URBIS

ELAINE SOLAR FARM

Town Planning Report

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Prepared for

ELGIN ENERGY PTY LTD

17 November 2023

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Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

This project proposal is located on Wadawurrung Country.

Urbis Acknowledges and respects the Wadawurrung People as the original custodians of the land, waters and skies, their unique ability to care for Country and deep spiritual connection to it.

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CONTENTS

FIGURES

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PICTURES

TABLES

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GLOSSARY OF ABBREVIATIONS

AC	Alternating current
AEMO	Australian Energy Market Operator
AEP	Average exceedance probability
AHD	Australian Height Datum
BESS	Battery Energy Storage System
BMO	Bushfire Management Overlay
BPA	Bushfire Prone Area
CCMA	Corangamite Catchment Management Authority
CFA	Country Fire Authority
CHMP	Cultural Heritage Management Plan
CHW	Central Highlands Water
DC	Direct current
DDO2	Design and Development Overlay Schedule 2
DJPR	Department of Jobs, Precincts and Regions
DTP	Department of Transport and Planning
EES	Environment Effects Statement
ELA	Ecological Australia
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESD	Environmentally Sustainable Development
EVC	Ecological Vegetation Class
FFG Act	*Flora and Fauna Guarantee Act 1988*
FRA	Fire Risk Assessment
FZ	Farming Zone
GW	Gigawatts
Ha	Hectares
kV	Kilovolts
LVIA	Landscape and Visual Impact Assessment
MLF	Marginal loss factor
MNES	Matters of National Environmental Significance
MW	Megawatts
MWac	Megawatt alternating current
MWh	Megawatt hour
MWp	Megawatt peak
NEM	National Electricity Market
NIRV	Noise from Industry in Regional Victoria
NSP	Network service provider
NVR	Native Vegetation Removal
P&E Act	*Planning and Environment Act 1987*
PPF	Planning Policy Framework
PV	Photovoltaic
RAP	Registered Aboriginal Party
SRW	Southern Rural Water
TMP	Traffic Management Plan
TOG	Traditional Owners Group
VAHR	Victorian Aboriginal Heritage Register
VPP	Victoria Planning Provisions
WTOAC	Wadawurrung Traditional Owners Aboriginal Corporation

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EXECUTIVE SUMMARY

This planning report supports a planning application for a renewable energy facility (solar farm) at the sites known as '**Peters'** and '**Windy'** in Elaine. The sites are located on the Midland Highway and Woolshed Road, respectively. This report provides an analysis of the suitability and constraints of the selected site, an assessment of the proposal against the relevant provisions of the Moorabool Planning Scheme and an assessment against relevant Commonwealth and state legislation.

The following planning permit triggers apply to the proposed solar farm installation at the subject sites:

- Use of land for a Renewable Energy Facility (other than Wind Energy Facility) and Utility Installation within the Farming Zone, pursuant to Clause 35.07-1.
- Buildings and works associated with Section 2 Uses (Utility Installation) within the Transport Zone, pursuant to Clause 36.04-2.
- Buildings and works associated with Section 2 Uses (Renewable Energy Facility and Utility Installation) within the Farming Zone, pursuant to Clause 35.07-4.
- Buildings and works associated with land covered by the Design and Development Overlay – Schedule 2, pursuant to Clause 43.02-2.
- Display of business identification signage, pursuant to Clause 52.05-14.
- Removal of native vegetation, including dead native vegetation, pursuant to Clause 52.17-1.

Due to the 150MW size of the proposal, the Minister for Planning is the Responsible Authority, pursuant to Clause 72.01.

The development is considered appropriate for the following reasons:

- The proposal complies with the Solar Energy Facilities Design and Development Guidelines and the Moorabool Planning Scheme (zoning, overlays and planning policy framework).
- The proposed development will comprise a 150MW solar farm and 150MW Battery Energy Storage System (BESS) that will contribute significantly to Victoria's renewable energy generation targets of 50% by 2030 and the reduction of greenhouse gas emissions (legislated to achieve net zero by 2050).
- Economic benefits will be provided to the community through the creation of construction and maintenance jobs and supporting the Victorian energy transition to renewable energy.
- Extensive community consultation and engagement has taken place providing opportunities for the community and stakeholders to provide formative feedback on the proposal's design and layout.
- Reasonable measures have been undertaken to protect environmental values by avoiding, minimising and offsetting impacts in order to achieve the objective of 'no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation'. Based on the current design, the proposed development will require the removal of 3.565 hectares of native vegetation, including 6 Large Trees.
- The applicant has committed to offsetting the 0.650 General Habitat Units and 6 Large Trees, as required within the Corangamite CMA / Moorabool Shire Council with a minimum strategic biodiversity value of 0.239.
- Visual impact is limited due to the typically low-profile form of the proposed installation. Visual impact will be significantly reduced after the establishment of amelioration measures, including native landscaping. There are no glare and glint impacts for sensitive receptors within 1km of the project, including Midland Highway.
- The proposed development allows retention of productive agricultural land and not impact negatively upon the long-term viability of this land. The construction impact is low, and the site can be restored to its previous use upon decommissioning of the installation at the end of its lifecycle.
- The residual risk that noise from the operational Solar Farm will cause adverse noise impacts is low. Preliminary noise modelling results indicate that during normal solar farm operation, noise from the proposed solar farm will comply with the relevant EPA Publication 1826 noise limits at all receivers without further mitigation.

- The proposal will not negatively impact upon the amenity of surrounding properties and agriculture uses. The passive nature of the solar farm once operational ensures limited noise pollution to neighbouring properties and visual impacts have been mitigated through design and screening methods.

For the reasons listed above, Urbis, on behalf of Elgin Energy request that the Minister for Planning grants a planning permit for a solar installation at the subject site, as detailed in this planning report.

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1. INTRODUCTION

This report has been prepared by Urbis Pty Ltd on behalf of Elgin Energy Pty Ltd ('the permit applicant') to accompany a planning permit application to construct a solar installation ('the proposed installation') at two properties to be known as '**Peters'** and '**Windy'**. These properties form the 'subject site'.

Windy contains the following lot along Midland Highway:

- Crown Allotment 17 on Title Plan 609966X (Volume 7076 Folio 091)

Peters contains the following lots adjacent to Woolshed Road:

- Crown Allotments 19B, 21E, 21F, 21G, 50 on Title Plan 488617T (Volume 8389 Folio 061)

The following permit triggers apply to this planning permit application:

- A permit is required for the use of land for a Renewable Energy Facility (other than Wind energy facility) and Utility Installation within the Farming Zone pursuant to Clause 35.07-1.
- A permit is required for buildings and works associated with Section 2 Uses (Renewable Energy Facility and Utility Installation) within the Farming Zone, pursuant to Clause 35.07-4. Including Earthworks which change the rate of flow of water across a property boundary.
- A permit is required for buildings and works associated with Section 2 Uses (Utility Installation) within the Transport Zone, pursuant to Clause 36.04-2.
- A permit is required for buildings and works for land affected by the Design and Development Overlay pursuant to Clause 43.02-2.
- A permit is required for the display of a business identification sign pursuant to Clause 52.05-14.
- A permit is required for the removal of native vegetation, including dead native vegetation pursuant to Clause 52.17-1.

The following particular provisions apply to the proposed installation on site:

- Clause 52.05 Signs
- Clause 52.17 Native Vegetation
- Clause 53.13 Renewable Energy Facility (other than Wind energy facility)

The following operational provisions apply to the proposed installation on site:

- Clause 72.01-1 Minister for Planning to be the Responsible Authority determining planning permit applications

Specialist consultants in Bushfire, Biodiversity, Hydrology, Traffic and Transport, Acoustic and Cultural Heritage have been commissioned to provide technical assessments to accompany the planning permit application.

Management plans required for statutory consents will be prepared after a permit is issued.

This report is informed and accompanied by:

- Certificates of Title **(Appendix A)**
- Site Plan (Urbis) **(Appendix B)**
- Landscape Strategy (Urbis) **(Appendix C)**
- Survey (Veris) **(Appendix D)**
- Elevation Plan (Urbis) **(Appendix E)**
- Solar Energy Facilities Design and Development Guidelines (DTP, October 2022) Assessment (Urbis) **(Appendix F)**
- Clause 35.07 Farming Zone Decision Guidelines (Urbis) **(Appendix G)**
- Clause 43.02 Design and Development Overlay Decision Guidelines (Urbis) **(Appendix H)**

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- Clause 53.13 Renewable Energy Facilities (other than Wind Energy Facilities) Decision Guidelines (Urbis) **(Appendix I)**
- Noise Impact Assessment (WSP) **(Appendix J) (to follow submission)**
- Agricultural Assessment (Ag-Challenge Consulting) **(Appendix K)**
- Preliminary Bushfire Risk Assessment (Ecology & Heritage Partners) **(Appendix L)**
- Biodiversity Assessment (Ecology & Heritage Partners) **(Appendix M)**
- Preliminary Cultural Heritage Advice (Ecology & Heritage Partners) **(Appendix N)**
- Traffic and Transport Assessment (Impact) **(Appendix O)**
- Engagement and Outcomes Report (Urbis) **(Appendix P)**
- Landscape and Visual Impact Assessment (Peter Haack Consulting) **(Appendix Q)**
- Glare and Glint Assessment (Urbis) **(Appendix R)**
- Flooding Impact Assessment (Ecological Australia) **(Appendix S)**
- Planning Provisions (Urbis) **(Appendix T)**
- Relevant Planning Scheme Amendments (Urbis) **(Appendix U)**

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2. SUBJECT SITE

The subject site sits over two locations, named '**Windy'** and '**Peters'**, as outlined below in Figure 1 and Figure 2. **Windy** is located to the west, and **Peters** is located to the east. The overall site area is approximately 267.2 hectares over seven lots.

Windy is located to the west of Midland Highway, is approximately 170.9 hectares, spanning one lot.

Peters is located to the south of Woolshed Road, is approximately 96.3 hectares and spans five lots. The site incorporates an access road from the unmade Government Road to the south to the subject site.

Both sites are within the Elaine, in the Moorabool Local Government Area, approximately 6 kilometres northwest of Elaine township and 23 kilometres southeast of Ballarat (Figure 1). The overall site area is approximately 267.2 hectares and spans seven (7) lots, which are detailed in the table below.

Table 1 Formal Land Descriptions

Volume/Folio	Crown Allotment	Parish	Address	Site
07076/091	17	Parish of Narmbool	Midland Highway, Elaine	Windy
08389/061	21F	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	19B	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	21E	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	21G	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	50	Parish of Narmbool	Woolshed Road, Elaine	Peters
-	-	Parish of Narmbool	Woolshed Road Reserve, Midland Highway Road Reserve, Horsehill Road Reserve,	Path of connecting power line

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Figure 1 Site Location Map

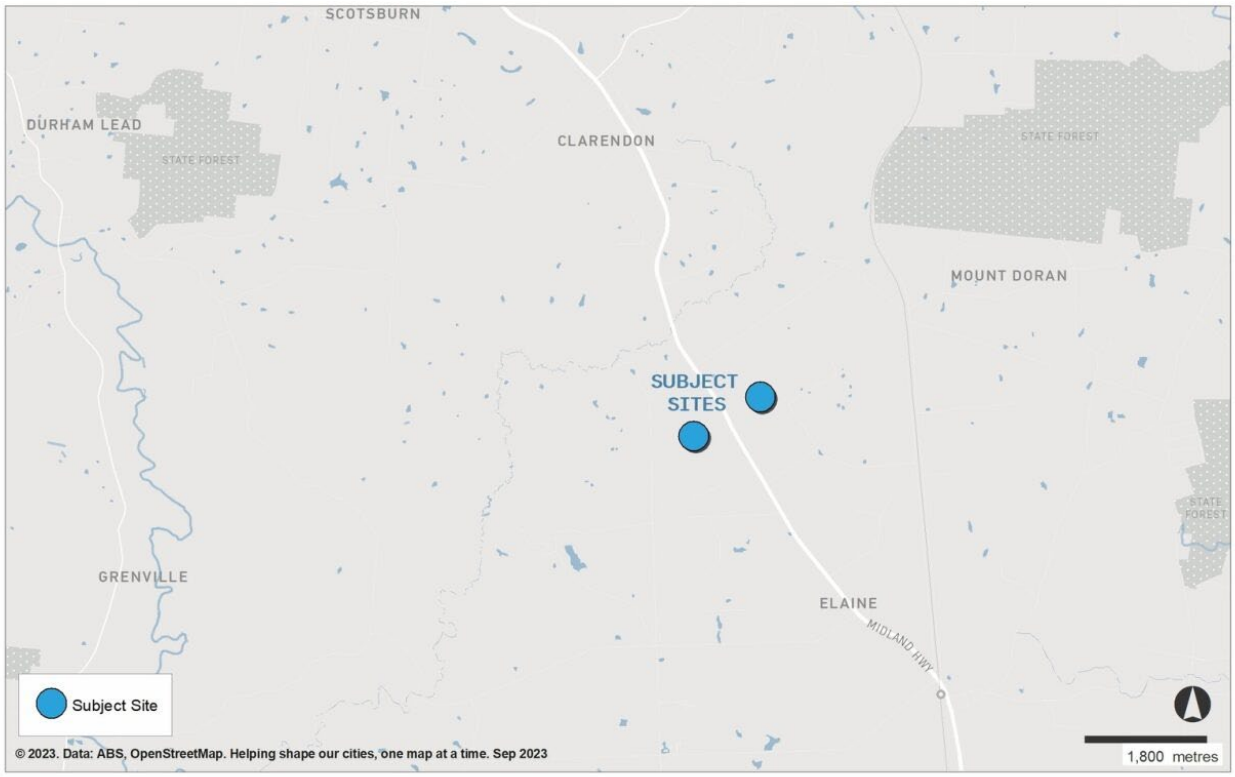

Figure 2 Site Location Aerial Map

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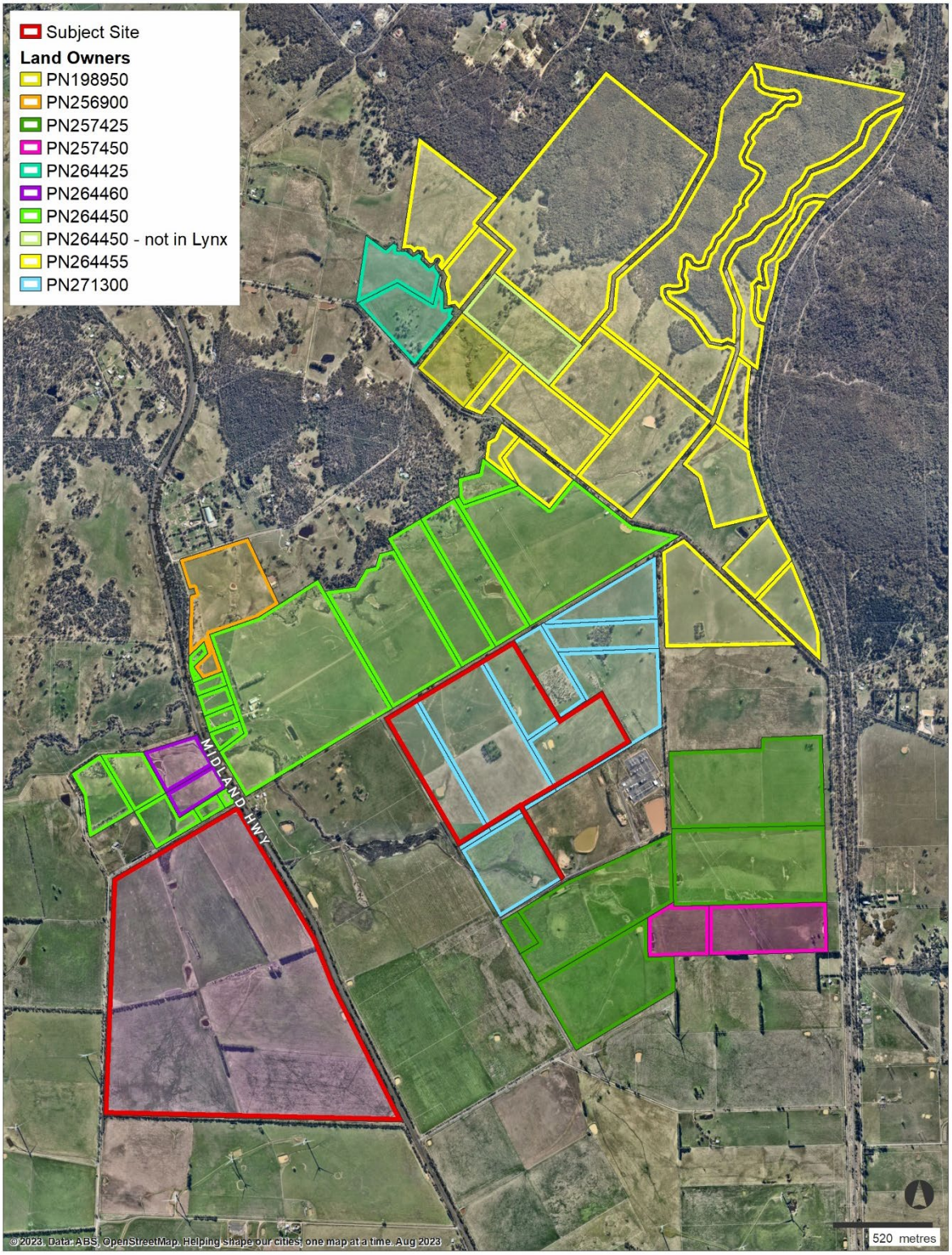
The parcels pictured below are owned by the landholder of the subject site. As the landholder owns land to the north of both **Peters** and **Windy**, this will assist in the handling of livestock on and off the site.

Figure 3 Landholder Map



Source: Urbis 2023

There are no easements or restrictions that encumber the **Windy** site. Crown Allotment 50 on the **Peters** site is encumbered by the following easements:

- Easement E-1 is to S.E.C of VIC, created by Instrument No B249834.
- Easement E-1 and E-2 are land marked for the transmission of electricity and has been acquired by Vide Notification L142683C to the S.E.C of VIC. The easement is a 220kV electricity transmission corridor to which the Elaine Solar Farm BESS would connect via a 33kV transmission line from the site to the easement.
- These easements sit to the east of the area of works, outside the site boundaries.

The key features of **Windy** include:

- Approximate area of 170.9 hectares.
- The site abuts Midland Highway (sealed road) as its far eastern interface, with the shared boundary running northwest to southeast. Current unsealed (grass) vehicle access is provided off Midland Highway at the southern end of the site. There are no existing internal access tracks on the site.
- The land form generally rises for north to south, with an elevation of 383 metres AHD a the north, rising to approximately 401 metres AHD to the south. Overall, the slopes on site are comprised of gently undulating rises and small convex slopes of 1% towards the north east and north west.
- There are no easements that encumber the site.

The key features of **Peters** include:

- Approximate boundary area of 73 hectares.
- The site abuts Woolshed Road as its northern interface, with the boundary running northeast to southwest. Current unsealed (grass) private vehicle access is provided off Woolshed Road. There are no existing internal access tracks on the site.
- The landform is flat to gently undulating. The site survey identifies that elevation varies across the site between approximately 400 metres AHD at the east of the site and 389 metres AHD to the west. North to south, the site is undulating and remains relatively consistent with levels generally between 397 metres AHD and 392 metres AHD. Overall, as mentioned above, the slopes on site are comprised of gently undulating rises and small convex slopes of 1% towards the north east and north west.

2.1. EXISTING SITE CONDITIONS

The sites are agricultural land primarily used for sheep and minor cattle grazing on cropped agricultural land with ground cover comprising mostly improved pasture species, patches of native vegetation and scattered trees. There are 6 farm dams within **Windy** and 3 farm dams within **Peters** (total 9 dams over both sites). There is also an old hut structure located toward the centre of the **Windy** site. A modelled wetland is located towards the north of **Windy**. The landform is a very gently undulating, basaltic plain system within the Western Uplands with moderate average rainfall.

The land that comprises the site is not considered versatile from an agricultural perspective. Additionally, the soils that are present on site are not highly regarded due to their poor structure and poor drainage. The land is considered as valuable land for a grazing enterprise. Accordingly, the panels have been appropriately designed to allow for the grazing of sheep. Therefore, the carrying capacity of the land will only be slightly reduced and sheep grazing will continue to occur on the land.

There are no perceived detrimental impacts of the development of the solar energy facility to the surrounding farm businesses. Agricultural productivity at the site is unlikely to significantly decrease as a consequence of the development, and the impacts to the agricultural amenity of the region are not significant.

Through an analysis of an aerial and Google Street View images of the site, as well as a site inspection on 7 June 2023, the following pictorial analysis of the existing site features has been compiled in Table 2:

Table 2 Site Photos

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Picture	Description
	**1:** This photo has been taken from the northern point of the **Windy** site facing south. The image depicts the intersection of Horsehill Road (northern interface) and Midland Highway (eastern interface), as well as vegetation along the Midland Highway interface.
	**2:** This picture outlines Woolshed Road facing northeast. This unsealed road provides access to the northern site access point at the **Peters** site.
	**3:** This image has been taken from the northwestern point of Horsehill Road, facing east towards **Windy**.
	**4:** This photo is taken facing west, outlining the intersection at Fords Lane and Midland Highway at the far southwest point of **Windy**.

Picture	Description
	**5:** This photo is taken from Midland Highway facing northeast to **Peters**. As visualised in the image, there are a number of undulating rises in the landform depicted between the Midland Highway and the **Peters** site, providing a natural visual barrier.
	**6:** This image has been taken from Elaine-Blue Ridge Road, approximately 1.3km southeast of **Peters** (facing northwest). The existing Elaine Terminal Station is visible in the background of the image.
	**7:** This image has been taken from Courts Road facing east. The image outlines the steep incline to form a ridge to the south of Courts Road, providing a natural visual barrier to **Peters** for dwellings north of the road. A range of mature vegetation also exists along this ridge, as identified in the background of the image.

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Picture	Description
	**8:** This picture has been taken from Horsehill Road facing northeast towards **Windy**. As outlined, a mature line of trees exists along the southern interface of **Windy**.
	**9:** This picture has been taken from on the **Windy** site facing southwest. As outlined in the picture above, mature trees line the southern interface of the site.
	**10:** This picture has been taken from Horsehill Road to the north of Peters, facing west. The image shows the current access track (grass and dirt).

Source: Urbis June 2023; Google Street View 2022

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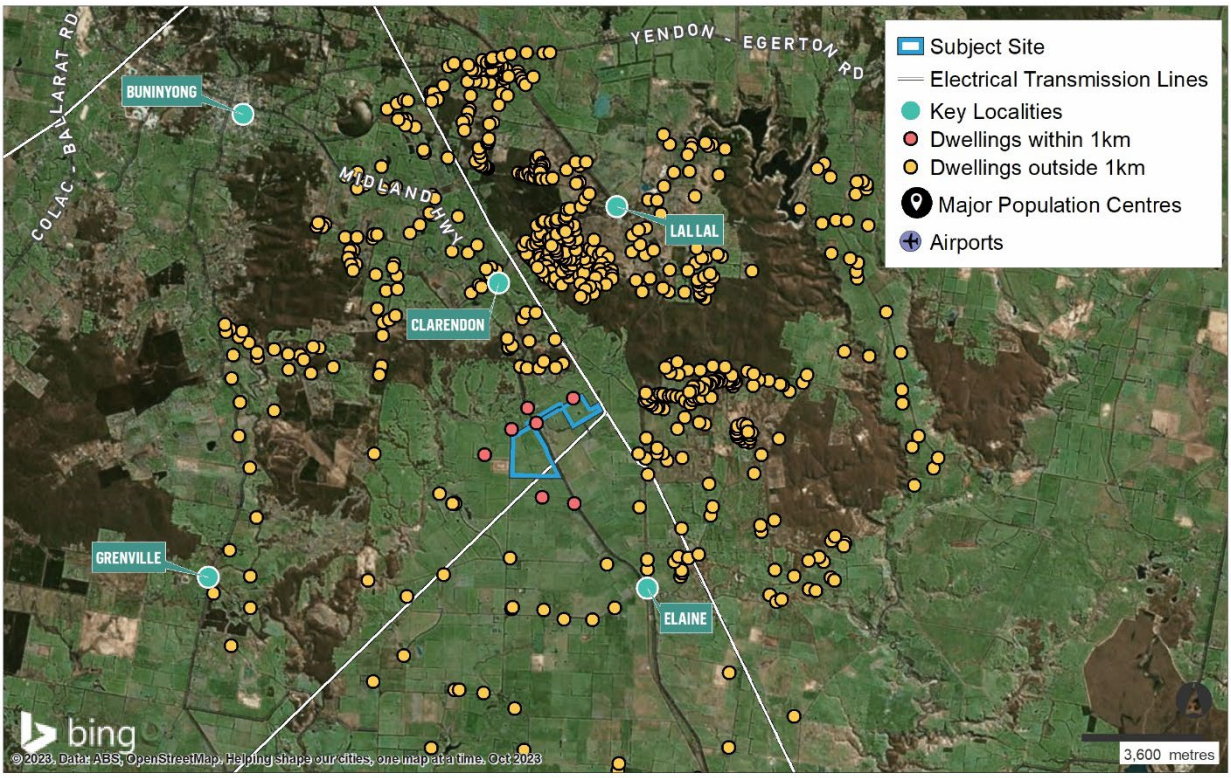
2.2. SURROUNDS

The predominant land uses surrounding the subject site include farming, agriculture and rural residential uses, as well as a significant wind farm surrounding the southern side of the site (Elaine/Lal Lal Wind Farm). The Elaine Wind Farm is one of two parts of the Lal Lal Wind Farm, consisting of 22 wind turbines and connects to the 220kV network via the Elaine Terminal Station. The Elaine Terminal Station is located adjacent to the south of the site. The area is sparsely populated and is made up of predominantly large lots with some containing a number of parcels. Notably, dense vegetation around Mount Doran exists northeast of the site, particularly east of the existing Ballarat-Melbourne railway alignment.

Figure 4 Regional Context Map



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MIDLAND HIGHWAY AND WOOLSHED RD, ELAINE
REGIONAL CONTEXT

2.2.1. Peters

North

The immediate north of the site is bound by a post and wire fence. The adjoining northern interface of the site is Woolshed Road, which is an unsealed road providing access to the north of the site via the Midland Highway. North of Woolshed Road is 5930 Midland Highway, Elaine, which is also located within the Farming Zone and is used for primarily agricultural purposes. Williamson Creek and Courts Road are located to the northwest of these lots, with dense vegetation evident. A number of residential dwellings also exist on the northern side of Courts Road.

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Picture 1 Woolshed Road and post and wire fence adjoining Peters' northern boundary (facing southwest)

East

Peters' immediate eastern interface predominantly agricultural land in the Farming Zone. The eastern section of **Peters** is adjacent to the 220kV Elaine Terminal Station to which the proposed solar farm would connect. Further east of the **Peters** site is Elaine-Blue Bridge Road, which is a local unsealed road running on a northwest – southeast axis and is lined by mature trees and vegetation. Further east is the Geelong to Ballarat train alignment, which is substantially raised above natural ground level.

Picture 2 Elaine Terminal Station and associated infrastructure from Elaine-Blue Bridge Road (facing west)

South

Immediately southeast of **Peters** is the Elaine Terminal Station, which distributes 220kV of electricity across the national grid. The Terminal Station is owned by Ausnet. Further south is a part of the Lal Lal Wind Farm (known also as Elaine Wind Farm), which is an 84MW renewable energy facility. The wind farm spans a number of lots and consists of 22 wind turbines and connections to the 220kV network via the Elaine Terminal Station. The closest turbine is approximately 890 metres southeast of the site's southern access point.

West

To the west of **Peters** is more agricultural land in the Farming Zone. Further west is the Midland Highway, which is within the Principal Road Network in the Transport 2 Zone (TRZ2). The road is sealed, with one lane of traffic running in each direction on a northwest-southeast axis. West of the Midland Highway is the **Windy** site.

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2.2.2. Windy

North

Windy adjoins Horsehill Road along its northern boundary. To the north of the site is primarily agricultural land over a number of lots with associated farming infrastructure evident. A residential dwelling exists approximately 415 metres northwest of the site at 5390 Midland Highway, Elaine. Williamson Creek is located further north, approximately 530 meters from the subject site.

Picture 3 Horsehill Road (facing west)

East

Midland Highway directly interfaces the east of **Windy**, separated by the road reserve. The road is within the Principal Road Network in the Transport 2 Zone (TRZ2). The road is sealed with one lane of traffic running in each direction on a northwest-southeast axis. Midland Highway connects the Elaine township north to Ballarat and south to Geelong. A dwelling exists to the east at 5876 Midland Highway, Elaine and is approximately 71 metres east of the site boundary. Further east is characterised as agricultural land as well as the Lal Lal Wind Farm as described above.

Picture 4 Midland Highway (facing northwest)

South

A mature lining of trees provides a visual barrier along the southern interface of the site. The Lal Lal Wind Farm is to the south, with the closest turbine approximately 97 metres south of **Windy**. A dwelling located at 87 Fords Lane, Elaine is approximately 546 metres south of the southern boundary. A number of blocks of pine plantation are also further south of **Windy**, to west of the Midland Highway.

Picture 5 Lal Lal Wind Farm along the southern boundary (facing east)

West

Windy adjoins Horsehill Road along its western boundary. As described above, the Lal Lal Wind Farm is located to the west of the site. A dwelling exists approximately 728 metres west at 440A Horsehill Road, Elaine. The closest turbine is approximately 95 metres west of the site's western boundary.

Picture 6 Lining of trees along western boundary (facing east towards Windy)

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3. ELGIN ENERGY

Elgin Energy (**Elgin**) is an international renewable energy developer who were founded in Dublin, Ireland in 2009. They specialise in solar and battery development. A further 120 projects totalling 6GW (solar) and 3GW (storage) are in development across Australia, the UK, and Ireland.

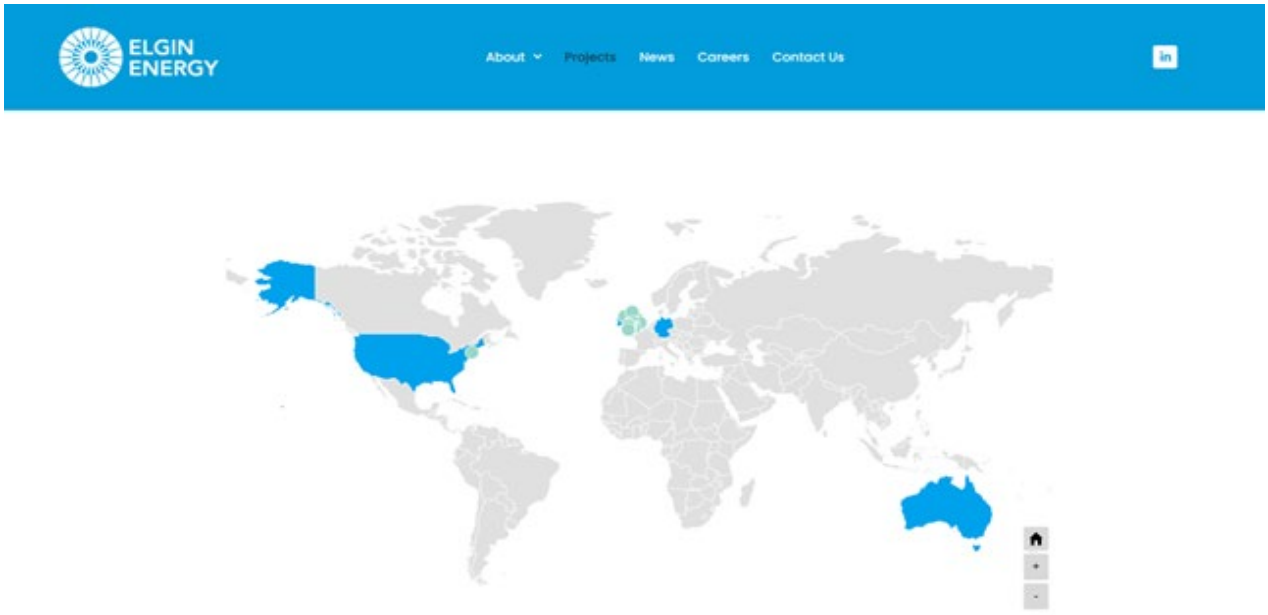
The company delivers utility-scale solar and storage projects from site origination through the development process to grid connection. With a 98% success rate in securing planning permission, Elgin Energy has secured consent on 70+ projects (totalling 1GW+) with 21 projects delivered to market to date across the UK & Northern Ireland including the largest solar farms in Scotland and Northern Ireland.

Elgin has been present in the Australian market since 2018 and is developing a pipeline of over 1GW of solar and battery storage projects throughout NSW and Victoria.

Elgin works with long-term strategic partners to deliver energy projects and provide asset management services through their operational life across three key markets of the UK, Australia, and Ireland (See Figure 5).

Elgin have earmarked the Elaine Solar Farm as a key project in their Victorian portfolio. This represents a significant investment in the State of Victoria ,helping the State achieve its renewable energy targets. Elgin are committed to the construction of the project and pending planning approval, Elaine will be shovel ready by 2025 and aiming for operation in 2026.

Figure 5 Markets Where Elgin Energy Operate



Source: Elgin Energy (Accessed 16 August 2023)

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4. PROPOSED DEVELOPMENT

4.1. PROJECT DESCRIPTION

The proposal includes a 150MW solar farm, Battery Energy Storage System (BESS) and associated infrastructure on approximately 244 hectares (of the site's 267.2 hectares) of land that is currently used for grazing purposes.

Considerable consideration has been given to avoid or minimise impacts to the ecological values present within the study area and bushfire implications. The proposed layout has been designed through detailed mapping of the existing ecological values present within the study area discussed further in Section 11.3 of this report.

This site is adjacent to the 220kV Elaine Terminal Station, with connection proposed via a new 220kV aboveground transmission line from Peters to the Terminal Station.

The subject site is considered highly suitable for a solar energy facility due to its location adjacent to a transmission line, generally flat topography, access and minimal visual exposure due to surrounding site typography and established, mature vegetation. Critically, the site receives an abundance of solar resource and there is direct proximity to the existing grid with capacity. These aspects combined with the fact that there is minimal site disturbance needed and limited planning constraints makes it an ideal site for generating solar energy.

4.2. LAYOUT AND BUILT FORM

The solar facility and ancillary equipment will encompass a large portion of the overall site. As shown in Figure 6 and Figure 7(indicative outlines of the extent of the proposed development layout), solar panels will cover approximately 43.35% of the site area on **Peters** and 82.23% on **Windy**. This coverage has been carefully designed to avoid and minimise impacts upon native vegetation, waterways and to protect the amenity of surrounding properties.

The facility will consist of the following:

- The installation of 256,866 ground mounted solar photovoltaic (PV) modules (panels), which use a single axis tracking solar technology. Each panel will measure approximately 2.4m (length) x 1.303m (width). Once mounted on the frames and fully tilted, the panels will be capable of reaching an overall height of no more than 3.2 metres above ground level. The PV modules will be installed through 1-string trackers, 2-string trackers and 3-string trackers depending on location throughout both sites.
  - 60,636 PV modules will be installed on **Peters** covering approximately 65 hectares.
  - 196,230 PV modules will be installed on **Windy** covering approximately 158 hectares.
  - Overall the combined sites will achieve a minimum output of approximately 150 Megawatts.
- Installation of approximately 35 solar inverters/transformers. Inverters and transformers are installed combined and mounted on a concrete base. The combined inverters/transformers are approximately 3.170m (length) x 2.1m (width) x 2.46m (height) in size.
  - 15 solar inverters will be installed on **Peters**.
  - 20 solar inverters will be installed on **Windy**.
- The installation of a 33/220KV switchyard and substation of a combined footprint of approximately 0.4ha with a nominal transfer capacity of approximately 150MW. The 220KV Transformer is approximately 18.0m (length) x 2.075m (width) x 2.3m (height) in size.
- Installation of a Battery Energy Storage System (BESS) and housing structure on **Peters** with a nominal capacity of 150MW/300MWh, partly grouped in containerised modules on a pad of approximately 2.4ha. The BESS will comprise 37 inverters.
- Installation of one (1) switch room zone on **Windy** along the northern boundary to allow for connection between **Windy** and **Peters**:

- Installation of one (1) overhead 33kV powerline approximately 1km in length to connect **Windy** and **Peters** along Woolshed Road. The proposed line has been sited within road reserve along Horsehill and Woolshed Road and intermediately crosses the Midland Highway west to east. The siting of 16m posts supporting the 33kv powerline have been shown on the plans to indicate approximate spacing and setback from the roadway (Woolshed Road, Midland Highway, Horse Hill Road). Note, poles will be further micro sited during construction to avoid any impact to native vegetation.
- Installation of one (1) overhead 220kv powerline to connect from the proposed substation to the existing Elaine Terminal Station, which connects to the existing transmission line.

- Internal roads
  - **Peters -** One internal road running east-west through the site, a road around the perimeter and an access road leading to the unmade Government Road to the south.
  - **Windy -** Two internal roads running east-west through the site as well as a road around the perimeter.
- Ancillary infrastructure, including:
  - A 2.3m high chain mesh fence installed around the solar farm. The purpose of the fence is to deter theft or vandalism and prevent unauthorised access.
  - Security cameras.
  - Substation control room on **Peters** approximately 13.265m (length) x 5.840m (width) x 4.640m (height).
  - 4 x 45,000L water tanks approximately 4.5m (width) x 3.05m (height) on **Windy**.
  - 5 x 45,000L water tanks approximately 4.5m (width) x 3.05m (height) on **Peters**.
  - Compost toilet.
  - Business identification signage (2 signs – 1 per site) measuring 2.4m (length) x 1.2m (height).
- Two (2) exclusion zones have been proposed throughout the site to assist with the handling of livestock on and off the site. These include:
  - **Peters –** One (1) exclusion zone at the northwestern corner, approximately 0.8 hectares in size.
  - **Windy -** One (1) exclusion zone at the northern corner, approximately 0.8 hectares in size.

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Figure 6 Windy Proposed Site Layout

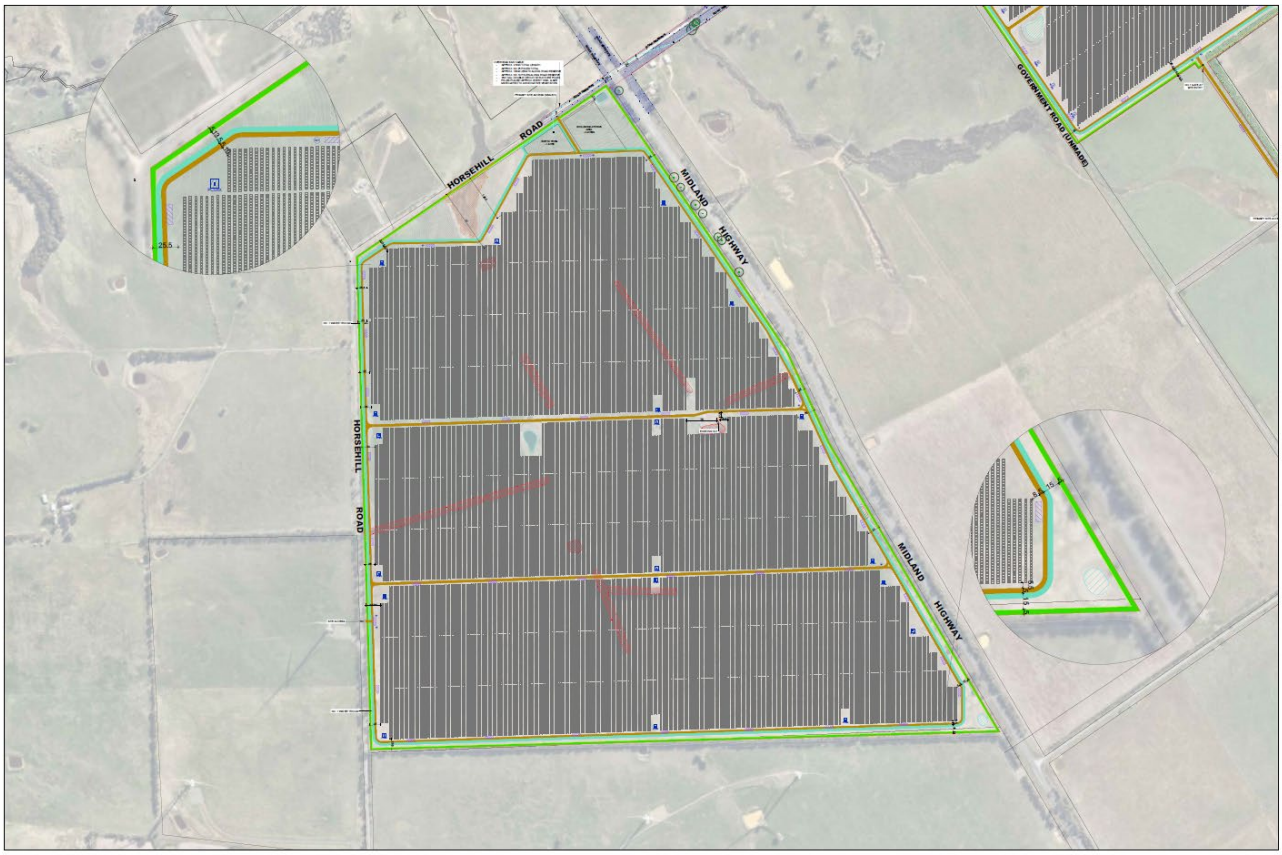
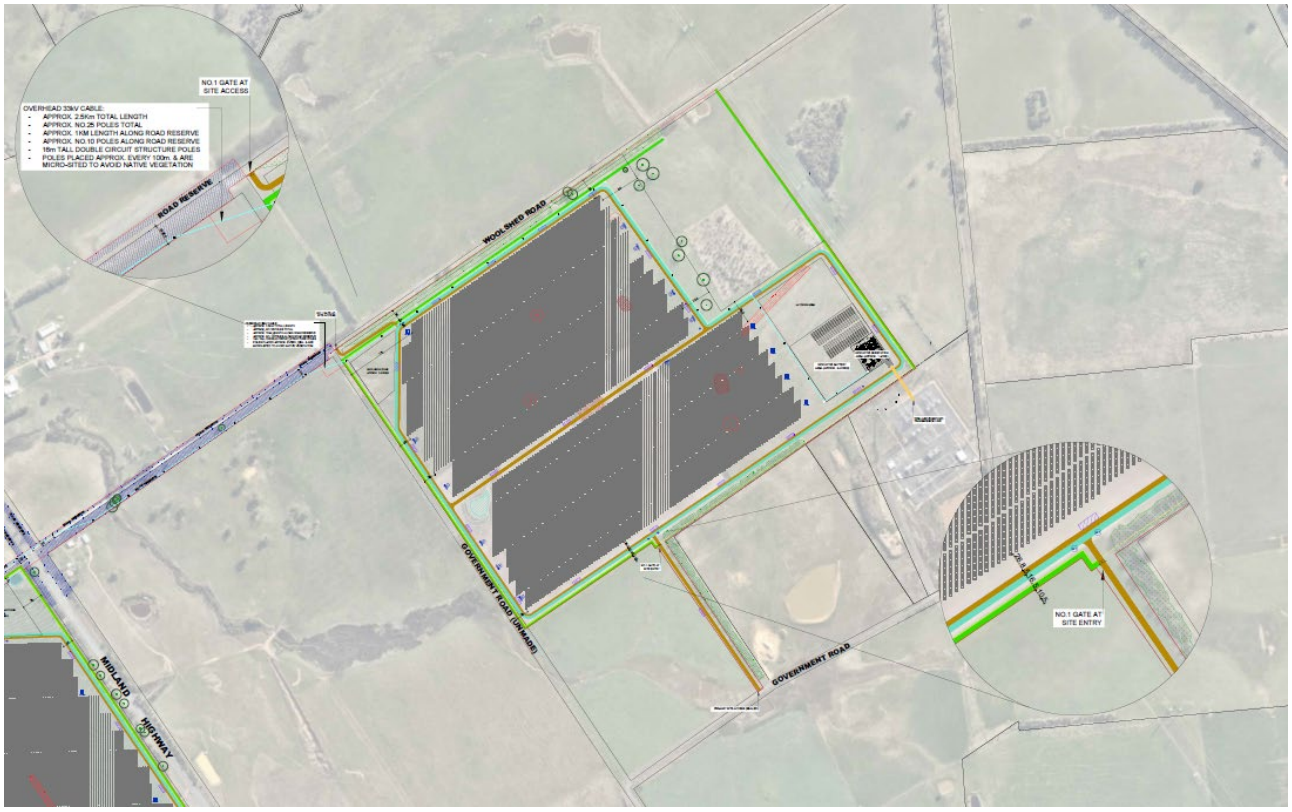


Figure 7 Peters Proposed Site Layout



Source: Urbis Design 2023

A full copy of the proposed site layout, including the relevant project details and legend can be found in the Site Plan (Appendix B) and Elevation Plan (Appendix E) within this report.

4.2.1. Layout of Facility

The solar facility has been carefully designed to respond to the site's context, opportunities and constraints and DTP's Solar Energy Facilities Design and Development Guidelines (October 2022). The design layout considers:

- Native vegetation
- Visual impact and glare and glint to neighbouring properties and road networks
- Bushfire mitigation
- Location of Elaine Terminal Station
- Waterways
- Noise
- Efficiency and economic viability of the solar facility

The design process has balanced the above matters with the economic viability of the development. The high voltage (220kV) connection requires a minimum size for the project to be economically viable.

The initial concept layout has been modified during the design stage that have enhanced the layout and consideration of key matters listed above. These changes have occurred based on ecological, bushfire, hydrological, heritage, traffic, glint and glare and visual impact advice as well as consultation with the local community and landowner. Changes include maximising the layout efficiency, reducing the impact to native vegetation, avoiding areas of ecological importance to allow for the retention of an existing irrigation system.

4.2.2. Solar Panels

Description

The proposal will mainly consist of the installation of 256,866 PV solar modules, with a combined energy capacity of approximately 150MW. The glass surfaced panels are coated to maximise daylight absorption, and thus minimise glare potential. Other materials are an encapsulant, a rear layer and a frame around the outer edge.

The panels will be attached in a single portrait configuration to horizontal mounting frames (Figure 8). The panels will 'track' the sun in an east to west plane to maximise solar exposure (Figure 9). The mounting frames will be made of either galvanized aluminium or steel and will have a rough matte finish, rather than a polished finish.

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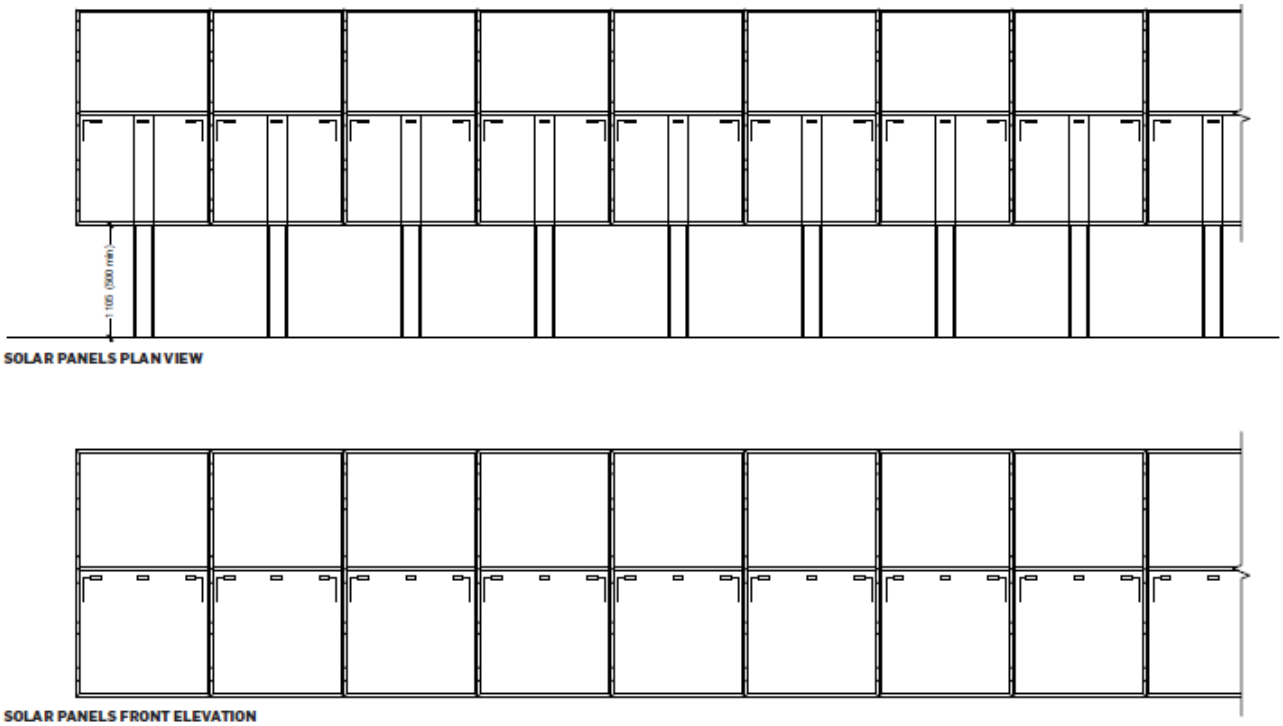
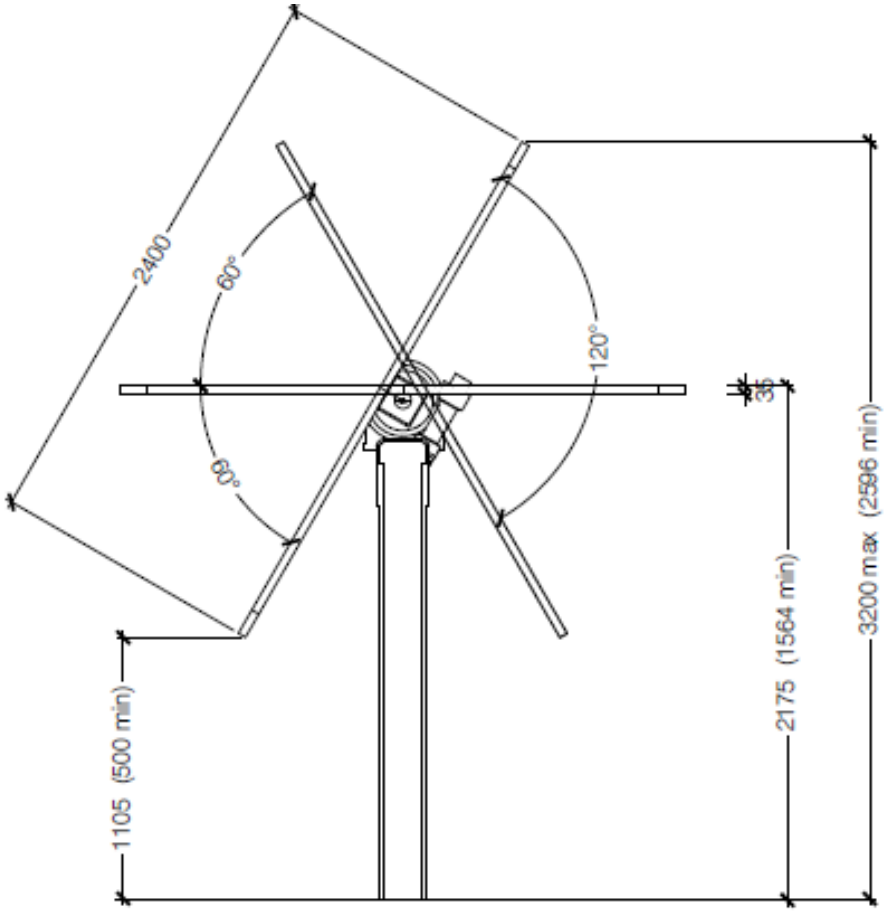
Figure 8 Solar panels elevations



Source: Urbis 2023

Figure 9 Solar tracker side elevation



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Source: Urbis 2023

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Construction

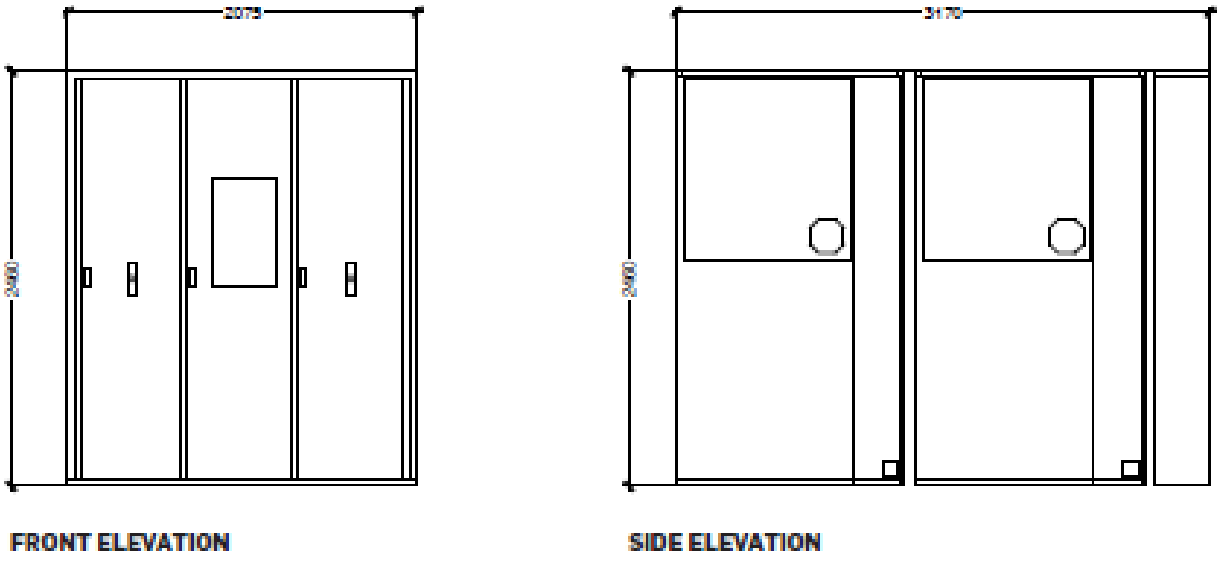
The mounting frames are pile-driven into the ground, and no concrete foundations are required. The base of the frame piles are thin 'H' or 'Z' shapes; thus, they have very little impact on the ground and do not require any prior excavation. This means that during construction patches of grass are relatively undisturbed and not impacted or lost across the project area. The frames are driven to a depth of approximately 1.5m. At the end of their operational life when the site is decommissioned, the frame piles are simply pulled out from the ground causing minimal ground disturbance. This light construction approach also minimises impact upon potential archaeology remains. In some areas where there is depth to rock is below 2 meters and piling refuses there is potential for the pile foundations to be predrilled.

4.2.3. Inverters

Panels generate Direct Current (DC) electricity which must be converted into Alternating Current (AC) before being fed into the local electricity grid network. There are a total of 35 solar inverters distributed across both sites.

Inverters / transformers are also housed together at the point of connection to facilitate the transfer of electricity into the grid. Further details regarding the inverters are located at Appendix E.

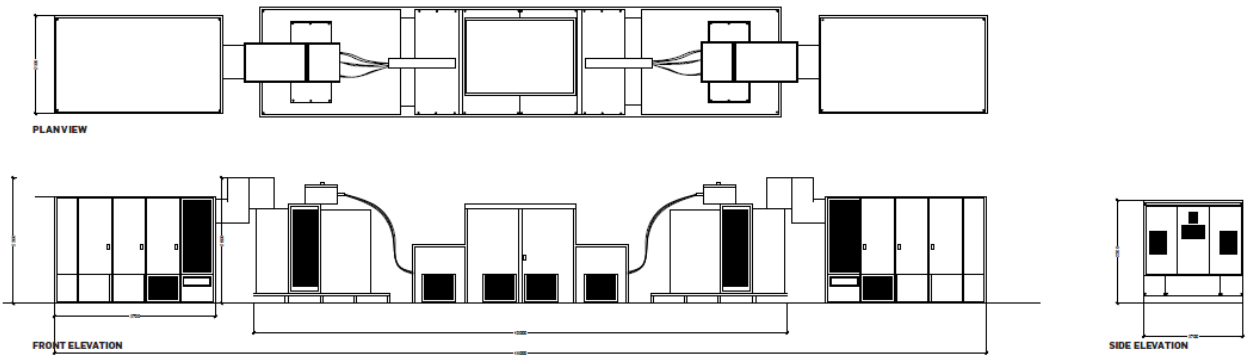
Figure 10 Inverter elevations



4.2.4. Transformers

The transformer transforms electrical energy from one circuit to another and allows for the energy generated to be fed into the local grid network. One 33kV/220kV transformer will be housed on **Peters.**. Further details regarding the transformers are located at Appendix E.

Figure 11 Transformers elevation

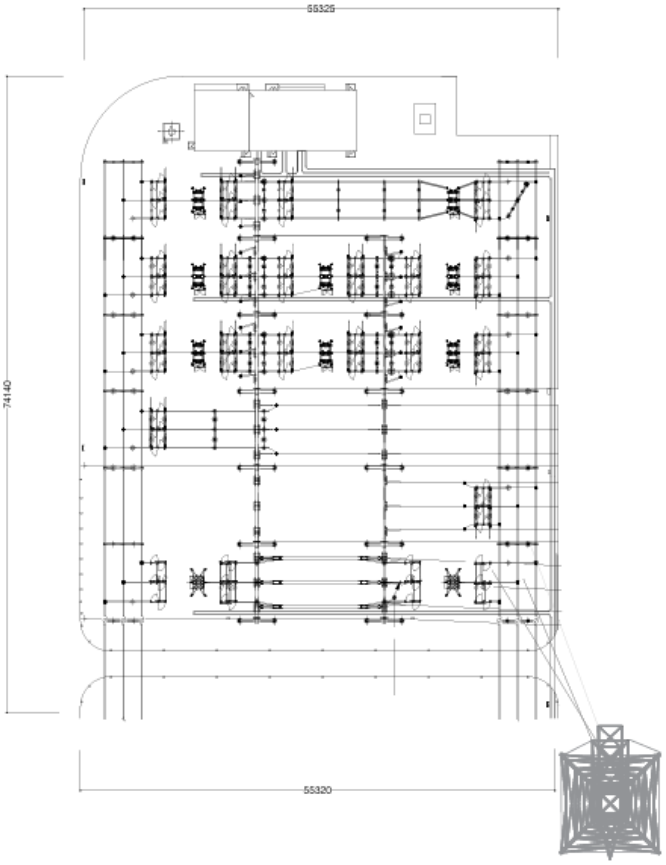


4.2.5. Substations

Substations are the on-site point of connection from where electricity enters and exists the transmission network. The substation is comprised of a switchgear which facilitates the connection or disconnection of electrical assets. Substation switchgear also acts as a safety mechanism to protect the Solar Farm and Battery Energy Storage System (BESS) from faults in the transmission network, and vice versa. It detects and disconnects electrical circuits if there is a fault in the system, much like a household fuse box.

One Utility Substation (**Peters**) and one switchgear building (**Windy**) are proposed. Further details regarding the substations are located at **Appendix E.**

Figure 12 Indicative utility substation plan (above ground transmission line)



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Source: Urbis 2023

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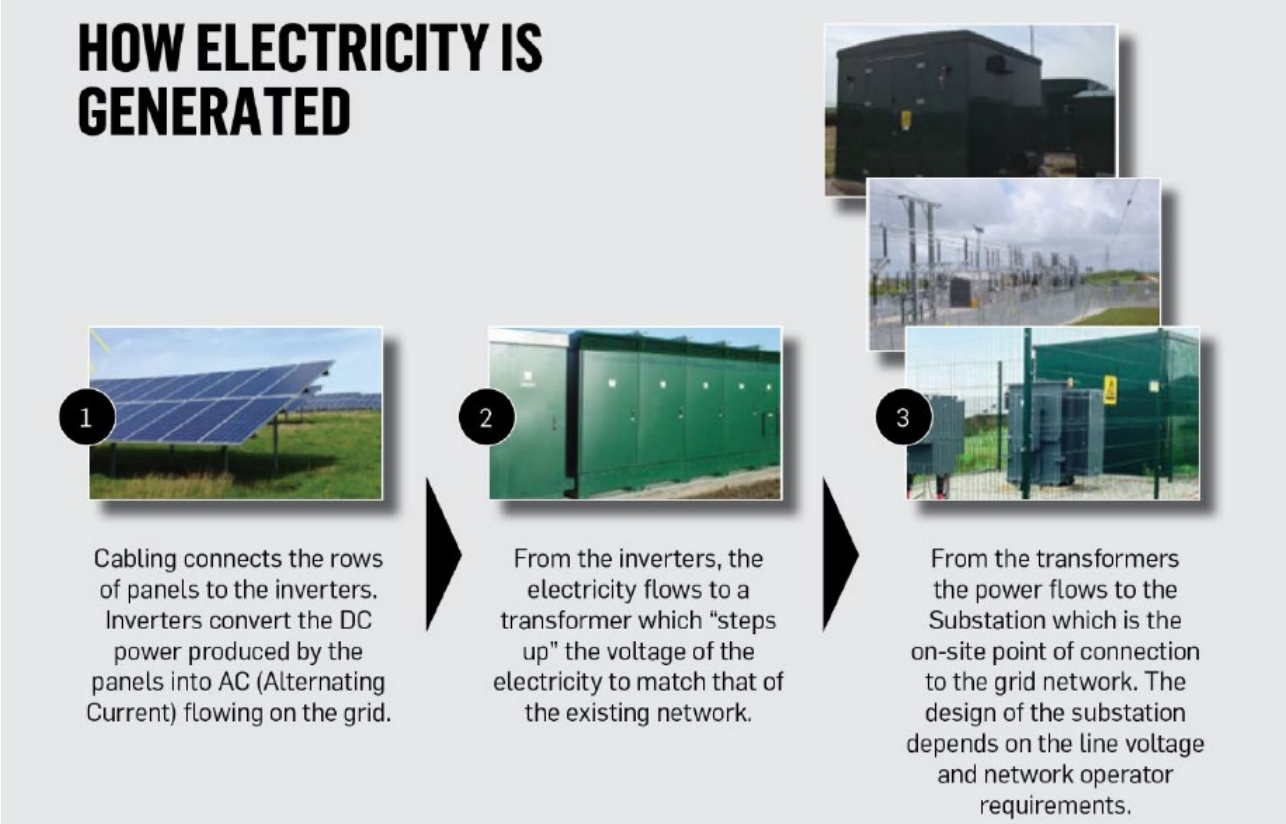
Figure 13 Solar energy generation explanation



Source: Urbis 2022

4.2.6. Site Access and Internal Road Network

Peters

There will be two vehicle access points to **Peters**, as outlined on the Site Plan. The primary site access point will be from a Government Road to the south and the secondary access point will be from Woolshed Road to the north.

Windy

There will be two vehicle access points to **Windy**, as outlined on the Site Plan. The primary site access point will be provided from Horsehill Road to the north and a secondary access from Horsehill Road to the south.

General

Internal routes are proposed throughout both **Windy** and **Peters** to allow for safe access when required. These are broken down typically by their functions, which include:

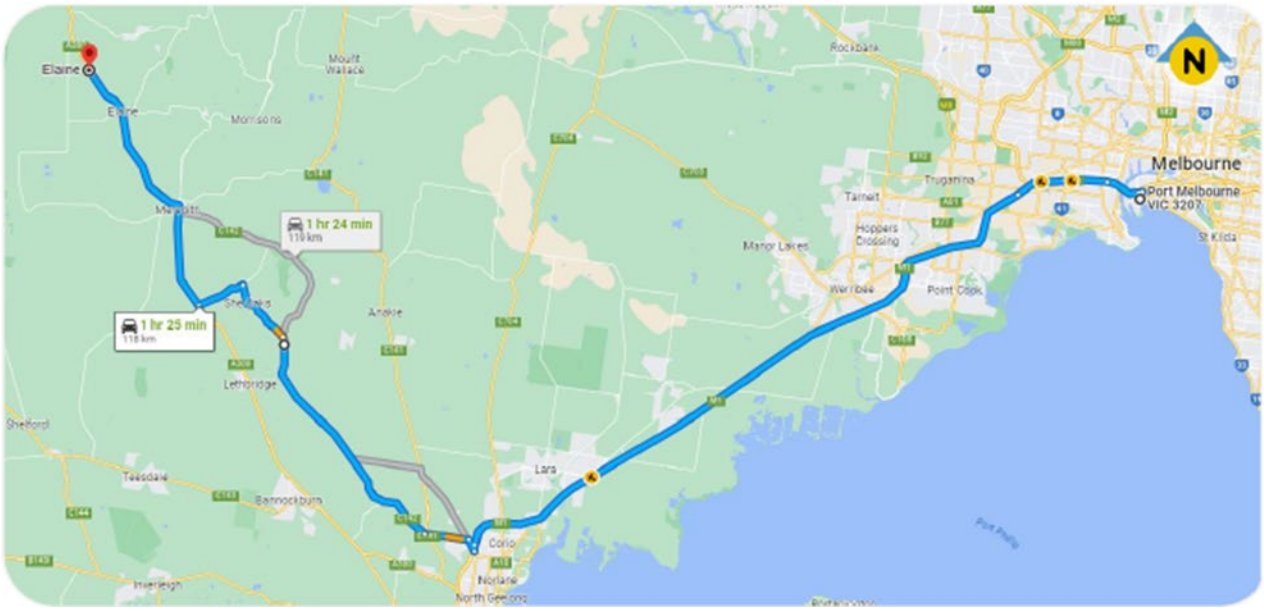
- Site ring road/perimeter track (enabling access to all parts of the site).
- 1-2 internal access ways through each site (primarily to service the panels).

All site access points will comply with the Country Fire Authority (CFA) requirements. The entry points at **Peters** and **Windy** will be designed to accommodate (at a minimum) a CFA firefighting vehicle. All internal roads have been swept path tested using a CFA fire truck to ensure compliance. All service vehicles associated with the development will also access the site from these entry points. The specific access point for service vehicles will depend on the task being undertaken and will likely change on a day-to-day basis.

Proposed route

As recommended by the Traffic and Transport Assessment prepared by Impact, the following route is for construction vehicle accessing the site during construction is proposed.

Figure 14 Proposed Traffic Route



Source: Impact 2023

This route is based from Melbourne and follows the following route:

- Port Melbourne - Todd Road - West Gate Freeway - Princes Highway - Anakie Road - Lovely Banks Road - Steiglitz Road - Midland Highway
- Horsehill Road - Site 1 primary access located on the northern boundary
- Horsehill Road – Site 1 secondary access from the western boundary
- Murphys Road - Government Road (Unmade) - Site 2 primary access
- Woolshed Road - Site 2 secondary access

An all-weather seal is expected. Swept paths for this route are located in the Traffic and Transport Assessment at **Appendix O**. Further detail regarding transport and access is located at Section 12.2 of this report.

4.2.7. Signage

The indicative signage at each primary access gate will display a flush 2.4m x 1.2m aluminium business identification sign, with a total area of 2.88 sqm. Details regarding the proposed business identification signage are as follows:

- 1 x business identification sign at the **Peters** primary site access gate (northwest).
- 1 x business identification sign at the **Windy** primary site access gate (north).

An Elevation Plan including the specification details for indicative signage is detailed at Appendix E of this report.

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Figure 15 Indicative business signage

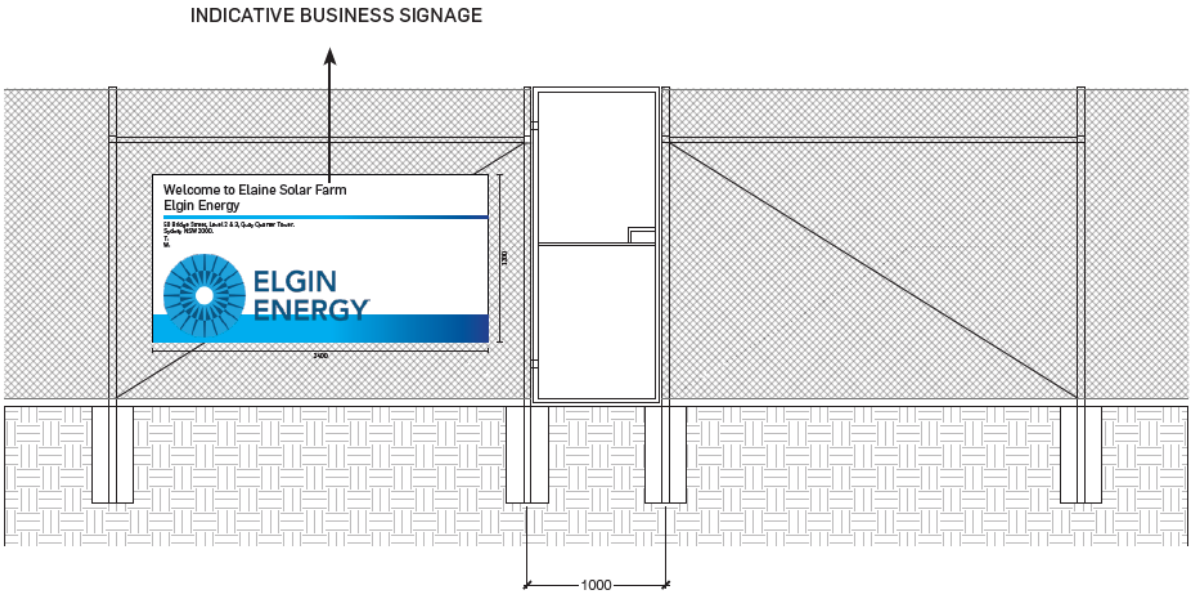
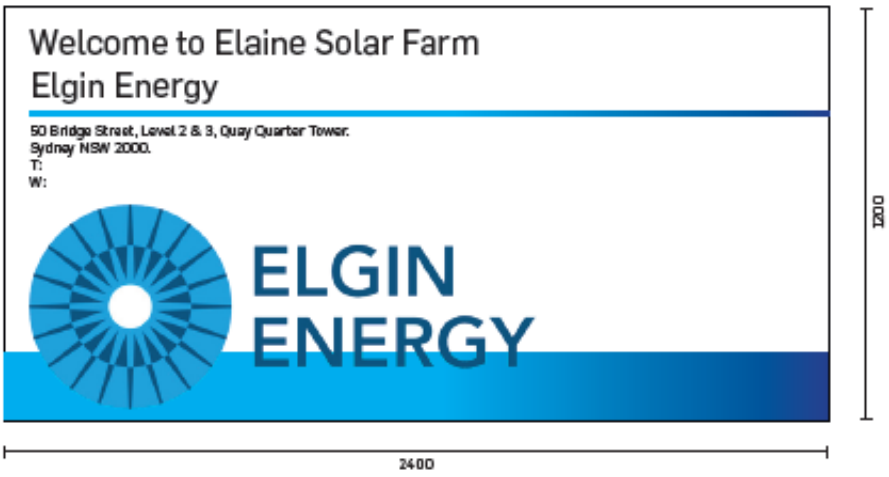


Figure 16 Indicative business signage close up



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Source: Urbis 2023

4.2.8. Connection to the Grid

The point of connection to the grid will commence from **Windy** and will comprise an overhead 33kV powerline approximately 2.6 kilometres long connecting both properties. A switchgear building is required for this 33kV connection at **Windy**. The line will begin at the **Windy** switchgear building and track towards **Peters**, crossing Midland Highway. The line will follow Woolshed Road and enter **Peters** (within each respective road reserve) at its far western corner, before tracking around the east boundary of the site and connecting at the substation and battery area. The electricity poles supporting the 33kV line will be 16 metres high and spaced 100 metres apart.

The Substation proposed on **Peters** will then connect to the existing Elaine Terminal Station via the new overhead 220kV transmission line. This line will connect to the existing Elaine Terminal Substation, which then connects to the 220kV transmission lines, passing the eastern boundary of the **Peters** site in a southeast-northwest direction.

4.2.9. Security Fencing and Cameras

A 2.3 m high chain mesh fence will be installed around the solar farm. The purpose of the fence is to deter theft or vandalism and prevent unauthorised access to the solar farm.

In order to monitor the site and detect any unauthorised access, motion sensor CCTV cameras will be erected around the site perimeter on poles of approximately 3 m in height. The cameras are directed into the solar farm, avoiding impinging on the privacy of nearby properties, and employ infrared technology so no lighting is required.

4.2.10. Native Vegetation Removal

The project involves limited removal of native vegetation within the site. The design complies with the 'avoid, minimise and offset' guideline, with significant avoidance of native vegetation.

Based on the proposed design, the development will require the removal of a total of 3.565 hectares of native vegetation, with 6 Large (scattered) trees. An assessment of this is detailed at Section 11.3 of this report.

A *Native Vegetation Removal Report* has a been prepared by Ecology Heritage Partners and is included within appendix 3 of their Biodiversity Assessment.

The offset requirements for native vegetation removal for the proposed development are 0.650 General Habitat Units and 6 Large Trees. A summary of proposed vegetation losses and associated offset requirements are presented in Section 11.3 of this report.

4.2.11. Setbacks and Landscaping

The planting strategy for each site is outlined below. All planting described below is for screening outside the security mesh fence and inside the property boundary line with a typical 5 metre planting buffer. Further detail on the strategy, setbacks, landscaping and screening typologies is located at **Appendix C** of this report.

Windy

The northern boundary will accommodate extensive, high density screening through large and small tree planting (Landscape Buffer Type 1) to reduce the visual impact from northern lots. Large trees will be generally spaced 10 metres apart, and small trees will be spaced as close as 3 metres apart. Large and medium shrubs are also proposed in Type 1 to reduce visual impact below the trees once they have established. Large shrubs will be placed in a meandering line centrally along the 5 metre buffer at 2 metre centres. Medium shrubs will be placed in a meandering line either side of the trees and large shrubs at 1.2 metre centres.

High density shrub planting with medium and large sized shrubs and tufting (Landscape Buffer Type 2) is proposed to the east of **Windy** to supplement the existing vegetation along the boundary. Large shrubs will meander roughly through the centre of the buffer at 2 metre centres, while medium shrubs will meander at either side of the large shrubs at 1.2 metre centres.

The southern and western boundaries will require low density shrub planting with medium and large sized shrubs and tufting (Landscape Buffer Type 4) to infill gaps in the existing mature tree lining along these interfaces. Large shrubs will be placed in a meandering line centrally along the 5 metre buffer at 3 metre centres. Medium shrubs and will be placed in a meandering line either side of the large shrubs at 2 metre centres.

Peters

The northern and western boundary of **Peters** will be infilled by low density tree and shrub planting (Landscape Buffer Type 3). Planting will consist of large trees, large shrubs and medium shrubs. Large trees will be placed centrally along the 5 meter buffer in random groups at 10 metre centres. Large shrubs will be placed in a meandering line centrally along the 5 metre buffer at 3 metre centres. Medium shrubs will be placed in a meandering line either side of the trees and large shrubs at 2 metre centres. An existing patch of vegetation will be retained along the northern boundary.

Low density shrub planting (Landscape Buffer Type 4, as described above) is proposed along the eastern interface of **Peters** as well as the western end of the southern boundary. A significant patch of vegetation will be retained to the south, which will assist in visual impact screening to the site.

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The overall planting strategy as included in the Landscape Strategy is visualised below. Planting typologies (Buffer Types 1, 2, 3 and 4) are also detailed in the Landscape Strategy at **Appendix C**.

Figure 17 Planting palette extract from Landscape Strategy (Tall Shrubs and Medium Shrubs)

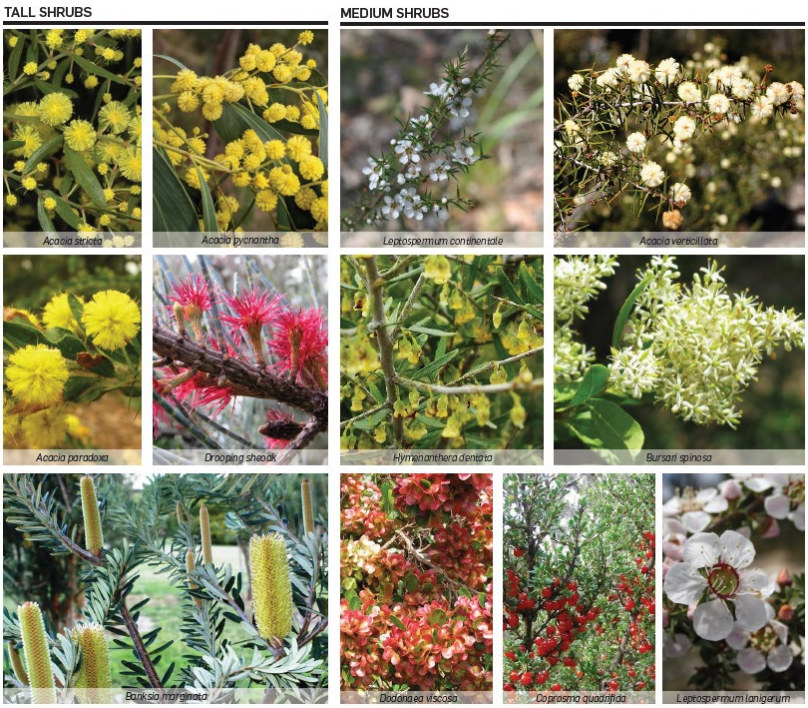

Figure 18 Planting palette extract from landscape strategy (Tall and Small Trees)

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Figure 19 Planting Strategy

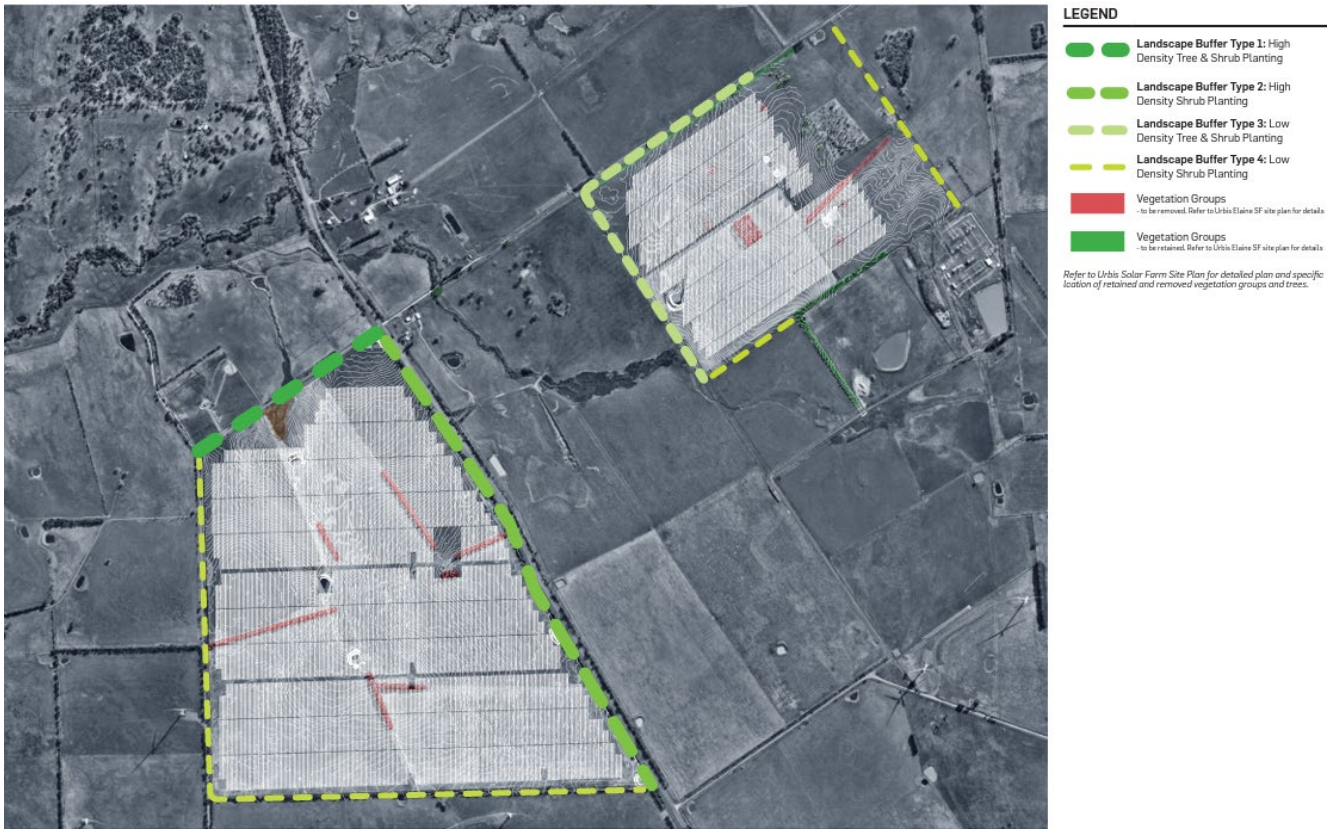
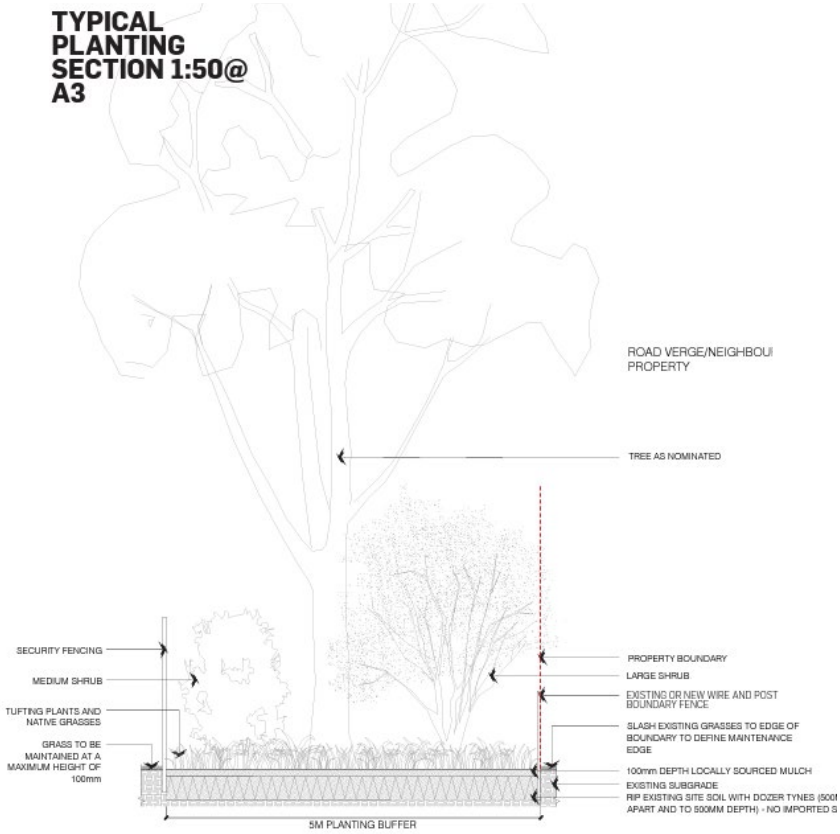


Figure 20 Typical planting section and example trees



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Source: Urbis 2023

4.2.12. Ancillary Infrastructure

The proposal will include the following ancillary infrastructure:

Communication monitoring house

A Communications building is required to enable 24-hour remote monitoring of performance and security.

Composting toilets

A composting toilet will be provided onsite for operators and maintenance staff. The toilets are waterless, chemical free and self-composting. Toilets use a dehydration process resulting in an order free compost which is collected annually for processing off site.

Water tanks

Water tanks are proposed on site, as described above. The tanks will measure approximately 4.5m (w) x 3.05m (h). The proposed colouring is Colourbond's 'Pale Eucalypt,' as pictured below.

Figure 21 Water tank elevations

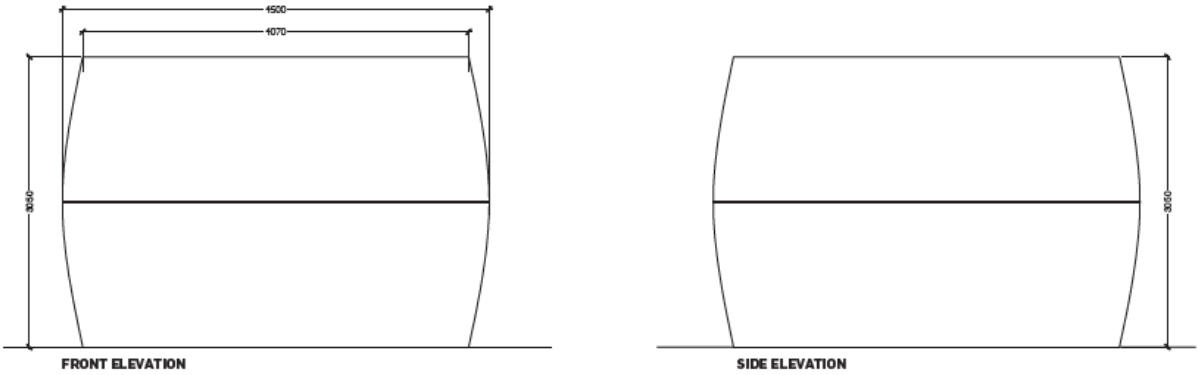
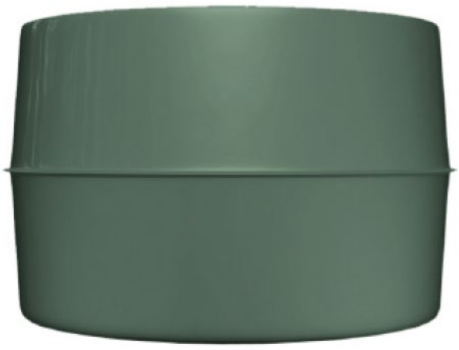


Figure 22 Proposed water tanks



PROPOSED WATER TANK COLOUR

(COLORBOND PALE EUCALYPT)

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Source: Urbis Design 2023

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5. COMMUNITY AND STAKEHOLDER CONSULTATION

Community consultation and engagement is an integral part of the design process when undertaking the development of renewable energy facilities in Victoria. DTP has produced a guide for renewable energy developers to undertake for community consultation.

Urbis prepared the Community and Stakeholder Engagement Strategy and undertook the engagement in line with the strategy. The draft Stakeholder Engagement Strategy was prepared to align with DTP's *Solar Energy Facilities, Design and Development Guidelines* and the International Association of Public Participation's (IAP2) *Public Participation Spectrum*. The approach also aligns with the framework set out in the *Community Engagement and Benefit Sharing in Renewable Energy Development in Victoria Guidelines*.

The activities outlined in the strategy sought to deliver an appropriate and relevant engagement process and provide opportunities for the community and stakeholders to learn about the proposal, understand the process and provide feedback which will inform design updates and the planning report submission, along with the site layout plan, elevations or specification sheets and all technical reports.

An Engagement Outcomes Report has been prepared by Urbis' Engagement team and is included within **Appendix P** of this report.

5.1. STAKEHOLDERS

The table below outlines the key stakeholders who were involved throughout the engagement process. The stakeholder identification matrix is based on the principles of IAP2's Public Participation Spectrum.

Table 3 Stakeholder identification

Stakeholder	Engagement objective	Forms of engagement
Relevant Government Agencies		
Local Councils: ▪ Moorabool Shire Council	**Consult:** Obtain feedback on the proposal by providing balanced and objective information to assist in understanding the proposal's impacts and benefits.	Phone Briefings Direct emails
Relevant agencies: ▪ Department of Transport and Planning (DTP) ▪ Department of Transport ▪ Department of Jobs, Precincts and Regions (DJPR) ▪ Country Fire Authority (CFA)	**Consult:** Obtain feedback on the proposal and understand how the proposal may impact each agency's service.	Phone Direct emails and letters Virtual meetings
Landowners and land users		
▪ Site landowner (priority stakeholder) **Aboriginal stakeholders** ▪ Traditional Custodians	**Consult:** Obtain feedback on the proposal by providing balanced and objective information to assist in understanding the proposal's impacts and benefits.	Virtual Meetings Face to Face meetings Email

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Stakeholder	Engagement objective	Forms of engagement
▪ Wadawurrung Traditional Owners Aboriginal Corporation		
Community		
Direct neighbours ▪ 5876 Midland Highway ▪ 5930 Midland Highway ▪ 5975 Midland Highway ▪ 68 Horsehead Road ▪ 440 Horsehead Road ▪ 87 Fords Lane, Elaine Vic 3334 ▪ 108 Courts Rd Clarendon Vic 3352 ▪ 146 Courts Rd Clarendon Vic 3352 ▪ Lal Lal Windfarm	**Consult:** Working directly with near neighbours throughout the planning process to ensure all concerns and aspirations and continually understood and considered by Elgin Energy. This included offering near neighbours / those with potential visual impact the opportunity to have photomontages prepared from the property.	Direct neighbour briefings Community newsletter Community information drop-in session Photomontages / perspective from neighbouring properties
Surrounding community ▪ Residents of post codes containing Elaine and Mount Doran (3334) and Clarendon (3352)	**Consult:** Obtain feedback on the proposal as they may be interested in visual impact, traffic associated with construction, environmental impacts.	Community newsletter Community information drop-in session
Community / environmental groups ▪ Farming Moorabool ▪ Moorabool Landcare Network ▪ Moorabool Environment Group ▪ Elaine Community Page (Facebook)	**Consult:** Obtain feedback on the proposal as they may be interested in visual impact, traffic associated with construction, environmental impacts.	Direct email
Businesses / organisations ▪ Elaine Cricket Club ▪ Elaine Tennis Club ▪ Elaine Mechanics Hall	**Consult:** Obtain feedback on the proposal as they may be interested in visual impact, traffic associated with construction, environmental impacts.	Community newsletter Community information drop-in session

Stakeholder	Engagement objective	Forms of engagement
▪ Railway Hotel Elaine ▪ Clarendon Community Centre		
Resource and development stakeholders		
Owners of mining leases, petroleum production and exploration licences. ▪ Neighbouring wind farms	No consultation with owners of mining leases, petroleum production and exploration licences has been undertaken as there were none located on the land.	N/A

5.2. ENGAGEMENT

As part of the larger planning process, Elgin Energy and Urbis Planning team were responsible for engagement with the relevant agencies, landowners, land users and stakeholders.

In addition, Urbis' Engagement team undertook engagement with the broader community. Engagement activities included letterbox drops, project specific website content, community and stakeholder briefings, information drop-in sessions and enquiry management through the duration of the planning process. The processes and outcomes are outlined below:

Direct Neighbour Briefings

- Elgin Energy consulted with the neighbours directly bordering the site via a series of direct neighbour letters, phone calls, and meetings that were held virtually. Surrounding neighbours were consulted extensively during the project's design, which will continue as the construction management plan and environment management plan are prepared (if the plans are approved).
- Consultation with direct neighbours included providing them with an overview of the proposal (before plans were presented to the broader community) the ability to ask questions of the project team, and offering a visual impact assessment to be conducted from their property. Out of the six direct neighbours consulted, two opted in for a visual impact assessment from their home.

Community Newsletter

The community newsletter outlined key features of the project and invited feedback. It included details of the project email and phone number managed by Urbis Engagement to answer questions and collect feedback. The newsletter was also used to promote the community information and drop-in session to the community.

It was distributed on Monday 10 July by letterbox drop to 359 homes and businesses located the postcode areas below:

- Elaine and Mount Doran (3334)
- Clarendon (3352)

Community Information Drop in Session

A three-hour community information drop-in session was held at the Community Town Hall (Elaine Mechanics Institute) on Thursday, 27 July 2023 (4.30pm – 7.30pm). Around 26 members of the community attended the session. The session offered the opportunity for the community to drop in, speak directly to the project team, ask questions and provide feedback on the proposal. Details regarding this Community session are within the Engagement and Outcomes Report at **Appendix P**.

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6. PLANNING FRAMEWORK

The following section outlines the planning controls which apply to the site as well as the State and Local policy frameworks which are relevant to the proposal and will be considered in the planning assessment of this report. A summary of relevant legislation and planning permit triggers is also provided.

6.1. PLANNING CONTROLS

The site is subject to the following controls:

- Farming Zone (FZ)
- Design and Development Overlay – Schedule 2 (DDO2)

The site is also located within a Designated Bushfire Prone Area.

An overview of the zone and overlay provisions that apply to the site is set out below.

6.1.1. Farming Zone

The site is located in the Farming Zone (Clause 35.07) (See Figure 23), the relevant purposes of which are:

- *To provide for the use of land for agriculture.*
- *To encourage the retention of productive agricultural land.*
- *To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.*
- *To encourage the retention of employment and population to support rural communities.*
- *To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.*
- *To provide for the use and development of land for the specific purposes identified in a schedule to this zone.*

Pursuant to the Farming Zone:

- A permit is required for the use of land for a Renewable Energy Facility.
- A permit is required for the use of land for a Utility Installation.
- A permit is required for buildings and works associated with a use in Section 2 – Renewable Energy Facility (other than Wind energy facility).
- A permit is required for buildings and works associated with a use in Section 2 – Utility Installation.
- A permit is required for earthworks which change the rate of flow or the discharge point of water across a property boundary.

Pursuant to the Schedule to the Farming Zone, the following requirements apply:

- Minimum setback from a road (metres) in the Transport 2 Zone (TRZ2) is 100 metres.
- Minimum setback from any other road (metres) is 20 metres.
- Minimum setback from a boundary is 5 metres.
- Minimum setback from a dwelling not in the same ownership is 100 metres.

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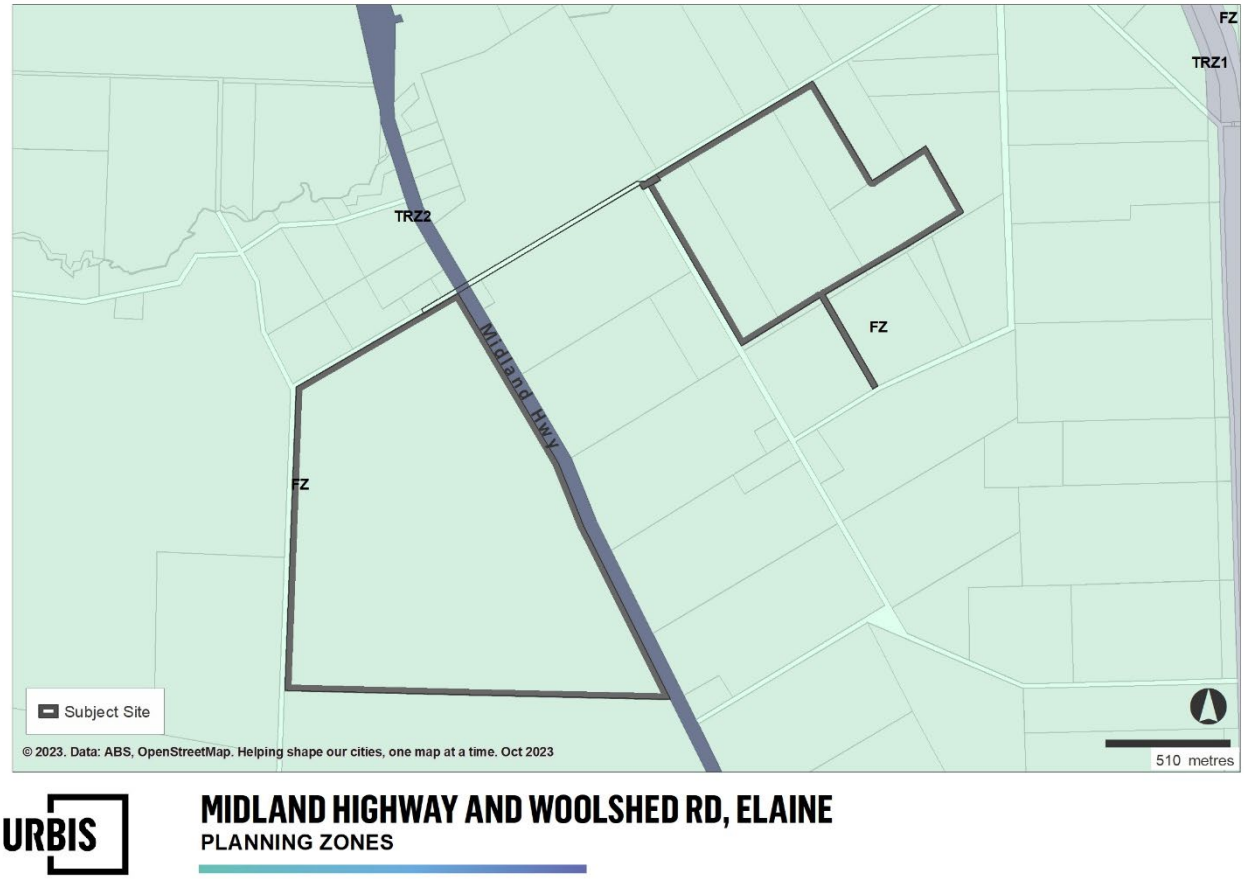
Figure 23 Zoning Map



Source: Urbis 2023

6.1.2. Design and Development Overlay – Schedule 2 (DDO2)

The site is located in within the Design and Development Overlay – Schedule 2 (DDO2) ('Visual amenity and building design') (See Figure 24), the relevant purposes of which are:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To identify areas which are affected by specific requirements relating to the design and built form of new development..*

Schedule 2 relates specifically to 'Visual amenity and building design,' the design objectives of which are:

- *To enhance visual amenity in rural, township and vegetated areas of the Moorabool Shire.*
- *To encourage the use of external cladding, such as non-reflective materials for building construction.*
- *To discourage the use of materials, such as reflective cladding for building construction, which could have a detrimental effect on amenity.*

Pursuant to Clause 43.02, the following apply:

- A permit is required to construct a building or construct or carry out works.

Figure 24 DDO2 Map

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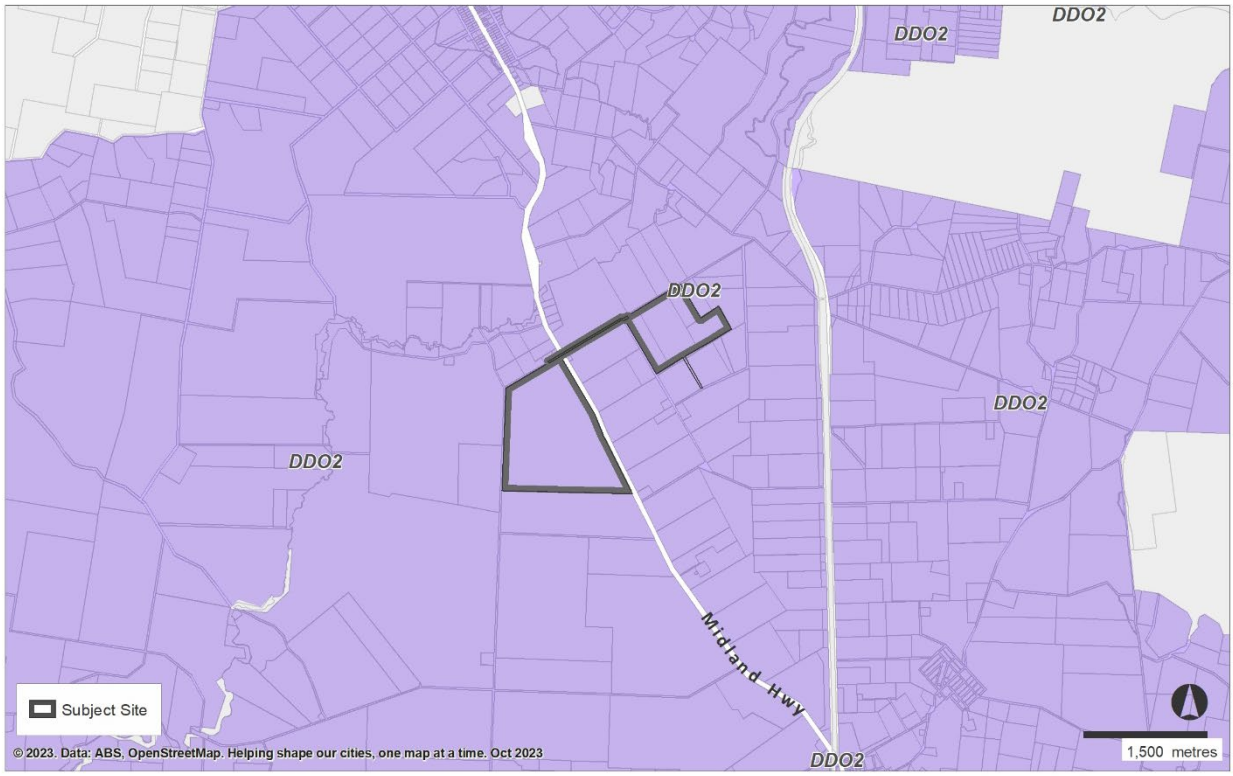

Source: Urbis 2023

6.1.3. Other Provisions

The subject site is also within the Designated Bushfire Prone Area, as outlined below.

Figure 25 Bushfire Prone Area Map

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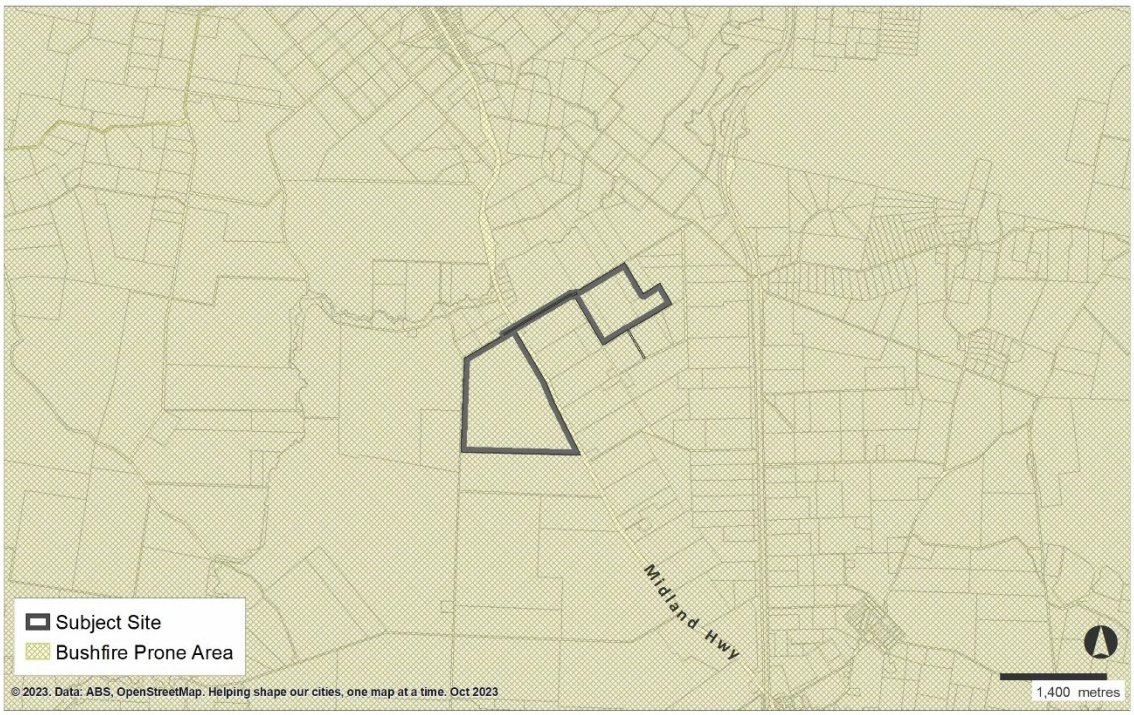
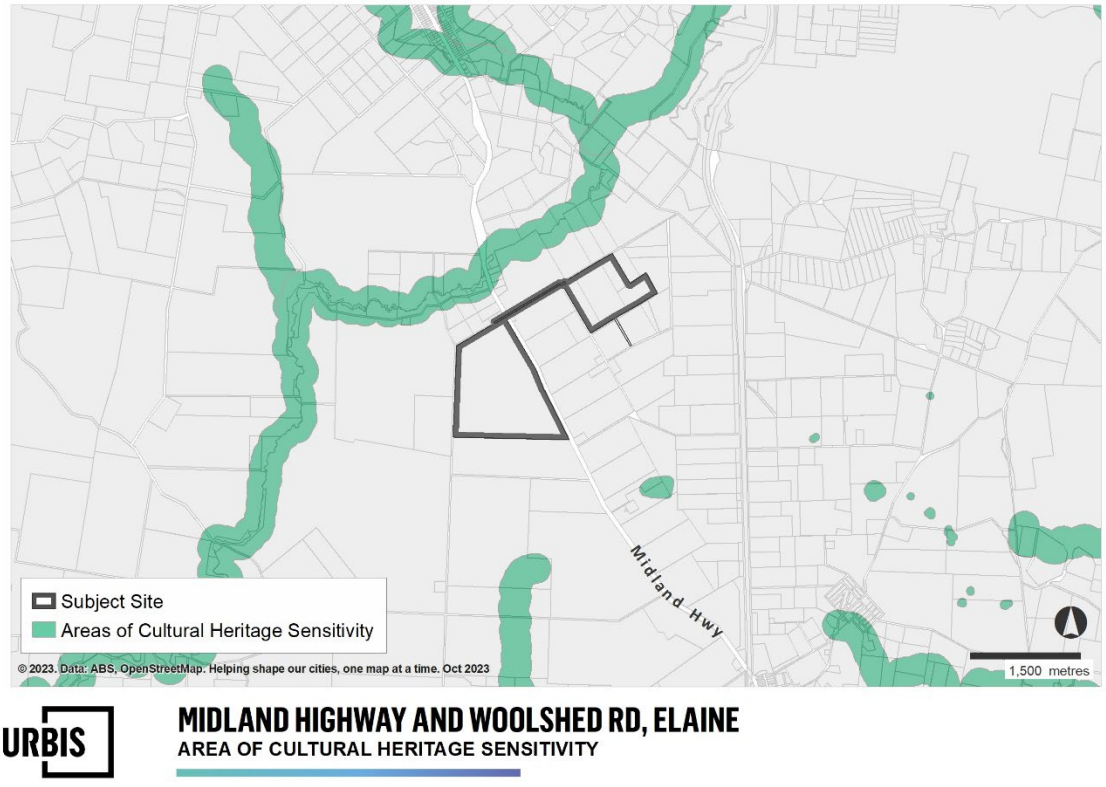


Source: Urbis 2023

The site is not within an area of Cultural Heritage Sensitivity, as outlined below.

Figure 26 Areas of Cultural Heritage Sensitivity



Source: Urbis 2023

6.2. PLANNING POLICY

6.2.1. Municipal Planning Strategy

The Municipal Planning Strategy (MPS) sets out the context, vision, strategic directions and strategic framework plan for the Moorabool Shire. The relevant sections of the MPS relevant to this application have been included at **Appendix T** of this report.

6.2.2. Planning Policy Framework

The Planning Policy Framework (PPF) seeks to develop objectives for Planning in Victoria to foster land use, development planning and policy which integrate relevant environmental, social and economic factors. The PPF outlines state and local provisions within the Moorabool Planning Scheme, which are outlined in **Appendix T** of this report.

6.2.3. Particular and General Provisions

A number of particular provisions apply to this application and have been outlined in Section 11 of this report. The following particular provisions are relevant:

- Clause 52.05 – Signs
- Clause 52.17 – Native vegetation
- Clause 52.29 – Land Adjacent to the Principal Road Network
- Clause 53.13 – Renewable Energy Facility (other than Wind Energy Facility)

The general provision under Clause 64.01 applies to this application as two uses within the Farming Zone are proposed (Renewable Energy Facility and Utility Installation).

6.3. RECENT PLANNING SCHEME AMENDMENTS

There have been several planning scheme amendments relevant to solar farm development in recent years. These amendments have resulted in changes to the Victorian Planning Provisions (VPP) and the Moorabool Planning Scheme which relate to aspects including renewable energy facilities, battery storage systems, energy supply and climate change strategies. These amendments are relevant to the proposed development and should be considered as relevant to this application.

Recent relevant amendments are listed in **Appendix U** of this report.

6.4. RELEVANT LEGISLATION

The following legislation, guidelines and policies are applicable to the proposal of the Elaine Solar Farm:

Commonwealth Legislation

- *Environmental Protection and Biodiversity Conservation Act 1999*

State Legislation

- *Climate Change Act 2017*
- *Environment Effects Act 1978*
- *Flora and Fauna Guarantee Act 1988*
- *Environmental Protection Act 2017 – Environmental Reference Standards*
- *Aboriginal Heritage Act 2006* and *Aboriginal Heritage Regulations 2018*
- *Planning and Environment Act 1987* – The Moorabool Planning Scheme

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Guidelines and Policies

- *Victoria's Guidelines for the removal, destruction or lopping of native vegetation*

- *Solar Energy Facilities – Design and Development Guidelines* (DTP, 2022)
- *Design Guidelines and Model Requirements – Renewable Energy Facilities v4* (CFA, August 2023)

Please refer to Section 7 of this report for an assessment against all relevant legislation.

6.5. SUMMARY OF PERMIT TRIGGERS

In summary, the following permit triggers apply to the proposed installation on the subject site pursuant to the following clauses of the Moorabool Planning Scheme and state legislation.

- A permit is required for the use of land for a Renewable Energy Facility (other than Wind energy facility) and Utility Installation within the Farming Zone pursuant to Clause 35.07-1.
- A permit is required for buildings and works associated with Section 2 Uses (Renewable Energy Facility and Utility Installation) within the Farming Zone, pursuant to Clause 35.07-4.Including earthworks
- A permit is required for buildings and works for land affected by the Design and Development Overlay pursuant to Clause 43.02-2.
- A permit is required for the display of a business identification sign pursuant to Clause 52.05-14.
- A permit is required for the removal of native vegetation, including dead native vegetation pursuant to Clause 52.17-1.

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7. ASSESSMENT AGAINST RELEVANT LEGISLATION

This section provides and assessment of the legislation, guidelines and policies which are applicable and relevant to the Elaine Solar Farm.

7.1. CLIMATE CHANGE ACT 2017

The Act sets out a clear policy framework and a pathway to 2050 that is consistent with the Paris Agreement to keep global temperature rise well below 2 degrees Celsius above pre-industrial levels. It provides a platform for subsequent action by government, community and business and the long-term perspective and policy stability needed to drive innovation and investment.

To meet the long-term emissions reduction target of net zero greenhouse gas emissions by 2050 set out in the Act, a transition to clean-energy sources and uses (renewable electricity, hydrogen, cleaner gas and electric vehicles) is required.

In the short-term the delivery of new solar energy infrastructure will play a significant role in Victorian Renewable Energy Targets for 50% of electricity to come from renewable sources by 2030. The Elaine Solar Farm is expected to be shovel ready by 2025 and operational by 2026.

7.2. COMMONWELATH ENVIRONMENTAL PROTECTION AND BIODIVERSITY CONSERVATION ACT (EPBC ACT) 1999

The EPBC Act establishes a Commonwealth process for the assessment of proposed actions likely to have a significant impact on any matters of National Environment Significance (NES).

The proposed action is highly unlikely to have a significant impact on any matter of NES. As such, a referral to the Commonwealth Environment Minister is unlikely to be required regarding matters listed under the EPBC Act.

It is considered unlikely that any cultural heritage sites of National Significance will be located it the study area. Therefore, no referral or further works would be required under the EPBC Act 1999.

7.3. ENVIRONMENT EFFECTS ACT 1978

The *Environment Effects Act 1978* establishes a process to assess the environmental impacts of a project. If applicable, the Act requires that an Environment Effects Statement (EES) be prepared by the proponent. The EES is submitted to the Minister for Planning and enables them to assess the potential environmental effects of the proposed development.

The 'Ministerial Guidelines for Assessment of Environmental Effects under the Environment Effects Act 1978' (DSE 2006) provide a range of criteria that can be used to determine whether an EES may be required for a project.

This project does not trigger the need for an EES Referral. The only relevant consideration against the referral triggers relates to the *Flora and Fauna Guarantee Act 1988* (FFG Act) however, as an individual matter it does not meet EES thresholds.

7.4. FLORA AND FAUNA GUARANTEE ACT 1988

The FFG Act is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes.

Permit exemptions under the FFG Act generally apply to the non-commercial removal of protected flora from private land, unless there is 'critical habitat' that has been declared on the land. No 'critical habitat' has been identified.

There are confirmed records of one species listed as Threatened under the FFG Act within the study area, Yarra Gum, and one protected flora species, Sifton Bush. However, all impacts to Yarra Gum occur within the areas of private land, and as such a permit under the FFG Act is not required. No impacts to Sifton Bush are anticipated, as this species was recorded along the road reserve, outside of the impact area.

The construction method for the aboveground cabling from **Windy** to the proposed substation to the east of the **Peters** site will be determined following confirmation from a geotechnical report. Drilling may be required

depending on site conditions. This has been done to avoid impacts to vegetation along the proposed cable corridor.

7.5. ABORIGINAL HERITAGE ACT 2006 AND ABORIGINAL HERITAGE REGULATIONS 2018

The *Aboriginal Heritage Act 2006* provides for the protection of Aboriginal Cultural Heritage in Victoria whilst the *Aboriginal Heritage Regulations 2018* sets out the process as to when a Cultural Heritage Management Plan (CHMP) should be prepared for a development.

The Regulations require a mandatory CHMP if:

1. All or part of the proposed activity is a high impact activity; and
2. All or part of the activity area (study area) is an area of cultural heritage sensitivity (subject to whether the entire area of cultural heritage sensitivity has been subject to significant ground disturbance).

The proposed activity is a high impact activity; however, the subject area is not within an area of cultural heritage sensitivity as mapped under the Aboriginal Heritage Regulations 2018 (Map 2). A mandatory CHMP is not required for the proposed development.

7.6. VICTORIA'S GUIDELINES FOR THE REMOVAL, DESTRUCTION OR LOPPING OF NATIVE VEGETATION

The purpose of the Guidelines is to guide how impacts to biodiversity should be considered when assessing a permit application to remove, destroy or lop native vegetation. The objective for the guidelines in Victoria is 'No net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation'.

Under the Guidelines, there are three assessment pathways for assessing an application for a permit to remove native vegetation: basic, intermediate and detailed.

The study area is within Location 2, with 3.565 hectares of native vegetation proposed to be removed. As such, the permit application is assessed under the Detailed assessment pathway. A Native Vegetation Removal Report which details the requirement for a detailed assessment pathway has been prepared by Ecology Heritage Partners and is included within Appendix 3 of their Biodiversity Assessment. The Biodiversity Assessment is located at **Appendix M** of this report.

7.7. DESIGN GUIDELINES AND MODEL REQUIREMENTS: RENEWABLE ENERGY FACILITIES RENEWABLE ENERGY FACILITIES V4 (CFA, AUGUST 2023)

Ecology & Heritage Partners have prepared Preliminary Bushfire Risk Assessment for the proposed Elaine Solar Farm. Section 4 of the report outlines compliance of the development concept plan and bushfire mitigation / management measures against the Guidelines (CFA, 2023) as well as Clause 13.02-1S.

A copy of the assessment has been provided at **Appendix L** of this report.

7.8. SOLAR ENERGY FACILTIES DESIGN AND DEVELOPMENT GUIDELINES (DELWP, OCTOBER 2022)

The Solar Energy Facilities Design and Development Guidelines provide an overview of the policy, legislative and statutory planning arrangements for solar energy facility projects in Victoria.

The guideline came into effect following Amendment VC161 (dated 17 September 2019) which amended the Victoria Planning Provisions and all planning schemes to introduce new requirements for renewable energy facilities. The guideline was updated on 28 October 2022 through Amendment VC224 which clarified guidance for solar energy facility proponents on identifying suitable sites within declared irrigation districts.

Please refer to **Appendix F** for a full assessment against the Solar Energy Facilities Design and Development Guidelines (DELWP, 2022).

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8. STATE AND LOCAL POLICY FRAMEWORK RESPONSE

The proposed development has been assessed in accordance with Moorabool Planning Scheme's State and Local planning policies and planning controls applicable to the site, as outlined in below and at Section 9 of this report. Refer to Appendix T for the relevant applicable planning policies.

8.1. CLIMATE CHANGE ACTION (CLAUSES 13.01, 14.01 & 19.01)

Renewable energy sources such as solar power have the potential to mitigate climate change through reducing greenhouse gas emissions from fossil fuel combustion. For this reason, the Victorian Government seeks to accelerate the development of well-sited and well-designed renewable energy generation facilities in Victoria, to reduce emissions, create jobs and put downward pressure on energy prices, while meeting legislated generation targets.

The *Climate Change Act 2017* provides Victoria with the legislative foundation to manage climate change risks and drives the transition to climate-resilient communities and the economy, with net-zero emissions by 2050. This is demonstrated at a local government level through a continued investment in energy efficient projects on a Council scale, as well as the intent to maintain close communications with Sustainability Victoria and DTP to seek opportunities for renewable energy, as stated within the Moorabool Shire's *Sustainable Environment Strategy 2016-2026*. It is noted that this strategy is in the process of being updated with an aim to develop a new strategy by 2025 following close collaboration with the community.

While there have been several recent amendments in relation to energy goals in the Victorian Planning Provisions, there is limited policy direction regarding Solar Farms and related facilities (particular provisions) to meet the energy demands of the State. The proposal is aligned with broader directions and targets of policy reform for carbon neutrality in Victoria, that are not yet fully reflected in the Victorian Planning Provisions.

The Elaine Solar Farm will continue to minimise the impacts of natural hazards and adapt to the impacts of climate change by providing clean, renewable energy to the grid. Aligning with Clause 13.01-1S (Natural hazards and climate change), this proposal directly addresses the strategy to respond to risks associated with climate change in planning and decision making processes.

The proposal supports the strategy of Clause 14.01-2S (Sustainable agricultural land use) to support adaptation in the agricultural sector to respond to the potential risks of climate change. Accordingly, this proposal seeks to use the land for a renewable energy facility, which will directly contribute to a reduction in emissions and support renewable energy generation in Victoria.

The proposal is also consistent with the objective and strategies of Clause 19.01-1S (Energy supply) as it will ensure Victoria's energy generation and storage are resilient to the impacts of climate change and assist in the transition to a low carbon economy.

The proposal will contribute significantly to Victoria's renewable energy generation target of 50% by 2030 and the reduction of greenhouse gas emissions (legislated to achieve net zero by 2050). When operational the facility will generate 150 megawatts of solar photovoltaic energy, creating enough clean, renewable electricity to power around 48,000 Victorian homes the equivalent of reducing 220,000 metric tonnes of carbon emissions per annum.

Simultaneously, the Elaine Solar Farm will significantly reduce carbon emissions produced by energy consumption within the local area and broader Moorabool region. This is a key deliverable within the overarching goal to contribute to reducing Victoria's and global greenhouse emissions and supporting local businesses and the community to reduce their greenhouse emissions as outlined in the *Sustainable Environment Strategy 2016-2026.*

8.2. SUPPLY OF URBAN LAND FOR ENERGY GENERATION (CLAUSES 11.02 & 19.01)

Clause 11.02-1S (Supply of urban land) seeks to ensure the ongoing provision of land and supporting infrastructure to support sustainable urban development. Additionally, this policy seeks to maintain access to productive natural resources and an adequate supply of well-located land for energy generation, infrastructure and industry.

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In order meet the needs of growing communities in a way that conserves the natural environment and creates healthy and sustainable built environments across Victoria, it is important to ensure suitable land is set aside for future renewable energy infrastructure such as the Elaine Solar Farm.

This is represented in the recently amended Clause 19.01-1S (Energy supply) which supports the appropriate development of energy infrastructure supply by:

- Supporting energy infrastructure projects in locations that minimise land use conflicts and that take advantage of existing resources and infrastructure networks.

This is also highlighted through Clause 19.01-2S (Renewable energy) which supports the provision and use of renewable energy by:

- Facilitating renewable energy development in appropriate locations.
- Protecting renewable energy infrastructure against competing and incompatible uses.
- Setting aside suitable land for future renewable energy infrastructure.
- Considering the economic, social and environmental benefits to the broader community of renewable energy generation while also considering the need to minimise the effects of a proposal on the local community and environment.

This is particularly relevant to the Moorabool Shire as a fast-growing peri-urban area in Victoria. Notably, the population is set to increase by 80% over the next 20 years as identified in *Plan Melbourne* and the *Central Highlands Regional Growth Plan*. As such, the project is consistent with this the above-mentioned clauses in providing renewable energy, storage and distribution in an area of the grid that has high system strength and able to boost the State's renewable energy production in close proximity to major population centres (Ballarat, Geelong and Melbourne).

8.3. BIODIVERSITY (CLAUSE 12.01)

As discussed within the Planning Provisions at **Appendix T** of this report, state and local policy seeks to maintain and enhance the biodiversity of native flora and fauna communities through native planting, offsets and retention of native vegetation where possible to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

Responding to Clauses 12.01-1S (Protection of biodiversity), 12.01-1L (Biodiversity) and 12.01-2S (Native vegetation management) the site location and layout have been carefully considered to avoid impacts to biodiversity by avoiding native vegetation removal where reasonably possible whilst ensuring the necessary to achieve the minimum yield to make the development economically viable (via a sufficient minimum power output) and making the most of this power generating opportunity. On balance, the proposed site location and layout avoids major removal of native vegetation.

The entire study area contains a Strategic Biodiversity Value score between 0.21 – 0.4 (DEECA 2023b), which is relatively low. This generally corresponds to areas that have been cleared for grazing.

Please refer to Section 11.3 of this report for a detailed Avoid and Minimisation statement. Based on the proposed use of the study area as a solar farm, there are no further opportunities to avoid or minimise impacts on native vegetation.

Importantly, offsets commensurate with the net loss of biodiversity as a result of the removal of native vegetation will be delivered as part of the proposal, in line with the strategies of Clause 12.01-2S and the Guidelines for the removal, destruction or lopping *of native vegetation* (Department of Environment, Land, Water and Planning, 2017). Further discussion of these offsets and impacts to the existing biodiversity of the area are discussed in Section 10.3.2 and 11.3 of this report.

8.4. HERITAGE (CLAUSE 15.03)

State and Local planning policies seek to conserve and protect Aboriginal sites and places of cultural heritage significance, including Clauses 15.03-1S (Heritage conservation), 15.03-1L (Heritage) and 15.03-2S (Aboriginal cultural heritage). A supporting desktop assessment prepared by Ecology Heritage Partners (**Appendix N**) concludes the study area is not located within a legislated area of Aboriginal cultural heritage sensitivity. Therefore, a mandatory CHMP is not required for the project.

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Regarding historical heritage places, although no previously recorded Places have been identified within the study area, a site inspection later confirmed the presence of a timber hut. As the site is more than 75-year-old, under the Heritage Act 2017 a site card must be provided to Heritage Victoria for further investigation. The Hut and immediate surrounding area have been excluded from the development area.

8.5. NOISE (CLAUSE 13.05)

WSP Australia Pty Ltd (WSP) have provided a Preliminary Noise Assessment for the proposed solar farm. By developing land that will introduce new sources of noise that could potentially impact surrounding land uses, the developer is required under the General Environmental Duty (GED) to minimise those risks of harm so far as reasonably practicable. Additionally, Clause 13.05-1S (Noise management) seeks to ensure that community amenity and human health is not impacted by noise emissions.

Preliminary noise modelling results indicate that during normal operation, noise from the proposed solar farm will comply with the relevant EPA Publication 1826 noise limits all receivers without further mitigation. Therefore, the proposal is compliant with noise limits and thus will not adversely impact community amenity and human health.

8.6. AGRICULTURE (CLAUSE 02.03 & 14.01)

The proposal responds to the objectives and strategies of Clause 14.01-1S (Protection of agricultural land) as it is not strategically significant in the local or regional context.

An Agricultural Assessment has been prepared by Ag-Challenge Consulting Pty Ltd. Their report states that currently, the site is used as agricultural land (grazing and fodder conservation), although the land is considered not considered versatile from an agricultural perspective. Notwithstanding, the land is considered valuable for a grazing enterprise.

Responding directly to the strategies outlined in Clause 14.01-1S (Protection of agricultural land), the Agricultural Assessment concludes that the development of the solar farm will have negligible impact on local and regional productivity as the land. It is envisaged that the design of the solar farm will enable sheep to be grazed underneath the solar panels, thus retaining some of the current level of agricultural productivity and providing a means for the land to remain productive without compromising its long-term agricultural viability, to which it will return upon decommissioning of the solar farm.

Responding to the strategies outlined in Clause 02.03-4 (Natural resource management), the report notes that there are no perceived detrimental impacts of the development to surrounding farm businesses or to the agricultural amenity of the area.

The proposal also responds to Clause 14.01-2S (Sustainable agricultural land use) in that it supports the adaptation of the agricultural sector to sustainable approaches and responds to the potential risks arising from climate change.

For further information, please refer to the Section 10.3.1 of this report and the Agricultural Assessment included within **Appendix K** of this report.

8.7. ECONOMIC DEVELOPMENT (CLAUSE 17.01)

The development is consistent with the *Moorabool Shire Economic Development Strategy (2015)* as the region seeks to investigate investment options to support the long-term sustainability of farms within the Shire. Notably, the Strategy seeks to work with farmers groups to improve the potential for income generation through innovative projects such as sustainable energy. The Strategy notes this as a valuable investment in the Shire through the better utilisation of farm capacity and the increased support for local services, leading to more jobs. It is noted that the Shire is currently updating the *Moorabool Shire Economic Development Strategy (2023-2027)*, which went to public exhibition in May-June 2023 and was anticipated to be endorsed in September 2023. The draft document outlines the importance of the diversification of industry to support sustainable economic growth, notably through the identification of opportunities in new and emerging industries and leveraging off existing industry strengths such as renewable energy. Direction 3.3 outlines a major project pipeline in the 'Green economy.' Direction 3.4 highlights the Agricultural Strategic Plan as a medium term priority project to realise the possibility for renewable energy investment (wind and solar) within the Shire.

Investment in renewable energy facilities (solar farms) will provide diversification and growth to the local agricultural economy. The proposal aligns with these directions above, as well as with the objective and

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relevant strategies within Clause 17.01-1S (Diversified economy), as it supports the growth and diversification of rural townships while facilitating employment growth in growing sectors, such as renewable energy.

Costs of the project will total approximately $300 Million (± 20%). Much of this will be created within the Victorian economy through job creation, such as builders, contractors, materials and services required for the installation and running of the solar farm. The project will assist in the creation of approximately 150 jobs during construction and 1-3 full time jobs during operation, supporting the rural economy, providing employment opportunities to local workers and supporting greater economic self-sufficiency for the region, as emphasised in Clause 17.01-1R (Diversified economy – Central Highlands).

8.8. ENERGY SUPPLY (CLAUSE 19.01)

Planning Scheme Amendment VC216 amended the Moorabool Shire Planning Scheme by including strategies in Clause 19 (Infrastructure) relating to clean energy generation in order to avoid, minimise and offset environmental impacts, and incorporate resilience to natural hazards, including future climate change risks. The Amendment included strategies in Clause 19.02-2S (Renewable energy) to contribute to net zero emission outcomes and support metropolitan and regional climate change strategies. Refer to **Appendix U** of this report for further details regarding planning scheme amendments.

Clause 19.01-1S (Energy supply) introduced a new strategy to facilitate appropriate development of energy supply infrastructure in communities to help diversify local economies and improve sustainability and social outcomes, and in the long term contribute to a transition to a low-carbon economy. Amendment VC226 inserted a new strategy at Clause 19.01-1S (Energy supply) to facilitate renewable energy generation and storage to meet on-site energy needs, which further supports the objective of the clause.

The proposal is consistent with the objectives and strategies of Clause 19.01-2S (Renewable energy) as it has been designed to ensure siting and design considerations are met through a range of technical means, as outlined within this Planning Report and the relevant appendices.

The proposal aligns with Clause 19.01 (Energy) as it will increase renewable energy production and support the transition away from fossil fuel energy production, while providing broader economic, social and environmental benefits to the community and environment. The proposal will contribute approximately 150MW of affordable green power to the local grid. The generation of energy to power approximately 48,000 homes annually will meet community demand for clean energy services and improve sustainability outcomes on a micro and macro scale.

8.9. BUSHFIRE (CLAUSE 13.02)

The site is wholly subject to the Bushfire Prone Area, for which no permit is required. No part of the study area is in the Bushfire Management Overlay. Ecology & Heritage Partners have been engaged to provide an assessment a review of the development's concept plan and bushfire mitigation/management measures against the Guidelines (CFA 2023) and Clause 13.02-1S (Bushfire planning) to determine whether the plan and measures complied with the policy and legislative requirements.

Compliance with the recommendation of this report is required to ensure the solar farm does not result in an increase in fire risk in the locality or to downwind assets and values.

Refer to Section 10.3.4 of this report for further detail regarding bushfire mitigation. A copy of the Preliminary Bushfire Risk Assessment prepared by Ecology & Heritage Partners is detailed at **Appendix L** of this report.

8.10. WATER (CLAUSE 14.02)

There is one main overland flow paths / waterway within both **Windy** and **Peters**. Both drainages are unnamed tributaries to Williamson Creek and discharge approximately 500 m north-west of the project site. Flood extent modelling and maximum depths indicate the likelihood that the proposed access tracks will remain passible under flooded conditions.

In accordance with Clause 14.02-1S (Catchment planning and management), buffer zones have been implemented to protect natural drainage corridors to the satisfaction of the Authority. Notably, solar infrastructure has been set back from the 'ecological zone' to the north of **Windy** to allow for the retained landscape around the existing wetland.

9. RESPONSE TO PLANNING CONTROLS

9.1. FARMING ZONE

As listed within Section 2 of the Table of uses in Clause 35.07-1, a permit is required for a Renewable Energy Facility (other than Wind Energy Facility) and a Utility Installation. Earthworks which change the rate of flow of water across a property boundary also require permit under Clause 35.07-4 The purposes of this zone, as outlined in Clause 35.07 of the Planning Scheme are listed in Section 6.1.1 of this report.

The proposed solar farm is considered to be in accordance with the requirements of the Moorabool Planning Scheme and the intent of the Farming Zone (Clause 35.07).

In order to satisfy the requirements of the Decision Guidelines of Clause 35.07-6, an assessment against the following matters is provided at **Appendix G**:

- General Issues
- Agricultural issues and the impacts from non-agricultural uses
- Accommodation issues
- Environmental issues
- Design and siting issues

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9.2. SCHEDULE TO THE FARMING ZONE

Clause 1 of the Schedule sets out a number of requirements that relate to a planning application within the Farming Zone. Notably, the minimum setback from a road in a Transport 2 Zone is 100 metres. A variation to this requirement has been proposed due to the nature of the development, existing development conditions, strategic plans in place, extensive screening proposed and levels of glint and glare from Midland Highway.

A setback of approximately 50 metres from solar infrastructure on **Windy** to Midland Highway is consistent with the general requirements for solar farm developments. Detailed design has considered a range of technical requirements including transport and access, bushfire and visual impacts.

Following an examination of parcels along Midland Highway (TRZ2) within the Elaine Township, several developments (including dwellings) encroach the 100m setback as prescribed by the Moorabool Planning Scheme. The following rural residential properties encroach within the 100 metre setback from Midland Highway, noting it can be assumed that these properties have successfully applied for a variation to the setback in the Farming Zone:

- 5876 Midland Highway – approx. 38.6m setback
- 5930 Midland Highway - approx. 36.5m setback
- 6064 Midland Highway - approx. 55.4m setback
- 5621 Midland Highway - approx. 34.7m setback

The recommended minimum setback of 100 metres would result in a significant decrease of developable land for a renewable energy facility, and thus reduce the total output potential (MW) to be delivered to the grid. Accordingly, it is proposed that the current setback at 50 metres from the Transport 2 Zone is an acceptable variation to the requirement, noting the proposed use will contribute to Victoria's renewable energy targets.

There is no current strategic plan in place by DTP or Council which suggests the likelihood for a road upgrade in the future. No Public Acquisition Overlay (PAO) exists adjacent to the Highway or on the subject site for upgrade or development purposes.

From all the assessed receptors, there are no glare impacts predicted including to Midland Highway. It is noted that there are no glare impacts predicted during the establishment phase for the amelioration planting. Following the establishment of amelioration, comprised of locally indigenous screening vegetation along the Project boundaries (specifically Midland Highway), the landscape character will appear similar to the remainder of the regional agricultural landscape and other bands of vegetation that occur through the landscape of the region. Views from the Midland Highway to Mount Buninyong will not be interrupted by the

Project, as the highest components of the project would sit well below the tops of vegetation lining the road corridor. Please refer to the Glare and Glint Assessment at **Appendix R** and the LVIA at **Appendix Q** for further details.

For the reasons listed above, it is therefore considered appropriate for the development to encroach the setback requirement of the Farming Zone.

Therefore, the proposed installation will generally meet the requirements of Clause 35.07 and the Schedule, and the setback variation is considered appropriate with regards to the use and development for a Renewable Energy Facility within the Farming Zone. The other requirements relevant to the Elaine Solar Farm have been considered and assessed within the Clause 35.07 Farming Zone Assessment at **Appendix G**.

Earthworks

The proposed access road to the south of Peters(considered to be earthworks under Clause 73.01) may change peak flow rates across the property boundary, however because modelled flows will generally be shallow the access road would not significantly affect runoff volumes. Due to the relatively minor raise of the access road and the installation of culverts, flows will be redirected to the crossing points but wouldn't store enough volume to appreciably change discharge rates.

9.3. DESIGN AND DEVELOPMENT OVERLAY – SCHEDULE 2

The proposed development is wholly covered by the Design and Development Overlay – Schedule 2 (DDO2). Pursuant to Clause 43.02-2, a permit is required for buildings and works for a Section 2 use.

The proposed solar farm is considered to be in accordance with the requirements of the Moorabool Planning Scheme and the intent of the Design and Development Overlay.

In order to satisfy the requirements of the Decision Guidelines of Clause 43.02-6, as well as the decision guidelines within Schedule 2, an assessment against the following matters are provided at **Appendix H**:

- Built form and layout
- Landscaping
- Landscape and visual amenity
- Materials proposed

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10. PLANNING APPRAISAL AND MATTERS FOR CONSIDERATION

Below is an assessment of the development and its construction and operational impacts with reference to the assessment against the policies and controls from the Planning Scheme contained within Section 6 of this report.

10.1. GRID CONNECTION

The project will connect to the grid via the existing 220kV Elaine Terminal Station. An overhead 33kV powerline will run from the north of **Windy** to the west of **Peters** and connect to the proposed on site substation located at the east of **Peters**. The Battery Energy Storage System (BESS) proposed will connect to the onsite substation.

Elgin will apply to Ausnet and AEMO for the proposed grid connection application. On completion, ownership of the contestable and non-contestable assets for the solar farm will be transferred to a third party.

Elgin is currently undergoing the connection application process in conjunction with town planning approval.

We note, a permit is required to construct a building or construct or carry out works for any use in Section 2 of Clause 36.04-1 within the Transport Zone (Midland Highway).

We acknowledge that an application by a person other than a relevant transport manager on land shown on a planning scheme map as TRZ2 must provide written consent from the Head, Transport for Victoria, indicating that the Head of Transport for Victoria consents generally or conditionally to the application being made and to the proposed use or development.

10.2. AMENITY IMPACTS

10.2.1. Landscape and Visual Impact

A Landscape and Visual Impact Assessment has been undertaken by Peter Haack Consulting and is included in **Appendix Q**. A Glare and Glint Assessment has also been prepared by Urbis and is located at **Appendix R.**

Visual impacts on sensitive receptors

The report notes that overall, the project is assessed as having either a low level of visual impact, or not being visible from surrounding sensitive viewpoints, primarily due to the limited number of proximate sensitive viewpoints and the relative lack of visibility resulting from existing vegetation throughout the landscape and the screening effects of rising topography. The residual visual impact will typically reduce to very low after the establishment of amelioration measures.

Prior to amelioration, only a limited number of sensitive uses proximate to the project will result in a high or medium high initial level of impact. These are:

- **VP1** – from the Midland Highway travelling from the south, a moderate to high visual impact is predicted prior to amelioration.
- **VP6** – from the Midland Highway travelling from the north, a moderate visual impact is predicted prior to amelioration.
- **VP9** – from the residence at 5975 Midland Highway, located on slightly elevated topography, a high visual impact is predicted prior to amelioration.

The residual visual impact will typically be reduced to very low after the establishment of amelioration planting along the relevant boundaries to mitigate impacts to VP1, VP6 and VP9.

Landscape character impacts

While the proposal results in a significant change to the landscape character from the existing setting, the low profile of the site will ensure that from ground-based viewing locations, only localised changes to character will result. The most visible changes will be to views from Midland Highway. Although, following amelioration, comprised of the establishment of locally indigenous screening vegetation along the site

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perimeter, the landscape character will appear similar to the remainder of the regional agricultural landscape and other bands of vegetation that occur through the landscape of the region.

The report concludes that the landscape of the project setting has a generally high landscape absorptive capacity and is located within an 'envelope' of energy infrastructure ensuring the colocation of landscape modifying elements.

Glint and glare impacts

Based on the proposed layout there are no glare impacts expected for the project for all assessed receptors within 1km of the project.

This is including Midland Highway from both **Peters** and **Windy** when then resting angle of PVs are configured at between 5°-60°. The panels will 'track' the sun in an east to west plane to maximise solar exposure and remain mostly perpendicular to the sun, therefore reducing impact for glint and glare. Additionally, the glass surfaced PV panels are coated to maximise daylight absorption, and thus minimise glare potential.

Risk of glare and glint for road users and surrounding residences around the project will be further reduced by proposed perimeter buffer landscaping which, once established, will ensure that surfaces of the panels are not visible, screening any reflections that would have occurred across the terrain. There will be no glare impacts expected during the establishment phase for the amelioration planting.

Risk to air traffic is considered minimal primarily due to the distance to the nearest aviation facility at Lethbridge Airport (22km south).

Therefore, the project is assessed as having a low impact resulting from reflection or glare due to the tilting of solar panels, minimal opportunities for overlooking and proposed planting around the perimeter of the project.

Lighting impacts

Lighting impacts are considered low as there is no requirement for operational lighting within the Category A2 environmental lighting zone. Therefore, the project does not result in an increased lighting impact.

The powerlines will be of a similar height to other powerlines along roads throughout the setting of the project and consequently their visual impact is assessed as being low.

10.2.2. Noise Impacts

Solar facilities are known to be relatively silent, however ancillary systems (such as inverters and BESS storage units) do create noise. WSP have prepared a Noise Impact Assessment providing a summary of operational noise modelling undertaken to assess operational noise from the proposal and battery energy storage system. The report concludes that the predicted noise from the operational solar farm will comply with the operational noise limits in all locations during most time periods. A summary of the predicted noise levels is provided in Table 4.3 of the Noise Impact Assessment Prepared by WSP.

The modelling inputs and method are considered conservative, based on the anticipated 'worst case' conditions and assuming all infrastructure is operating simultaneously at maximum load during all periods.

Noise mitigation options have been investigated for contingency purposes and the predictive noise modelling results indicate that mitigated noise from the operational Solar Farm site can be further reduced by up to 2 dBA at NSAs closest to noise generators. These measures will be incorporated into the detailed design with the expectation the requirements of a detailed noise emission assessment / compliance survey will be conditioned onto any planning permit granted for this development.

Overall, the residual risk that noise from the operational Solar Farm will cause adverse noise impacts is minimal.

At the height of the predicted range, noise levels as a result of the infrequent activation of the emergency circuit breaker switches were found to exceed the impulsive project noise criteria at four locations during night-time periods. It is expected that emergency circuit breaker switches may (in the event of an emergency) typically occur approximately once every 5 years.

It is recommended that once the Solar Farm is operational, commissioning noise measurements are undertaken to validate the noise modelling assumptions (including circuit breaker noise ranges) and ensure

compliance with EPA legislation. Where noise is found to exceed the operational noise limits from EPA 1826 (or an alternative assessment criterion such as EPA 1996), additional noise mitigation measures will need to be considered beyond those presented in this report.

A full report prepared by WSP will be submitted shortly at Appendix J.

10.2.3. Cumulative Impacts

The site is located in close proximity to the Elaine Terminal Station, which supplies energy to the grid via the 220kV Moorabool Terminal to Ballart Terminal overhead transmission line. It is noted that the subject site is in a favourable position to connect to the existing Terminal Station. The Elaine Wind Farm (part of the Lal Lal Wind Farm) is also located in proximity to the site and there is currently a town planning application lodged with DTP for a BESS located directly to the south of the site.

It is noted that the above-mentioned renewable energy facilities / infrastructure are not solar farms. A desktop study of the area indicates there are no other utility sized solar farms in the region and majority of the surrounding land is made up agricultural land.

As discussed in this report, the site has been located and designed to minimise or avoid impact to surrounding sensitive uses and native vegetation. The proposal will not result in a significant change to the existing landscape due to vegetation screening, landform as well as being co-located with existing, similar facilities. Accordingly, there are no unreasonable cumulative impacts raised by this proposal.

10.3. ENVIRONMENTAL CONSIDERATIONS

10.3.1. Potential Loss of Agricultural Land

An Agricultural Assessment has been prepared by Ag-Challenge Consulting that concludes the subject land is of moderate productivity for grazing.

The main economic driver within the Ballarat Region is grazing, plantation forestry and intensive horticulture where irrigation is available on the outskirts of Ballarat.

The average annual rainfall for the site is considered moderate. Overall, the combined land parcel (**Peters** and **Windy**) has a Land Capability rating of 4 and is not considered suitable for horticultural cropping. The site currently experiences poor structured and poorly drained soils. Conditions would continue to worsen with intensive cultivation and tillage practices as a result of cropping. Overall, intensively cropping the land is not considered sustainable without significant modifying practices.

The soils that are present on site are not highly regarded due to their poor structure and poor drainage. While the property utilises groundwater from a bore (which may have the potential to be used as irrigation), data regarding water salinity from neighbouring bores indicates this water is not suitable for irrigation due to high concentrations of chlorine present. This is not considered suitable for horticultural crops, particularly those of high value. Therefore, the land that comprises the site is not considered versatile from an agricultural perspective.

The land is considered as valuable land for a grazing enterprise. The report notes that the cropping of oats will be no longer practical due to the altering use of agricultural land. However, the panels have been appropriately designed to allow for the grazing of sheep. Therefore, the carrying capacity of the land will only be slightly reduced. Sheep grazing will also contribute to fuel load management, which in turn assists in a reduced risk for wildfire.

There are no perceived detrimental impacts of the development of the solar energy facility to the surrounding farm businesses. Agricultural productivity at the site is unlikely to significantly decrease as a consequence of the Solar Farm development. The impacts to the agricultural amenity of the Region are not significant.

10.3.2. Biodiversity

Ecology and Heritage Partners was commissioned by Urbis Pty on behalf of Elgin Energy to undertake a Biodiversity Assessment of the proposed development area. This report presents the results of the assessment and discusses the potential ecological and legislative implications associated with the proposed action. This report has been provided at **Appendix M**.

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A field assessment was undertaken by a habitat hectare assessor, who is accredited by DEECA in the habitat hectare assessment methodology, on 30 July and 9 September 2022, and 6 July 2023 to obtain information on flora and fauna values within the study area.

A discussion regarding biodiversity is detailed at Section 8.3 of this report. Additionally, an assessment against the impact to native vegetation and ecological features on site is located at Section 11.1 of this report. Please refer to these sections as well as **Appendix M** for further details.

10.3.3. Landscaping

A Landscape Strategy has been prepared by Urbis Pty Ltd (September 2023) to support the amelioration recommendations of a preliminary Landscape Visual Impact Assessment (LVIA). The planting palette has been carefully selected to accommodate existing ecologies around the site. There is a diverse selection that focuses on native species endemic to the area and provides habitat for local fauna. The screen planting will differ according to location around the site, while still respecting the site's unique existing character and form.

Given the location of the project, the plant species have been drawn from a number of EVC's and Council plant lists as outlined in the Landscape Strategy. These include:

- EVC 55- Victorian Volcanic Plains – Plains woodlands or forests
- EVC 132 – Victorian Volcanic Plain – Plains grassland and chenopod shrublands
- EVC 22 – Central Victorian Uplands – Grassy Dry Forests
- EVC 128 – Central Victorian Uplands – Grassy Forest
- EVC 175 - Central Victorian Uplands – Grassy woodland

The planting strategy for each site has been discussed at Section 4.2.11 of this report and is also outlined below.

Windy

The northern boundary will accommodate extensive, high density screening through large and small tree planting (Landscape Buffer Type 1) to reduce the visual impact from northern lots. Large and medium shrubs are also proposed along this boundary to reduce visual impact below the trees once they have established.

High density shrub planting with medium and large sized shrubs and tufting (Landscape Buffer Type 2) is proposed to the east of **Windy** to supplement the existing vegetation along the boundary.

The southern and western boundaries will require low density shrub planting with medium and large sized shrubs and tufting (Landscape Buffer Type 4) to infill gaps in the existing mature tree lining along these interfaces.

Peters

The northern and western boundary of **Peters** will be infilled by low density tree and shrub planting (Landscape Buffer Type 3). Planting will consist of large trees, large shrubs and medium shrubs.

Low density shrub planting (Landscape Buffer Type 4) is proposed along the eastern interface of **Peters** as well as the western end of the southern boundary. A significant patch of vegetation will be retained to the south, which will assist in visual impact screening to the site.

The overall planting strategy as included in the Landscape Strategy is visualised below. Planting typologies (Buffer Types 1, 2, 3 and 4) are also detailed in the Landscape Strategy at **Appendix C**.

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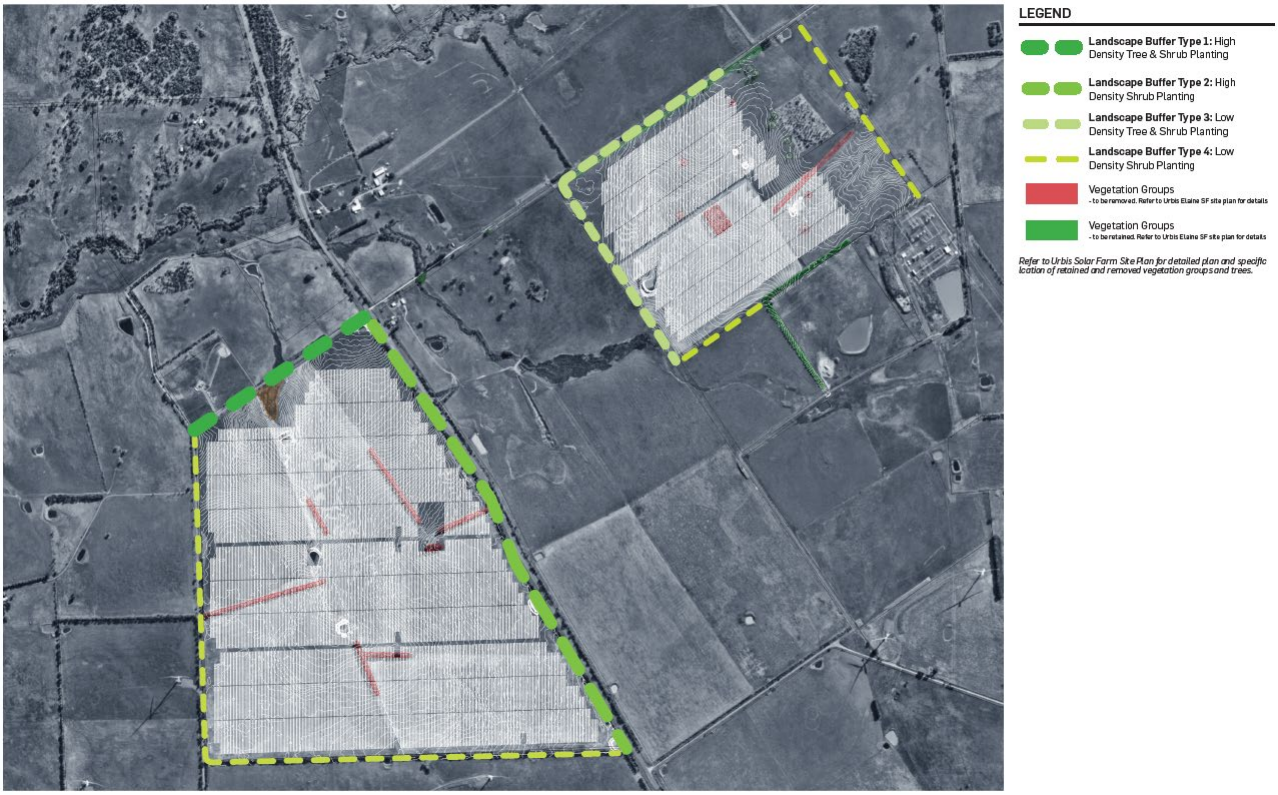
Figure 27 Overall Planting Strategy



Source: Urbis 2023

10.3.4. Bushfire Prone Land and Fire Risks

Ecology and Heritage Partners Pty Ltd was instructed by Elgin Energy Pty Ltd to assess the bush/grassfire risk with respect to the Elaine Solar Farm against the Design Guidelines and Model Requirements for Renewable Energy Facilities v4 (the Guidelines) (CFA 2023) and Clause 13.02-1S of the Victoria Planning Provisions.

The report outlines that the most likely directions of bushfire attack on severe fire weather days are from the north-west or south-west in Victoria. Both directions from the site are dominated by cleared agricultural land, with forests occurring 3-5 kilometres away. The report notes that while forest fires have the potential to generate embers on days of severe bushfire weather, there is a lack of connectivity in the landscape where fuel loads could be considered large on a continual basis. This is due several roads intersecting the land, the periodic harvesting of crops, and the grazing of farm animals in paddocks, which would likely greatly reduce the amount of fuel available.

The assessment outlines that it would likely be difficult for a fire to build the momentum to become what can be considered a 'significant threat.'

Based on EHP's assessment of the site, the following separation distances between unmanaged vegetation and buildings/structures should apply:

- Grassland and Upslope/Flat land – Separation distance of 19 metres.
- Grassland and Downslope >0 to 5 degrees – Separation distance of 22 metres.

These distances correspond to a Bushfire Attack Level (BAL) construction standard of BAL-12.5 for habitable buildings.

Bushfire mitigation and management measures have been undertaken during the design phase in order to reduce the risk of bushfire, as well as show compliance with policy and legislative requirements. The following measures have been implemented to reduce the bush/grassfire risk with respect to the proposal:

- The internal road network has been designed to accommodate emergency vehicle (fire truck) access. Passing bays are located at least every 200 metres. Internal roads also provide ample access to the

BESS, substation and laydown area compound for emergency vehicle access. Both sites also have two access points which will have the capacity to accommodate emergency vehicles.

- Storage water tanks (9 tanks overall) will be above ground for ease of access for firefighting water supply. Tanks have been located in close proximity to the site access points on both sites to ensure safe access for fire vehicles.
- A formal fire break is situated on the outside of the perimeter road. The fire break includes that perimeter road to create a total 10m fire break to reduce fire risk and to ensure emergency vehicle access around and throughout the site. The fire break also delineates around the control room to ensure vehicle access.
- 5-metre-wide vegetation screening is proposed at specific locations around the boundary of each site. This planting is not considered to be a fire risk due to their narrow width and being at least 20 metres from solar panels and other infrastructure.

A copy of the Preliminary Bushfire Risk Assessment is detailed at **Appendix L** of this report.

10.3.5. Geology, Soil, Water Quality and Hydrology

The site is generally comprised of gently undulating rises and small convex slopes of 1% towards the northeast and northwest across both sites.

An ephemeral tributary of Williamson Creek flows through both properties, running north-south on **Windy** and east-west on **Peters** towards farms dams. Discharge occurs at the junction of the tributaries with Williamson Creek, approximately 500 metres northwest of the project site.

As outlined in the Flooding Impact Assessment prepared by Ecological Australia, flood depths derived from the existing conditions of the site generally show that flows are concentrated to the waterways and defined overland flow paths within the region, with sufficient terrain relief to limit the amount of sheet flow. Velocities within defined paths tend to be below the threshold where rock armouring to protect waterways and features is required.

It is noted within the report that depths in the inundation areas are generally shallow (< 1 metre) under each AEP scenario and will be able to pass under the PV panel arrays in these events. Flood extent modelling and maximum depths indicate the likelihood that the proposed access tracks will remain passible under flooded conditions. It is also noted that solar panels do not create an increase in runoff intensity.

The laydown and infrastructure areas are impermeable surfaces and as such, runoff will be controlled and filtered prior to discharge.

Culverts are to be incorporated into the detailed design where flow paths intersect the proposed access road along the northeastern edge of the primary **Peters** access (southern access point) as recommended by EHP. The inclusion of culverts in the prescribed locations will allow flows to discharge into the waterway running between **Windy** and **Peters**.

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11. PARTICULAR AND GENERAL PROVISIONS

11.1. CLAUSE 53.13 – RENEWABLE ENERGY FACILITY (OTHER THAN WIND ENERGY FACILITY)

Clause 53.13 applies to land used, developed and proposed to be used and developed for a renewable energy facility. This clause outlines application requirements for a renewable energy facility which must be complied with in respect to this proposal.

Before deciding on an application, in addition to the decision guidelines of Clause 65, the Responsible Authority must consider, as appropriate the application requirements and decision guidelines under Clause 53.13. Please refer to **Appendix I** for a response to the application requirements and decision guidelines of Clause 53.13.

11.2. CLAUSE 52.02 – SIGNAGE

Pursuant to Clause 35.07-7 (Farming Zone) the site is designated sign Category 4 (sensitive areas).

Pursuant to Clause 52.05, a permit is required for the display of a business identification sign.

Category 4 areas are defined as maximum limitation and a permit is required for business identification signage, where the total display area to each premises must not exceed 3 sqm. The proposed signs (2 total, one to each site) are compliant with Clause 52.05 with a total area of 2.88 sqm each. Refer to Section 4.2.7 of this report for more information regarding indicative signage, including elevations and sizing.

11.3. CLAUSE 52.17 – NATIVE VEGETATION REMOVAL

Clause 52.17 of the Moorabool Planning Scheme requires a planning permit to remove, destroy or lop native vegetation. The assessment process for the clearing of vegetation follows the 'Guidelines for the removal, destruction or lopping of native vegetation' (the Guidelines) (DTP 2017).

The Guidelines manage the impacts on biodiversity from native vegetation removal using an assessment-based approach.

Native vegetation proposed to be removed or lost

The below clearing scenario is based on the site development plan. The native vegetation impacts associated with the solar farm are limited to the following:

- 2.153 hectares of impact to a modelled current wetland in the western block (with no native vegetation observed during the site assessment);
- 0.031 hectares of Plains Grassy Woodland along Woolshed Road for the installation of 33kV powerlines;
- Six large scattered trees within the north eastern corner of the study area (Tree ID's 12 – 15, 20 and 25 on Figure 2);
- 0.876 hectares of Plains Grassy Woodland removed that falls within the proposed panel location (PGW1b, PGW3 and PGW4 on Figure 2); and,
- 0.105 hectares impacted of PGW3 for the creation of the internal security fence (PGW3a on Figure 2).

The study area is within Location 2, with 3.565 hectares of native vegetation proposed to be removed. As such, the permit application falls under the Detailed assessment pathway as detailed in **Appendix M**, Removal of Native Vegetation (the Guidelines) (DELWP 2017).

Guidelines for the removal, destruction or lopping of native vegetation

The Guidelines for the removal, destruction or lopping of native vegetation (Guidelines) is an incorporated document of all Planning Schemes in Victoria and therefore must be applied when a permit is required under Clause 52.17 of Planning Schemes.

The three-step approach (avoid, minimise, offset) is the key policy in relation to the removal of native vegetation to achieve no net loss to biodiversity as a result of the removal, destruction or lopping of native

vegetation. All applications to remove native vegetation must demonstrate the three-step approach of avoid, minimise and offset.

Avoid and Minimise

Prior to finalising the development plan for the site, detailed mapping of the existing ecological values present within the study area was completed. The results of this mapping were provided to the client, along with a Preliminary Biodiversity Assessment, to aid in selecting a site layout that minimised impacts on the ecological values present.

The biodiversity report highlights that much of the study area is devoid of native vegetation, through use of much of the study area for livestock grazing. The paddocks were dominated by exotic pasture grasses, with over sowing evident in most paddocks. Scattered native trees remained in the north eastern portion of the study area and bordering the study area within road reserves or revegetation plantings along boundaries.

Figure 28 – Windy Site Photo

The main areas of ecological value were identified along the Midland Highway road reserve as patches of moderate to high quality Plains Grassland (EVC 132) and within some farm dams in an earlier, larger study area, where aquatic and semi-aquatic vegetation was present. These areas were subsequently excluded from the refined study area, with the identified values avoided.

The final site layout of the solar facility demonstrates significant consideration has been given to avoiding the removal of native vegetation on site.

Figure 29 Ecological Features

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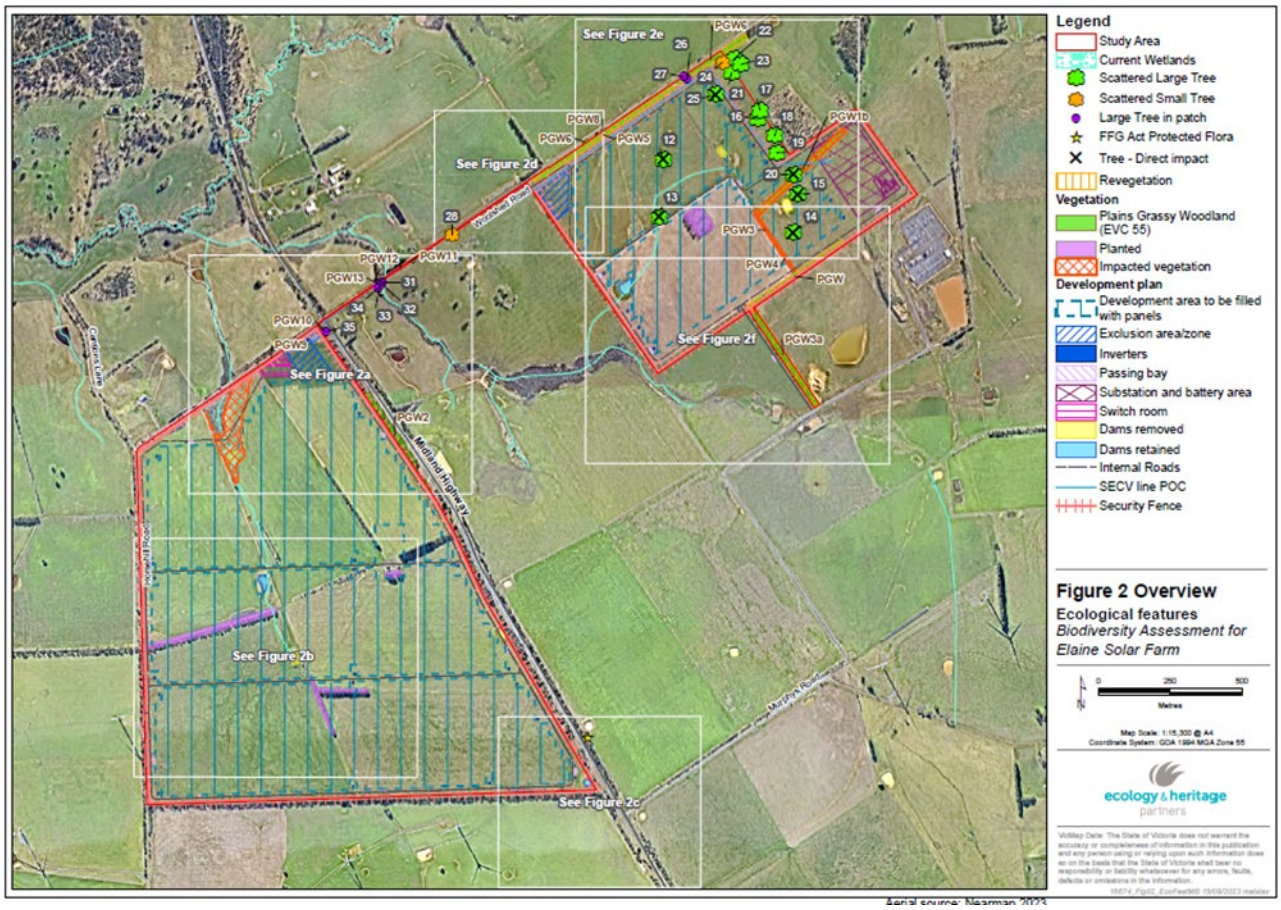

Source: Ecology & Heritage Partners

Within the current footprint, measures to avoid or minimise impacts to ecological value have been achieved by relocating internal access roads and shifting the site access points to reduce impacts to native vegetation. Avoiding impacts to the vegetation located along the roadsides was also recommended and has been achieved, with no impacts proposed within the higher quality vegetation located along the Midland Highway.

Further avoidance of native vegetation was not achievable based on the proposed use of the study area as a solar farm. Measures to minimise the amenity and environmental impacts during the construction, operation and decommissioning of the solar energy facility will be addressed in the preparation of management plans (EMP) and relevant subplans in accordance with the solar energy facilities design and development guidelines.

Mitigation Measures

Recommended measures to mitigate impacts upon terrestrial and aquatic values present within the study area have been recommended by Ecology Heritage Partners in their Biodiversity Assessment, which include the following:

- Minimise impacts to native vegetation and habitats through construction and micro-siting techniques, including fencing retained areas of native vegetation during construction;
- Implementation of Tree Protection Zones (TPZs) to prevent indirect losses of native vegetation during construction activities (DSE 2011);
- Removal of any habitat trees or shrubs (particularly hollow-bearing trees or trees/shrubs with nests) should be undertaken between February and September to avoid the breeding season for most fauna species. If any habitat trees or shrubs are proposed to be removed, this should be undertaken under the supervision of an appropriately qualified zoologist to salvage and translocate any displaced fauna;
- Retain the timber from removed trees within the study area as habitat (such as placing in a revegetation area in consultation with the landholder);

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- Supplement the loss of hollows from the removed large trees by placing nesting boxes in the retained scattered trees in the north east;
- Where possible, construction stockpiles, machinery, roads, and other infrastructure should be placed away from areas supporting native vegetation, Large Trees and/or wetlands;
- Ensure that best practice sedimentation and pollution control measures are undertaken at all times, in accordance with Environment Protection Authority (EPA) guidelines (EPA 2020a; EPA 2020b; Victorian Stormwater Committee 1999) to prevent offsite impacts to waterways and wetlands; and,
- As indigenous flora provides valuable habitat for indigenous fauna, it is recommended that any landscape plantings that are undertaken as part of the proposed works are conducted using indigenous species sourced from a local provenance, rather than exotic deciduous trees and shrubs.

Offsets

The offset requirements for native vegetation removal are calculated by DELWP and presented in a Native Vegetation Removal (NVR) Report within **Appendix M**.

The offset requirement for native vegetation removal is .650 General Habitat Units and 6 Large Trees as shown in the table below.

Table 4 Offset Targets

General Offsets Required	0.650 General Habitat Units
Large Trees	6
Vicinity (catchment/council)	Corangamite CMA / Moorabool Shire Council
Minimum Strategic Biodiversity Value*	0.239

*The minimum Strategic Biodiversity Value is 80% of the weighted average score across habitat zones where a General offset is required.

The applicant intends to satisfy offset requirements through the purchase native vegetation credits through the offset register. There are eight offset sites within the Corangamite CMA or Moorabool Shire Council municipality that can be used to satisfy the General Habitat Unit and Large tree offset requirements.

A summary of proposed vegetation losses and associated offset requirements is presented in the Biodiversity Assessment prepared by Ecology and Heritage Partners provided at **Appendix M**.

11.4. CLAUSE 65 – DECISION GUIDELINES

Before deciding on an application or approval of a plan, the Responsible Authority must consider, as appropriate the overarching decision guidelines outlined in Clause 65.

We confirm that the proposal suitably responds to these decision guidelines for the following reasons:

- The Minister for Planning will assess this application with regard to the matters listed in Section 60 of the Act.
- Impacts of the proposal on the natural environment and natural systems have been investigated and it is concluded that no significant impacts will occur, or measures have been taken to offset impacts.
- The proposal aligns with the Planning Policy Framework and the Moorabool Planning Scheme, detailed at Section 8 and 9 of this report.
- There are no adverse conflicts between the proposal and the purposes of the zone or any overlay or other provision.
- There are no adverse conflicts between the proposal and any matter required to be considered of the zone or any overlay or other provision.
- The proposed installation is a suitable use of the land.
- Amenity has been assessed and considered, including in terms of noise, visual impacts and cumulative impacts. Amenity regarding traffic and access conditions has also been considered.

- The topography of the land means it is not subject to inundation. A hydrology report has been commissioned to model inundation and runoff.
- The Preliminary Bushfire Risk Assessment indicates the solar farm is expected to comply the relevant requirements of the Guidelines (CFA 2023) and Clause 13.02-1S.
- Although native vegetation removal is required, the proposal has avoided as much as practical, minimised, and will offset what must be removed. The proposed installations will not have a significant impact on the character of native vegetation within the area.
- In order to achieve the objective of 'no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation', the applicant has undertaken or committed to protect the existing ecology of the site by avoiding, minimising and offsetting impacts in accordance with Victoria's guidelines for the removal, destruction or lopping of native vegetation. In addition to official offsets, significant landscape planting with native species, including in waterways, will provide a significant increase in native vegetation.
- No loading and unloading facilities are required. Appropriate measures will be implemented during the construction phase, of which will be detailed in a construction management plan.
- It is concluded that there would be no impacts upon the area from any of the above matters.

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12. OTHER MATTERS

12.1. ABORIGINAL CULTURAL SIGNIFICANCE

Ecology and Heritage Partners were commissioned by Urbis to provide Preliminary Advice regarding Cultural Heritage Obligations for Elaine Solar Farm. The following tasks were undertaken as part of this assessment:

- A desktop assessment, with all relevant cultural heritage databases and mapping programs examined.
- Assessment of the likelihood of Aboriginal and historical cultural heritage sites being present within the study area and of the requirement for further investigation.
- Identification of potential legislative implications (associated with cultural heritage values) for future development of the study area.

Regarding Aboriginal cultural heritage It has been determined that the proposed activity is a high impact activity under r.46(1)(a)(b)(xxx) being land used to generate electricity; however, the study area is not within an area of cultural heritage sensitivity. Therefore, a mandatory CHMP is not required for the proposed works.

Regarding historical heritage Places, although no previously recorded Places have been identified within the study area, the site inspection confirmed the presence of a pre-1936 timber hut once owned by the initial occupant of the farm, and later converted to an agricultural shed for crutching sheep. Under the Heritage Act 2017, as the site is more than 75 years old, a site card must be provided to Heritage Victoria within 30 days after the discovery for the potential to be listed on the Victorian Heritage Inventory.

There are no implications for the project in relation to Matters of NES under the EPBC Act 1999.

Should any suspected historic heritage be identified during works, work in the vicinity of the discovery will cease, and a Heritage Advisor will be engaged to investigate the discovery. Chance find protocol and procedure shall be detailed within a CEMP prior to the commencement of works.

12.2. CONSTRUCTION TRAFFIC AND ACCESS

Construction is expected start in Q1 2025 and take approximately 18 months to complete with a peak period of four (4) months.

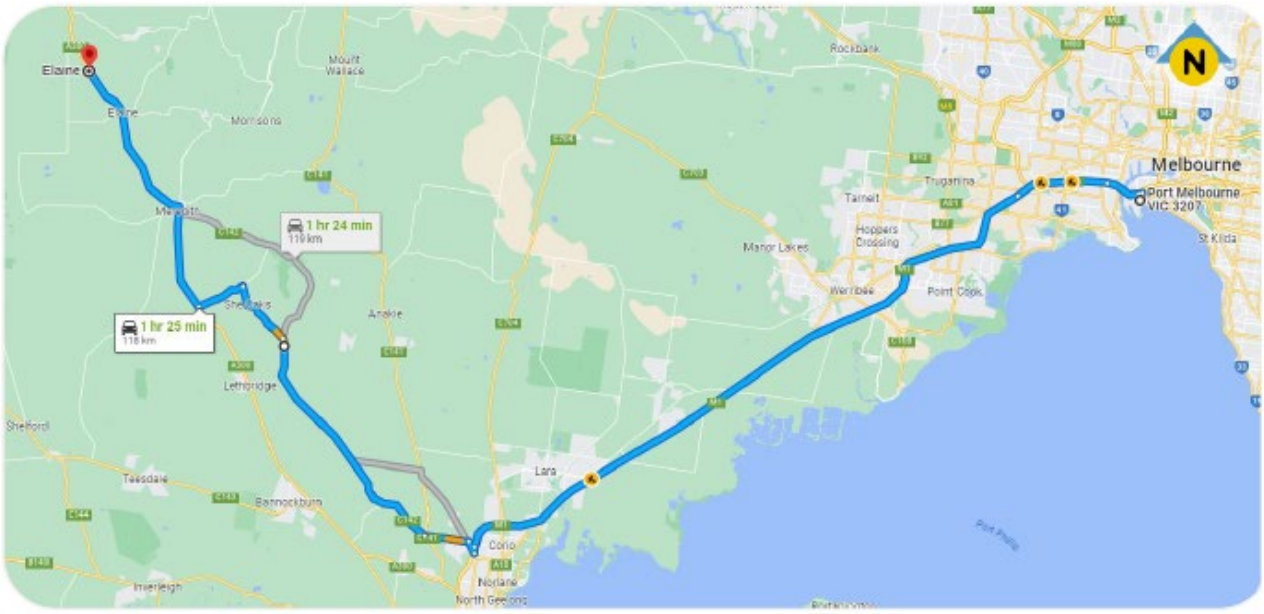
It is expected that the haulage of solar farm components will be from Port Melbourne. The Traffic and Transport Assessment prepared by Impact assessed possible routes from Melbourne to the subject site, with a focus on delivery during the construction phase. The following route has been identified for delivery, as outlined in Figure 27 below.

- Port Melbourne - Todd Road - West Gate Freeway - Princes Highway - Anakie Road - Lovely Banks Road - Steiglitz Road - Midland Highway
- Horsehill Road - Site 1 primary access located on the northern boundary
- Horsehill Road – Site 1 secondary access from the western boundary
- Murphys Road - Government Road (Unmade) - Site 2 primary access
- Woolshed Road - Site 2 secondary access

It is noted that Todd Road, the West Gate Freeway, Princes Highway, Anakie Road, Steiglitz Road and Midland Highway are pre-approved for the haulage of B-double vehicles and high mass limit vehicles. Local roads including Lovely Banks Road, Horsehill Road, Murphys Road and Woolshed Road are not approved for the haulage of B-double vehicles. Permits for haulage will be secured prior to construction.

Murphys Road, Woolshed Road and Government Road are currently unsealed roads. It is expected that the road pavement would comfortably cater for the proposed construction traffic in dry weather only. The Transport Impact Assessment recommends that these sections of the road be upgraded to an ‘all weather’ standard to decrease the likelihood and frequency of maintenance and repairs required, which may occur due to wet weather events. Liaison with Council will be undertaken to agree upon the construction standard required for a gravel all weather road and to determine an appropriate maintenance agreement during the construction period.

Figure 30 Nominated site access route



Source: Impact, 2023

Swept path assessments have been undertaken for 26m B-double vehicles for the proposed access routes as outlined above to ensure that the largest vehicles can reach both sites. These include:

- Midland Highway to Murphys Road
- Government Roads towards **Peters** southern site access (primary)
- Midland Highway to Woolshed Road

The detailed assessments are located within the Traffic and Transport Assessment at **Appendix O**.

Internal access tracks are proposed to connect roads to each access point. The primary access points will connect to Horsehill Road (**Windy)** and a Government Road (**Peters)**. Internal site access arrangements are also relevant for emergency vehicle access and are discussed in Sections 4.2.6 and 12.2 of this report.

The proposed development is projected to generate up to 167 daily vehicle movements during peak construction activities or up to 53 peak hour movements. The assessment notes that up to 50 light vehicle movements can be expected during the peak period. As such, buses with a capacity of 7-16 people are proposed to transport local workers to the site during the construction period. This will reduce movements of light vehicles from 50 per hour to 4 per hour. This volume of traffic is not expected to have any material impact on the operation of the roads along the nominated route and would not require an alterations to access roads.

Adequate sight lines are available for vehicles travelling to / from the proposed route. Traffic management devices including advanced warning signs and reduced speed limits are recommended to warn motorists of vehicles entering and exiting the site. A physical sight distance assessment can be undertaken prior to construction. Further, prior to construction, on-site assessment will be undertaken to confirm that there is no vegetation impeding on the integrity of the available safe intersection sight distances at all intersections along the proposed route (and whether minor trimming would be required).

Once construction is complete and the site begins operation, access will be required for employees who will park within the site.

A Traffic Management Plan will be prepared following issue of a permit. Please refer to the Traffic and Transport Assessment for further details (**Appendix O**).

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13. CONCLUSION

This Planning Report has demonstrated that the proposed renewable energy (solar farm) installation is an appropriate use and form of development for the site when assessed against the Moorabool Planning Scheme and all relevant State and Commonwealth legislation, policies and guidelines.

It is considered appropriate that a planning permit be granted for a solar installation at the subject site for the following reasons:

- The proposed development demonstrates consistency with state and local policies, provisions and zoning controls and overlays relevant to the proposal; contained within the Moorabool Planning Scheme. The proposed installation and associated ancillary buildings and infrastructure appropriately accounts for the site conditions and constraints and responds accordingly, demonstrating general compliance with the planning provisions contained within the planning scheme.
- The proposed development allows retention of productive agricultural land and not impact negatively upon the long-term viability of this land, as the construction is low impact and can be restored to its previous use upon decommissioning of the installation at the end of its lifecycle.
- The proposal will not negatively impact upon the amenity of surrounding properties and agriculture uses. The passive nature of the solar farm once operational ensures limited noise pollution to neighbouring properties and visual impacts have been mitigated through landscaping screening measures.
- The site supports State and Local policies seeking site-responsive renewable energy facilities to assist in meeting Victoria's renewable energy targets.
- The proposal will provide community benefit through its generation of energy to be placed back into the grid for the local supply as well as offshoot benefits through the creation of employment opportunities for maintenance and management of the environment on the site.

Considering the above reasons, Urbis, on behalf of the permit applicant requests that the Minister for Planning provides a planning permit for a solar installation at Crown Allotment 17 on Title Plan 609966X (**Windy**) and Crown Allotments 19B, 21E, 21F, 21G, 50 on Title Plan 488617T (**Peters**).

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ADVERTISED
PLAN

APPENDIX A CERTIFICATE OF TITLE

ADVERTISED
PLAN

APPENDIX B SITE PLAN (URBIS)

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PLAN

APPENDIX C LANDSCAPE STRATEGY (URBIS)

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PLAN

APPENDIX D SURVEY PLAN (VERIS)

ADVERTISED
PLAN

APPENDIX E ELEVATION PLAN (URBIS)

ADVERTISED
PLAN

APPENDIX F SOLAR ENERGY FACILITES DESIGN AND DEVELOPMENT GUIDELINES (DTP, OCTOBER 2022) ASSESSMENT (URBIS)

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APPENDIX G CLAUSE 35.07 FARMING ZONE ASSESSMENT (URBIS)

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PLAN

APPENDIX H CLAUSE 43.02 DESIGN AND DEVELOPMENT OVERLAY ASSESSMENT (URBIS)

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PLAN

APPENDIX I

CLAUSE 53.13 RENEWABLE ENERGY FACILITIES (OTHER THAN WIND ENERGY FACILITY) ASSESSMENT (URBIS)

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PLAN

APPENDIX J NOISE IMPACT ASSESSMENT (WSP) (TO FOLLOW SUBMISSION)

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APPENDIX K AGRICULTURAL ASSESSMENT (AG-CHALLENGE CONSULTING)

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APPENDIX L PRELIMINARY BUSHFIRE RISK ASSESSMENT (EHP)

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APPENDIX M BIODIVERSITY ASSESSMENT (EHP)

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APPENDIX N CULTURAL HERITAGE ADVICE (EHP)

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APPENDIX O TRAFFIC AND TRANSPORT ASSESSMENT (IMPACT)

ADVERTISED
PLAN

APPENDIX P ENGAGEMENT AND OUTCOMES REPORT (URBIS)

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APPENDIX Q LANDSCAPE AND VISUAL IMPACT ASSESSMENT (PETER HAACK CONSULTING)

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APPENDIX R GLARE AND GLINT ASSESSMENT (URBIS)

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APPENDIX S FLOODING IMPACT ASSESSMENT (ECOLOGICAL AUSTRALIA)

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APPENDIX T PLANNING PROVISIONS (URBIS)

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PLAN

APPENDIX U RELEVANT PLANNING SCHEME AMENDMENTS (URBIS)

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