australia	88%	80%	77%	85%	85%	65%
Speaking English only at home	92%	93%	81%	88%	91%	68%
Population change 2001-2022*	-	-	-	10%	19%	25%
Proj. annual population change 2021-2041**	-	-	-	0.29%	-0.25%	0.95%

Source: ABS 2021 Census General Community Profiles (Australian Bureau of Statistics, 2022a) unless otherwise noted.<sup>2</sup>

\* Based on ABS Regional Population 2021-2022 (Australian Bureau of Statistics, 2023a).

\*\* Based on NSW Planning, Population Projections (Department of Planning and Environment, 2022a). Projections reflect the common planning assumption projections.

### 5.2.2 Socio-Economic Indicators

Income levels in Muswellbrook LGA, including Denman are generally lower than the NSW medians while those in Singleton LGA, including Jerrys Plains, are higher. Dalswinton, which is located in Muswellbrook LGA also has higher median incomes. With regards to socio-economic disadvantage, Denman is located in the third decile within Australia of the Index of Relative Socio-economic Disadvantage (IRSD), meaning it is among the more disadvantaged suburbs in the country. By contrast, Jerrys Plains is located in the fifth decile and Dalswinton in the seventh.

<sup>2</sup> The ABS uses random adjustment of Census data to protect anonymity of respondents. This means that small values may not be reliable, and consequently cells with small values have been omitted in this and subsequent tables, affecting some data points for Denman, Dalswinton and Jerrys Plains.

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For the secondary social locality, Muswellbrook is located in the third decile of LGAs, whereas Singleton is in the seventh meaning it displays less socio-economic disadvantage. Education levels in the primary and secondary social localities is generally lower than the NSW state average.

The economy is largely characterised by agriculture and mineral extraction. In Dalswinton, 62% of the population is reported to work in the agricultural sector, and in the larger suburbs of Jerrys Plains and Denman this sector accounts for 40% and 8% of employment respectively. Mining accounts for 22% of employment in Denman, and 17% in Jerrys Plains. In the Muswellbrook and Singleton LGAs mining remains the top industry of employment with other dominant industries being health care and retail trade. At the time of the Census the unemployment rate in the secondary localities was below or the same as the NSW state average (Table 6).

**TABLE 6 SOCIO-ECONOMIC INDICATORS**

	Primary social locality			Secondary social locality		NSW
	Denman	Jerrys Plains	Dalswinton	Muswellbrook Shire	Singleton Shire	
Median personal income (weekly)	\$721	\$964	\$1,050	\$769	\$819	\$813
Median household income (weekly)	\$1,427	\$2,020	\$1,812	\$1,628	\$2,016	\$1,829
SEIFA IRSD index*	3	5	7	3	7	-
Top industries of employment**	Mining (22%) Health Care (8.2%) Agriculture (8.1%)	Agriculture (40%) Mining (17%) Administrative (6%)	Agriculture (62%) - -	Mining (22%) Health Care (9%) Retail Trade (8%)	Mining (22%) Health Care (9%) Retail Trade (8%)	Health Care (14%) Retail Trade (9%) PST Services (8.9%)
Highest year of schooling year 12 or equivalent***	30%	42%	-	33%	38%	59%
Bachelor degree or higher****	14%	22%	-	16%	20%	43%
Unemployment rate	2%	-	-	3%	2%	3%
Current estimated unemployment*****	-	-	-	5%	3%	3%

Source: ABS 2021 Census General Community Profiles (Australian Bureau of Statistics, 2022a) unless otherwise noted.

\* Socio-economic indexes for Australia (Australian Bureau of Statistics, 2023c). Decile within Australia.

\*\* Percentage of employed persons aged 15 years and over. Agriculture encompasses 'Agriculture, forestry and fishing' Administrative encompasses 'Administrative and Support Services', Health care encompasses 'Health care and social assistance' and Education encompasses 'Education and training', PST Services encompasses 'Professional, Scientific and Technical Services'.

\*\*\* Percentage of persons aged 15 years and over who are no longer attending primary or secondary school.

\*\*\*\* Percentage of persons aged 15 years and over with a non school qualification.

\*\*\*\*\* Jobs and Skills Australia, smoothed estimates June quarter 2023 for Muswellbrook and Singleton (Jobs and Skills Australia, 2023) and ABS Labour Force, Australia, June 2023 for NSW (Australian Bureau of Statistics, 2023b).



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### 5.2.3 Housing

Housing costs across the primary and secondary social localities are lower than the NSW medians, both for rents and mortgage repayments. The proportion of households in rental or mortgage stress (i.e. those where rental or mortgage payments are more than 30% of income) is also lower compared to NSW, particularly for households with a mortgage. Housing availability is currently very low with rental vacancy rates between 0.3% and 0.7% in Muswellbrook and Singleton LGAs (see Table 7 overleaf).

TABLE 7 HOUSING INDICATORS

	Primary social locality			Secondary social locality		NSW
	Denman	Jerrys Plains	Dalswinton	Muswellbrook Shire	Singleton Shire	
Median mortgage repayment (monthly)	\$1,650	\$1,376	\$2,694	\$1,517	\$1,917	\$2,167
Median rent (weekly)	\$280	\$350	\$200	\$300	\$338	\$420
Median weekly rent, new bonds (June qtr '23)*	-	-	-	\$420	\$495	\$600
Total bonds held*	-	-	-	1,724	1,515	863,473
Median sales price (March qtr '23)*	-	-	-	\$460,000	\$621,000	\$830,000
Household mortgage payments greater than 30%**	9.3%	-	-	9.2%	10.7%	17.3%
Household rental payments greater than 30%**	32.9%	-	-	30.7%	31.1%	35.5%
Rental vacancy rate (October '23)***	-	-	-	0.7% (POA 2333) 0.5% (POA 2328)	0.3% (POA 2330)	-
Rental vacancies (October '23)***	-	-	-	14	7	-

Source: ABS 2021 Census General Community Profiles (Australian Bureau of Statistics, 2022a) unless otherwise noted.

\* Source: NSW Department of Communities and Justice (Department of Communities and Justice, 2023)

\*\* Source: Australian Bureau of Statistics 2021 Census – Quickstats (Australian Bureau of Statistics, 2022b).

\*\*\* Source: SQM Research (SQM Research, 2023). Data is available at postcode (POA) level and the postcodes that most closely approximate the relevant areas have been selected. Postcodes 2328 and 2333 approximate Muswellbrook LGA. Postcode 2330 approximates Singleton LGA.

### 5.2.4 Health and Community Wellbeing

When it comes to health and wellbeing the situation across the primary and secondary social localities is mixed. The degree of volunteering, which can be an indicator of strong social capital and community wellbeing, is higher both in the primary and secondary social localities. The proportion of people who reported at least one long-term health condition in the 2021 Census was higher in Denman, Muswellbrook and Singleton than the NSW State average (see Table 8).

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**TABLE 8 HEALTH AND COMMUNITY WELLBEING INDICATORS**

	Primary social locality			Secondary social locality		NSW
	Denman	Jerrys Plains	Dalswinton	Muswellbrook Shire	Singelton Shire	
Volunteering*	19%	15%	-	12%	15%	13%
Need for assistance	6%	3%	-	6%	5%	6%
One or more long term health conditions	35%	22%	-	32%	29%	27%

Source: ABS 2021 Census General Community Profiles (Australian Bureau of Statistics, 2022a)

\* Percentage of persons 15 years and over.

### 5.3 Summary of Social Baseline

In summary, the characteristics of the primary and secondary social localities are:

- The Project is located within the Denman and Jerrys Plains Suburbs – the primary social locality – which both are within the Muswellbrook and Singleton LGAs in the Hunter Valley in NSW. This is the traditional home of the Wanaruah / Wonnarua people. It is a region characterised by viticulture, equine industries, coal mining and energy generation (Bayswater and Liddell power stations). The proportion of the population that are Aboriginal or Torres Strait Islander is comparatively high.
- The Hunter-Central Coast area has recently been declared a Renewable Energy Zone.
- Singleton is the larger of the two LGAs in the secondary social locality. The population in the Muswellbrook and Singleton LGAs is forecast to remain relatively stable over the coming two decades.
- The socio-economic conditions of the area are mixed, with relatively high income levels and less disadvantage in the Singleton LGA, and slightly lower incomes and higher degrees of disadvantage in Muswellbrook. Education levels are generally lower than the NSW state average. Unemployment rates are low.
- Housing costs are comparatively low across the primary and secondary social localities, however the availability of rental housing is very low.
- There is a greater degree of volunteerism in the study area than in NSW more broadly. People in the primary and secondary social localities are in general more likely to report one or more long-term health conditions than the NSW state average.

## 6. PRELIMINARY SOCIAL IMPACT IDENTIFICATION

### 6.1 Overview

A preliminary impact identification and assessment has been carried out as part of the SIA scoping phase, for the purpose of prioritising subsequent SIA data collection and analysis. The following process was followed to identify potential impacts:

- 1) Components or phases of the Project were listed and analysed as to whether the activities associated with these may give rise to a change with regards to the social impact categories described in Section 2.
- 2) For all identified impacts, the potentially affected stakeholder groups (i.e. those people who may experience the change) were then described.
- 3) A preliminary significance analysis was then carried out considering the likely duration, severity and scale, sensitivity of people affected and their level of concern or interest.

This analysis formed the basis for the proposed level of assessment to be carried out in the second phase of the SIA. APPENDIX B details potential impacts should the Project proceed. As this is a greenfield Project, these impacts would not eventuate should it not proceed.

### 6.2 Potential Impacts of the Project Proceeding

Table 9 summarises the preliminary social impact identification process and outlines the proposed level of assessment to be deployed in the SIA and other relevant EIS studies.

**TABLE 9 POTENTIAL SOCIAL IMPACTS OF THE PROJECT PROCEEDING**

Category	Potential impact	Nature	Potentially affected stakeholder groups	Proposed level of assessment
Surroundings	Construction related noise, dust and lighting impacts affect the quality of life and amenity of nearby landholders.	Negative	Nearby landholders, including vineyards and horse studs.	Detailed
	Potential visual impact of the Project, reducing aesthetic and amenity values.	Negative	Nearby landholders and residents, including vineyards and horse studs.	Detailed
Culture	Potential disturbance to Aboriginal cultural heritage sites.	Negative	Aboriginal stakeholders, particularly the RAPs.	Detailed
Livelihoods	Employment opportunities for local residents during construction.	Positive	Local residents, jobseekers.	Detailed
	Business opportunities for local businesses during construction, thus contributing to a diversified local economy.	Positive	Local businesses.	Detailed



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Category	Potential impact	Nature	Potentially affected stakeholder groups	Proposed level of assessment
	Employment and business opportunities during operations and maintenance phases.	Positive	Local residents and businesses.	Standard
	Business opportunities associated with decommissioning and rehabilitation.	Positive	Local businesses.	Standard
Accessibility	Potential for unsustainable demand for short term workforce accommodation.	Negative	Accommodation providers, vulnerable community members, tourists and other visitors.	Detailed
	Potential for construction traffic to affect accessibility, amenity and travel times for other road users.	Negative	Local residents, tourists and other visitors.	Detailed
Community	Community contributions support the vitality of local community groups.	Positive	Community organisations.	Standard

The Project is located in a REZ with many other proposed renewable energy projects, as well as existing and proposed mining operations. As such, it is anticipated that there will be a cumulative aspect to many of these potential impacts. Furthermore, the multiplicity of proposed projects within the REZ also adds a potential distributive equity aspect to these cumulative impacts. It is possible that affected stakeholders will feel that they are bearing much of the cost of Australia’s energy transition, whilst benefits will largely accrue elsewhere.

In addition to these potential impacts and opportunities which are likely to extend across the primary and secondary social localities, the Project is also expected to generate broader benefits. As a renewable energy project it would contribute to NSW transitioning away from carbon-based electricity generation, thus reducing greenhouse gas emissions within the State. It is further anticipated that this may contribute – together with other renewable energy projects – to lower electricity prices. Storage of generated electricity in a BESS would manage intermittency of solar generation due to weather events (i.e. would allow for battery discharge during periods of peak demand and help stabilise the electricity grid).

In summary, the impacts described above will be further investigated in the subsequent SIA phases, including an analysis of the significance and the development of mitigation measures. The SIA to support the EIS would also consider potential newly-identified impacts, or new information about these impacts which may warrant reconceptualization or a different level of assessment. A cumulative impact assessment will also be included in the SIA to support the EIS, and potential distributive equity considerations will be addressed.

No refinements to the Project scope or definition have been proposed based on this preliminary assessment.

## 7. PROPOSED METHODOLOGY FOR THE SECOND PHASE OF THE SIA

The second phase of the SIA process will involve conducting additional SIA specific consultation, and additional desktop research. Findings will be analysed and used to evaluate social impacts in accordance with the evaluation framework in the SIA Guideline (DPE, 2023b), and following this mitigation measures will be developed. These steps are further described below.

### 7.1 SIA Consultation and Primary Research

Consultation and primary data collection with community members will be a key step in the second phase of the SIA. Consultation for the second phase of the SIA will aim to:

- collect and confirm further primary data about the potentially affected community;
- seek input into social impact identification and significance assessment, particularly seeking to understand how impacts may be experienced from the stakeholders' perspectives;
- ensure stakeholders have an opportunity to provide feedback into the Project planning and design; and
- seek community input to impact evaluation and prioritisation of mitigation measures.

#### 7.1.1 Consultation Methods


The main SIA specific consultation methods will be semi-structured interviews with a sample of stakeholders, participation in the Maxwell CCC, and a community drop-in session.

##### *Semi-structured Interviews*

Commensurate with a qualitative research and consultation strategy, a targeted sampling strategy will be developed for the stakeholder interviews and meetings. Stakeholders will be selected aiming to achieve the following criteria:

- 1) Seek participation from all stakeholder groups outlined in the SIA Guideline (p.29 of the SIA Guideline and column one of Table 4 above).
- 2) Prioritise stakeholders that are likely to be directly affected.
- 3) Seek a balanced mix of stakeholders representing social, cultural and economic perspectives, and a balanced mix of genders.
- 4) Involve potentially vulnerable stakeholders, or where that is not possible or appropriate, organisations that represent their interest.

In light of the likely geographically contained nature of the social impacts associated with the Project, approximately 15 stakeholders will be included in the semi-structured interviews. A flexible conversation protocol will be developed to support the interviews. Participants will be informed about the purpose of the consultation, and notes from the consultation will be shared to seek their feedback. The aim of this is to ensure the findings adequately represent the participants' information, as well as to achieve communicative validity.



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Further, a core consideration for the consultation process is for it to be carried out in an ethical fashion, particularly seeking to ensure that participants understand how their information will be stored, analysed and presented, and giving them the opportunity to determine how their information will be attributed. Participants' verbal or written consent will be sought prior to a consultation event commencing.

*Community Consultative Committee Meeting*

The Maxwell CCC will be utilised as a focus group, seeking feedback on the proposed impact identification and assessment. Participation in at least one CCC meeting is aimed at conducting a community based social impact evaluation and prioritisation of mitigation measures.

*Community Drop-in Session*

Two community drop in sessions have been conducted for the Project. The first community drop-in session was conducted in Jerrys Plains on 28 November 2023, and the second in Denman on 7 February 2024.

Voltere will conduct further community drop-in sessions during the preparation of the EIS to seek feedback from the community on the Project and key environmental considerations to be included in the EIS.

## 7.2 Additional Desktop Research


Primary research and consultation will provide the main data input for the remainder of the SIA. However, further secondary (desktop) research will also be conducted. This will include expanding the social baseline with additional social, economic and demographic data and conducting further documentary analysis. It will also include analysing findings from other technical studies as part of the EIS, in particular those relating to visual, noise, air quality, surface water, Aboriginal cultural heritage and economics.

## 7.3 Impact Assessment

Social impacts will be described, analysed and evaluated using the processes and criteria outlined in the Technical Supplement (DPE, 2023b). The assessment will also consider intergenerational as well as distributive equity associated with the Project.

A cumulative impact assessment will be undertaken in accordance with the *Cumulative Impact Assessment Guidelines for State Significant Projects* (Department of Planning and Environment, 2022b), drawing on publicly available data about other relevant projects as well as feedback from community stakeholders. As there are multiple operating and planned projects in the area, including coal mines, solar and wind farms as well as mines and power stations currently in or soon to be in closure, it is likely most impacts will display some cumulative aspects.





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#### 7.4 Develop Mitigation Measures

The SIA will also include development of recommended mitigation measures. These will take into account the factors described in the Technical Supplement (DPE, 2023b, p. 15), and the recommendations for benefit sharing outlined in the Large Scale Solar Energy Guideline (DPE, 2022c, p. 27).


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## 8. CONCLUSION

This SIA Scoping Report has identified ten social impacts associated with the Project proceeding, for further evaluation during the second phase of the SIA (see Figure 6). Of these, seven are proposed to require detailed assessment, and three standard assessment.

**FIGURE 6 SOCIAL IMPACTS IDENTIFIED DURING SCOPING PHASE**


Surroundings	Culture	Livelihoods	Accessibility	Community
<ul style="list-style-type: none"> <li>•Construction related noise, dust and lighting impacts affect the quality of life and amenity of nearby landholders.</li> <li>•Potential visual of the Project, reducing aesthetic and amenity values.</li> </ul>	<ul style="list-style-type: none"> <li>•Potential disturbance to Aboriginal cultural heritage sites.</li> </ul>	<ul style="list-style-type: none"> <li>•Employment opportunities for local residents during construction.</li> <li>•Business opportunities for local businesses during construction, thus contributing to a diversified local economy.</li> <li>•Employment and business opportunities during operations and maintenance phases.</li> <li>•Business opportunities associated with decommissioning and rehabilitation.</li> </ul>	<ul style="list-style-type: none"> <li>•Potential for unsustainable demand for short term workforce accommodation.</li> <li>•Potential for construction traffic to affect accessibility, amenity and travel times for other road users.</li> </ul>	<ul style="list-style-type: none"> <li>•Community contributions support the vitality of local community groups.</li> </ul>



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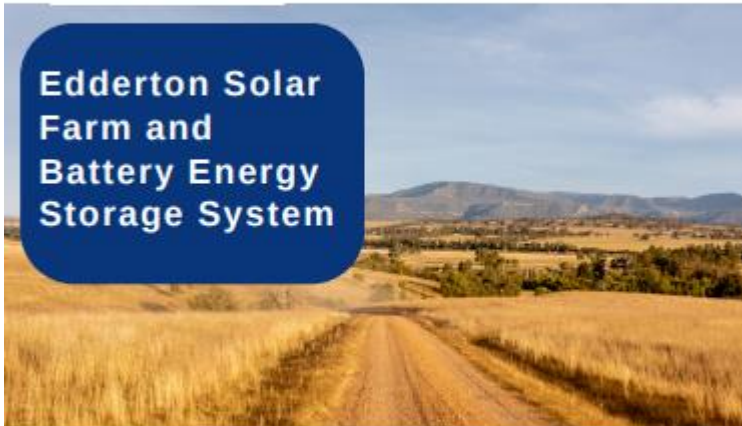
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APPENDIX A      Consultation Material



## Edderton Solar Farm and Battery Energy Storage System

**EDF Renewables Australia and Malabar Resources are collaborating on the Edderton Solar Farm and Battery Energy Storage System project, to be constructed in the Hunter Valley.**

### **Community Drop In Day**

EDF Renewables and Malabar are hosting this session to:

- introduce neighbours to the project
- introduce neighbours to the team
- ensure feedback from neighbours is included as part of early project development

### **EDF Renewables Australia**

Established in 2017, EDF Renewables Australia has successfully developed and secured a large portfolio of wind and solar power generation opportunities across Australia.

### **Malabar Resources**

Malabar Resources is an independent Australian owned resources company. Malabar recognises the need to transition to a low carbon economy and is focussed on delivering high-quality metallurgical coal, renewable energy, and agricultural products.

Edderton Solar Project  
Social Impact Assessment Scoping Report

### Project Investigation Area



### Estimated Project Timeline



#### Find out more:

Contact Hannah Coffey on 0418 656 583 or [hannah@taylorconnect.org](mailto:hannah@taylorconnect.org)

Visit [www.eddertonsolarfarm.com.au](http://www.eddertonsolarfarm.com.au) to find out more about the project

Contact [australia@edf-re.com.au](mailto:australia@edf-re.com.au) to register for project updates



**EDF Renewables Australia and  
Malabar Resources**

**COMMUNITY DROP-IN**

**Edderton Solar Farm & BESS**

Join us and have your say!

**Wednesday 7th February**

**Denman Memorial Hall  
30 Ogilvie Street Denman  
From 2pm to 7pm**







To the Landholder

EDF Renewables Australia Pty Ltd  
Level 1, 60 Martin Place  
Sydney, NSW 2000

16 November 2023

Dear Neighbour,

**EDF Renewables Australia - Edderton Solar Farm**

My name is Dave Johnson and I am the CEO of EDF Renewables Australia (EDF R). EDF R has recently entered into a joint venture with Malabar Resources to explore renewable energy projects on their landholdings in the Hunter Valley region. I'm writing today to introduce the Edderton Solar Farm, which would be developed under this joint venture.

The Edderton Solar Farm is a significant milestone in the development of the Hunter Central Coast Renewable Energy Zone, which was established by the NSW Government in late 2020. It will bring diversified investment to the local economy and will strengthen the power network with battery storage and peaking power.

While we are still early in the investigative stage of project development, it is currently anticipated that the project will comprise of three distinct power 'islands' on land owned by Malabar Resources (refer Attachment 1). We're also investigating the potential for a Battery Energy Storage System or BESS to be deployed at the Edderton Solar Farm site.

The Solar Farm would produce approximately 800,000 MWh each year, which is enough to power at least 130,000 homes. The number of homes that could be powered by the Solar Farm is equivalent to the number of homes in the Muswellbrook, Singleton, Upper Hunter and Newcastle local government areas.

Building on the relationships established by Malabar Resources in the local community, EDF R's approach to developing renewable energy projects is to involve stakeholders early in the process to share information including the status of the investigation and the anticipated timeline of assessment and development. It's also important to us to hear from you regarding any questions, issues or concerns you may have, to ensure these are factored into the project development from the very beginning.



Renewable energy project investigations and development can take a long time. Over the coming months, EDF R will engage with landholders and other stakeholders, whilst undertaking various technical and environmental studies to support an investment decision on the project. The upcoming environmental studies will also support preparation of an Environmental Impact Statement (EIS) that would be submitted to the NSW Government to support its review and assessment of the Edderton Solar Project. We will engage with the local community during the preparation of the EIS to ensure community feedback is gathered, considered in our future plans and concerns are addressed.

Our team is available to provide more information and will keep you regularly informed as the investigation continues.

In order to avoid the busy holiday period, we will be hosting drop-in sessions on 28 November 2023 and 1 February 2024 where we will be available to discuss the project in more detail. Details of the first session are below, and details regarding the second session will be shared in the new year.

Date: 28 November 2023  
Time: 2pm – 7pm  
Location: Jerrys Plains School of Arts Hall

Please contact our Community Relations Manager Hannah Coffey on 0418 656 583 or by email at [hannah@taylorconnect.org](mailto:hannah@taylorconnect.org) to discuss the project and register your interest to attend a drop-in session. You can also find out more information by visiting our project website, [www.eddertonsolarfarm.com.au](http://www.eddertonsolarfarm.com.au).

We look forward to meeting you and discussing the proposed Edderton Solar Farm further.

Yours sincerely

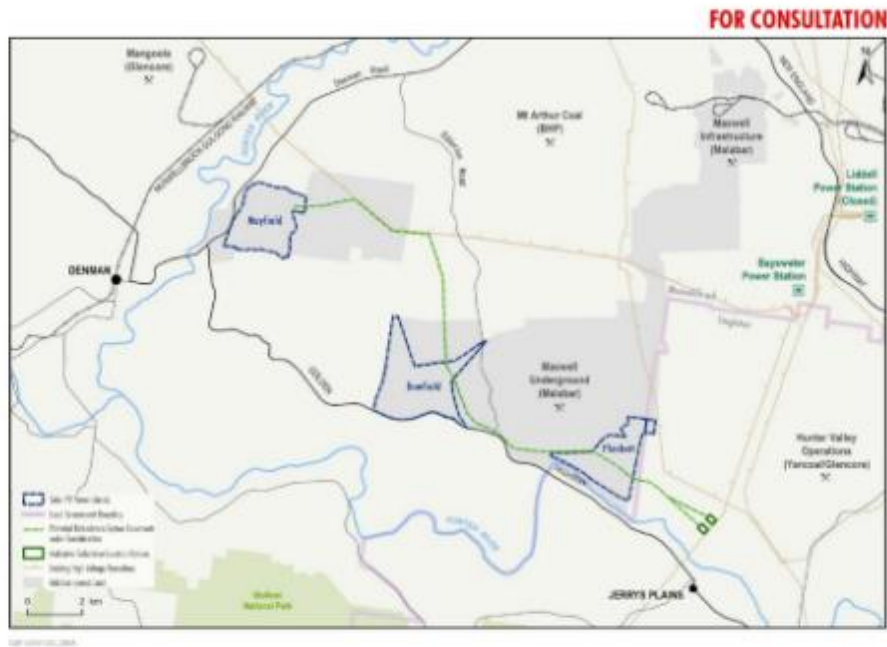
**Mr Dave Johson**  
**Chief Executive Officer**  
EDF Renewables Australia  
[www.edf-renewables.com](http://www.edf-renewables.com)

# Edderton Solar Project

## Social Impact Assessment Scoping Report



Attachment 1 – Investigation Area Map



# Edderton Solar Project

## Social Impact Assessment Scoping Report

### EDF Renewables Australia

Established in 2017, EDF Renewables Australia is developing a large portfolio of wind and solar power generation opportunities across Australia.

### Malabar Resources

Malabar Resources is an independent Australian owned resources company. Malabar recognises the need to transition to a low carbon economy and is focussed on delivering high-quality metallurgical coal, renewable energy, and agricultural products.



### Community Drop in

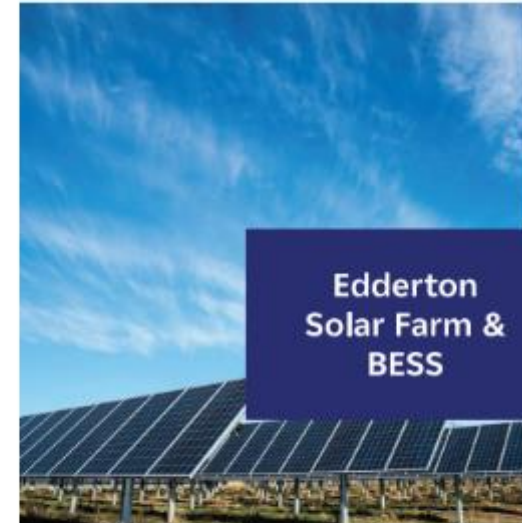
Feel free to come and meet us at  
**Denman Memorial Hall - 30 Ogilvie Street, Denman - on 7 February from 2pm - 7pm**

### Find out more:

Contact Hannah Coffey on 0418 656 583 or [hannah@taylorconnect.org](mailto:hannah@taylorconnect.org)

Visit [www.eddertonsolarfarm.com.au](http://www.eddertonsolarfarm.com.au) to find out more about the project.

Contact [australia@edf-re.com.au](mailto:australia@edf-re.com.au) to register for project updates.



EDF Renewables Australia and Malabar Resources are collaborating on the Edderton Solar Farm and Battery Energy Storage System project, to be constructed in the Upper Hunter Valley.

<https://www.eddertonsolarfarm.com.au/>





# Edderton Solar Project

## Social Impact Assessment Scoping Report



### Community Drop In Day

EDF Renewables and Malabar are hosting this session to:

- introduce neighbours to the project
- introduce neighbours to the team
- ensure feedback from neighbours is included as part of early project development



### Estimated Project Timeline





UPDATE  
JANUARY 2024

COMMUNITY NEWSLETTER

### Malabar Resources: A New Approach to Resource Management

We are building a successful resources company for the long-term benefit of all stakeholders while listening to our communities.



- \* Malabar Resources is an independent Australian-owned resources company based in the Upper Hunter Valley, in New South Wales taking a new approach to resource management.
- \* We are employing underground mining methods, focusing on metallurgical coal, developing large scale renewable energy projects, and rehabilitating previously mined areas for sustainable activities including renewables and agriculture.
- \* In addition to the Maxwell Underground Mine, we own the Maxwell Solar Farm based on rehabilitated land, Maxwell Infrastructure, the Spur Hill Underground Project, and agricultural properties including the Merton Vineyard. We are also developing the Edderton Solar Farm with our partner, EDF Renewables.







UPDATE  
 JANUARY 2024

### MAXWELL UNDERGROUND MINE UPDATE

Over the past 12 months we have achieved several key milestones and substantial progress on the Maxwell Underground Mine including:

- Surface construction activities are well advanced.
- The Coal Handling and Preparation Plant (CHPP), train load-out facility, and rail loop have been successfully refurbished and recommissioned.
- Services and utilities are well advanced or complete including 10km access road, permanent power established, water systems and dams.

There are several key benefits of the mine including:

- Underground mining ensures minimal surface disturbance, relatively minimal impacts on the surrounding air quality, minimal noise impacts, and the absence of operational blasting.
- At least 75% of the volume of coal produced by the Maxwell Underground Mine (and 80% on a revenue basis) will be metallurgical coal suitable for making steel. The balance would be suitable for the new generation High Efficiency, Low Emissions (HELE) power generators.
- Our view is that the continued use of our high calorific value (CV), low sulphur, low ash coal, leads to lower emissions (per unit of energy produced) and will continue to be the product of choice for HELE power stations. The favourable qualities of the coal produced at the Maxwell Underground Mine are well suited for HELE power stations.

First coal was produced from the Bord and Pillar operation in March 2023. The first train departed the mine in June 2023.



Coal production at the Maxwell Underground Mine has continued steadily following the departure of the first coal train for the Port of Newcastle in June 2023.

The mine comprises of a long-life underground longwall operation supplemented by a Bord and Pillar operation. The mine will deliver approximately 450 new, direct, long-term jobs in the local region and many more indirect jobs. This will provide a real boost for the local economy, keeping families and young people in the region. Likewise, the mine will support local businesses and suppliers over the course of its 25-year life span.



**£1-1.25 BILLION** IN MINING ROYALTIES FOR THE PEOPLE OF NSW  
**£0.9-1.1 BILLION** IN ANNUAL EXPORT INCOME  
 over its initial 25 years of operations





UPDATE  
JANUARY 2024

## RECRUITMENT DRIVE

Malabar has commenced the ramp up of operations and is now seeking to enlarge our workforce to cater for the future needs of operations. Our recruitment is now in full swing to attract employees who are keen to carve out long term careers where they can make a difference to the resources sector.

Malabar stands out in the mining sector by offering unparalleled benefits:

- \* **Enduring Career Opportunities:** Forge a lasting career with Malabar as we proudly hold a development consent that allows mining for the next 25 years and continuously expand our projects, providing stability and growth for your professional journey.
- \* **Empowering Can-Do Culture:** Join a workforce that thrives on a can-do culture, where your contributions and insights are welcomed and valued. Your proactive approach will help shape our success.
- \* **Opportunity and Advancement:** Experience a commitment to internal promotions with a wide variety of diverse opportunities available across our business. Your career path is not limited, ensuring you can explore and excel in various areas within the organisation.
- \* **Inclusive Environment:** Be part of our close-knit community at Malabar, where every individual is cherished. Our environment fosters a sense of belonging, ensuring that each person's unique talents and perspectives contribute to our collective success.



### UNEARTH a long term career with Malabar

If you want to be a valued member of our Malabar team, submit your expression of interest here:

[malabarresources.com.au/peoplecareers/](https://malabarresources.com.au/peoplecareers/)



450  
NEW JOBS  
GENERATING OVER

\$68 MILLION PER YEAR IN WAGES







UPDATE  
JANUARY 2024

## UPDATES ON SOLAR PROJECTS

### MAXWELL SOLAR FARM

Malabar is continually looking at ways we can lower emissions and minimise our impact on the local environment. The Maxwell Solar Farm represents our first investment into renewable energy, a major component of our commitment to emissions reduction.

Stage 1 of the project has been approved for 25MW. This means it will generate up to 60 gigawatt hours annually, equivalent to enough energy to power around 10,000 homes.



**60GW**

Generating over 60 gigawatt hours annually



**~10,000**

Powering around 10,000 homes

It is located on rehabilitated land that was previously an open-cut mine and positioned within the designated Hunter-Central Coast Renewable Energy Zone, established by the NSW Government in late 2020.

Electricity generated at the site will contribute to Malabar's energy needs, helping the business achieve its decarbonisation goals.

### EDDERTON SOLAR FARM

Malabar and EDF Renewables Australia have established a joint venture to develop the Edderton Solar Farm in the Hunter Valley, bringing local and global expertise to large-scale solar energy development in the Upper Hunter region.

The project will provide diversified investment into the local economy and help to deliver more reliable, cheaper, and cleaner energy.

The plan is to build a large-scale solar farm over three distinct power 'islands' on land owned by Malabar. The islands will be in Mayfield, Bowfield and Plashett.



**~350MW**

Spread over 3 distinct "Power Islands"



**2025**

When we expect construction to commence

The Edderton Solar Farm will use the existing transmission and help support the infrastructure in the region, helping to support NSW's transition to net zero emissions.

The solar farm would produce approximately 800 GWhrs of electricity each year, which is enough to power at least 130,000 homes. The number of homes that could be powered by the solar farm is equivalent to the number of homes in the Muswellbrook, Singleton, Upper Hunter, and Newcastle local government areas.

We are currently undertaking community consultation, including holding meetings with local councils, surrounding private landholders and business owners, relevant government agencies. A community drop-in session is being held in February 2024 with more details available on our social media. These engagements will help inform the project's Social Impact Assessment.

We aim to commence the planning approval process early this year, with the scoping report expected to be lodged with the NSW Department of Planning and Environment in the first half of 2024.





UPDATE  
JANUARY 2024

## OUR WORK WITHIN THE LOCAL COMMUNITY

### CCC MEETING - 15TH NOVEMBER 2023

Malabar continues to engage with community stakeholders through its Community Consultative Committee (CCC) which meets on a quarterly basis. The CCC provides a forum for discussion between Malabar and representatives of the local community, key stakeholder groups and the local council on issues relating directly to Malabar's projects.

The most recent meeting of the CCC was held on the 15th of November 2023 providing an update and site tour of the Maxwell Underground Mine as well as offering attendees the opportunity to provide initial feedback on the proposed Edderton Solar Farm project. Meeting minutes can be found on our [website](#).

### COMMUNITY SPONSORSHIP

Malabar is an active participant in the local community and continues to support a wide range of local groups, businesses, and charities, with over \$600,000 donated to date. We believe the regions in which we operate should be the main beneficiary of our presence. Over the last year, Malabar has been involved in community events and sponsorships, further demonstrating Malabar's authentic dedication to the community. Beyond specific events, Malabar has consistently demonstrated its commitment to the community through various sponsorships and collaborative endeavours. Our involvement spans local schools, sports clubs, and cultural events.



MALABAR HAS CONTRIBUTED OVER:

**\$600k**  
TO DATE IN  
COMMUNITY  
SUPPORT



### ROOHAVEN WILDLIFE RESCUE

Roohaven Wildlife Rescue, a non-profit organisation in Muswellbrook run by Brad and Julie Smith, has been dedicated to rescuing and rehabilitating injured native wildlife.

Currently caring for kangaroos, wallabies, wombats, birds, and a possum, some requiring 3 to 4 daily milk feeds, Roohaven received a grant from the Malabar Community Sponsorship Program to support their efforts. The Malabar team were delighted to visit Roohaven and assist in feeding the joeys.







UPDATE  
JANUARY 2024

## OUR WORK WITHIN THE LOCAL COMMUNITY

### DENMAN SANDY HOLLOW JUNIOR RUGBY LEAGUE CLUB AND MACKENZIE DAY

Malabar has been the long-time major sponsor of local junior rugby league club the Denman Sandy Hollow Devils, who cater for both boys and girls teams from Under 6s all the way up to senior divisions.

Malabar recently had the opportunity to visit the club during their training at Denman Oval and provide them with new equipment for the approaching season.

A standout player for the club is Mackenzie Day, who has proven to be an integral member of the Under 17s women's team this year.

Her talent was identified by the Wanderers Australia representative team, who invited her on their 2023 tour of the UK and France in December.

As part of the Malabar Community Sponsorship Program, Mackenzie Day received a grant to help cover the costs associated with her participation in this prestigious tournament.

This is a once in a lifetime opportunity for Mackenzie to travel overseas and represent her country whilst playing the sport that she loves.



### SHINING BRIGHT: MALABAR SUPPORTS 2NM/POWERFM CHRISTMAS APPEAL

The spirit of giving is alive and well in the Malabar community and we are proud to have joined hands with the not-for-profit BlackRoo Community Indigenous Corporation to support the annual 2NM/PowerFM Food and Toy Christmas Appeal. This appeal touches the lives of local families, providing them with gifts and hampers during the festive season.

This year Malabar has donated \$2000 through our Community Sponsorship Program, along with thoughtful gift contributions from the Malabar Resources team to support the appeal.







UPDATE  
JANUARY 2024

## OUR WORK WITHIN THE LOCAL COMMUNITY

### MARTINDALE PUBLIC SCHOOL

Martindale Public School is the last small school in the Denman area, serving a diverse and mostly rural community. Located on the outskirts of Denman, the school currently employs two teachers and has 11 students enrolled from kindergarten through to Year 6.

In addition to the mandatory syllabus, the students participate in an intensive swimming program each year held during term 4. This fun-filled program teaches lifesaving swimming skills and techniques so that the kids can safely enjoy the water as we enter the hot summer months.



To support the program, Malabar Resources has provided swimming packs for all students, which includes a swim bag, goggles, swim cap, bucket hat, sunscreen, drink bottle, bubbles and a skipping rope. The kids were thrilled to receive their packs and couldn't wait to get in the water and try out their new gear.

### OPEN DOOR SINGLETON

Open Door at the Singleton Neighbourhood Centre provides support to those in need in the local Singleton Community. Some of the services they provide include:

- ✦ Free use of showers and laundry facilities
- ✦ Free continental breakfast
- ✦ Free hot meals every Monday to Thursday
- ✦ Support services to facilitate better involvement in the community i.e. employment services
- ✦ Free clothing, shoes and hair cuts
- ✦ The provision of fresh bread, fruit and vegetables
- ✦ Street Library with free books for everyone

Open Door aims to create a sense of belonging to all members of the local community. It is a safe space where anyone can drop in for a coffee and a chat.

Malabar recognised the great work being done by Open Door and was eager to help. With all meals being prepared and cooked onsite by volunteers, Malabar's Community Sponsorship Program gifted new cooking pots, food and kitchen supplies to Open Door's pantry.







UPDATE  
JANUARY 2024

## REHABILITATION UPDATE

Malabar continues to work on the rehabilitation of the previously mined areas:

- \* To date, we have rehabilitated over 880 hectares of land.
- \* Since taking ownership of the site, we have planted over 160,000 trees in our woodland corridor with the total trees planted at site now exceeding 350,000.
- \* Key land management activities such as weed spraying and feral animal management continue on-site and within our biodiversity offset areas.

SINCE TAKING OWNERSHIP OF THE SITE, WE HAVE:

PLANTED OVER  
**160,000**  
TREES



WITH TOTAL TREES PLANTED ONSITE  
NOW EXCEEDING **350,000**

REHABILITATED OVER  
**880** HECTARES  
OF LAND



## COMMUNITY ENGAGEMENT

Malabar maintains a 24-hour community hotline (1800 653 960) for any issues or enquiries related to our operations or our plans for the local area.

## CONTACT US

If you have any other questions about Malabar Resources or any of our projects, please do not hesitate to contact us.

Donna McLaughlin  
Health, Safety Environment and Community Manager.  
Email: [info@malabarresources.com.au](mailto:info@malabarresources.com.au)  
Phone: (02) 6542 0283

952 Thomas Mitchell Drive,  
Muswellbrook NSW 2333  
[www.malabarresources.com.au](http://www.malabarresources.com.au)




APPENDIX B    Impact Identification

Edderton Solar Project  
Social Impact Assessment Scoping Report

**TABLE B-1 IMPACT IDENTIFICATION OF THE PROJECT – WERE IT TO PROCEED**

Component/Project phase	Social impact category	Potential social impact	Potentially affected people	Likely cumulative impacts	Proposed level of assessment
Construction of Project, including solar farm, BESS, transmission lines, access roads and associated facilities.	Surroundings	Construction related noise, dust and lighting impacts affect the quality of life and amenity of nearby landholders.	Nearby landholders, including vineyards and horse studs.	Yes	Detailed
	Culture	Potential disturbance to Aboriginal cultural heritage sites.	Aboriginal stakeholders, particularly the RAPs.	Yes	Detailed
	Livelihoods	Employment opportunities for local residents during construction.	Local residents, jobseekers.	Yes	Detailed
	Livelihoods	Business opportunities for local businesses during construction, thus contributing to a diversified local economy.	Local businesses.	Yes	Detailed
	Accessibility	Potential for unsustainable demand for short term workforce accommodation.	Accommodation providers, vulnerable community members, tourists and other visitors.	Yes	Detailed
	Accessibility	Potential for construction traffic to affect accessibility, amenity and travel times for other road users.	Local residents, tourists and other visitors.	Yes	Detailed
Operation of the Project.	Surroundings	Potential visual impact of the Project, reducing aesthetic and amenity values.	Nearby landholders and residents, including vineyards and horse studs.	Yes	Detailed
	Livelihoods	Employment and business opportunities during operations and maintenance phases.	Local residents and businesses.	Yes	Standard
	Community	Community contributions support the vitality of local community groups.	Community organisations.	Yes	Standard
Project closure	Livelihoods	Business opportunities associated with decommissioning and rehabilitation.	Local businesses.	Yes	Standard





Edderton Solar Project  
Social Impact Assessment Scoping Report

## DOCUMENT PROPERTIES

Version	Purpose	Issued	Contributors	Approver
1.0	Final Report	2/04/2024	Jon Simpson Daniel Holm	Daniel Holm

Edderton Solar Project  
Social Impact Assessment Scoping Report

## DECLARATION

This SIA Scoping Report has been prepared by Jon Simpson and Lars Daniel Holm.

Jon Simpson holds a Graduate Diploma and Graduate Certificate in Environmental Management, a Bachelor of Communication (Public Relations) and a Bachelor of Arts (International Relations and Philosophy), all from the University of Queensland. He has approximately five years of experience working with demographic analysis for social impact assessment and similar projects.

The lead author of this SIA Scoping Report is Lars Daniel Holm (Daniel). Daniel is the director and principal consultant of Square Peg Social Performance Pty Ltd. He holds a master's degree in political science from Uppsala University in Sweden and has approximately 15 years of professional experience in the field of social impact assessment, social performance, social policy and communications, and is a member of the International Association of Impact Assessment. Daniel has contributed to or led more than fifteen SIAs or other projects studying community and stakeholder experiences of projects or policy interventions. He is currently undertaking PhD studies at the University of Queensland.

In submitting this SIA Report the following declarations are made:

- This SIA Report contains all information deemed relevant for the purposes of meeting the requirements set out in the Social Impact Assessment Guideline for State Significant Projects (Department of Planning and Environment (DPE), 2023a).
- None of the information presented herein is to the knowledge of the lead author false or misleading.
- The lead author is aware of and has endeavoured to abide by the ethical principles and considerations outlined in the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council, 2018) and the Principles for ethical research involving humans: ethical professional practice in impact assessment Part I (Vanclay et al., 2013).
- The qualifications, experience and professional memberships of the authors are set out in the paragraph above.

Signed and dated:



2/04/2024

---

Lars Daniel Holm



SQUARE PEG  
SOCIAL PERFORMANCE

**ATTACHMENT 4**  
**PRELIMINARY VISUAL IMPACT ASSESSMENT**





Edderton Solar Project

Preliminary Visual Impact Assessment



# Edderton Solar Project

## Preliminary Visual Impact Assessment

**Prepared for**  
Voltere Pty Ltd

**Issue**  
F

**Date**  
02/04/24

**Project Number**  
2392

Revision	Date	Author	Checked	Comment
F	02/04/24	SW	AR	Final Issue for Submission



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ABN: 48 097 558 908

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# 1.0 Introduction

Voltere Pty Ltd (The Client) proposes to develop the Edderton Solar Project and associated Battery Energy Storage System (BESS). Moir Landscape Architecture (Moir LA) have been commissioned by the Client to prepare a Preliminary Visual Impact Assessment (PVIA) for the proposed Edderton Solar Project. The purpose of this PVIA is to provide a preliminary assessment of the potential visual impacts associated with the Edderton Solar Project which is referred to hereafter as 'the Project'.

The PVIA for the Project has been prepared in accordance with the following documents:

- *Large-Scale Solar Energy Guideline August 2022* (referred to hereafter as 'the Guideline') developed by the Department of Planning and Environment (DPE) (2022a) (now the Department of Planning, Housing and Infrastructure [DPHI]).
- *Technical Supplement - Landscape and Visual Impact Assessment, Large-Scale Solar Energy Guideline August 2022* (referred to hereafter as 'the Technical Supplement') developed by the DPE (2022b).
- *State Significant Development Guidelines - Preparing a Scoping Report (Appendix A)* (referred to hereafter as 'the SSD Guidelines') (Department of Planning, Industry and Environment [DPIE], 2022b).

This PVIA will form part of the Scoping Report seeking the Secretary's Environmental Assessment Requirements (SEARs) that will inform the preparation of an Environmental Impact Statement (EIS).

## 1.1 Relevant Experience

The Technical Supplement states: "*The applicant is expected to engage relevant professionals (for example, landscape architects, architects, environmental planners, geographers, or other visual assessment specialists) with demonstrated experience and capabilities.*" (DPE, 2022b).

Moir LA is a professional design practice and consultancy specialising in the areas of Landscape Architecture, Urban Design and Landscape and Visual Impact Assessment. Our team has extensive experience in undertaking Landscape and Visual Impact Assessments for large-scale infrastructure and renewable energy projects. In the context of our experience and with guidance from the Guideline and the Technical Supplement we have developed methodologies to ensure a comprehensive and qualitative assessment of the Project.

Recent experience includes the preparation of Landscape and Visual Impact Assessments for the following Solar Energy Projects:

- Blind Creek Solar Farm LVIA (Bungendore, NSW).
- Glenellen Solar Farm LVIA (Glenellen, NSW).
- Oxley Solar Farm LVIA (Castledoyle, NSW).
- Stubbo Solar Farm LVIA (Stubbo, NSW).
- Tilbuster Solar Farm LVIA (Tamworth, NSW).
- Dunedoo Solar Farm LVIA (Dunedoo, NSW).
- Upper Hunter South Solar Farm (Denman, NSW).



## 1.2 Overview of Preliminary Visual Impact Assessment for Solar Farms

The Technical Supplement states: “A *Preliminary Visual Assessment must be included in an applicant’s scoping report as part of their request for the Secretary’s environmental assessment requirements (SEARs).*” (DPE, 2022b). It also states that the visual assessment process is broken into two key stages:

- Stage 1 - Preliminary Assessment; and
- Stage 2 - Detailed Assessment.

This PVIA forms part of Stage 1 - Preliminary Assessment and will be submitted to DPHI together with the Scoping Report for the request for SEARs. This stage is used to identify viewpoints or receptor locations that would require detailed assessment in Stage 2 as a part of the EIS phase.

*Stage 1 - Preliminary Assessment* comprises the application of the Preliminary Assessment Tools. The Preliminary Assessment Tools assist in the identification of viewpoint locations where a solar farm may have impacts and warrant further consideration. This also provides the opportunity to identify potential visual impacts to inform and refine the proposed development footprint layout. The tools assist in identifying locations and viewpoints that are likely to experience little to no impacts which is useful in early consultation and ensures that field work and assessments are concentrated in areas with potential visual impacts only.

The Guideline states that effective and early stakeholder engagement is critical for large-scale solar energy projects (DPE, 2022a). Along with the application of Preliminary Assessment Tools in *Stage 1 - Preliminary Assessment*, the Guideline recommends proponents engage with the local community in a project’s preliminary stages. Findings from preliminary stakeholder engagement help identify existing community values related to specific viewpoints or key landscape features, and assist in identifying opportunities and constraints related to the design, management, visual impact and mitigation measures.

The Client has undertaken community engagement to support the preparation of the Scoping Report. The potential for visual impacts at private residences and at nearby equine businesses were raised during engagement to date.

## 2.0 Study Method

The Guideline and Technical Supplement state that assessments of large-scale solar farms should include a PVIA. The Technical Supplement defines the component as the following:

- Visual Impact Assessment: *“This is the process for determining the day-to-day visual effects of a project on people’s views (what people see at a place, when they are there) from the private and public domain.”* (DPE, 2022b).

The following has been undertaken to develop the PVIA in accordance with the Guideline and the Technical Supplement:

### Preliminary Visual Impact Assessment:

Preliminary Assessment Tools have been applied to identify locations or viewpoints with potential views to the solar array. The results of the PVIA identify viewpoint locations that require further detailed assessment. The findings of the preliminary assessment have been included in this PVIA and will form the basis for discussion with the community in the EIS phase of the Project.

### Community Consultation:

Community consultation has commenced through the scoping phase of the Project. Consultation results and community views on the landscape values will inform the preparation of a Landscape and Visual Impact Assessment for the EIS. Community consultation will continue through the EIS phase of the Project.

## 2.1 Report Structure

The following table provides an overview of the requirements of the Guideline and the Technical Supplement, and where these have been addressed in the PVIA:

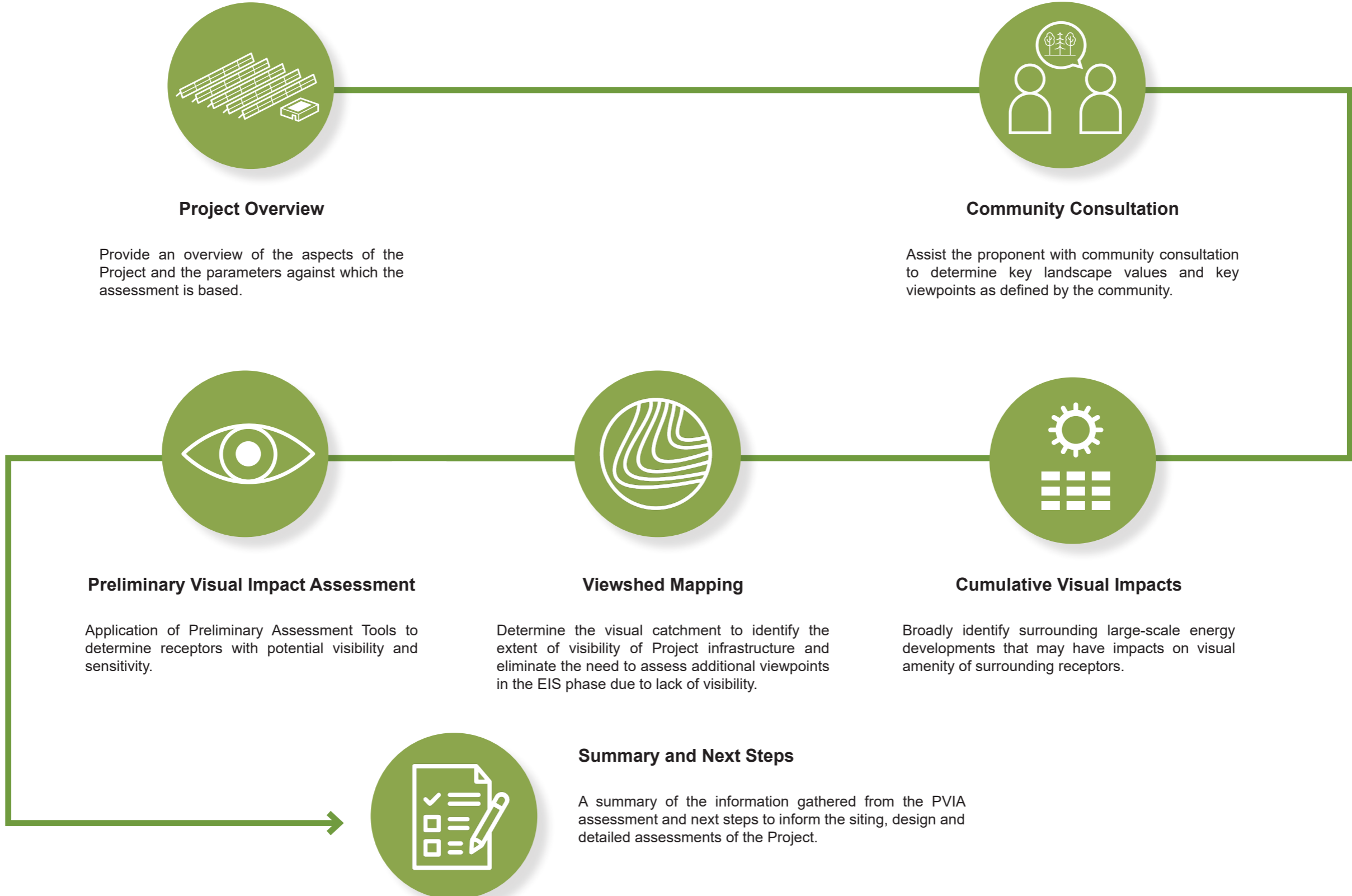
### Preliminary Visual Impact Assessment Requirements:

Guideline and Technical Supplement Requirements:	Where addressed in PVIA Report:
<i>The assessment must include a full description of the proposed solar energy project design and use maps to show the location of the project in relation to viewpoints and surrounding landscapes identified for analysis.</i>	<b>Section 3.0 Project Overview</b>
<i>A Preliminary Visual Assessment must be included in an applicant’s scoping report as part of their request for the Secretary’s environmental assessment requirements (SEARs). The applicant can use viewshed mapping to further eliminate the need to assess viewpoints that fall below the lines in the Preliminary Assessment Tool if the analysis shows there is intervening terrain that would block line of sight to a particular viewpoint. The applicant should also consider undertaking a reverse viewshed analysis.</i>	<b>Section 4.0 Preliminary Visual Impact Assessment</b>
<i>The baseline analysis should identify and describe (...) the location of any existing operational or approved large-scale energy developments within a regional and local context, including projects which may have the potential to create direct or indirect cumulative impacts with the project.</i>	<b>Section 5.0 Cumulative Visual Impacts</b>

**Table 01** – Overview of Report Structure

2.2 Steps Undertaken for PVIA

The following process has been undertaken to develop this PVIA:





## 3.0 Project Overview

### 3.1 The Project

The Project comprises a large-scale solar photovoltaic (PV) generation facility with a generation capacity of approximately up to 350 megawatts (MWac) and an associated BESS, which would nominally be located at Plashett.

The Project covers an area of approximately 1,000 hectares (ha). **Figure 01** shows the existing site context and **Figure 02** provides an indicative layout of the Project. The final layout and capacity of the Project will be investigated during the preparation of the EIS and will be selected on the basis of environmental constraints identification, outcomes of stakeholder engagement, engineering assessments and design of Project infrastructure.

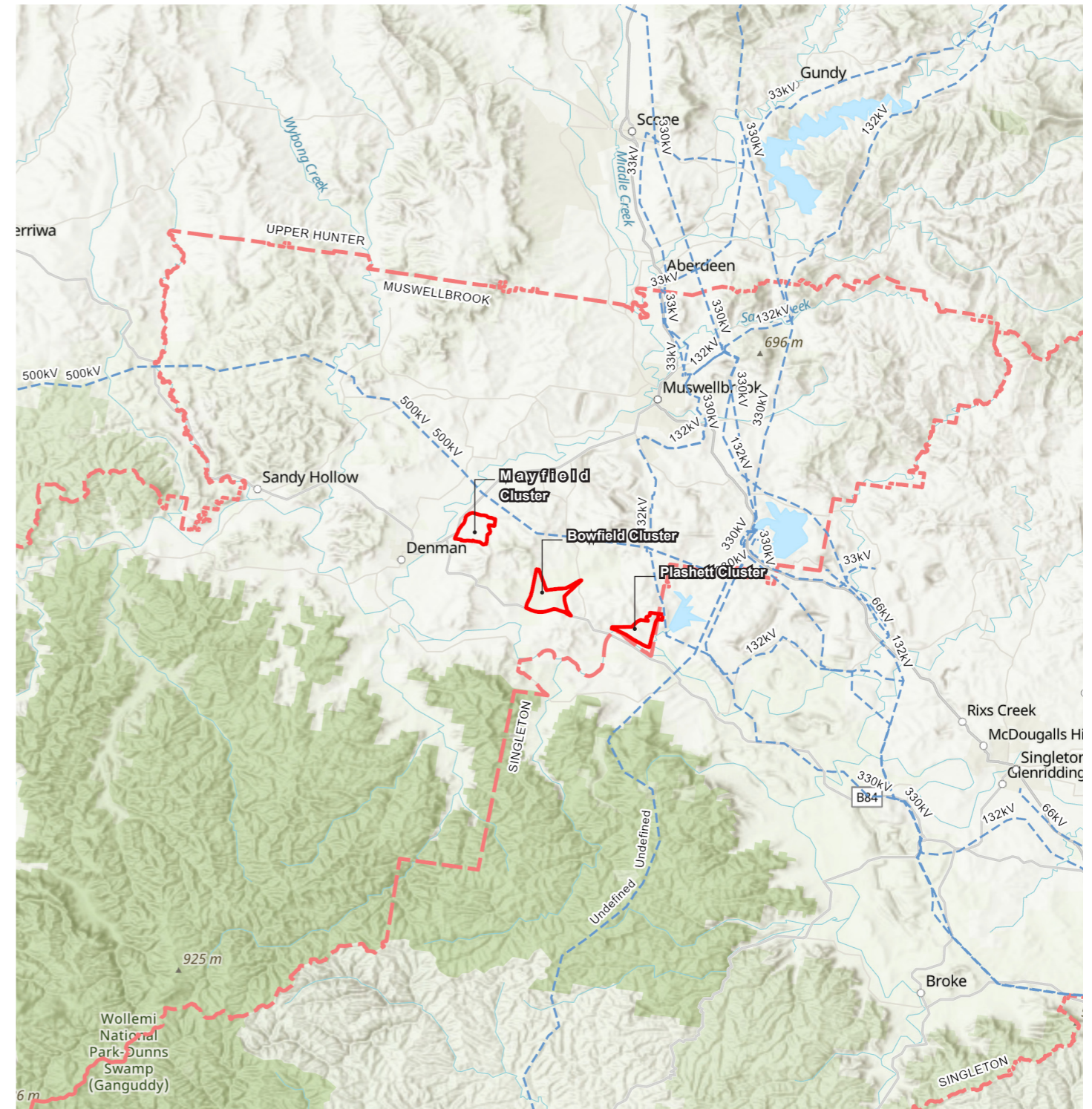
Estimated height of the PV modules will be up to 1.70 metres (m) above ground level when in horizontal position and the lower edge of each PV module will not be less than 0.50 m above ground level at the maximum tilt angle. As a worst-case assumption for the visual impact assessment, the maximum height of the PV modules at maximum tilt angle is expected to be 2.70 m above ground level. The solar arrays will be mounted to galvanised steel racking frames onto horizontal tracker tubes and will utilise single axis tracking systems, with relatively little ground disturbance required.

The Project consists of three 'power clusters' named as Mayfield, Bowfield and Plashett clusters. An internal reticulation system is proposed to connect all three clusters and the BESS to the existing 330kV Electricity Transmission Network (see **Figure 02**).

### 3.2 Key Project Components

It is anticipated that the physical layout and design of the Project will comprise the following key infrastructure elements:

- PV modules,
- BESS
- Power Conversion Units
- Transmission lines
- Substation
- Internal access tracks
- Operation and maintenance buildings.

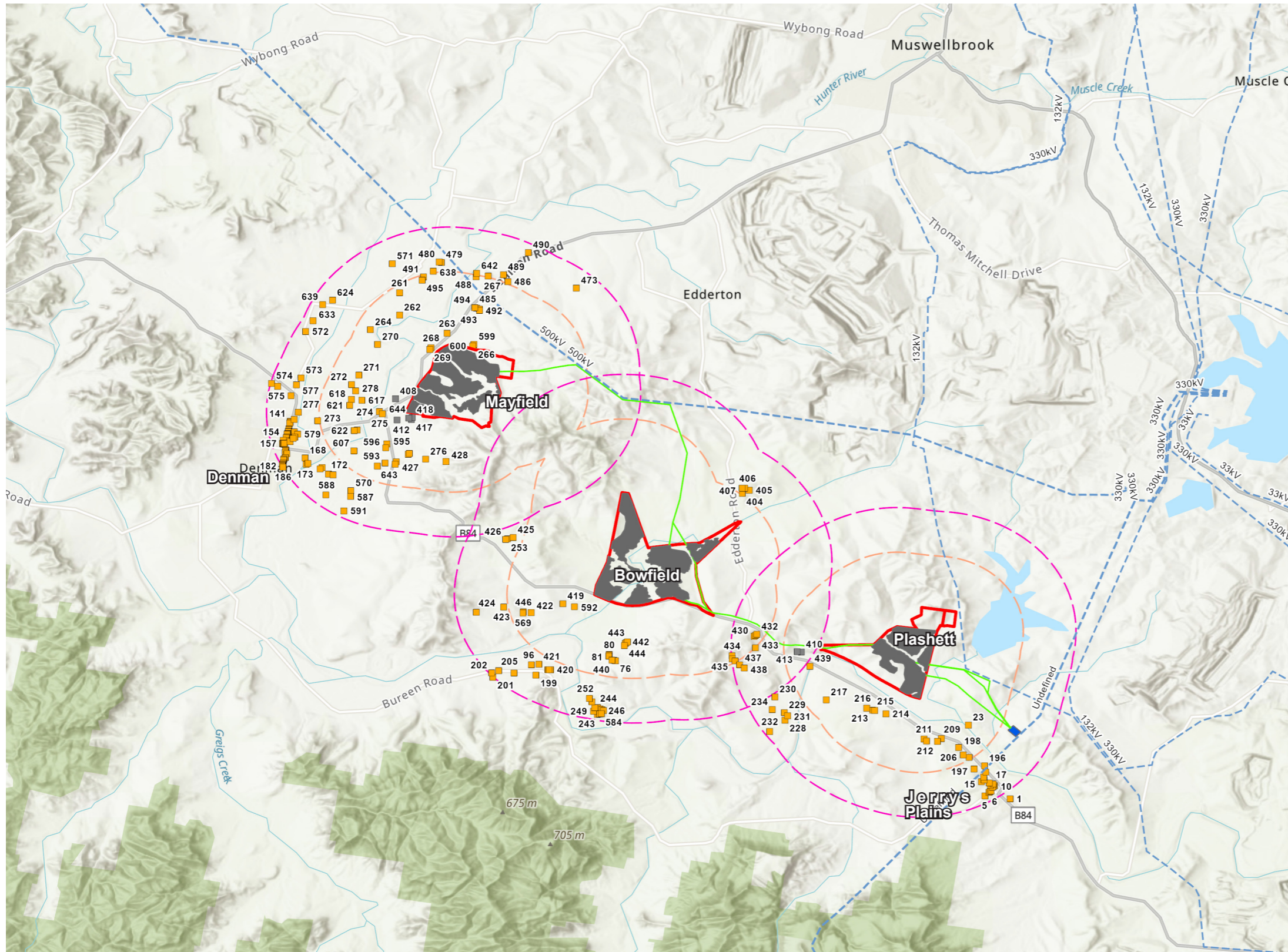


— Indicative PV Study Area      - - - LGA Boundary  
 - - - Existing Transmission Lines

**Figure 01 – Site Context**  
 Imagery Source: Six Maps 2022







# Preliminary Project Layout

## Edderton Solar Project

### LEGEND

- Solar PV Study Area
- 2.5 km from the Indicative PV Area
- 4 km from the Indicative PV Area
- Potential Reticulation Systems Easements
- Indicative PV Area
- Non-Associated Receptors
- Associated Receptors
- Indicative Substation location
- Existing Transmission Lines

**Figure 02 – Preliminary Project Layout**  
 Basemap Source: ARCGIS 2023



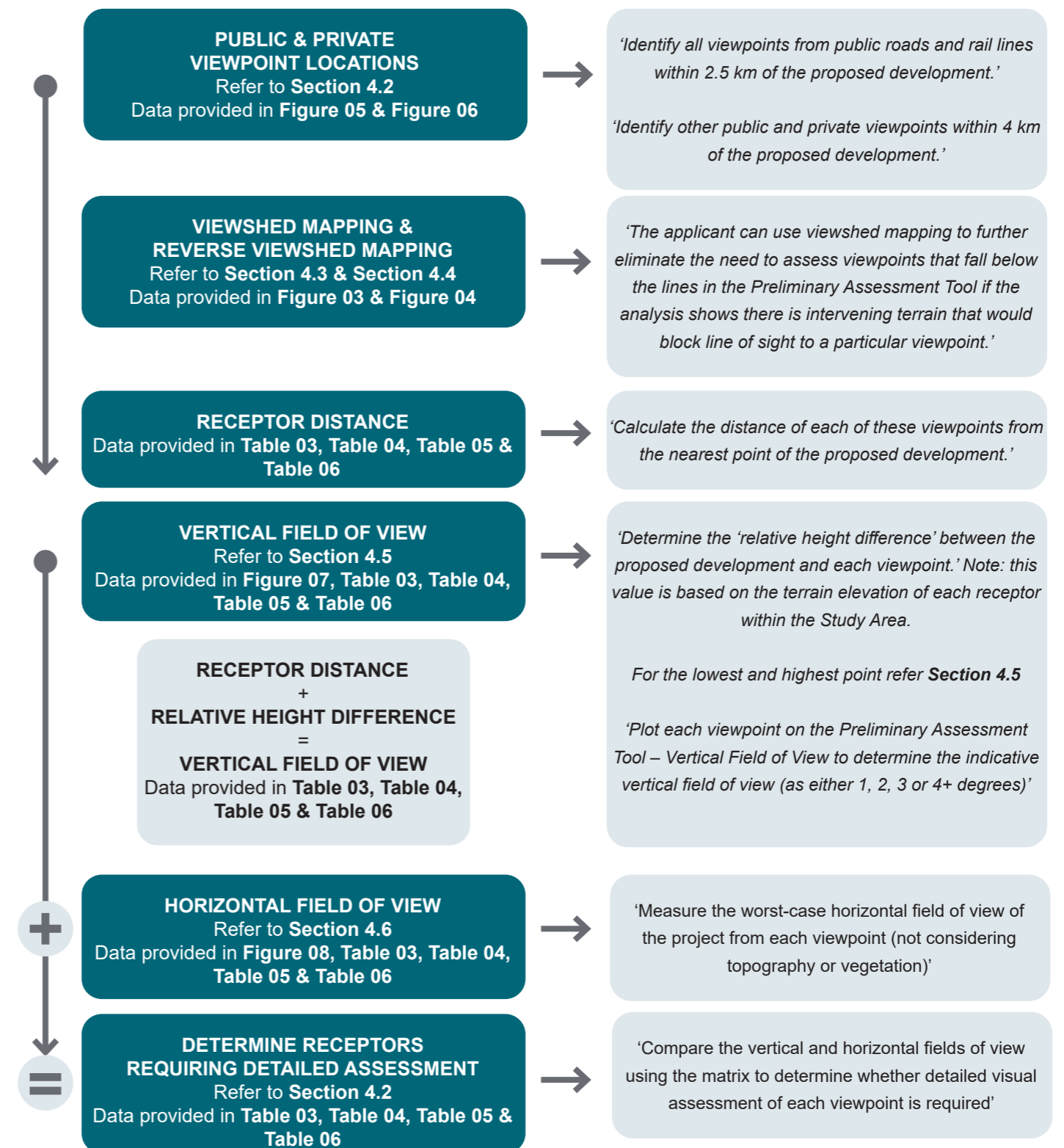
# 4.0 Preliminary Visual Impact Assessment

## 4.1 Preliminary Visual Impact Assessment Overview

The Technical Supplement states: ‘a preliminary visual assessment must be included in an applicant’s scoping report as part of their request for the Secretary’s environmental assessment requirements (SEARs)’ (DPE, 2022b). Further, it states: ‘to use the Preliminary Assessment Tools: identify all viewpoints from public roads and rail lines within 2.5 km of the proposed development; identify other public and private viewpoints within 4 km of the proposed development.’ (DPE, 2022b)

The preliminary assessment tools must be used to identify viewpoints that require detailed assessment in the EIS. The tools can be used to eliminate the need to assess viewpoints that are likely to experience very low impacts. This is assessed using on the vertical and horizontal field of view that a development is likely to occupy when viewed from each viewpoint and is influenced by distance, height elevation changes, and width of a project (DPE, 2022b).

The adjacent flowchart provides an overview of the requirements of the PVIA (in accordance with the Section 3.1.1 of the Technical Supplement) and the relevant sections of the report where these have been addressed.



## 4.2 Viewpoint Selection and Preliminary Assessment Tool

### Assessment Parameters:

The Technical Supplement states: “*The calculations can be based on either the project area, or the development footprint depending on the level of information available at the time. A more refined approach that uses the development footprint, may result in less viewpoints requiring assessment.*” (DPE, 2022b).

As stated in the Technical Supplement, all private receptors have been assessed within 4 km of the Project. All public road receptors have been assessed within 2.5 km of the Project.

All assessments have been undertaken for an extent of 4 km (for all private receptors) from the Project Area and 2.5 km (for all public i.e. road and rail receptors) from the Project Area. All the above distances are in accordance with the Technical Supplement (DPE 2022b, p. 12).

Based on the 4km extents from each power cluster, a total of:

- 112 non-associated receptors were identified within 4km of the Mayfield power cluster.
- 53 non-associated receptors were identified within 4km of the Bowfield power cluster.
- 45 non-associated receptors were identified within 4 km of the Plashett power cluster.
- One (1) non-associated receptor [1] was identified outside the 4km extent of Plashett power cluster.
- One (1) non-associated receptor [210] was identified outside the 4km extent of Bowfield power cluster

Viewshed Mapping is utilised to identify receptors that have visibility to the power clusters (see **Section 4.3** and **Section 4.4**). Receptors identified to have visibility are further assessed using vertical and horizontal field of view calculations outlined in **Section 4.5** to **Section 4.7**.

Viewpoints have been illustrated in **Figure 05** and **Figure 06**. Further refinement of the viewpoints will be undertaken in the preparation of the Landscape and Visual Impact Assessment (LVIA).

It is noted that 'receptors' refers to a range of different building types, including but not limited to residences, short-term accommodation and office, commercial or industrial buildings. Private receptors have only been included at the edge of the town of Denman, as they are considered representative of all private receptors within Denman.

### Public Roads and Rail Lines:

In accordance with the Technical Supplement, all viewpoints from public roads and rail lines within 2.5 km of the Project must be assessed. A total of 31 public viewpoints are selected within the Project study area, to represent roads and rail receptors of which, 23 public viewpoints are located within 2.5 km of the Project study area.

An additional public viewpoint has been identified approximately 6.3 km from the Project. This viewpoint has been selected to assess preliminary visual impact from the Project at the Apex Lookout Point along Reg Thornton Memorial Drive.

Viewshed Mapping is utilised to identify public receptors that have visibility to the power clusters (see **Section 4.3** and **Section 4.4**). These receptors are further assessed using vertical and horizontal field of view calculations discussed in **Section 4.5** to **Section 4.7** (see **Table 03**, **Table 04** and **Table 05**).

### Other public and private viewpoints:

In accordance with the Technical Supplement, other public and private viewpoints within 4 km of the Project Area must be identified and assessed.

### Additional viewpoints:

The Technical Supplement states: “*Additional viewpoints should be considered if ancillary infrastructure, such as substations, have the potential to cause impacts beyond the distances prescribed in the tool.*” (DPE, 2022b). If deemed necessary, additional viewpoints will be assessed once ancillary infrastructure layout has been confirmed. Detailed assessment from these viewpoints will be carried out in the EIS stage if deemed necessary.

### 4.3 Viewshed Mapping

A viewshed map identifies all areas from which a project may be viewed. Viewshed mapping can be achieved by using geographic information systems (GIS) that account for topography and line of sight between viewpoints and the project.

The purpose of the viewshed map is to further eliminate the need to assess viewpoints that fall below the lines in the Preliminary Assessment Tool if the analysis shows there is intervening terrain that would block line of sight to a particular viewpoint.

Viewshed mapping was undertaken for the Project to eliminate viewpoint locations that will not have a line of sight to the Project (refer to **Figure 03**). It is important to note that the viewshed map provides an assessment based on topography alone and does not take into account intervening elements such as vegetation and structures. The viewshed map, therefore, represents a theoretical worst-case scenario.

Viewshed mapping has been undertaken based on a maximum panel height of 2.70 m.

#### Summary of Viewshed Map:

The following provides a summary of the viewshed map prepared for the each cluster of the Study Area:

- Majority of the non-associated receptors will theoretically have views to the majority of the Project (< 30% visibility) based on topography alone.
- Due to the separated power clusters of the Project, the visibility towards each cluster varies depending on the receptor location.
  - The 'Mayfield' cluster is within close proximity to the town of Denman. The receptors within and surrounding the town have been identified to have potential views of the Project (up to 30% visibility).
  - According to the viewshed diagram (**Figure 03**), the elevated area to the northwest and west of 'Mayfield' will have the most visibility (up to 40-50% visibility). The undulating terrain around Mayfield means some parts of the north and south of the area would have limited visibility to the Project.
  - Elevated areas to the north of 'Bowfield' will have a high potential visibility to the Project (up to 60%). There are only four (4) receptors on a single property owned by BHP (404,405,406,407) in this area.
  - According to the viewshed diagram, the private viewpoints around the 'Plashett' cluster will have visibility up to 30%.

- Golden Highway and Denman Road are major road corridors located within 2.5 km of the Project
  - Golden Highway runs along the immediate south of each cluster, and as such, visibility of the Project from these public receptors will be up to 20%.
  - Denman Road will have the most visibility towards the 'Mayfield' cluster as it runs along its immediate west (up to 25% visibility).

### 4.4 Reverse Viewshed Mapping

The Technical Supplement states: *'The applicant should also consider undertaking a reverse viewshed analysis. This can be a useful tool to refine the project design process to reduce any significant impacts. It can also be used to communicate the visibility of certain parts of the project and aid consultation with the community. This analysis should be used to highlight parts of the project that can be seen from the greatest number of viewpoints'* (DPE, 2022b).

**Figure 04** represents a reverse viewshed map that takes into account non-associated receptors surrounding the Project Area. This figure shows parts of the Project Area that are likely to be visible from the surrounding private receptors. This assessment also represents a bare ground scenario (i.e. a landscape without intervening elements such as vegetation and structures). It is important to note that not all non-associated receptors surrounding the Project Area may have views towards the power clusters.

#### Summary of Reverse Viewshed Map:

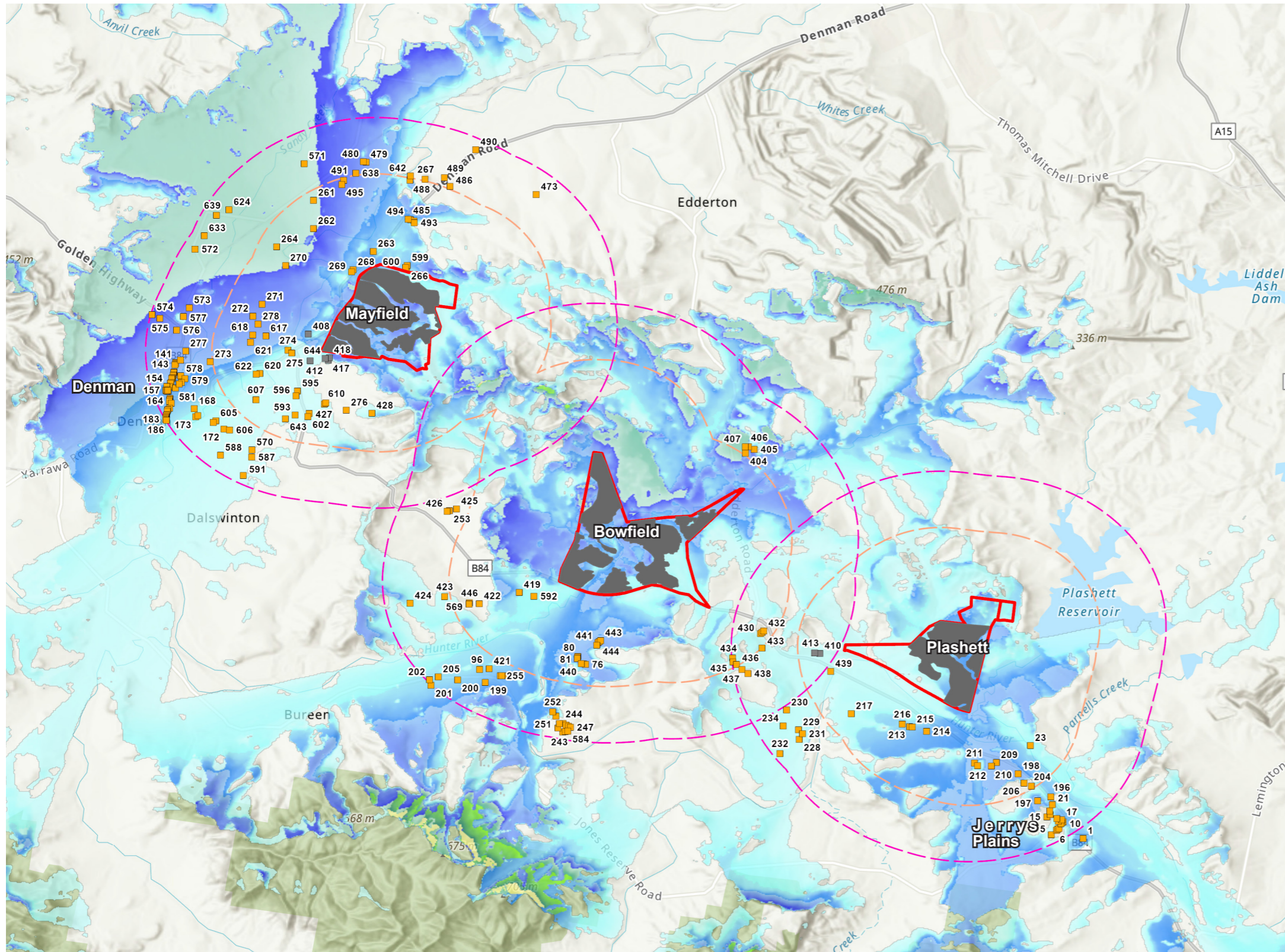
The following provides a summary of the reverse viewshed map prepared for the Project Area:

- Some portions of the Mayfield power island have the potential to be visible from up to 107 non-associated receptors.
- Some portions of the Bowfield power island have the potential to be visible from up to 35 non-associated receptors.
- Some portions of the Plashett power island have the potential to be visible from up to 41 non-associated receptors.



# Viewshed Map

## Edderton Solar Project



### LEGEND

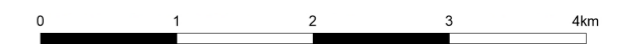
- Solar PV Study Area
- - - 2.5 km from the Indicative PV Area
- - - 4 km from the Indicative PV Area
- Indicative PV Area
- Associated Receptors
- Non-Associated Receptors

### ZVI (Based on 2.70m Panel Height)

- No Visibility
- 1 - 10% Visibility
- 10 - 20% Visibility
- 20 - 30% Visibility
- 30 - 40% Visibility
- 40 - 50% Visibility
- 50 - 60% Visibility
- 60 - 70% Visibility
- 70 - 80% Visibility
- 80 - 90% Visibility
- 90 - 100% Visibility

**Figure 03 – Viewshed Map**  
Imagery Source: Six Maps 2022

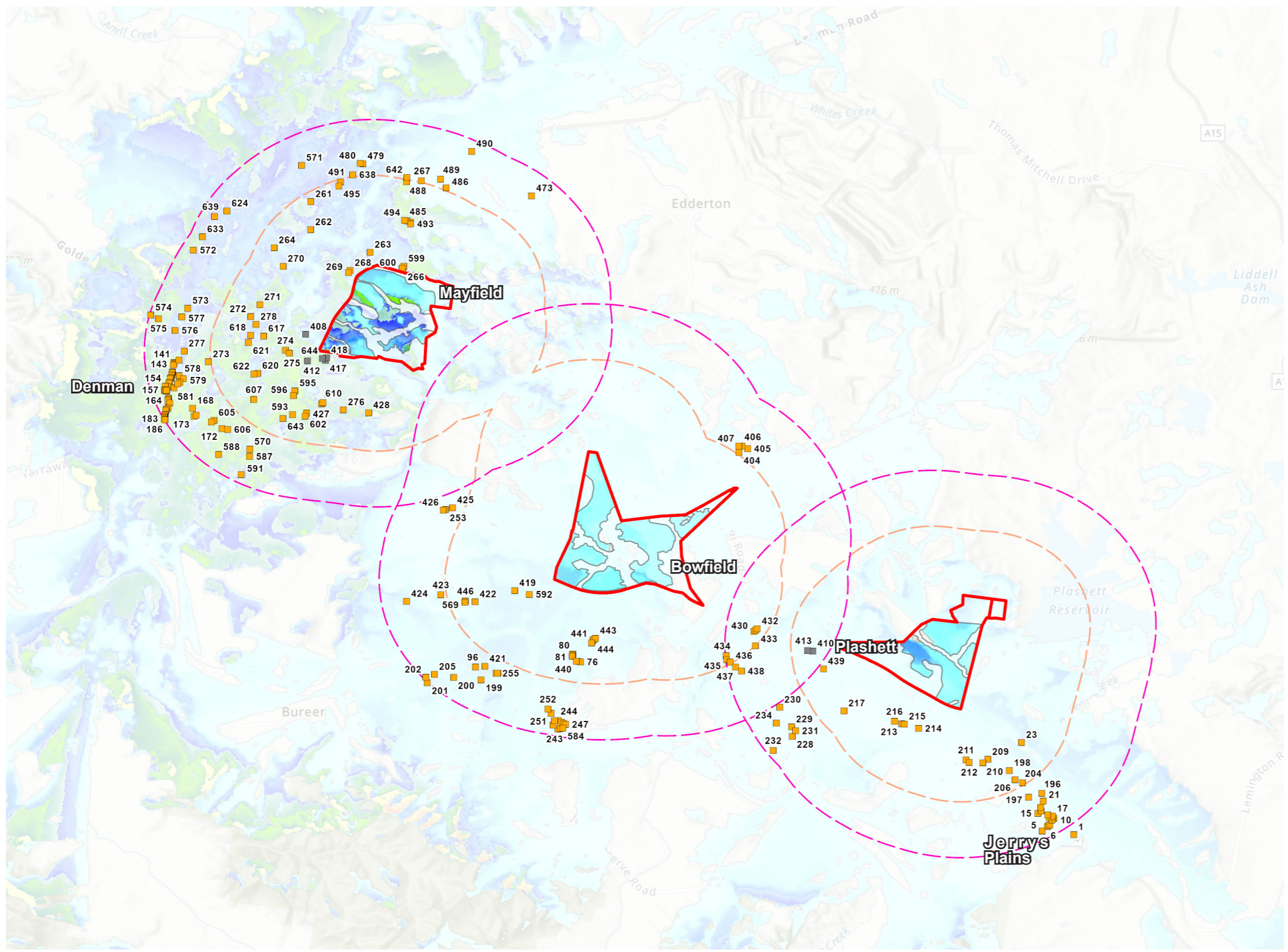
Note: Viewshed Map is a Preliminary Assessment Tool that represents a bare ground scenario - i.e. a landscape without screening, structures or vegetation. As accurate information on the height and coverage of vegetation and buildings is unavailable, it is important to note the map is based solely on topographic information. Therefore this form of mapping should be acknowledged as representing the worst-case scenario.





# Reverse Viewshed Map

## Edderton Solar Project



**LEGEND**

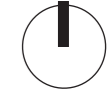
- Solar PV Study Area
- - - 2.5 km from the Indicative PV Area
- - - 4 km from the Indicative PV Area
- Associated Receptors
- Non-Associated Receptors
- Indicative PV Area

**ZVI (Based on 2.70m Panel Height)**

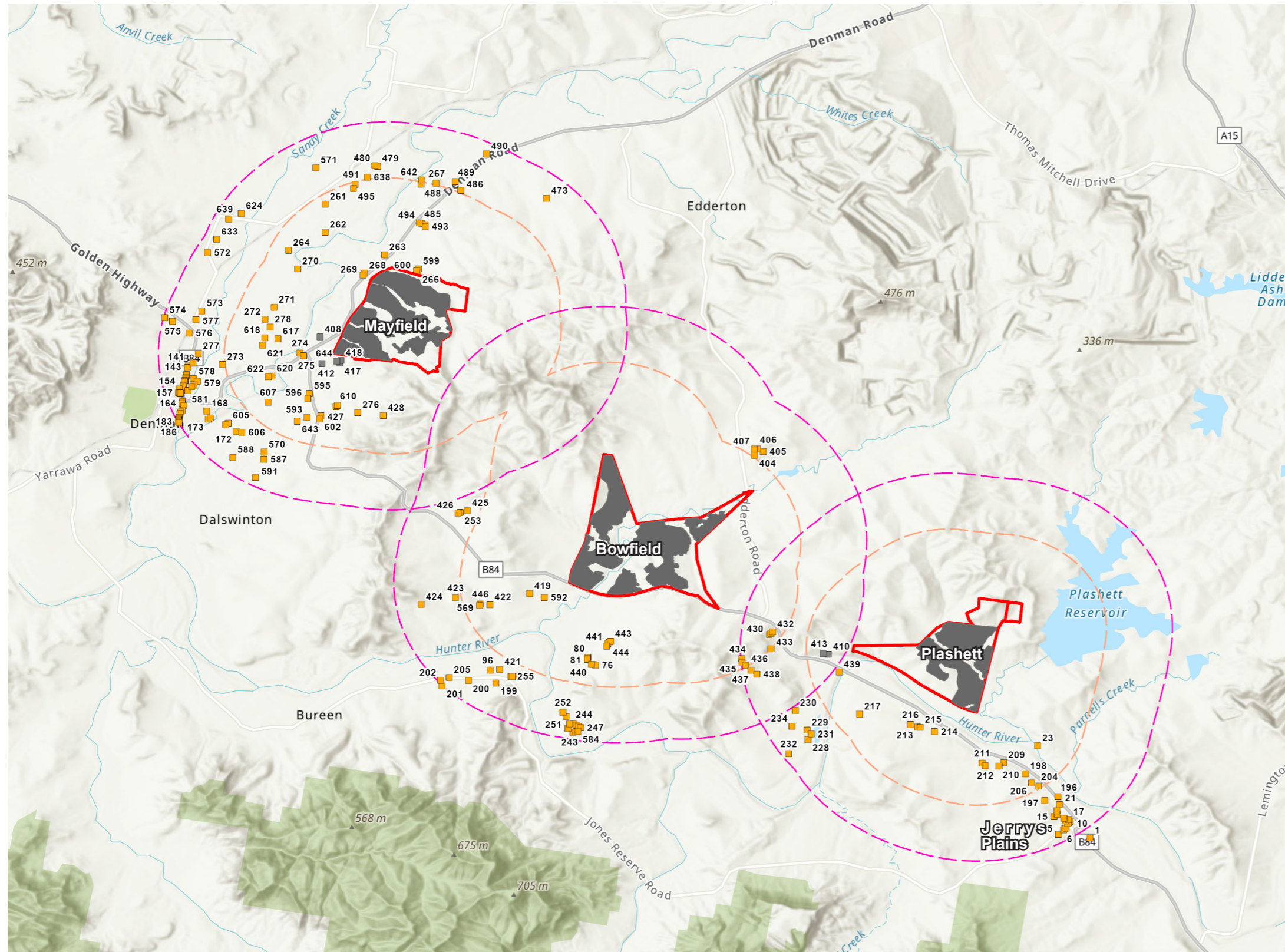
- No Visibility
- 1 - < 21 Dwellings
- 22 - < 44 Dwellings
- 45 - < 65 Dwellings
- 66 - < 86 Dwellings
- 87 - < 107 Dwellings
- 108 - < 128 Dwellings
- 129 - < 149 Dwellings
- 150 - < 170 Dwellings
- 171 - < 191 Dwellings
- 192 - < 212 Dwellings

**Figure 04 – Reverse Viewshed Map**  
Imagery Source: Six Maps 2022

Note: Viewshed Map is a Preliminary Assessment Tool that represents a bare ground scenario - i.e. a landscape without screening, structures or vegetation. As accurate information on the height and coverage of vegetation and buildings is unavailable, it is important to note the map is based solely on topographic information. Therefore this form of mapping should be acknowledged as representing the worst-case scenario.







# Private Receptor Locations

## Edderton Solar Project

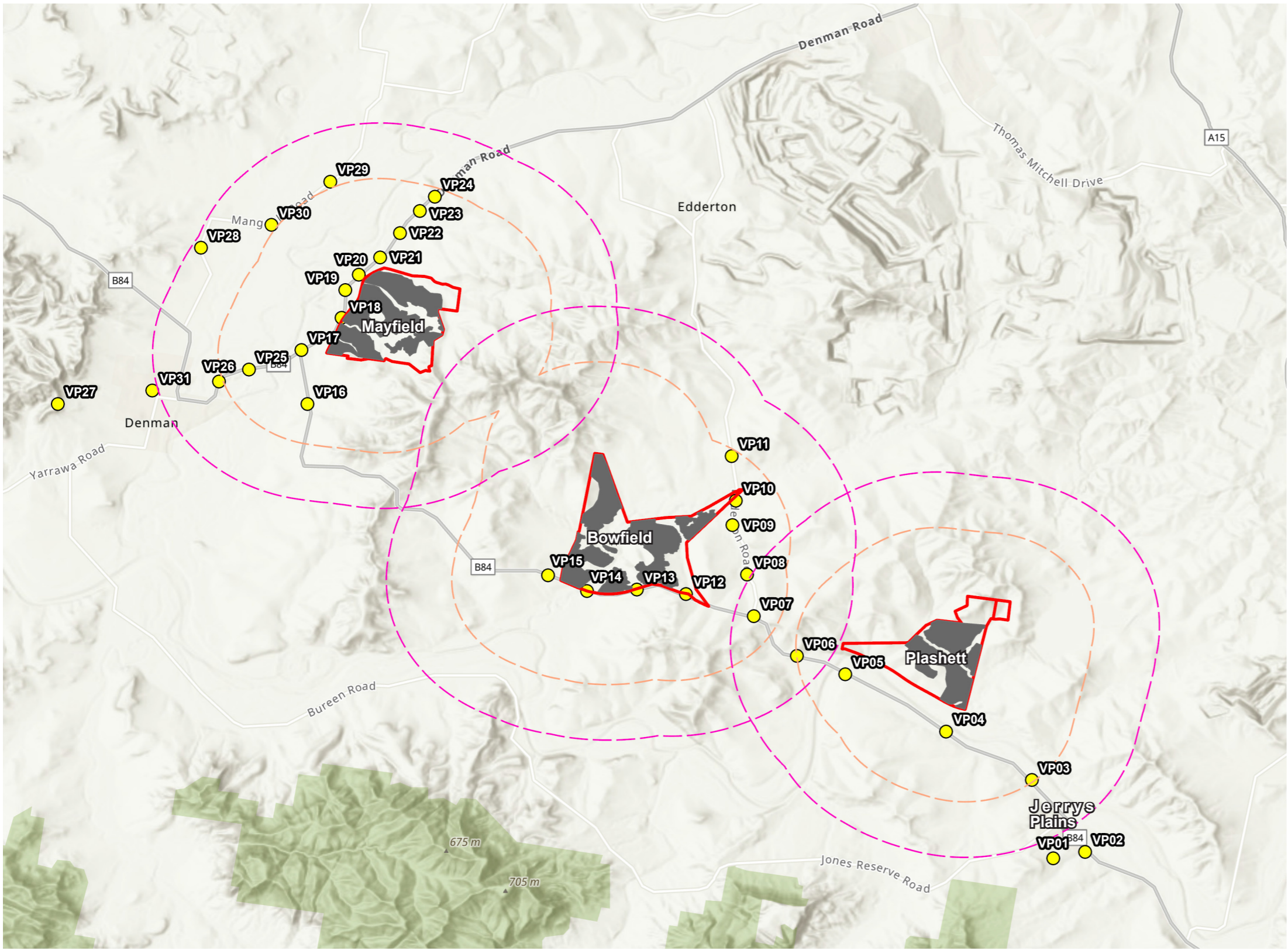
### LEGEND

- Solar PV Study Area
- - - 2.5 km from the Indicative PV Area
- - - 4 km from the Indicative PV Area
- Indicative PV Area
- Associated Receptors
- Non-Associated Receptors

**Figure 05 – Private Receptor Locations**  
 Imagery Source: ArcGIS 2023







# Public Receptor Locations

## Edderton Solar Project

### LEGEND

- Solar PV Study Area
- 2.5 km from the Indicative PV Area
- 4 km from the Indicative PV Area
- Indicative PV Area
- Public Receptors

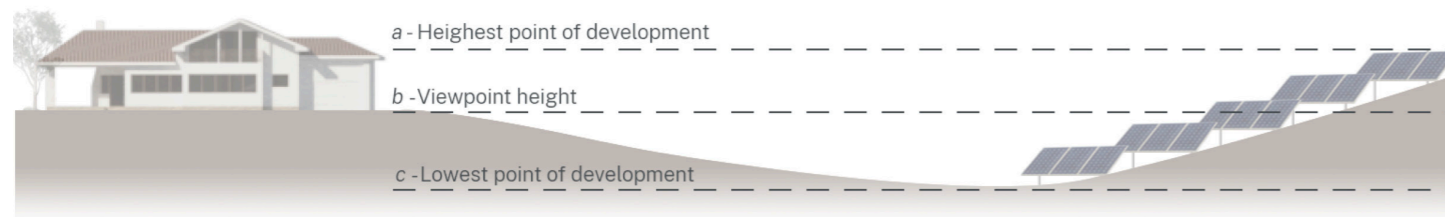
Figure 06 – Public Receptor Locations  
Imagery Source: ArcGIS 2023



### 4.5 Vertical Field of View Calculation

As stated in the Technical Supplement, **Figure 07** below illustrates how the vertical field of view is calculated for each viewpoint location. Plotting viewpoints on **Figure 09** to **Figure 12**, however, provides the actual value of the vertical field of view.

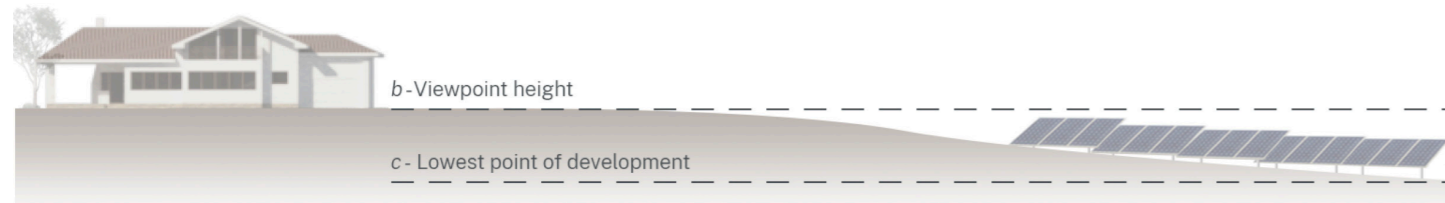
#### Project located above and below viewpoint (a - c)



#### Project located above viewpoint (a - b)



#### Project located below viewpoint (b - c)



**Figure 07 – Relative Height Calculations** Highest and the lowest point differs for each power cluster as given below

Source: DPE, 2022b

*'Determine the 'relative height difference' between the proposed development and each viewpoint.' Note: this value is based on the terrain elevation of each receptor within the:*

**Plashett Cluster** Lowest Point = 78.5 m  
**Plashett Cluster** Highest Point = 152.5 m

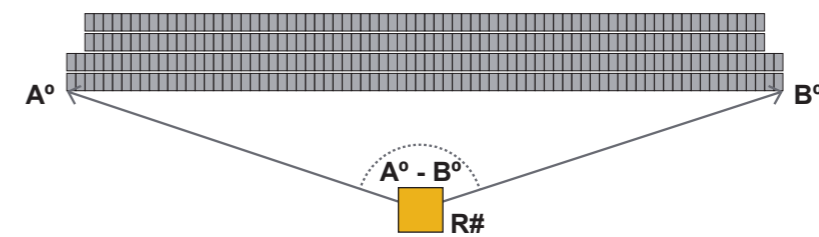
**Bowfield Cluster** Lowest Point = 97.3 m  
**Bowfield Cluster** Highest Point = 189 m

**Mayfield Cluster** Lowest Point = 120.3 m  
**Mayfield Cluster** Highest Point = 217.4 m

*'Plot each viewpoint on the Preliminary Assessment Tool – Vertical Field of View to determine the indicative vertical field of view (as either 1, 2, 3 or 4+ degrees)'*

### 4.6 Horizontal Field of View Calculation

As stated in the Technical Supplement, **Figure 08** below illustrates how the horizontal field of view is calculated for each viewpoint location. For the purpose of this report, the horizontal field of view has been calculated based on the solar PV area to provide a worst-case scenario assessment. This will be refined in the EIS phase.



**Figure 08 – Horizontal Field of View Calculations**

Source: DPE, 2022b

### 4.7 Assessment Requirements

As stated in the Technical Supplement, **Table 02** is used to determine whether a detailed visual assessment of each viewpoint is required by comparing the vertical and horizontal fields of view for each viewpoint. This will be refined in the EIS phase.

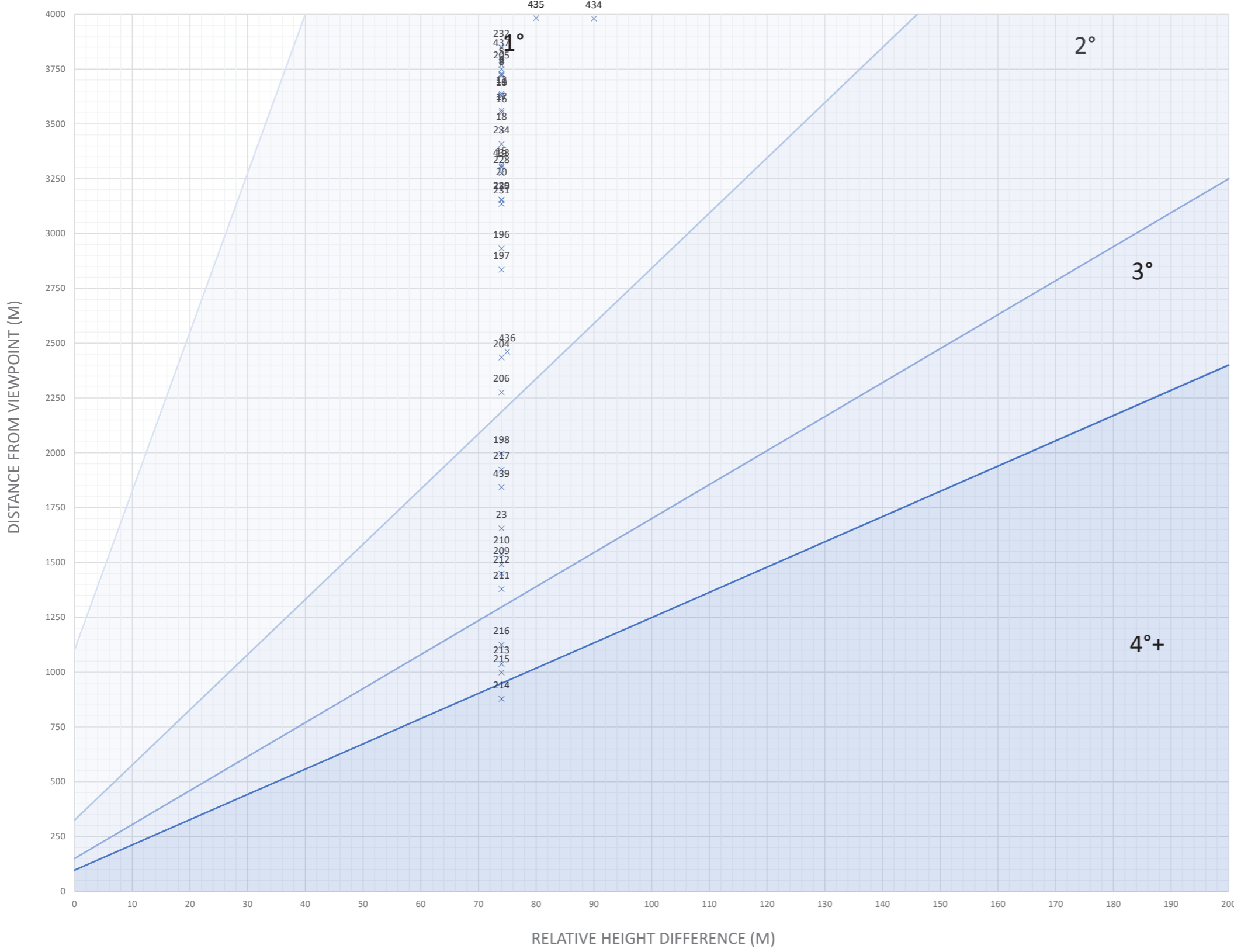
Horizontal FOV	1° Vertical FOV	2° Vertical FOV	3° Vertical FOV	4° + Vertical FOV
1 - 10 °	No assessment required	No assessment required	No assessment required	No assessment required
11 - 20 °	No assessment required	No assessment required	No assessment required	Assessment required
21 - 30 °	No assessment required	No assessment required	Assessment required for all viewpoints except road / rail	Assessment required
31 - 40 °	No assessment required	Assessment required for all viewpoints except road / rail	Assessment required for all viewpoints except road / rail	Assessment required
41 - 50 °	No assessment required	Assessment required for all viewpoints except road / rail	Assessment required	Assessment required
51 - 60 °	No assessment required	Assessment required for all viewpoints except road / rail	Assessment required	Assessment required
61 - 70 °	No assessment required	Assessment required	Assessment required	Assessment required
71 - 130 °	Assessment required for all viewpoints except road / rail	Assessment required	Assessment required	Assessment required
130 ° +	Assessment required	Assessment required	Assessment required	Assessment required

**Table 02 – Preliminary Visual Assessment Tool - Assessment Requirements**

Source: DPE, 2022b



Preliminary Visual Assessment Tool - vertical field of view



# Vertical Field of View Private Receptors - Plashett Cluster

Refer to Section 4.5

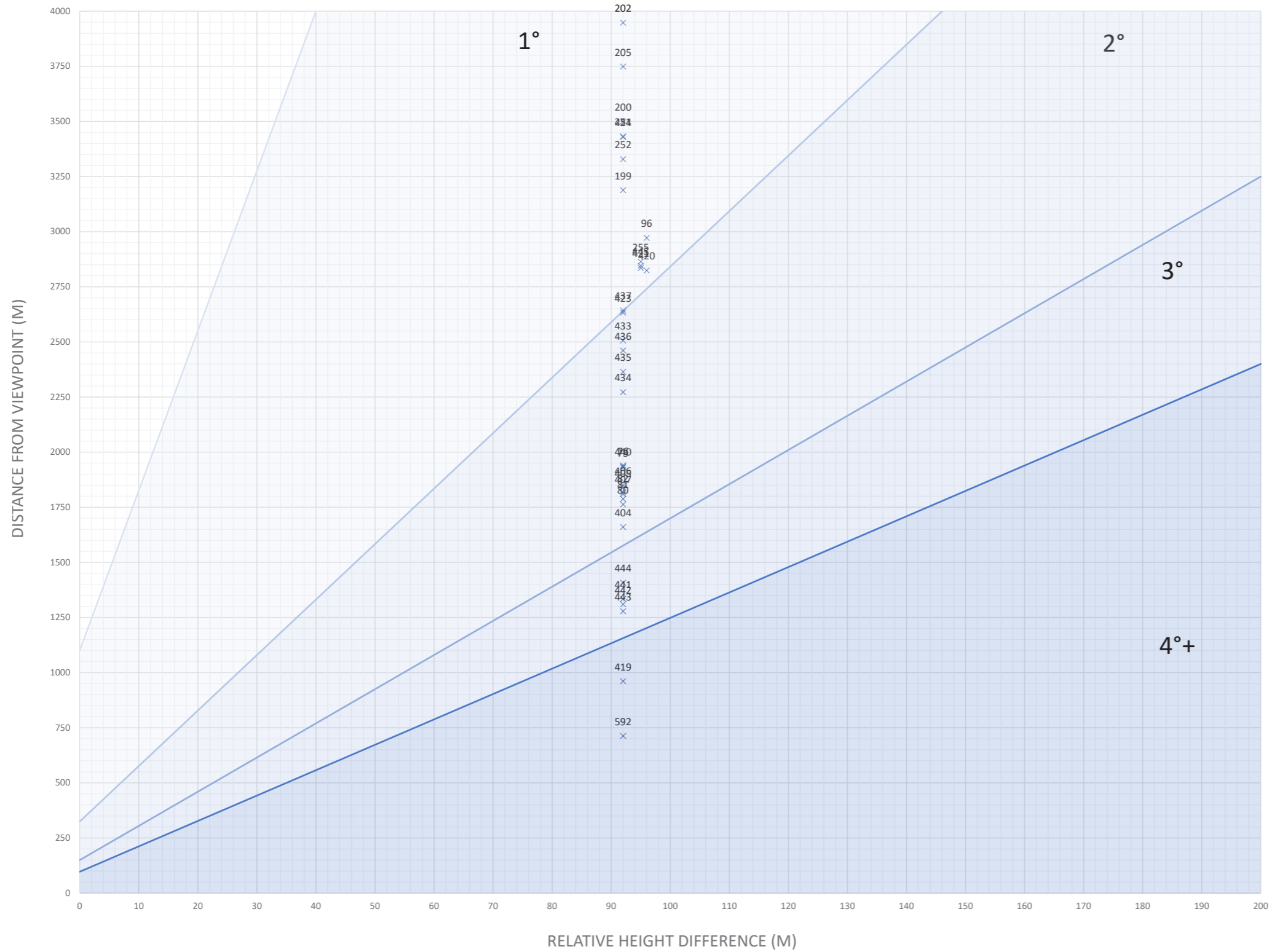
Figure 09 – Vertical Field of View - Private Receptors - Plashett Cluster

Private Viewpoints / Receptors									
Receptor ID	Elevation of Receptor (m)	Highest Point	Lowest Point	Relative Height Difference (m)	Distance to the nearest Solar Panel (m)	Vertical Field of View (FOV) X°	Horizontal extent of view (FOV) A°-B°	Visibility (based on viewshed mapping)	Detailed Assessment Required?:
1	78.1	152.5	78.5	74	4249	1	21	20-30%	NO
5	104	152.5	78.5	74	3769	1	21	1-10%	NO
6	98.7	152.5	78.5	74	3728	1	22	20-30%	NO
7	96.2	152.5	78.5	74	3723	1	21	20-30%	NO
8	93.3	152.5	78.5	74	3720	1	22	20-30%	NO
10	81.8	152.5	78.5	74	3626	1	23	20-30%	NO
11	84.5	152.5	78.5	74	3631	1	23	20-30%	NO
12	86.7	152.5	78.5	74	3638	1	22	20-30%	NO
15	93.7	152.5	78.5	74	3312	1	23	20-30%	NO
16	86.3	152.5	78.5	74	3551	1	22	20-30%	NO
17	81.8	152.5	78.5	74	3561	1	22	20-30%	NO
18	82.4	152.5	78.5	74	3471	1	23	20-30%	NO
19	86.7	152.5	78.5	74	3301	1	24	10-20%	NO
20	84.2	152.5	78.5	74	3217	1	25	20-30%	NO
23	78.4	152.5	78.5	74	1655	2	44	1-10%	YES
196	78.3	152.5	78.5	74	2932	1	26	20-30%	NO
197	87.8	152.5	78.5	74	2835	1	25	10-20%	NO
198	86.1	152.5	78.5	74	1996	2	32	20-30%	YES
204	85	152.5	78.5	74	2434	1	29	1-10%	NO
206	94.3	152.5	78.5	74	2275	1	30	30-40%	NO
209	82.3	152.5	78.5	74	1490	2	34	30-40%	YES
210	85.8	152.5	78.5	74	1539	2	32	20-30%	YES
211	86.5	152.5	78.5	74	1378	2	33	20-30%	YES
212	86.8	152.5	78.5	74	1449	2	31	20-30%	YES
213	87.1	152.5	78.5	74	1037	3	74	10-20%	YES
214	84.6	152.5	78.5	74	878	4	71	20-30%	YES
215	86.8	152.5	78.5	74	998	3	74	10-20%	YES
216	94.2	152.5	78.5	74	1124	3	75	10-20%	YES
217	99.8	152.5	78.5	74	1923	2	53	1-10%	YES
228	88.7	152.5	78.5	74	3274	1	34	1-10%	NO
229	87.8	152.5	78.5	74	3155	1	36	1-10%	NO
230	93.9	152.5	78.5	74	3152	1	36	1-10%	NO
231	85.9	152.5	78.5	74	3135	1	36	1-10%	NO
232	93.1	152.5	78.5	74	3848	1	30	1-10%	NO
234	93.6	152.5	78.5	74	3408	1	33	1-10%	NO
433	139.6	152.5	78.5	74	3305	1	30	1-10%	NO
434	168.4	152.5	78.5	90	3980	1	26	1-10%	NO
435	158	152.5	78.5	80	3982	1	27	1-10%	NO
436	153.2	152.5	78.5	75	3910	1	28	1-10%	NO
437	141.5	152.5	78.5	74	3805	1	29	1-10%	NO
439	80.5	152.5	78.5	74	1843	2	48	1-10%	YES

Note: Receptors with no visibility towards the power clusters, determined through viewshed mapping have not been considered in the Preliminary Assessment Tool Calculations

Table 03 – Preliminary Visual Assessment Tool Results - Plashett Cluster - Private Receptors

Preliminary Visual Assessment Tool - vertical field of view



## Vertical Field of View Private Receptors - Bowfield Cluster

Refer to Section 4.5

Figure 10 – Vertical Field of View - Private Receptors - Bowfield Cluster

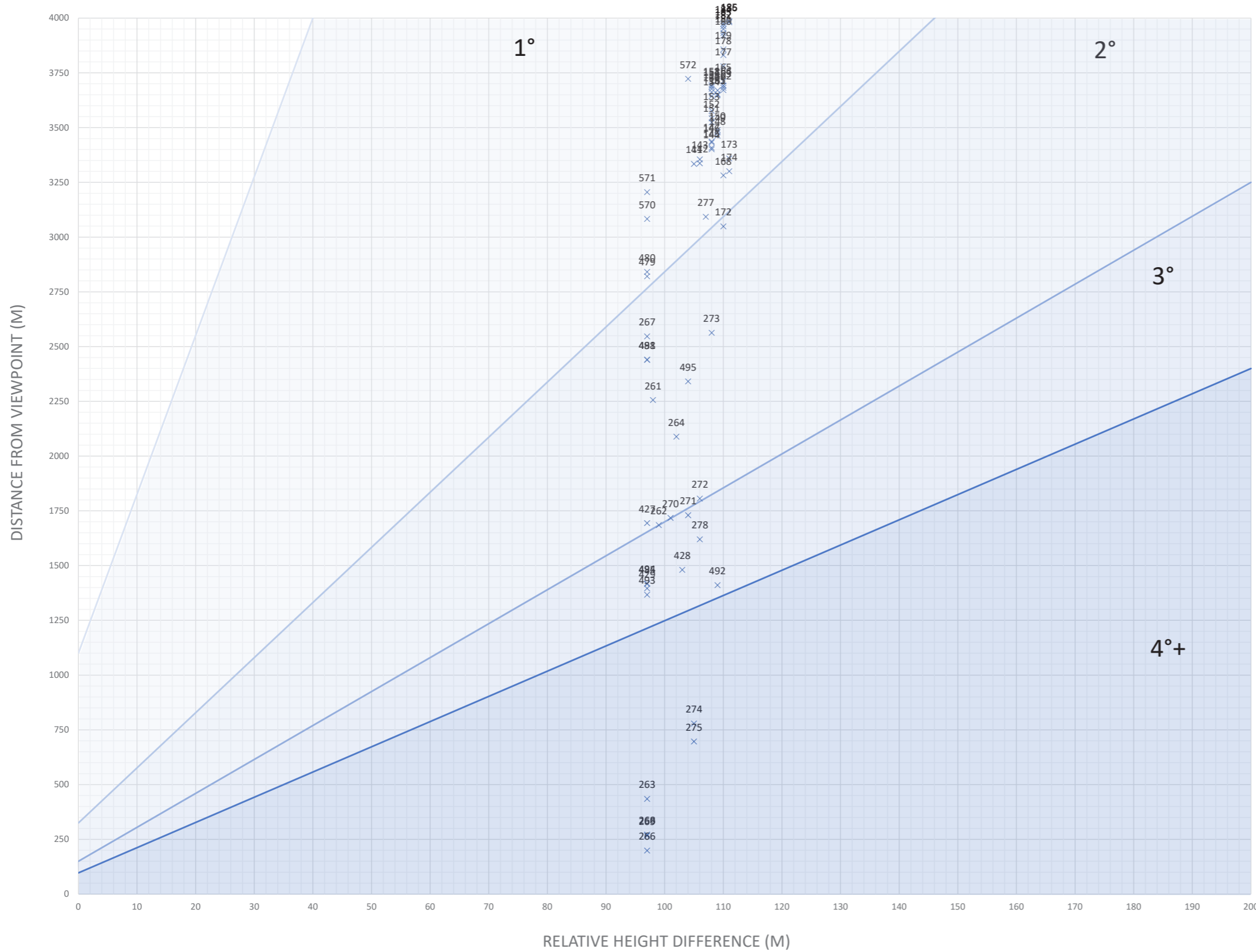


Private Viewpoints / Receptors									
Receptor ID	Elevation of Receptor (m)	Highest Point	Lowest Point	Relative Height Difference (m)	Distance to the nearest Solar Panel (m)	Vertical Field of View (FOV) X°	Horizontal extent of view (FOV) A°-B°	Visibility (based on viewshed mapping)	Detailed Assessment Required?:
75	122.8	189	97.3	92	1931	2	60	30-40%	YES
76	126.3	189	97.3	92	1940	2	60	30-40%	YES
80	107.6	189	97.3	92	1763	2	62	30-40%	YES
81	108.3	189	97.3	92	1788	2	62	30-40%	YES
82	109	189	97.3	92	1817	2	61	30-40%	YES
96	93.5	189	97.3	96	2972	1	40	10-20%	NO
199	98.8	189	97.3	92	3188	1	38	20-30%	NO
200	97.9	189	97.3	92	3500	1	36	10-20%	NO
201	102.7	189	97.3	92	4029	1	33	10-20%	NO
202	99.5	189	97.3	92	3948	1	34	10-20%	NO
205	97.7	189	97.3	92	3749	1	35	10-20%	NO
251	120.1	189	97.3	92	3432	1	37	10-20%	NO
252	117.2	189	97.3	92	3329	1	38	20-30%	NO
255	94.1	189	97.3	95	2864	1	39	20-30%	NO
404	166.4	189	97.3	92	1660	2	69	50-60%	YES
405	178.1	189	97.3	92	1839	2	63	50-60%	YES
406	177.8	189	97.3	92	1849	2	66	50-60%	YES
407	173.6	189	97.3	92	1810	2	67	50-60%	YES
419	119.7	189	97.3	92	961	4	66	20-30%	YES
420	93.5	189	97.3	96	2824	1	40	20-30%	NO
421	94.2	189	97.3	95	2835	1	41	10-20%	NO
423	139.2	189	97.3	92	2633	2	48	1-10%	YES
424	163.6	189	97.3	92	3429	1	41	10-20%	NO
433	139.6	189	97.3	92	2506	2	53	1-10%	YES
434	168.4	189	97.3	92	2272	2	64	1-10%	YES
435	158	189	97.3	92	2364	2	56	1-10%	YES
436	153.2	189	97.3	92	2461	2	54	1-10%	YES
437	141.5	189	97.3	92	2643	1	52	1-10%	NO
440	117.1	189	97.3	92	1935	2	59	20-30%	YES
441	120.3	189	97.3	92	1334	3	78	30-40%	YES
442	121	189	97.3	92	1310	3	79	30-40%	YES
443	121	189	97.3	92	1278	3	80	30-40%	YES
444	120.7	189	97.3	92	1408	3	75	30-40%	YES
445	93.6	189	97.3	95	2845	1	40	20-30%	NO
592	105.6	189	97.3	92	713	4	67	10-20%	YES

Note: Receptors with no visibility towards the power clusters, determined through viewshed mapping have not been considered in the Preliminary Assessment Tool Calculations

Table 04 – Preliminary Visual Assessment Tool Results - Bowfield Cluster - Private Receptors

Preliminary Visual Assessment Tool - vertical field of view



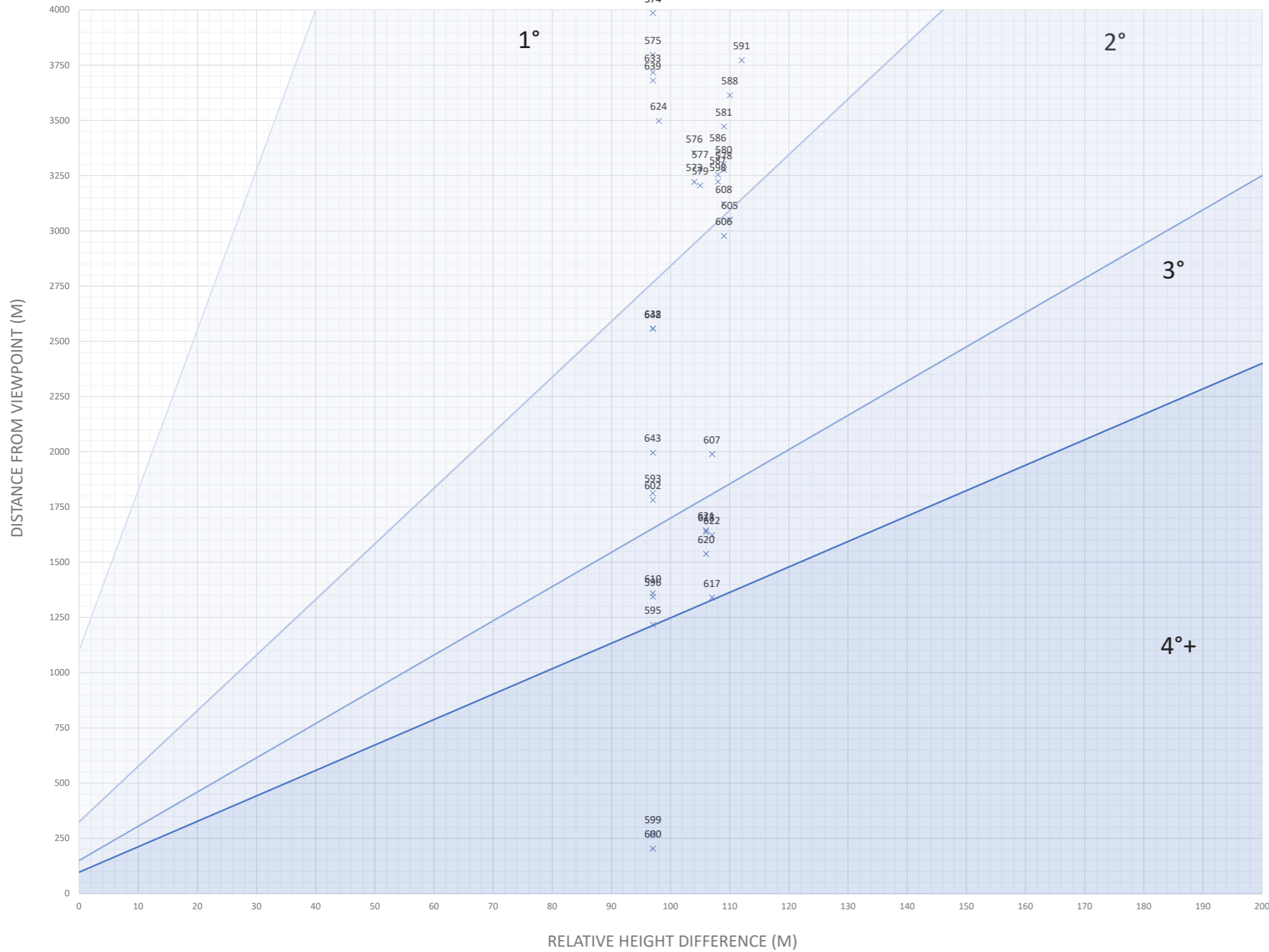
## Vertical Field of View Private Receptors - Mayfield Cluster

Refer to Section 4.5

Figure 11a - Vertical Field of View - Private Receptors - Mayfield Cluster

**\*\*Informative Note:\*\*** The Preliminary Assessment Tool restricts the assessment of receptors to a maximum of 104. Consequently, the Preliminary Assessment is presented in two separate figures.

Preliminary Visual Assessment Tool - vertical field of view



## Vertical Field of View Private Receptors - Mayfield Cluster

Refer to Section 4.5

Figure 11b - Vertical Field of View - Private Receptors - Mayfield Cluster - Continued

**\*\*Informative Note:\*\*** The Preliminary Assessment Tool restricts the assessment of receptors to a maximum of 104. Consequently, the Preliminary Assessment is presented in two separate figures.



Private Viewpoints / Receptors									
Receptor ID	Elevation of Receptor (m)	Highest Point	Lowest Point	Relative Height Difference (m)	Distance to the nearest Solar Panel (m)	Vertical Field of View (FOV) X°	Horizontal extent of view (FOV) A°-B°	Visibility (based on viewshed mapping)	Detailed Assessment Required?:
141	112.1	217.4	120.3	105	3334	1	28	30-40%	NO
142	111.9	217.4	120.3	106	3337	1	28	30-40%	NO
143	111.9	217.4	120.3	106	3355	1	28	30-40%	NO
144	109.8	217.4	120.3	108	3401	1	27	20-30%	NO
145	109.7	217.4	120.3	108	3408	1	27	20-30%	NO
146	109.3	217.4	120.3	108	3432	1	27	20-30%	NO
147	109.1	217.4	120.3	108	3437	1	27	20-30%	NO
148	108.7	217.4	120.3	109	3463	1	27	20-30%	NO
149	108.6	217.4	120.3	109	3479	1	26	20-30%	NO
150	108.6	217.4	120.3	109	3489	1	26	20-30%	NO
151	109.5	217.4	120.3	108	3524	1	27	20-30%	NO
152	109.5	217.4	120.3	108	3542	1	26	20-30%	NO
153	109	217.4	120.3	108	3576	1	26	20-30%	NO
154	109.3	217.4	120.3	108	3644	1	25	20-30%	NO
155	108.4	217.4	120.3	109	3653	1	24	20-30%	NO
156	108.9	217.4	120.3	109	3670	1	25	20-30%	NO
157	109.4	217.4	120.3	108	3686	1	25	20-30%	NO
158	109.8	217.4	120.3	108	3693	1	25	20-30%	NO
159	109.5	217.4	120.3	108	3677	1	25	20-30%	NO
160	109.2	217.4	120.3	108	3662	1	25	20-30%	NO
161	108.8	217.4	120.3	109	3648	1	25	20-30%	NO
162	107.4	217.4	120.3	110	3671	1	24	20-30%	NO
163	107.5	217.4	120.3	110	3682	1	24	20-30%	NO
164	107.6	217.4	120.3	110	3692	1	25	20-30%	NO
165	107.7	217.4	120.3	110	3712	1	25	20-30%	NO
166	107.5	217.4	120.3	110	3691	1	24	20-30%	NO
168	107.4	217.4	120.3	110	3282	1	26	10-20%	NO
172	107.9	217.4	120.3	110	3049	2	27	20-30%	NO
173	106.4	217.4	120.3	111	3359	1	25	10-20%	NO
174	106.5	217.4	120.3	111	3301	1	26	10-20%	NO
177	107.7	217.4	120.3	110	3780	1	24	20-30%	NO
178	107.8	217.4	120.3	110	3831	1	24	20-30%	NO
179	107.8	217.4	120.3	110	3857	1	23	10-20%	NO
180	107.5	217.4	120.3	110	3920	1	23	10-20%	NO
181	107.3	217.4	120.3	110	3932	1	23	10-20%	NO
182	107.2	217.4	120.3	110	3950	1	23	10-20%	NO
183	107.1	217.4	120.3	110	3963	1	24	10-20%	NO
184	107	217.4	120.3	110	3974	1	23	10-20%	NO
185	106.9	217.4	120.3	111	3986	1	23	10-20%	NO
186	106.7	217.4	120.3	111	3981	1	23	10-20%	NO
261	119.8	217.4	120.3	98	2256	2	46	40-50%	YES

Note: Receptors with no visibility towards the power clusters, determined through viewshed mapping have not been considered in the Preliminary Assessment Tool Calculations

Table 05 – Preliminary Visual Assessment Tool Results - Mayfield Cluster - Private Receptors

262	118.2	217.4	120.3	99	1685	2	55	40-50%	YES
263	122.6	217.4	120.3	97	435	4	78	20-30%	YES
264	115.5	217.4	120.3	102	2089	2	57	40-50%	YES
266	139.3	217.4	120.3	97	199	4	139	10-20%	YES
267	150.4	217.4	120.3	97	2547	2	35	30-40%	YES
268	122.4	217.4	120.3	97	272	4	114	10-20%	YES
269	122.5	217.4	120.3	97	267	4	117	10-20%	YES
270	116.5	217.4	120.3	101	1718	2	68	40-50%	YES
271	113.8	217.4	120.3	104	1730	3	64	30-40%	YES
272	111.8	217.4	120.3	106	1806	2	56	30-40%	YES
273	109.6	217.4	120.3	108	2563	2	32	20-30%	YES
274	112.7	217.4	120.3	105	779	4	56	10-20%	YES
275	112.6	217.4	120.3	105	697	4	56	1-10%	YES
277	110.5	217.4	120.3	107	3093	1	29	30-40%	NO
278	111.9	217.4	120.3	106	1620	3	57	30-40%	YES
427	141	217.4	120.3	97	1694	2	45	1-10%	YES
428	223.5	217.4	120.3	103	1481	3	69	1-10%	YES
429	141.8	217.4	120.3	97	1396	3	58	1-10%	YES
479	121.9	217.4	120.3	97	2821	1	36	30-40%	YES
480	121.9	217.4	120.3	97	2841	1	36	30-40%	YES
485	126.7	217.4	120.3	97	1416	3	54	20-30%	YES
488	124.3	217.4	120.3	97	2441	2	36	10-20%	YES
491	121.5	217.4	120.3	97	2439	2	42	40-50%	YES
492	128.2	217.4	120.3	97	1411	3	54	20-30%	YES
493	129	217.4	120.3	97	1367	3	55	20-30%	YES
494	125.8	217.4	120.3	97	1419	3	53	20-30%	YES
495	121.5	217.4	120.3	97	2341	2	43	40-50%	YES
570	108.5	217.4	120.3	109	3083	1	27	1-10%	NO
571	121	217.4	120.3	97	3205	1	37	40-50%	NO
572	125.3	217.4	120.3	97	3723	1	36	40-50%	NO
573	113.7	217.4	120.3	104	3221	1	35	1-10%	NO
574	134.9	217.4	120.3	97	3986	1	28	40-50%	NO
575	127	217.4	120.3	97	3797	1	29	40-50%	NO
576	113	217.4	120.3	104	3351	1	30	20-30%	NO
577	112.3	217.4	120.3	105	3280	1	33	30-40%	NO
578	108.9	217.4	120.3	109	3277	1	27	20-30%	NO
579	107.1	217.4	120.3	110	3205	1	28	20-30%	NO
580	108.8	217.4	120.3	109	3302	1	27	20-30%	NO
581	108.3	217.4	120.3	109	3472	1	26	20-30%	NO
586	109.4	217.4	120.3	108	3357	1	26	20-30%	NO
587	109.6	217.4	120.3	108	3254	1	26	1-10%	NO
588	107.2	217.4	120.3	110	3614	1	24	1-10%	NO
591	105.9	217.4	120.3	112	3772	1	23	1-10%	NO
593	134	217.4	120.3	97	1813	2	39	1-10%	YES

Note: Receptors with no visibility towards the power clusters, determined through viewshed mapping have not been considered in the Preliminary Assessment Tool Calculations

Table 05 - Preliminary Visual Assessment Tool Results - Mayfield Cluster - Private Receptors Continued

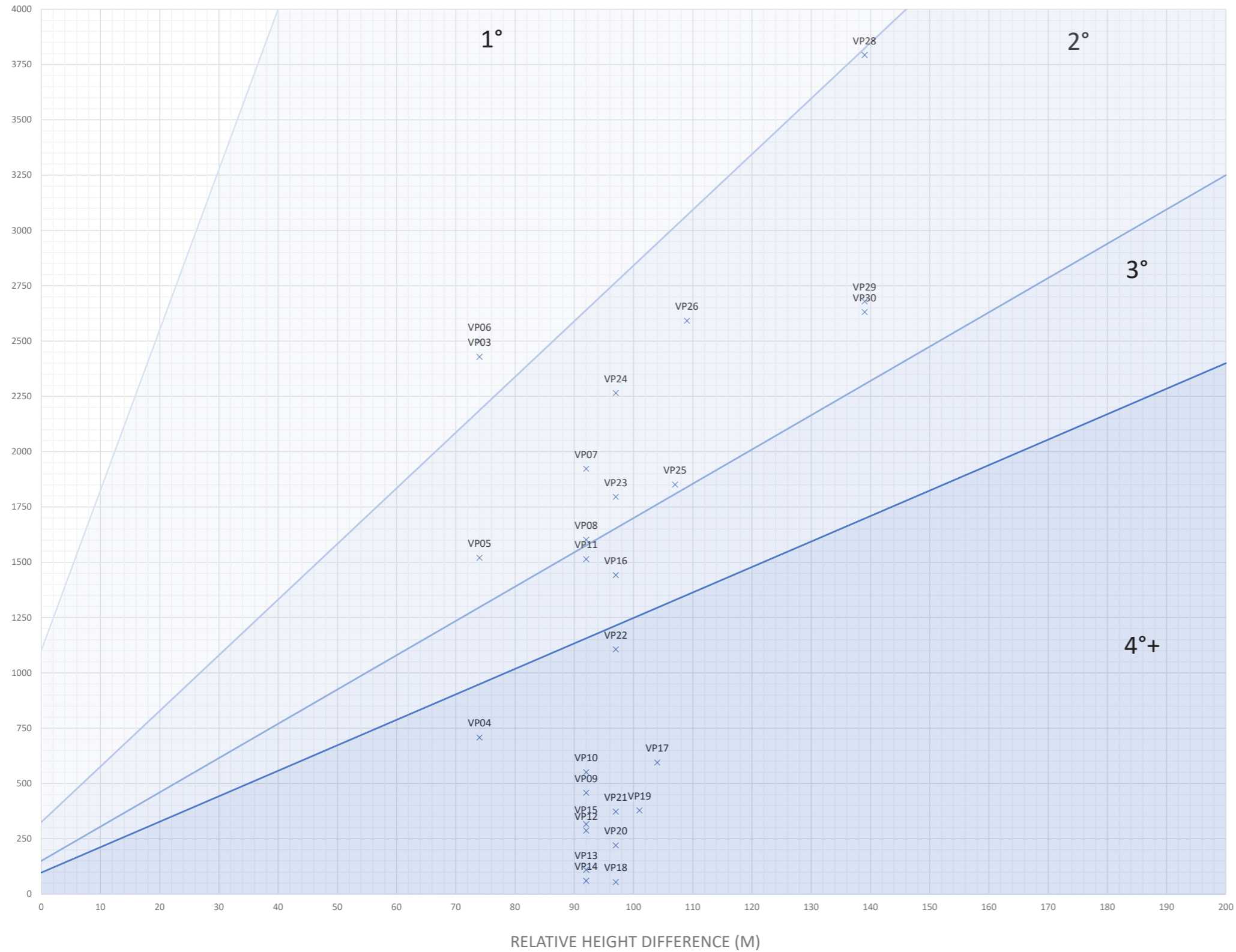
595	121	217.4	120.3	97	1217	3	43	1-10%	YES
596	121.9	217.4	120.3	97	1344	3	42	1-10%	YES
598	109.7	217.4	120.3	108	3223	1	28	30-40%	NO
599	139.1	217.4	120.3	97	270	4	130	20-30%	YES
600	138.7	217.4	120.3	97	204	4	137	20-30%	YES
602	144	217.4	120.3	97	1782	2	44	1-10%	YES
605	107.7	217.4	120.3	110	3050	2	26	1-10%	NO
606	108	217.4	120.3	109	2977	2	27	1-10%	NO
607	110.5	217.4	120.3	107	1990	2	34	1-10%	YES
608	108	217.4	120.3	109	3122	1	26	1-10%	NO
610	141.9	217.4	120.3	97	1360	3	59	1-10%	YES
617	110.9	217.4	120.3	107	1340	3	54	30-40%	YES
618	111.9	217.4	120.3	106	1637	3	48	30-40%	YES
620	111	217.4	120.3	106	1538	3	39	1-10%	YES
621	111.2	217.4	120.3	106	1645	3	44	30-40%	YES
622	110.7	217.4	120.3	107	1623	3	39	10-20%	YES
624	119.6	217.4	120.3	98	3498	1	37	40-50%	NO
633	126.3	217.4	120.3	97	3717	1	37	40-50%	NO
638	121.5	217.4	120.3	97	2558	2	39	40-50%	YES
639	124.1	217.4	120.3	97	3681	1	37	40-50%	NO
642	122.7	217.4	120.3	97	2557	2	35	1-10%	YES
643	128.6	217.4	120.3	97	1996	2	34	1-10%	YES

Note: Receptors with no visibility towards the power clusters, determined through viewshed mapping have not been considered in the Preliminary Assessment Tool Calculations

**Table 05 - Preliminary Visual Assessment Tool Results - Mayfield Cluster - Private Receptors Continued**



Preliminary Visual Assessment Tool - vertical field of view



## Vertical Field of View Public Receptors

Refer to Section 4.5

Figure 12 – Vertical Field of View - Public Receptor

Public Viewpoints / Receptors									
Receptor ID	Elevation of Receptor (m)	Highest Point	Lowest Point	Relative Height Difference (m)	Distance to the nearest Solar Panel (m)	Vertical Field of View (FOV) X°	Horizontal extent of view (FOV) A°-B°	Visibility (based on viewshed mapping)	Detailed Assessment Required?:
VP01	110.1	152.5	78.5	74	4504	1	17	1-10%	NO
VP02	83.3	152.5	78.5	74	4730	1	19	1-10%	NO
VP03	76.3	152.5	78.5	76	2429	1	30	20-30%	NO
VP04	78.2	152.5	78.5	74	708	4	60	20-30%	YES
VP05	80.9	152.5	78.5	74	1520	2	55	1-10%	NO
VP06	90.1	152.5	78.5	74	2498	1	37	1-10%	NO
VP07	170.7	189	97.3	92	1923	2	63	NO VISIBILITY	NO
VP08	148.2	189	97.3	92	1602	2	80	1-10%	YES
VP09	130.1	189	97.3	92	458	4	99	20-30%	YES
VP10	127.6	189	97.3	92	551	4	82	30-40%	YES
VP11	147.9	189	97.3	92	1514	3	79	40-50%	YES
VP12	177.4	189	97.3	92	287	4	107	1-10%	YES
VP13	151.2	189	97.3	92	110	4	186	10-20%	YES
VP14	98.3	189	97.3	92	60	4	158	20-30%	YES
VP15	120.5	189	97.3	92	316	4	98	30-40%	YES
VP16	128.5	217.4	120.3	97	1442	3	43	1-10%	YES
VP17	113.7	217.4	120.3	104	595	4	61	1-10%	YES
VP18	120.7	217.4	120.3	97	54	4	171	20-30%	YES
VP19	116.1	217.4	120.3	101	378	4	138	20-30%	YES
VP20	124	217.4	120.3	97	220	4	120	10-20%	YES
VP21	125.1	217.4	120.3	97	373	4	82	20-30%	YES
VP22	121.5	217.4	120.3	97	1106	4	60	20-30%	YES
VP23	137.4	217.4	120.3	97	1796	2	46	20-30%	NO
VP24	152.6	217.4	120.3	97	2265	2	38	1-10%	NO
VP25	110.1	217.4	120.3	107	1851	2	38	20-30%	NO
VP26	108.2	217.4	120.3	109	2592	2	31	20-30%	NO
VP27	271.8	217.4	120.3	152	6328	1	49	40-50%	NO
VP28	129.5	217.4	120.3	97	3793	2	36	40-50%	NO
VP29	120.5	217.4	120.3	97	2679	2	41	40-50%	NO
VP30	115.5	217.4	120.3	102	2631	2	45	40-50%	NO
VP31	115.6	217.4	120.3	102	4134	1	23	20-30%	NO

Note: Receptors with no visibility towards the power clusters, determined through viewshed mapping have not been considered in the Preliminary Assessment Tool Calculations

Table 06 – Preliminary Visual Assessment Tool Results - Public Receptors

## 4.8 Results of Preliminary Assessment Tools

It is important to note that non-associated receptors with no visibility towards the power clusters, determined through viewshed mapping, have been excluded from the Preliminary Assessment Tool Calculations. **Figure 13** and **Figure 14** illustrate private and public receptors that require further assessment.

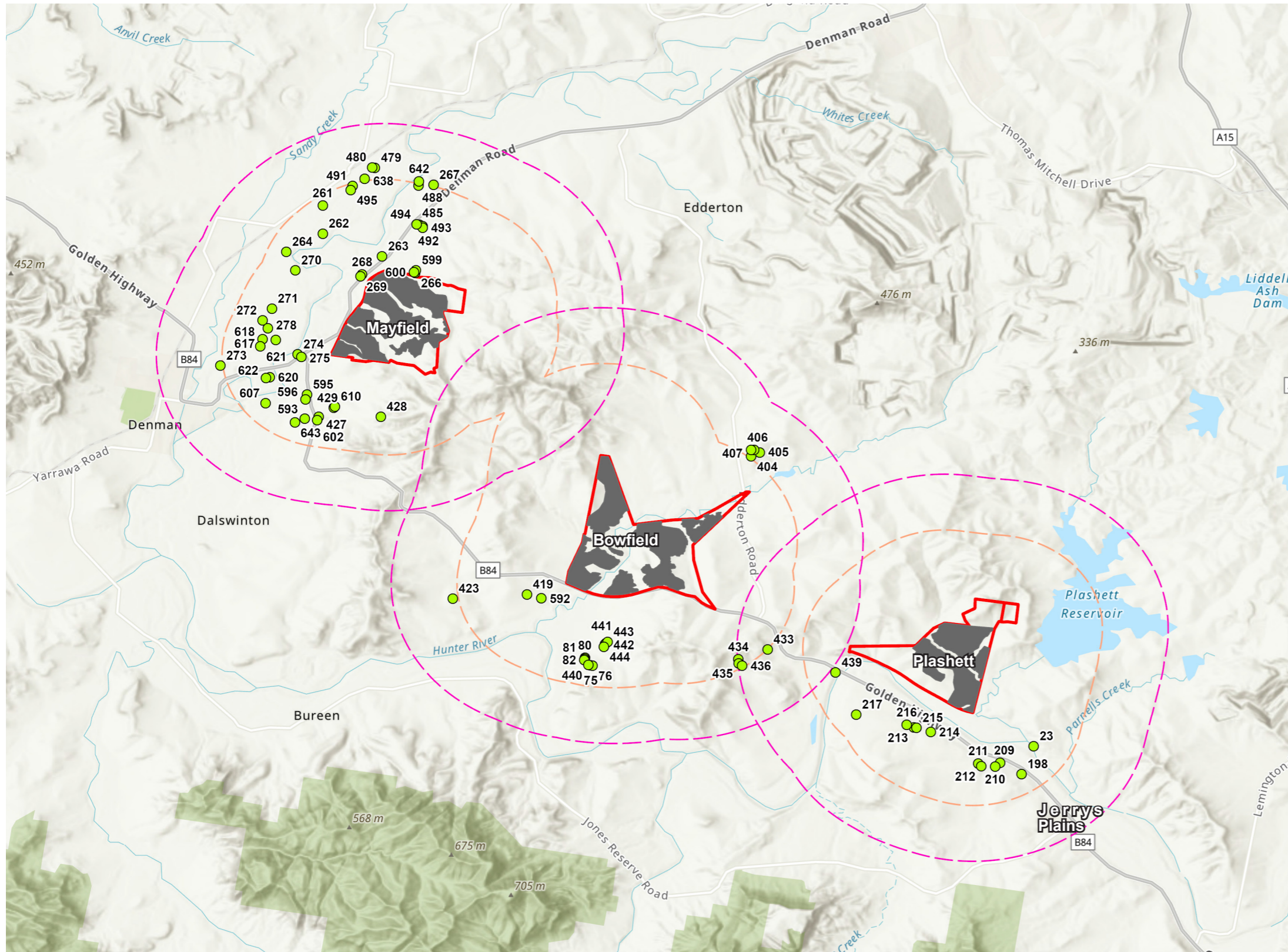
Application of the Preliminary Assessment Tools identified a total of:

- 41 non-associated receptors within 4km of the Plashett power cluster of which, 12 non-associated receptors will require further detailed assessment (see **Figure 13**).
- 35 non-associated receptors were assessed by applying the Preliminary Assessment Tools within 4km of the Bowfield power cluster of which, 21 non-associated receptors will require a detailed assessment (see **Figure 13**). *(Please note that five (5) non-associated receptors [433, 434, 435, 436 and 437] located between the Plashett and Bowfield power clusters and have been considered separately in both preliminary assessments).*
- 107 non-associated receptors were assessed by applying the Preliminary Assessment Tools within 4km of the Mayfield power cluster of which, 43 non-associated receptors will require further detailed assessment (see **Figure 13**).

It is important to note that non-associated receptors with no visibility towards the power clusters, determined through viewshed mapping, have been excluded from the Preliminary Assessment Tool Calculations.

Public receptors (a total of 31) were assessed by applying the Preliminary Assessment Tools of which 16 will require further detailed assessment in the LVIA (see **Figure 14**). **Table 03, Table 04, Table 05 and Table 06** provide a summary of these results.





## Private Receptor requiring further detailed assessment

### Edderton Solar Project

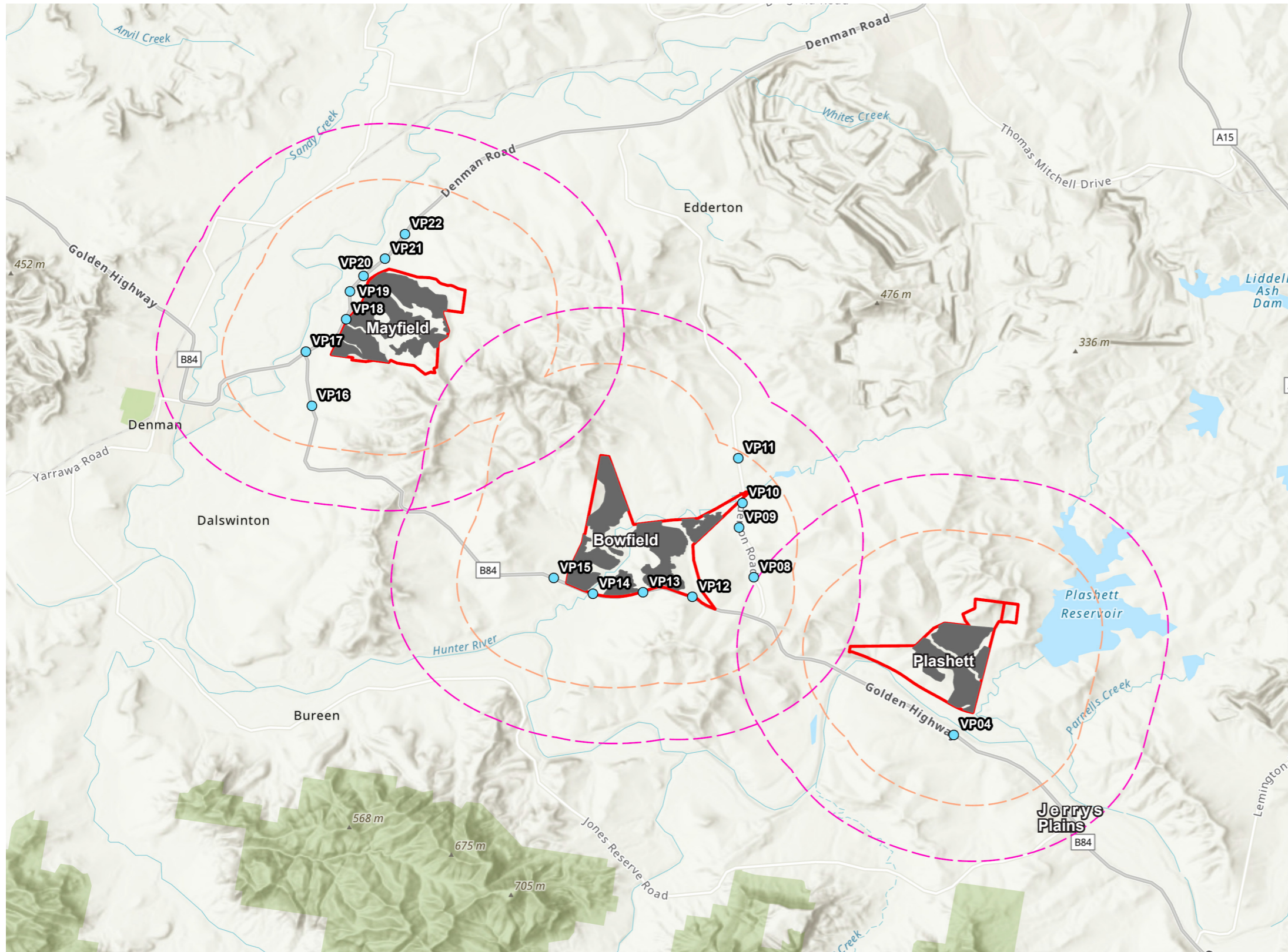
#### LEGEND

- Solar PV Study Area
- - - 2.5 km from the Indicative PV Area
- - - 4 km from the Indicative PV Area
- Indicative PV Area
- Private Receptors

**Figure 13** – Private Receptors requiring further detailed assessment  
 Imagery Source: ArcGIS 2023







## Public Receptor requiring further detailed assessment

### Edderton Solar Project

#### LEGEND

- Solar PV Study Area
- - - 2.5 km from the Indicative PV Area
- - - 4 km from the Indicative PV Area
- Indicative PV Area
- Public Receptors

**Figure 14** – Public Receptors requiring further detailed assessment  
 Imagery Source: ArcGIS 2023



## 5.0 Cumulative Visual Impacts

### 5.1 Overview of Potential Cumulative Impacts

The Project is located within the Muswellbrook Shire Local Government Area and the Hunter - Central Coast Renewable Energy Zone (REZ). The existing visual landscape of the region includes existing open cut mining and power generation operations (see **Figure 15**) and viticulture (vineyards) and equine enterprises.

In accordance with the *Cumulative Impact Assessment Guidelines* (DPIE, 2022a), the area selected to assess relevant cumulative impacts from other developments should not be unnecessarily large or include areas where the cumulative impacts are likely to be negligible, relative to the baseline condition of the relevant Project. Visibility research suggests objects recede into the background in terms of visibility at 8 km (DPE, 2016).

The occurrence of large-scale renewable energy projects within a region has the potential to alter the perception of the overall landscape character irrespective of being viewed in a single viewshed as these projects could become part of the existing landscape. It is important to determine whether the effect of multiple projects and other major infrastructure within the region would combine to become the dominant visual element, altering the perception of the general landscape character. **Figure 15** shows other renewable energy projects that are currently proposed, operating and under construction over a broader regional context.

### 5.2 Nearby Large-Scale Renewable Energy Projects

Four (4) large-scale renewable energy projects are located within 10 km of the Project. Upper Hunter South Solar Farm, Hunter River Solar Farm, Maxwell Solar Farm and Denman Solar Park are in close proximity to the Project (see **Table 07**).

Given the distance to the other projects, intervening elements such as existing vegetation, built form and weather conditions would obscure visibility. As all the other large-scale renewable projects are located in excess of 10 km, it is unlikely that all the other projects located beyond 10 km would be visible simultaneously.

Cumulative visual impacts of all the three (3) large-scale renewable projects within 10km in relation to the Project will be assessed in detail during the EIS stage.

### 5.3 Cumulative Impact on Broader Landscape Character

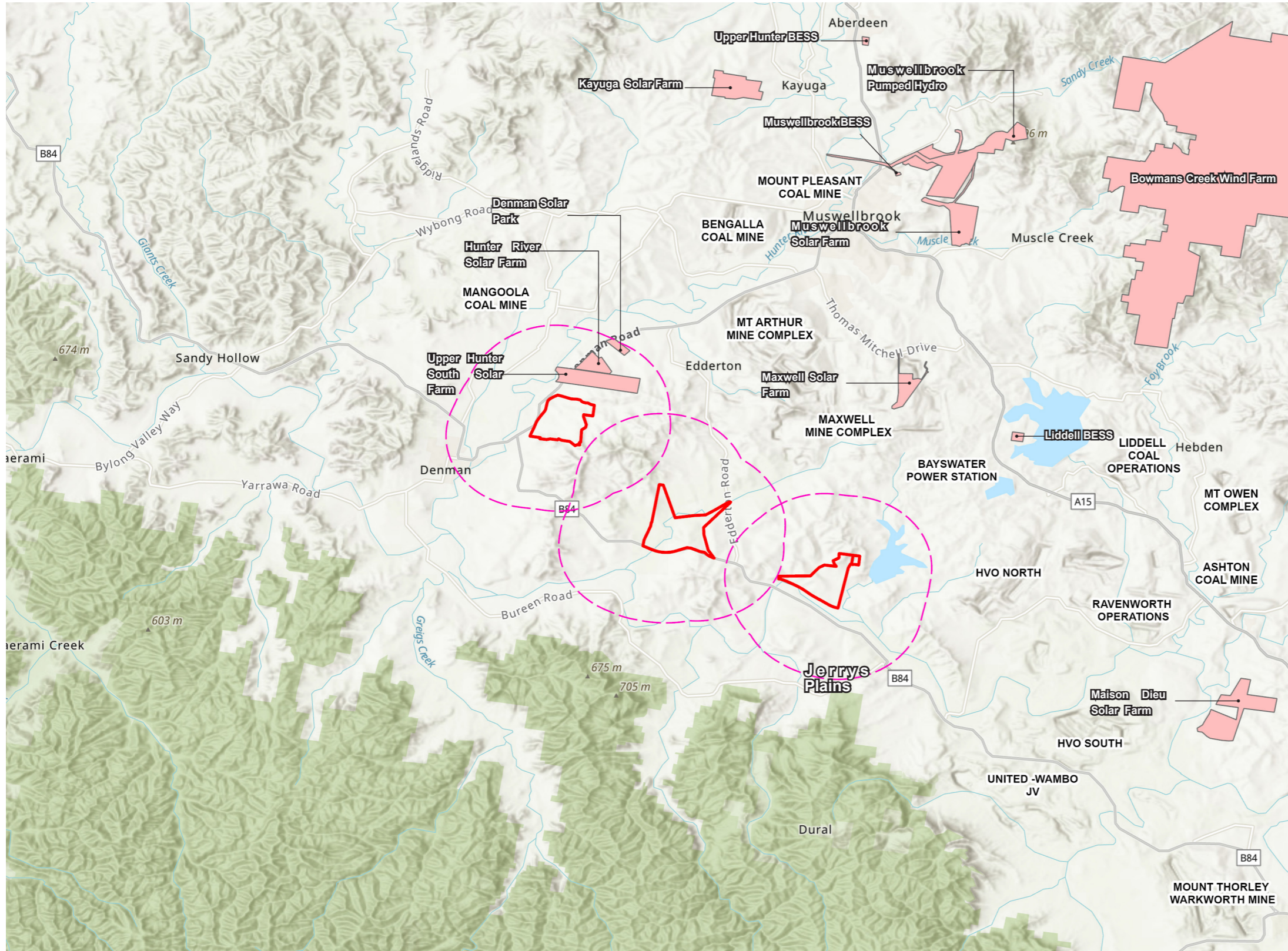
The emergence of renewable energy projects has the potential to alter the perception of the overall landscape character irrespective of being viewed in a single viewshed. It is important to determine whether the effect of major infrastructure projects within the region would combine to become the dominant visual element, altering the perception of the general landscape character (DPE, 2021).

With respect to the Project, it is likely that several projects would be visible simultaneously because of the proximity to each other. Further assessment of the cumulative visual impact will be detailed in the EIS, along with potential mitigation and management measures that can be employed to reduce cumulative impacts.

<i>Name of Project</i>	<i>Distance to Study Area</i>	<i>Current Status</i>
	<i>* Approximate distances</i>	
Upper Hunter South Solar Farm	< 1 km	SEARS Requested
Hunter River Solar Farm	2 km	AMENDED SEARS issued Feb 2023
Maxwell Solar Farm	8 km	Approved August 2020
Denman Solar Park	5 km	Approved with Consent
Muswellbrook Solar Farm	18 km	Response to Submission SEP 2023
Muswellbrook BESS	19 km	Approved July 2023
Bowmans Creek Wind Farm	18 km	Approved with Consent
Liddell BESS	10 km	Approved March 2022
Kayuga Solar Farm	22 km	Scoping Phase
Upper Hunter BESS	27 km	SEARS Issued September 2023
Muswellbrook Pumped Hydro	21 km	SEARS Issued February 2024
Maison Dieu Solar Farm	20 km	SEARS Issued October 2022

**Table 07** – Nearby Renewable Energy Projects





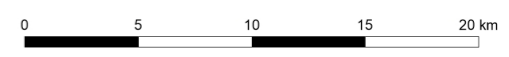
## Nearby Renewable Projects

### Edderton Solar Project

#### LEGEND

- Solar PV Study Area
  - 4 km from the Indicative PV Area
  - Other Large-scale Renewable Energy Projects.
- Indicative Layout of the Project as available on Major Project Website - [www.planningportal.nsw.gov.au](http://www.planningportal.nsw.gov.au)

**Figure 15 – Nearby Renewable Energy Projects**  
 Imagery Source: ArcGIS, 2023





## 6.0 Summary and Next Steps

### 6.1 Summary of Findings

Due to the relatively undulating topography that is typical of the surrounding landscape, view to the majority of the clusters are likely to be visible only from areas close to each PV array cluster. Undulations within the existing landscape will potentially limit visibility to up to 30% at the majority of the receptors to the south of the Project.

The PVIA considered a 4 km buffer from each power cluster in order to identify preliminary visual impacts for a worst-case scenario. Viewshed Mapping was utilised to identify receptors that had visibility to the power clusters (see **Section 4.3** and **Section 4.4**). Receptors that had visibility were further assessed using vertical and horizontal field of view calculations discussed in **Section 4.5** to **Section 4.7**.

Application of the Preliminary Assessment Tools identified a total of:

- 41 non-associated receptors within 4km of the Plashett power cluster of which, 12 non-associated receptors will require further detailed assessment.
- 35 non-associated receptors were assessed by applying the Preliminary Assessment Tools within 4km of the Bowfield power cluster of which, 21 non-associated receptors will require a detailed assessment. *(Please note that five (5) non-associated receptors [433, 434, 435, 436 and 437] located between the Plashett and Bowfield power clusters and have been considered separately in both preliminary assessments).*
- 107 non-associated receptors were assessed by applying the Preliminary Assessment Tools within 4km of the Mayfield power cluster of which, 43 non-associated receptors will require further detailed assessment.

In addition, there are 31 public viewpoints that were identified for consideration within the Study Area using the Preliminary Assessment Tool, of which 16 would require a detailed assessment in the EIS phase. Preliminary desktop analysis identified that intervening vegetation surrounding nearby receptors and roadsides will likely fragment views of the Project.

### 6.2 Next Steps

A Landscape and Visual Impact Assessment (LVIA) will be prepared in accordance with the Guideline and the Technical Supplement. During the preparation of the LVIA, detailed site investigations will be undertaken from areas identified in the preliminary assessment as having potential visibility towards the Project. This process will be undertaken using the procedures outlined in the following Guidelines:

- *Large-Scale Solar Energy Guideline* (DPE 2022a).
- *Technical Supplement Landscape and Visual Impact Assessment - Large-Scale Solar Energy Guideline* (DPE, 2022b).
- *Environmental Planning and Assessment Regulation* 2021.
- *Muswellbrook Local Environmental Plan* (LEP) 2009.
- *State Environmental Planning Policy (Transport and Infrastructure)* 2021.
- *Cumulative Impact Assessment Guidelines for State Significant Development* (DPE 2022a).

Specialised modelling tools and visualisations (including photomontages) will be developed to illustrate potential views of the Project from key public and private viewpoints identified through this report. In addition site inspections will be undertaken from key public viewpoints identified as requiring further assessment.

The LVIA will include an assessment of the landscape and visual impact resulting from all associated infrastructure and ancillary structures, and consideration of cumulative impacts of nearby infrastructure. Existing visual character of the Project study area will be considered to form a visual baseline. Further assessment will be undertaken to assess potential impacts of glint and glare using industry standard methodology.

Cumulative impacts of surrounding renewable energy projects will also be assessed in the LVIA in order to identify impacts on the broader landscape character of the region. Currently, four (4) large-scale project were identified within 10km of the Project. Detailed assessment of the impacts of these projects will be undertaken in the EIS phase.

On-site and off-site visual landscape mitigation strategies will be developed in response to the assessment and community consultation. The purpose of the mitigation strategies will be to ensure the Project is integrated into the existing landscape and to mitigate identified visual impacts to an acceptable level.

## 7.0 References

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