

VIEWBANK SOLAR FARM

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Prepared for:

FRV Services Australia Pty Ltd

Prepared by:

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landscape architects

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Viewbank Solar Farm, Landscape and Visual Impact Assessment v2 Final 12 November 2020

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ITEM	DETAIL
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Green Bean Design

Green Bean Design (GBD) is a highly experienced landscape architectural consultancy specialising in landscape and visual impact assessment. As an independent consultancy GBD provide professional advice to a range of commercial and government clients involved in large infrastructure project and policy development.

GBD director and Principal Landscape Architect Andrew Homewood is a Registered Landscape Architect, member of the Australian Institute of Landscape Architects and the Environmental Institute of Australia and New Zealand. Andrew has over 30 years' continuous employment in landscape consultancy and has completed numerous landscape and visual impact assessments for a range of large-scale state significant developments including wind energy and solar power projects. GBD has been commissioned for over 40 renewable energy projects across New South Wales, Victoria, South Australia, Queensland and Tasmania.

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Contents

Executive summary		7
Section 1	Introduction and report structure	
	1.1 Introduction	9
	1.2 Report structure	9
Section 2	Methodology	
	2.1 Methodology	11
	2.2 LVIA objectives	11
	2.3 Tasks	11
	2.4 Desktop study	11
	2.5 Fieldwork and photography	11
	2.6 Assessment of visual impact	12
	2.7 Mitigation measures	12
Section 3	Project location and description	
	3.1 Project location	13
	3.2 Site description	13
	3.3 Project description	13
	3.4 Infrastructure layout	14
	3.5 Transmission	14
	3.6 Proposed tree removal	14
Section 4	Legislative and planning frameworks	
	4.1 Legislative and planning frameworks	18
Section 5	Panoramic photographs	
	5.1 Panoramic photographs	21
Section 6	Landscape character assessment and VAC	
	6.1 Landscape character area	29
	6.2 Landscape character assessment	29
	6.3 Visual Absorption Capability	33
Section 7	Significance of visual impact	
	7.1 Introduction	35
	7.2 Sensitivity of visual receivers	35
	7.3 Magnitude of visual effects	35
	7.4 Residential visual significance matrix	38
	7.5 Visual impact summary	47
	7.6 Views from local roads	47
	7.7 Views from agricultural areas	47

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Section 8	Cumulative assessment	
	8.1 Cumulative Impact Assessment	49
Section 9	Visualisation	
	9.1 Visualisation	50
Section 10	Pre-construction and construction	
	10.1 Potential visual impacts	53
Section 11	Mitigation measures	
	11.1 Mitigation measures	54
	11.2 Detail design	54
	11.3 Construction	54
	11.4 Operation	54
Section 12	Conclusion	
	12.1 Summary	55

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Figures

Figure 1	Location plan
Figure 2	Photo locations
Figure 3	Photo sheet 1
Figure 4	Photo sheet 2
Figure 5	Photo sheet 3
Figure 6	Photo sheet 4
Figure 7	Photo sheet 5
Figure 8	Photo sheet 6
Figure 9	Distance and visual effect
Figure 10	Dwelling locations (within 1km)
Figure 11	Visualisation (existing, post construction and mitigation)
Figure 12	Visualisation (post construction and mitigation details)

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Glossary

This Visual Impact Assessment has adopted and adapted the following definitions from the *Guidelines for Landscape and Visual Impact Assessment* (2013).

Table 1 – Glossary

Term	Definition
Cumulative effects	The summation of effects that result from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.
Magnitude	A combination of the scale, extent and duration of an effect.
Mitigation	Measures, including any processes, activity or design to avoid, reduce, remedy or compensate for adverse landscape and visual effects of a development project.
Visualisation	Computer simulation or other technique to illustrate the appearance of a development.
Sensitivity	Susceptibility of a receiver to a specific type of change.
Visibility	A relative determination at which the proposal can be clearly discerned and described.
Visual amenity	The value of a particular area or view in terms of what is seen.
Visual Absorption Capability	The degree to which a particular landscape character type or area can accommodate change without unacceptable adverse effects on its character.
Visual Impact Assessment	A process of applied professional and methodical techniques to assess and determine the extent and nature of change to the composition of existing views that may result from a development.
View location	A place or situation from which a proposed development may be visible.
Visual receiver	Individual and/or defined groups of people who have the potential to be affected by a proposal.
Visual significance	A measure of the importance or gravity of the visual effect culminating from the degree of magnitude and receiver sensitivity.

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Executive summary

Green Bean Design Pty Ltd (GBD) was commissioned by FRV Services Australia Pty Ltd (the Proponent) to undertake a Landscape and Visual Impact Assessment (LVIA) for the proposed Viewbank Solar Farm and associated development infrastructure. The Viewbank Solar Farm would include a range of infrastructure covering an area of approximately 217 hectares (ha).

This LVIA has determined that the landscape surrounding the solar farm site, as well as landscape in the broader viewshed, has a low visual sensitivity to change and a relatively high visual absorption capability.

The landscape has been significantly modified post European settlement and incorporates rural residential and agricultural features common to the regional landscape. This LVIA has determined that existing landscape characteristics are generally robust. The degree to which the landscape may accommodate the solar farm will not significantly alter existing landscape character.

This LVIA has determined that the visual impact of the solar farm is likely to be low for dwellings and key public view locations and that the Viewbank Solar Farm:

- will have a no visual impact on the principal rural townships within the surrounding landscape
- will result in no significant impact on views from local roads and highways
- will result in no significant cumulative visual impacts, and
- will result in no significant visual impact from key public viewpoints.

This LVIA identified a total of 15 dwellings located within an approximate 1 kilometre (km) viewshed surrounding the Viewbank Solar Farm site. This LVIA determined that:

- 2 dwellings would experience a moderate high visual impact
- 3 dwellings would experience a moderate visual impact
- 6 dwellings would experience a low visual impact and
- 4 dwellings would experience a negligible visual impact.

This LVIA also determined that the Viewbank Solar Farm would have a low visual impact for motorists with views being largely indirect and of a short duration. Views from surrounding the Midland Highway and some sections of local roads would also be partially filtered by tree planting alongside road corridors.

The cumulative impact assessment determined that the overall low level of visibility will limit potential for cumulative visual impacts and specifically those that could result from views toward approved solar farm developments to the west and south west of the Viewbank Solar Farm site.

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Proposed electrical infrastructure works are unlikely to be of such magnitude to result in any significant change to the existing visual environment associated with the solar farm development.

The Planning Assessment Report determined that the opportunities for glare would be limited due to the properties and characteristics of the solar panels, which are designed to absorb light rather than reflect it, as well as the overall lack of direct visibility and line of sight from surrounding sensitive receiver locations including residential dwellings.

Whilst this LVIA has determined an overall low-level visual impact, mitigation measures may be considered appropriate to minimise any residual or localised visual impacts. Additional mitigation measures would largely address the selection of appropriate materials, finishes and colours for proposed infrastructure and some landscape planting treatments to address any specific and/or localised views from private properties.

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Introduction and report structure

Section 1

1.1 Introduction

GBD has prepared this LVIA on behalf of the Proponent to inform the assessment of the Viewbank Solar Farm site with regard to potential landscape and visual impacts during construction and operational stages. The structure and content of this LVIA addresses the Department of Environment, Land, Water and Planning (DELWP) Solar Energy Facilities Design and Development Guidelines August 2019.

1.2 Report structure

This LVIA report been structured into 13 parts as follows:

Table 2 – Report structure

Report section	Description
1 – Introduction and report structure	This section provides an introductory section that describes the intent and purpose of the LVIA and description of the report structure
2 – Methodology	This section sets out the methodology employed in the LVIA preparation
3 – Project location and description	This section describes the locality and key visible components of the solar farm
4 – Legislative and planning frameworks	This section sets out the legislative and planning issues relevant to the solar farm landscape and visual assessment.
5 – Panorama photographs	This section illustrates the LVIA with panorama photographs taken during the site inspection. The panorama photographs are provided to illustrate the general appearance of typical landscape characteristics that occur within and surrounding the project.
6 – Landscape Character Assessment and Visual Absorption Capability (VAC)	This section describes the physical characteristics of the landscape surrounding the solar farm site and determines the overall sensitivity of the landscape to the development.
7 – Significance of visual impact	This section describes and determines the potential

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Table 2 – Report structure

Report section	Description
	visual effect of the solar farm on key receiver locations within the project viewshed.
8 – Cumulative assessment	This section describes the potential impact of alternate existing and/or known infrastructure developments within proximity to the solar farm site.
9 – Visualisation	This section presents preliminary visualisations to illustrate potential views toward the proposed solar farm.
10 – Pre-construction and construction	This section identifies potential visual impacts which may occur during pre-construction and construction stages of the project.
11 – Mitigation measures	This section considers the application of mitigation measures to minimise potential visual impact
12– Conclusion	Conclusions are drawn on the overall impact of the proposed solar farm within the surrounding viewshed.

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Methodology

Section 2

2.1 Methodology

The methodology employed for this LVIA has been based on existing guidelines identified in Section 4 of this LVIA. The methodology is also based on the assessment of multiple renewable energy projects undertaken by GBD within Victoria, New South Wales, South Australia, Queensland and Tasmania. The key objectives and tasks incorporated into the LVIA methodology are identified below.

2.2 LVIA objectives

The primary objective of this LVIA is to determine the potential visual significance of the proposed solar farm on people living and working in or travelling through the landscape within and surrounding the proposed solar farm site. This LVIA has also been undertaken to:

- assess the existing visual character within the project site as well as the surrounding landscape
- determine the extent and nature of the potential visual significance of the proposed solar farm on surrounding areas and
- identify measures to mitigate and minimise any potential visual impacts.

2.3 Tasks

This LVIA included the following tasks and activities:

- desktop study addressing visual character and identification of view locations within the surrounding area
- fieldwork and photography
- assessment and determination of visual significance and
- determination of potential mitigation measures.

2.4 Desktop study

A desktop study was carried out to identify an indicative viewshed for the proposed solar farm. This was carried out by reference to topographic maps and aerial photographs of the project site and surrounding landscape.

Topographic maps and aerial photographs were also used to identify the locations and categories of potential receiver locations that could be verified during the fieldwork component of the assessment. The desktop study also outlined the visual character of the surrounding landscape including features such as landform, elevation, landcover and the distribution of residential dwellings.

2.5 Fieldwork and photography

The fieldwork involved:

- a site inspection to determine and confirm the potential extent of visibility of the proposed solar farm and ancillary structures and

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- determination and confirmation of the various view location categories and locations from which the proposed solar farm structures could potentially be visible.

2.6 Assessment of visual significance

The visual significance of the proposed solar farm on surrounding residential view locations will result primarily from a combination of the potential visibility of the solar farm infrastructure and the characteristics of the landscape between, and surrounding, the view locations and the solar farm site. The potential degree of visibility and resultant visual significance will be partly determined by a combination of factors including:

- distance between receiver location and various proposed elements within the proposed solar farm
- duration of view from receiver locations toward various constructed elements within the proposed solar farm
- predicted magnitude of the solar on existing visual amenity and
- visual sensitivity of receiver locations from which views toward the proposed solar farm exist.

The determination of a visual significance is also subject to several other factors which are considered in more detail in this LVIA.

2.7 Mitigation measures

Mitigation measures have been determined to assist in the reduction and, where possible, remediation of any significant adverse effects on surrounding receiver locations that may arise from the proposed solar farm.

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Project location and description

Section 3

3.1 Project location

The project site is approximately 5km east of Stanhope, 30km west of Shepparton and approximately 200km to the north of Melbourne. The project site locality is illustrated in **Figure 1**. The project site is approximately 217 ha and is farmland that is used for cropping and grazing. While there is irrigation infrastructure located within the project site, it is not currently irrigated.

The broader landscape is generally used for agricultural purposes with associated dwellings and infrastructure, with the notable exceptions being:

- Cooma Recreation Reserve and Cooma Evangelical Memorial Uniting Church 8km north-east
- Stanhope township approximately 8km west
- Girgarre township approximately 12km north-west and
- Merrigum township approximately 17km north-east.

The Powercor Shepparton 66kV Sub-Transmission Line runs along the northern edge of the Midland Highway corridor.

3.2 Site description

The topography of the land is generally flat along the southern portion of the site (to around 112 to 114m AHD). The land rises gently to the north of the project site (to around 123m AHD). The property then slopes down towards the irrigation areas, which also includes a natural drainage channel and swamp that are located to the south west corner. There is an existing dwelling and associated farm buildings on the site of 90 McCague Road, Girgarre East to the north of the subject site. It is proposed to demolish and remove the dwelling and associated farm buildings.

3.3 Project description

The key infrastructure components of the project would include:

- Solar PV panels at around 4 metres (m) high (single axis tracking – orientated north-south)
- Power Conversion Blocks
- Dedicated solar farm substation
- 25 MW battery storage facility
- Site office and car parking
- Safety fencing, fencing of the entire facility with 2.4m high chain mesh fence
- Access track (up to 5m wide) to and from site and within solar arrays and to PCBs; and
- Temporary construction compound, offices and laydown area

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3.4 Infrastructure layout

The proposed solar farm layout comprises groups of solar panels on relatively level to gently sloping ground. These are all located on the Viewbank Solar Project site. Power conversion Blocks comprising inverters, step-up transformers and switchgear would be located centrally to groups of panels. Most components within the project site will have a low height generally up to 4m height. Materials laydown areas would be required during construction and would be located within the solar farm site. These would be removed when construction is complete.

3.5 Transmission

The solar farm project would be connected to Powercor's existing 66kV sub-transmission line extending along the project site southern boundary and adjoining the Midland Highway corridor. The proposed substation would be in the south east portion of the site and accessed from Poole Road. The substation location will minimise the extent of visible overhead powerline connection between the substation and the existing Powercor 66kV line.

3.6 Proposed tree removal

The solar farm project would require the removal of a small number of individual paddock trees within the site boundary. The removal of a small number of individual trees within the site boundary would not result in any significant change to the existing site amenity where viewed from surrounding public and private receiver locations.

Other stands and individual mature specimen trees would be retained throughout the site and assist in breaking up the overall visual scale and extent of solar panel coverage from both road and dwelling locations.

The following photographs (**Plates 1 to 4**) illustrate views toward a range of typical infrastructure included in an operational solar farm development.

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Plate 1 – Typical solar panel detail and arrangement



Plate 2 – Typical inverters

3.4 Battery storage

The battery storage infrastructure will be located adjacent to the existing Robertstown substation and/or the planned nearby interconnector substation.

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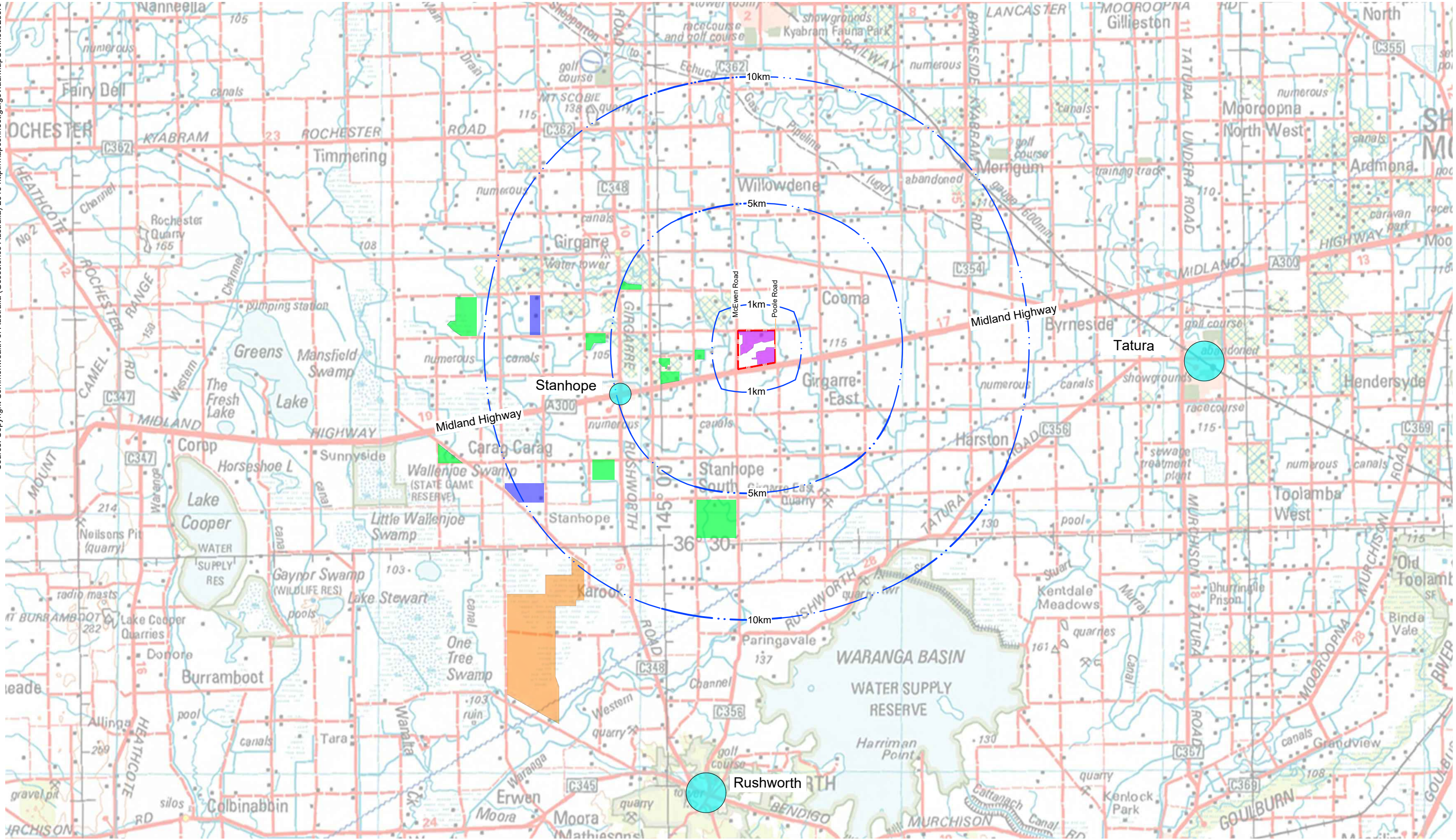
Plate 3 – Typical battery storage facility









Plate 4 – Typical battery storage facility

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Legend		Solar farm operating	
Viewbank solar panel array (indicative layout)		Solar farm approved	
Project site boundary (indicative layout)		Solar farm under consideration	
Proposed site boundary offset			

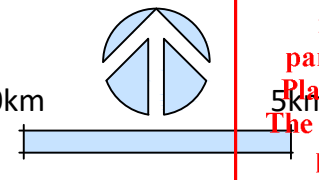
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Figure 1
 Viewbank Solar Farm location and other solar farms (to 10km)

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0km 5km 10km



Viewbank Solar Farm LVIA

Legislative and planning frameworks

Section 4

4.1 Legislative framework

4.1 Introduction

The LVIA has been undertaken with regard to various Federal, State and Local planning policies, as well as controls and policy guidelines applicable to the project. These include:

4.1.1 Planning Policies

- Victorian State Planning Policy Framework – relevant Clause 19.01 Energy
- Local Planning Policy Framework – relevant Clauses 21-22

4.1.2 Planning Controls

- Particular Provisions – relevant Clauses 53.13
- Zoning and Overlays

4.1.3 Relevant guidelines

- Solar Energy Facilities Design and Development Guideline (Department of Environment, Land, Water and Planning, August 2019).

4.2 State Planning Policy Framework

The Victorian Government State Planning Policy Framework Clause 19.01, Renewable Energy, sets out objectives, strategies and policy guidelines for the provision of renewable energy including the development of renewable energy facilities.

4.3 Local Planning Policy Framework – Greater Shepparton Planning Scheme

The Greater Shepparton Planning Scheme sets out Councils objectives with regard to land use, development and protection of land via the State Governments Planning Policy Framework and the Local Planning Policy Framework.

4.4 Zoning and Overlays

The proposed solar farm is wholly located within the Rural Farming Zone (FZ) as defined in Clause 35.07 of the Planning Scheme. Solar farm facilities are a permissible use subject to the renewable energy project meeting the requirements of Clause 53.13 Renewable Energy Facility (Other than Wind Energy Facility)

There are no Significant Landscape Overlays (SLO's) that occur within the proposed project area.

4.5 Application requirements (relevant to the LVIA)

The Greater Shepparton Planning Scheme outlines application requirements for renewable energy facilities including information to accompany applications that relates to potential landscape and visual impacts. In general, the application information includes:

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A site and context analysis, including:

- *A site plan, photographs or other techniques to accurately describe the site and the surrounding area.*
- *A location plan showing the full site area, local electricity grid, access roads to the site and direction and distance to nearby accommodation, hospital or education centre.*

A design response, including:

- *Detailed plans of the proposed development including, the layout and height of the facility and associated building and works, materials, reflectivity, colour, lighting, landscaping, the electricity distribution starting point (where the electricity will enter the distribution system), access roads and parking areas.*
- *Accurate visual simulations illustrating the development in the context of the surrounding area and from key public view points.*

Written report and assessment, including:

- *An explanation of how the proposed design derives from and responds to the site analysis.*
- *the potential amenity impacts such as noise, glint, light spill, emissions to air, land or water, vibration, smell and electromagnetic interference.*

4.7 Solar Energy Facilities Design and Development Guideline (DELWP, August 2019).

A solar energy facility should not lead to:

- *the loss of cultural heritage or landscape values of significance*

The visual impact of a solar energy facility relates to:

- *the sensitivity of the landscape and its ability to absorb change*
- *the size, height, scale, spacing, colour and surface reflectivity of the facility's components*
- *the number of solar energy facilities located close to each other another within the same landscape*
- *the excessive removal, or planting of inappropriate species of vegetation*
- *the location and scale of other ancillary uses, buildings and works including transmission lines,*
- *battery storage units and associated access roads*
- *the proximity to environmentally sensitive areas such as public land, water courses and low-lying areas.*

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Landscape Plan (Planning Permit Conditions)

A landscape plan will be developed to identify all proposed new vegetation to be planted on-site or existing vegetation to be retained. Details in the plan will confirm planting locations, species, and a schedule. The landscape plan can also include earthworks or other elements aimed at preventing views to the facility.

4.7 Planning considerations

The key considerations drawn from the existing planning policy framework which are directly relevant to this LVIA are as follows:

- The Greater Shepparton Planning Scheme applies Overlays across landscape features within the municipality. The Planning Scheme identifies no existing SLO immediately within or adjoining the project site.
- The project site is located within land designated as Farming Zone within the Greater Shepparton Planning Scheme.
- There are no Environmental Significance Overlays within the project viewshed.
- There are a small number of localities or settlements beyond the solar farm viewshed. These are located beyond 2 km from the project site.
- The Solar Farm Guidelines (August 2019) present a clear set of considerations by which to assess the potential visual impacts of solar farm developments.

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Panoramic photographs

Section 5

5.1 Panoramic photographs

A series of individual and panorama digital photographs were taken during the course of the fieldwork to illustrate existing views in the vicinity of a number of view locations inspected and assessed as part of this LVIA.

Photographs were taken from the within the proposed solar farm site looking beyond the site, and from areas beyond the proposed solar site toward it. This provided a range of views which assisted in the determination of the viewshed and the identification of areas from which the proposed solar farm may be visible.

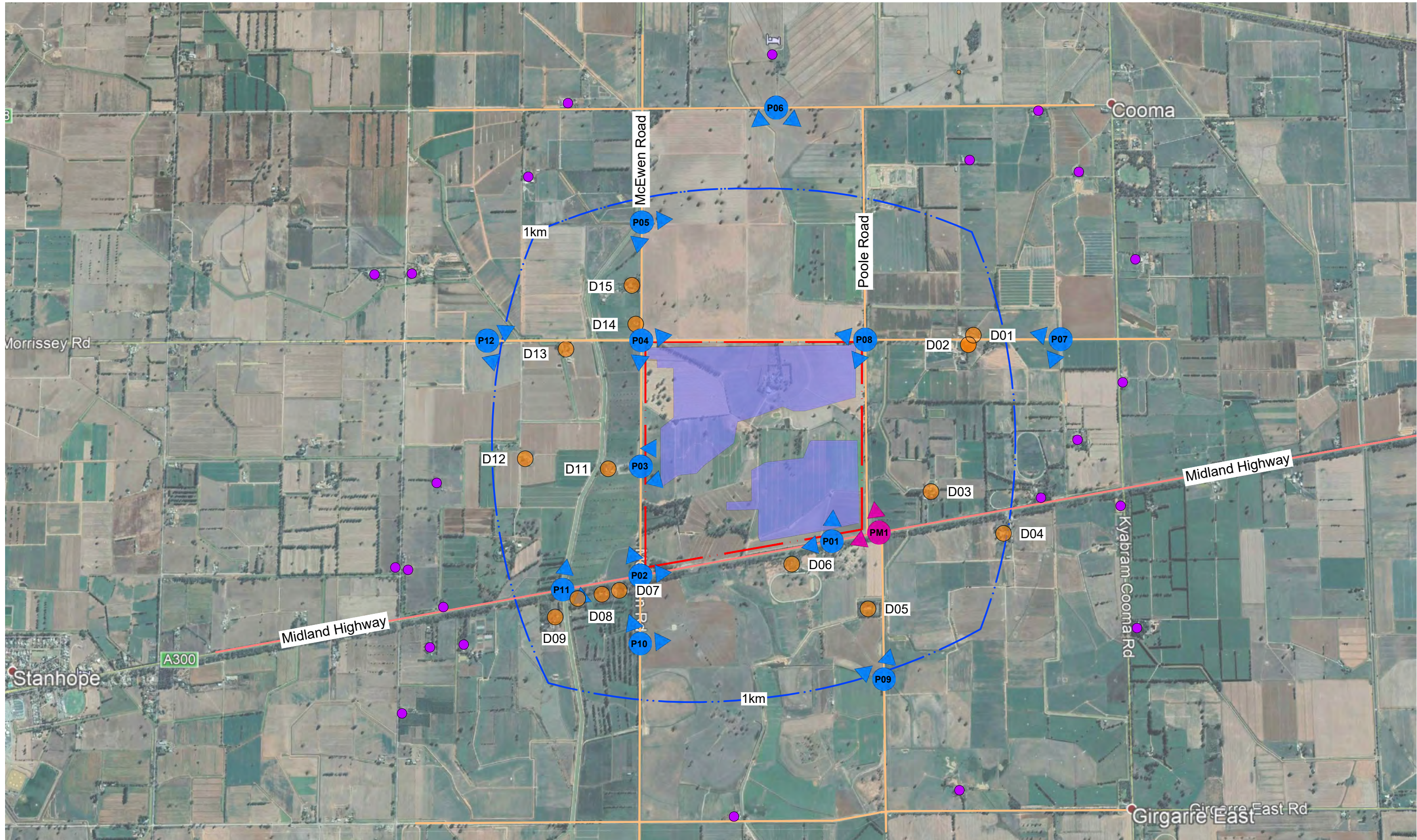
The panorama photographs also illustrate the extent to which existing tree planting and surrounding landform screen views toward the proposed solar farm site.

The panorama photographs were digitally stitched together to form a segmented panorama image to provide a visual illustration of the existing view from each photo location.

The panoramic photographs presented in this LVIA have been annotated to identify local features within and beyond the proposed solar farm site.

The panoramic photograph locations are illustrated in **Figure 2**, and the panoramic photographs illustrated in **Figures 3 to 8**.

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Legend

- Solar panel array (indicative layout)
- Project site boundary (indicative layout)
- Midland Highway corridor
- Local road corridor
- Dwelling locality (indicative) within 1km of site boundary D5
- Dwelling locality (indicative) beyond 1km from site boundary
- 1km site boundary offset 1km
- Panorama photo location (indicative) P08
- Photomontage (visualisation) location PM1

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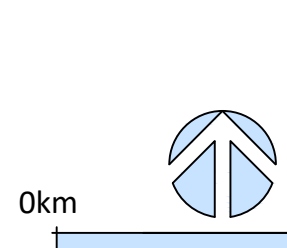


Figure 2
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Viewbank Solar Farm LVIA

Midland Highway

66 kV subtransmission line

Indicative project site, substation and battery storage facilities

Poole Road

Trees to be retained screen views across project site

Trees to be retained screen views across project site



Photo location P01 Existing view west to north west from the Midland Highway (Poole Road intersection) toward the project site

Midland Highway

66 kV subtransmission line

Trees to be retained filter views across project site



Photo location P02 Existing view north north east to east from the Midland Highway toward the project site.

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Viewbank Solar Farm LVIA

Figure 3
Photo sheet 1
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Photo location P03 Existing view north east to south east from McEwen Road toward the project site



Photo location P04 Existing view east to south from McEwen Road toward the project site.

McEwen Road



Gently sloping land toward McCague Road provides potential screening of solar panels

Photo location P05 existing view south east to south toward the project site from McEwen Road

McCague Road



Distant views toward solar panels partially screened by tree cover across the project site

Photo location P06 Existing view south east to south toward the project site from Craddock Road

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Viewbank Solar Farm LVIA

Figure 5
Photo sheet 3

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Views toward the project site will be largely screened by tree cover to the east of the project site

Photo location P07 Existing view west to south west toward the project site locality from McCague Road



Existing farm buildings and vegetation to be removed

McCague Road

Direct foreground views extend toward solar panels within the project site extending west toward and across gently rising landform.

Photo location P08 Existing view west to south west toward the project site from the McCague Road and Poole Road intersection

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Figure 6
Photo sheet 4
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Midland Highway (beyond tree line)

Poole Road

Views toward the solar farm and associated electrical infrastructure largely screened by tree planting surrounding dwellings and the Midland Highway road corridor



Photo location P09 Existing view north west to north toward the project site locality from Poole Road

McEwen Road

Midland Highway

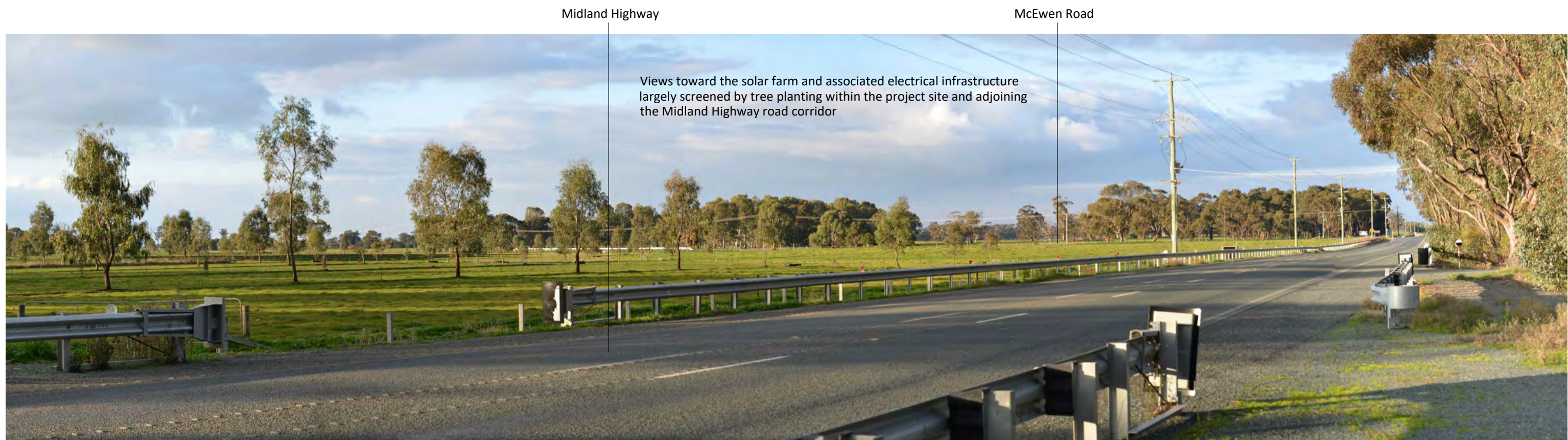
Views toward the solar farm and associated electrical infrastructure largely screened by tree planting alongside and beyond the Midland Highway road corridor



Photo location P10 Existing view north to north east toward the project site from the McEwen Road (south of Midland Highway)

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Figure 7
Photo sheet 5
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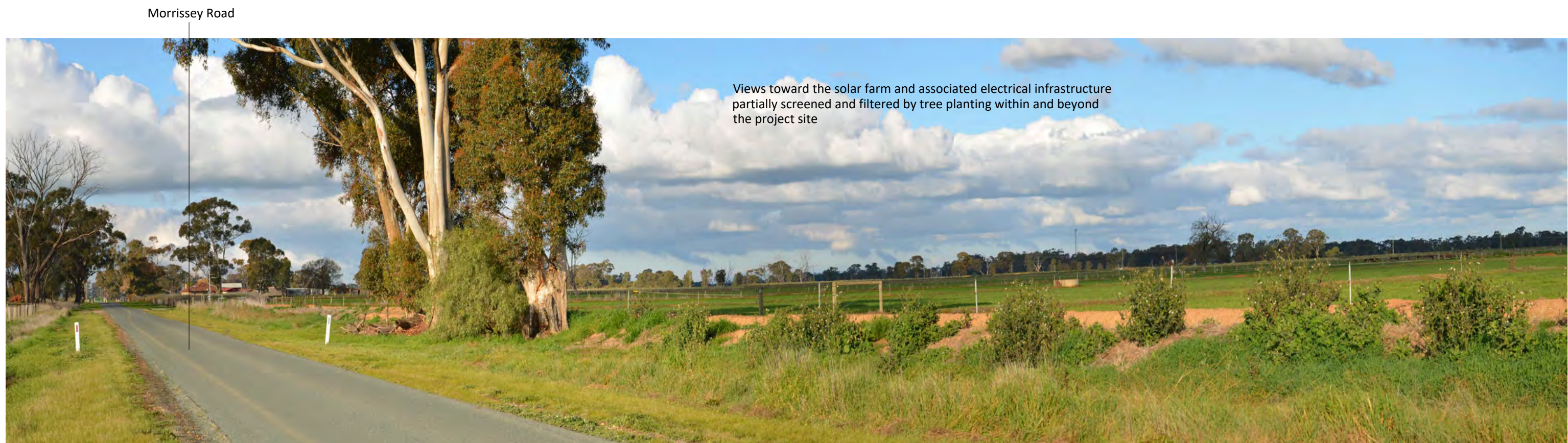


Midland Highway

McEwen Road

Views toward the solar farm and associated electrical infrastructure largely screened by tree planting within the project site and adjoining the Midland Highway road corridor

Photo location P11 Existing view north east to east toward the project site locality from the Midland Highway corridor (at water canal)



Morrissey Road

Views toward the solar farm and associated electrical infrastructure partially screened and filtered by tree planting within and beyond the project site

Photo location P12 Existing view east to south east toward the project site from the Morrissey Road corridor

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Viewbank Solar Farm LVIA

Figure 8
Photo sheet 6
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Landscape character assessment and visual absorption capability

Section 6

6.1 Landscape character area

As part of the LVIA process it is important to understand the nature and sensitivity of different components of landscape character, and to assess them in a clear and consistent process. For this LVIA, landscape character is defined as *'the distinct and recognisable pattern of elements that occur consistently in a particular type of landscape'* (The Countryside Agency and Scottish Natural Heritage 2002). The pattern of elements includes characteristics such as landform, vegetation, land use and settlement.

For the purposes of this LVIA, the landscape character surrounding the proposed solar farm site has been determined as a singular landscape unit which generally occurs within the viewshed of the proposed solar farm site. The landscape unit represents an area that is relatively consistent and recognisable in terms of its key landscape elements and physical attributes; which include a relatively limited combination of topography/landform, vegetation/landcover, land use and built structures (including settlements and local road corridors).

For this LVIA the predominant landscape unit within and surrounding the project site has been identified as level to gently sloping and modified agricultural land with scattered tree cover.

6.2 Landscape character assessment

An understanding of a particular landscape's key characteristics and principal visual features is important in defining a regional distinctiveness and sense of place and to determine its sensitivity to change. The criteria applied in the determination of landscape character assessment and the ability of a landscape to accommodate change is outlined in **Table 3**.

These criteria are based on established industry good practice employed in the assessment of developments and have been adopted for numerous LVIA assessments across Australia. The criteria are detailed in the Guidelines for Landscape and Visual Impact Assessment, Third Edition, Landscape Institute and Institute of Environmental Management & Assessment, 2013 – Chapter 5 Assessment of landscape effects.

Landscape sensitivity is a relative concept, and landscape values of the surrounding environment may be considered of a higher or lower sensitivity than other areas in the region.

Whilst landscape character assessment is largely based on a systematic description and analysis of landscape characteristics, this LVIA acknowledges that some individuals and other members of the local community may place higher values on the local landscape.

These values may transcend preferences (likes and dislikes) and include personal, cultural as well as other parameters.

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Table 3 – Criteria for the assessment of landscape character

Landscape Character Assessment Criteria			
Characteristic	Aspects indicating lower sensitivity to the solar farm development	↔	Aspects indicating higher sensitivity to the solar farm development
Landform and scale: patterns, complexity and consistency	<ul style="list-style-type: none"> • Large scale landform • Simple • Featureless • Absence of strong topographical variety 	↔	<ul style="list-style-type: none"> • Small scale landform • Distinctive and complex • Human scale indicators • Presence of strong topographical variety
Landcover: patterns, complexity and consistency	<ul style="list-style-type: none"> • Simple • Predictable • Smooth, regular and uniform 	↔	<ul style="list-style-type: none"> • Complex • Unpredictable • Rugged and irregular
Settlement and human influence	<ul style="list-style-type: none"> • Concentrated settlement pattern • Presence of contemporary structures (e.g. utility, infrastructure or industrial elements) 	↔	<ul style="list-style-type: none"> • Dispersed settlement pattern • Absence of modern development, presence of small scale, historic or vernacular settlement
Movement	<ul style="list-style-type: none"> • Prominent movement, busy 	↔	<ul style="list-style-type: none"> • No evident movement, still
Rarity	<ul style="list-style-type: none"> • Common or widely distributed example of landscape character area within a regional context 	↔	<ul style="list-style-type: none"> • Unique or limited example of landscape character area within a regional context
Intervisibility with adjacent landscapes	<ul style="list-style-type: none"> • Limited views into or out of landscape • Neighbouring landscapes of low sensitivity • Weak connections, self contained area and views • Simple large scale backdrops 	↔	<ul style="list-style-type: none"> • Prospects into and out from high ground or open landscape • Neighbouring landscapes of high sensitivity • Contributes to wider landscape • Complex or distinctive backdrops

The landscape sensitivity assessment criteria set out in **Table 4** have been evaluated for the landscape character area by applying a professionally determined judgement on a sliding scale between 1 and 5.

A scale of 1 indicates a landscape characteristic with a lower sensitivity to the solar farm development (and will be more likely to accommodate the solar farm development). A scale of 5 indicates a landscape characteristic with a high level of sensitivity to the solar farm development (and less likely to accommodate the solar farm development).

The scale of sensitivity for the landscape character area is outlined in **Table 4** and is set out against each characteristic identified in **Table 3**.

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The overall landscape sensitivity for the landscape character area is a summation of the scale for each characteristic identified in **Tables 4**.

The overall scale is expressed as a total out of 30 (i.e. 6 characteristics for the landscape character area with a potential top scale of 5). Each characteristic is assessed separately, and the criteria set out in Table 3 are not ranked in equal significance. The overall landscape sensitivity for the landscape character area has been determined as either:

High (Scale of 23 to 30) – key characteristics of the landscape character area will be impacted by the proposed project, and will result in major and visually dominant alterations to perceived characteristics of the landscape character area which may not be fully mitigated by existing landscape elements and features. The degree to which the landscape may accommodate the proposed project development will result in several perceived uncharacteristic and significant changes.

Medium (Scale 15 to 22) – distinguishable characteristics of the landscape character area may be altered by the proposed project, although the landscape character area may have the capability to absorb some change. The degree to which the landscape character area may accommodate the proposed project will potentially result in the introduction of prominent elements to the landscape character area but may be accommodated to some degree.

Low Rating (Scale of 7 to 14) – most of the landscape character area characteristics are generally robust and will be less affected by the proposed project. The degree to which the landscape may accommodate the solar farm will not significantly alter existing landscape character.

Negligible Rating (Up to 6) the characteristics of the landscape character area will not be impacted or visibly altered by the proposed project.

Table 4 – Landscape character area assessment

	Lower Sensitivity		↔	Higher Sensitivity	
	Low	Low to Med	Medium	Med to High	High
Rating	1	2	3	4	5
Landform and Scale			3		
	Landform within and surrounding the project site is generally level to gently sloping and extends between the Midland Highway and McCague Road on the south and north boundaries of the project site. The landscape exhibits an overall medium visual scale, defined by agricultural field patterns and scattered vegetated areas and tree lines within and adjoining the project site. Tree cover restricts and partially filters views toward and across the project site from key view locations including sections of the Midland Highway. Simple landscape features and minor topographical elements are located within and beyond the project site including irrigation channels and ponds.				

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Table 4 – Landscape character area assessment

	Lower Sensitivity		↔	Higher Sensitivity	
	Low	Low to Med	Medium	Med to High	High
Rating	1	2	3	4	5
	Landform and scale is relative to adjoining and broader areas of landscape surrounding the project site.				
Landcover		2			
	Landcover is both simple and predictable across the site and surrounding landscape areas. European settlement established an agricultural presence and defines much of the contemporary livestock and cropping areas across the project site and beyond. Cropping and pastoral fields create a regular and uniform appearance and display characteristics of repeated seasonal operations associated with agricultural production. Landcover is also defined by scattered and denser areas of tree cover following road corridors and field boundaries.				
Settlement and human influence			3		
	Settlement is generally dispersed beyond the project site and surrounding landscape and consists largely of farmsteads and individual dwellings. There are limited examples of small scale, historic or vernacular structures within the landscape. A 66kV sub-transmission line, with a regular arrangement of supporting timber pole structures extends in an approximate east to west alignment south of the project site alongside the Midland Highway corridor. Fencing is evident across the landscape together with a range of common agricultural structures and buildings.				
Movement			3		
	Movement beyond the proposed solar farm project site is generally restricted to local vehicular movements, including cars and trucks travelling along the Midland Highway and more occasional vehicles travelling along unsealed local access roads. Occasional agricultural vehicles are seen within surrounding fields.				
Rarity		2			
	The project site and adjoining landscape is considered to be a relatively common landscape type within a regional context which extends across the				

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Table 4 – Landscape character area assessment

	Lower Sensitivity		↔	Higher Sensitivity	
	Low	Low to Med	Medium	Med to High	High
Rating	1	2	3	4	5
	Victorian Riverina bioregion.				
Intervisibility		2			
	Views toward distant landscape features from within the project site are partially restricted by a gently rising landform within the northern portion of the project site, together with tree stands in the south west portion of the site and trees extending alongside the Midland Highway. Most views from the site, at mid and lower sections, are relatively confined by landform to the north, and tree cover within and beyond the project site. Visual connectivity to the landscape beyond the proposed solar farm site is largely influenced and disrupted by tree planting within 1 to 2km of the site boundary.				
Overall Sensitivity Rating	<p>Score 15 out of 30</p> <p>In consideration of the existing landscape characteristics, the landscape within and surrounding the project site is determined to have a medium landscape sensitivity and that landscape character area may be altered by the proposed project, although the landscape character area may have the capability to absorb some change. The degree to which the landscape character area may accommodate the proposed project will potentially result in the introduction of prominent elements to the landscape character area but may be accommodated to some degree.</p>				

6.3 Visual absorption capability

Visual Absorption Capability (VAC) is a classification system used to describe the relative ability of the landscape to accept modifications and alterations without the loss of character or deterioration of visual amenity. VAC relates to the physical characteristics of the landscape that are often inherent and quite static in the long term. In essence the VAC indicates the ability of a landscape setting to absorb development.

The VAC of a landscape is largely determined by inherent physical factors which include:

- the degree of visual penetration (view distance without obstruction) through surrounding landscape, landform and tree cover; and
- the complexity of the landscape defined through scale, form and line.

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Landscapes with a low visual penetration will have higher visual absorption capability values. Complex landscapes which include a mix of scale, form and line (together with some degree of vegetative screening) will also have high visual absorption capability values.

The VAC of the landscape surrounding the proposed solar farm generally exhibits a high VAC because of locally low and gently undulating landforms and areas of tree cover within and surrounding the proposed solar farm site. The extent of existing tree planting within and surrounding the project site which may provide some degree of screening and filtering of views toward the project is illustrated in **Figure 10**

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Visual effects

Section 7

7.1 Introduction

The overall determination of visual effects resulting from the construction and operation of the solar farm would result primarily from a combination of receiver sensitivity and the magnitude of visual effects.

A determination of visual effects from the combination of receiver sensitivity and the magnitude of visual effect is a well-established methodology and has been applied extensively on renewable energy LVIA in Victoria and across Australia. The standard methodology is set out in industry and best practice guidelines including the Guidelines for Landscape and Visual Impact Assessment, Third Edition, Landscape Institute and Institute of Environmental Management & Assessment, 2013 – Chapter 6 Assessment of visual effects as well as the NSW Wind Energy Visual Assessment Bulletin (December 2016).

7.2 Sensitivity of visual receivers

Judging the sensitivity of visual receivers needs to take account of the occupation or activity of people experiencing the view at particular locations and the extent to which their attention or interest is focussed on views within and surrounding the project site.

7.3 Magnitude of visual effects

Judging the magnitude of the visual effects needs to take account of:

- the scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development
- the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line height, colour and texture
- the nature of the view of the proposed development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses.

Tables 5 and 6 set out definitions and criteria for sensitivity and magnitude.

The proportion of view occupied by the solar panels at distances of 50m, 100m and 200m are illustrated in **Figure 9**. This figure demonstrates the reasonably rapid diminishment of solar panel magnitude with and increasing view distance. The combination of sensitivity and magnitude will provide the rating of visual effect for viewpoints. **Table 8** sets out the relative visual impact grading values which combines issues of sensitivity and magnitude for the solar farm project.

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Table 5 – Receiver location sensitivity

View Category	Sensitivity
Dwellings	<i>Highest Sensitivity</i>
Areas of high scenic value (National Parks or designated landscapes)	▽
Public recreational areas	▽
Rural employment/farming	▽
Motorists	▽
Business (commercial)	▽
Industrial areas	<i>Lower Sensitivity</i>

Table 6 – Magnitude assessment criteria

Criteria	Definition
Distance	
Very short	<500 m
Short	500 – 1 km
Moderate	1 km – 2 km
Long	2km+
Duration of effect	
High	> 2 hours
Moderate	30 - 120 minutes
Low	10 – 30 minutes
Very low	< 10 minutes
Degree of visibility	
High	Limited or no screening toward the solar farm
Moderate	Screening filters some views toward the solar farm
Low	Screening partially screens views toward the solar farm
Very low	Screening effectively blocks views toward the solar farm

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Table 7 - View Location Assessment Criteria

Criteria	Definition
Magnitude:	
High (H)	Total loss or major change to pre-development view or introduction of elements which are uncharacteristic to the existing landscape features.
Medium (M)	Partial loss or alteration to pre-development view or introduction of elements that may be prominent but not necessarily uncharacteristic with the existing landscape features.
Low (L)	Minor loss or alteration to pre-development view or introduction of elements that may not be necessarily uncharacteristic with the existing landscape features.
Very low (VL)	Very minor loss or alteration to pre-development view or introduction of elements which are not uncharacteristic with the existing landscape features (resulting in a no change situation).

The combination of sensitivity and magnitude will provide the rating of visual impact for receiver locations.

Table 8 sets out the relative visual impact grading values which combines issues of sensitivity and magnitude for the project.

Table 8 Visual impact grading matrix

		Scale or magnitude of visual effects			
		High	Moderate	Low	Very low
Sensitivity	High	High impact	Moderate high	Moderate	Low
	Moderate	Moderate high	Moderate	Moderate low	Low
	Low	Moderate	Moderate low	Low	Very low
	Very low	Low	Low	Very low	Negligible

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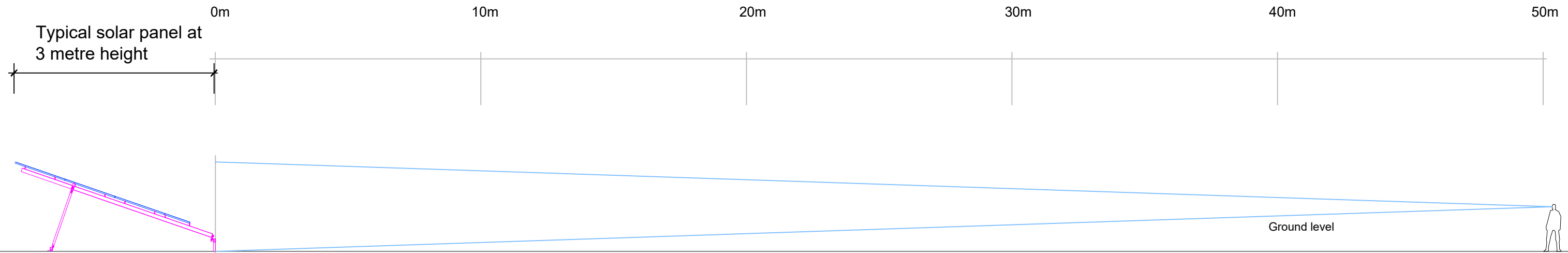
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7.4 Visual impact matrix

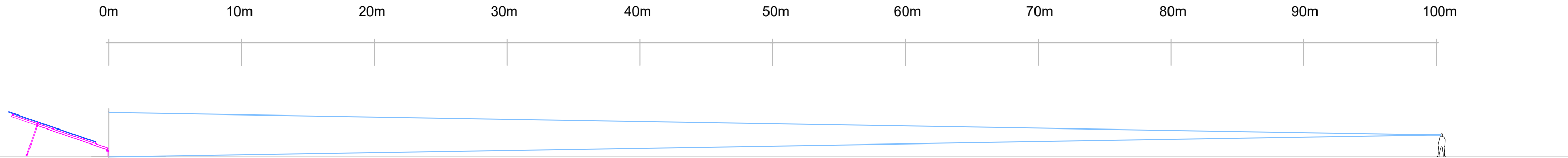
Table 9 sets out the assessment process and determination of visual impact from dwellings up to 1km from the proposed project site. The dwelling locations included in this LVIA are illustrated in **Figure 10**.

Whilst the assessment includes a determination of impacts from dwellings, it also takes into account any curtilage surrounding each dwelling which may be considered an extension to the dwelling for domestic or social activities. The criteria set out in **Tables 5** and **6** are noted against each dwelling, with a visual impact determined with regard to the grading matrix in **Table 8**. The assessment and determination of visual impacts are also informed by the site photographic records and figures prepared for this LVIA.

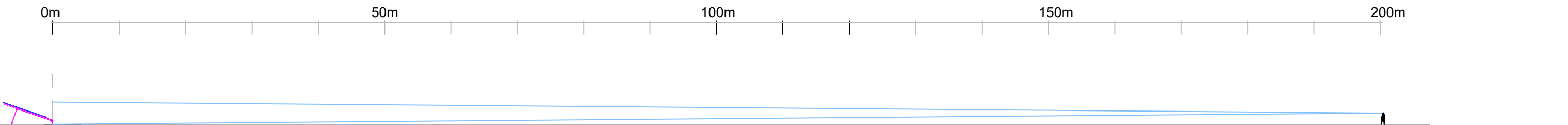
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The solar panels viewed from a 50 metre distance would occupy less than 4% of the vertical human view cone



The solar panels viewed from a 100 metre distance would occupy less than 2% of the vertical human view cone

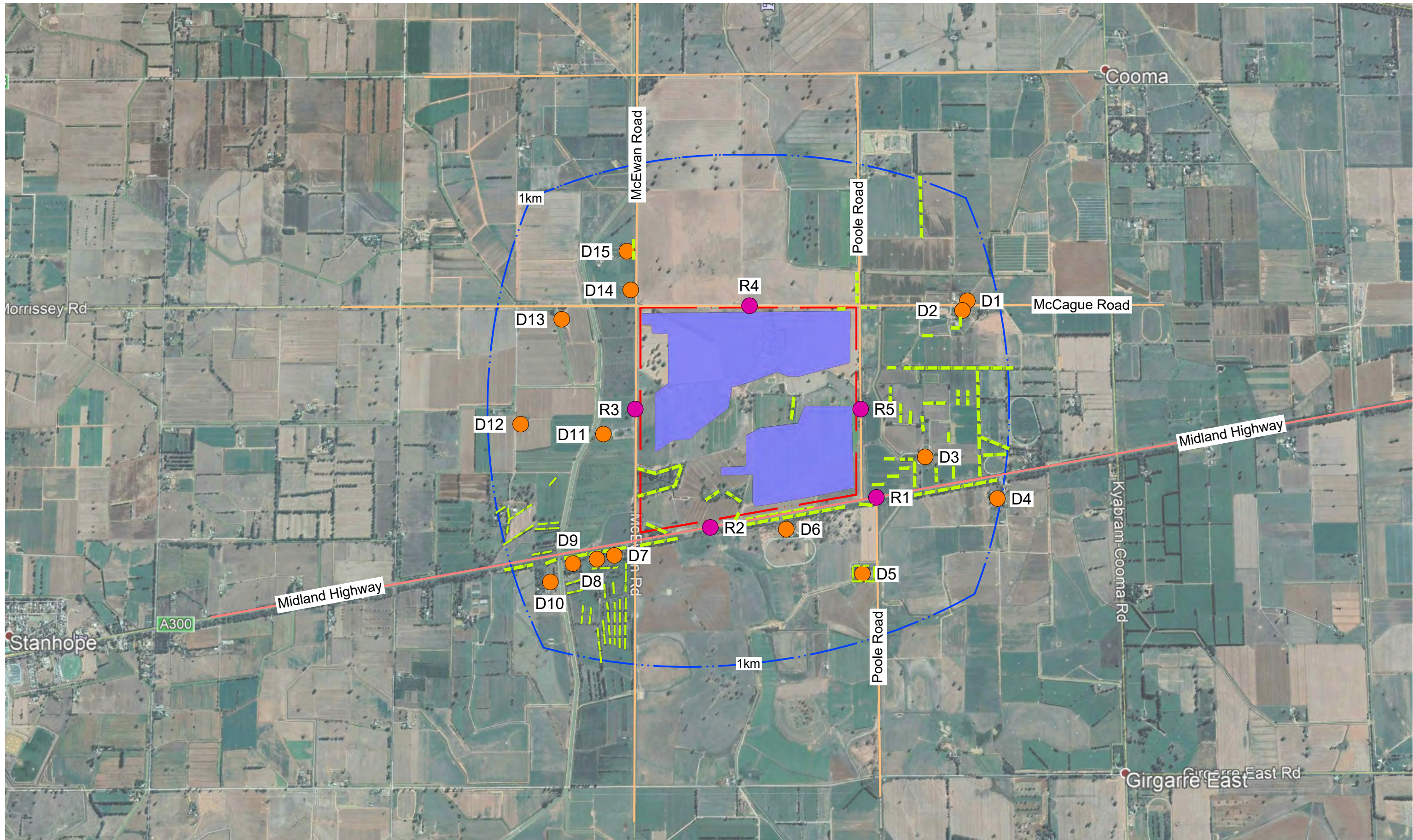


The solar panels viewed from a 200 metre distance would occupy less than 1% of the vertical human view cone

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Figure 9
Distance and visual effect
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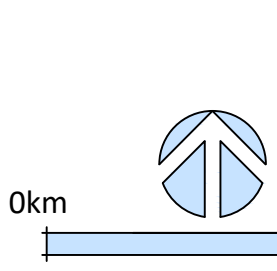
GREEN LEAF DESIGN



Legend

- Solar panel array (indicative layout)
- Project site boundary (indicative layout)
- Midland Highway corridor
- Local road corridor
- Dwelling locality (indicative) D5
- Highway/road locality R1
- 1km site boundary offset
- Existing tree planting with screening potential

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Viewbank Solar Farm LVIA

Table 9 – Residential visual significance matrix (Refer **Figure 9** for residential receiver locations)

Receiver location	SENSITIVITY	MAGNITUDE				Description	Visual impact
	Category of receiver location and sensitivity grading	Approximate distance to solar farm site boundary	Potential duration of effect	Degree of visibility	Overall magnitude grading		
D01	Non-associated rural dwelling Sensitivity: High	785m	High	Low	Moderate	Short distance views will extend toward the solar farm site from areas surrounding the dwelling. Partial screening may occur through tree cover and agricultural buildings between the dwelling and the project site. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through some existing screening.	Low through existing screening
D02	Non associated rural dwelling Sensitivity: High	747m	High	Low	Moderate	Short distance views will extend toward the solar farm site from areas surrounding the dwelling. Partial screening may occur through tree cover and agricultural buildings between the dwelling and the project site. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through some existing screening.	Low through existing screening
D03	Non associated rural	492m	High	Low	Moderate	Very short distance views toward the solar farm	Low through existing screening

Table 9 – Residential visual significance matrix (Refer **Figure 9** for residential receiver locations)

Receiver location	SENSITIVITY	MAGNITUDE				Description	Visual impact
	Category of receiver location and sensitivity grading	Approximate distance to solar farm site boundary	Potential duration of effect	Degree of visibility	Overall magnitude grading		
	dwelling Sensitivity: High					site from the dwelling will be partially screened through tree cover between the dwelling and the project site. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through existing screening.	existing screening
D04	Non associated rural dwelling Sensitivity: High	956m	High	Very low	Moderate	Short distance views toward the solar farm site from the dwelling will be partially screened through tree cover between the dwelling and the project site. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through existing screening.	Low through existing screening
D05	Non associated rural dwelling Sensitivity: High	581m	High	Very low	Moderate	Short distance views toward the solar farm site from the dwelling will be partially screened through tree cover between the dwelling and the project site. The solar farm is unlikely to form a	Low through existing screening

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Table 9 – Residential visual significance matrix (Refer **Figure 9** for residential receiver locations)

Receiver location	SENSITIVITY Category of receiver location and sensitivity grading	MAGNITUDE				Description	Visual impact
		Approximate distance to solar farm site boundary	Potential duration of effect	Degree of visibility	Overall magnitude grading		
						dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through existing screening.	
D06	Non associated rural dwelling Sensitivity: High	176m	High	Low	Moderate	Very short distance views toward the solar farm site from the dwelling will be partially screened through tree cover between the dwelling and the project site including trees alongside the Midland Highway corridor. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through existing screening.	Low through existing screening
D07	Non associated rural dwelling Sensitivity: High	740m	High	Very low	Low	Short distance views toward the solar farm site from the dwelling will be screened through tree cover between the dwelling and the project site including trees alongside the Midland Highway corridor. The solar farm is unlikely to form a dominant feature in the landscape. The potential	Negligible through existing screening

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Table 9 – Residential visual significance matrix (Refer Figure 9 for residential receiver locations)

Receiver location	SENSITIVITY	MAGNITUDE				Description	Visual impact
	Category of receiver location and sensitivity grading	Approximate distance to solar farm site boundary	Potential duration of effect	Degree of visibility	Overall magnitude grading		
						for a moderate visual impact is likely to be mitigated through existing screening.	
D08	Non associated rural dwelling Sensitivity: High	813m	High	Very low	Low	Short distance views toward the solar farm site from the dwelling will be screened through tree cover between the dwelling and the project site including trees alongside the Midland Highway corridor. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through existing screening.	Negligible through existing screening
D09	Non associated rural dwelling Sensitivity: High	1.1km	High	Very low	Low	Short distance views toward the solar farm site from the dwelling will be screened through tree cover between the dwelling and the project site including trees alongside the Midland Highway corridor. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be	Negligible through existing screening

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Table 9 – Residential visual significance matrix (Refer **Figure 9** for residential receiver locations)

Receiver location	SENSITIVITY	MAGNITUDE				Description	Visual impact
	Category of receiver location and sensitivity grading	Approximate distance to solar farm site boundary	Potential duration of effect	Degree of visibility	Overall magnitude grading		
						mitigated through existing screening.	
D10	Non associated rural dwelling Sensitivity: High	943m	High	Very low	Low	Short distance views toward the solar farm site from the dwelling will be screened through tree cover between the dwelling and the project site including trees alongside the Midland Highway corridor. The solar farm is unlikely to form a dominant feature in the landscape. The potential for a moderate visual impact is likely to be mitigated through existing screening.	Negligible through existing screening
D11	Non associated rural dwelling Sensitivity: High	368m (to nearest panels)	High	Medium	Moderate high	Very short distance views extend from the dwelling and curtilage toward the project site. There is no significant screening between the dwelling and the project site.	Moderate high
D12	Non associated rural dwelling Sensitivity: High	913m (to nearest panels)	High	Medium	Moderate high	Very short distance views extend from the dwelling and curtilage toward the project site. There is no significant screening between the	Moderate high

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Table 9 – Residential visual significance matrix (Refer Figure 9 for residential receiver locations)

Receiver location	SENSITIVITY	MAGNITUDE				Description	Visual impact
	Category of receiver location and sensitivity grading	Approximate distance to solar farm site boundary	Potential duration of effect	Degree of visibility	Overall magnitude grading		
						dwelling and the project site.	
D13	Non associated rural dwelling Sensitivity: High	561m (to nearest panels)	High	Medium	Moderate	Short distance views extend from the dwelling and curtilage toward the project site. There is some partial screening between the dwelling and the project site.	Moderate
D14	Non associated rural dwelling Sensitivity: High	173m (to nearest panels)	High	Medium	Low moderate	Very short distance views extend from the dwelling and curtilage toward the project site with some partial tree screening between the dwelling and the project site.	Moderate
D15	Non associated rural dwellings Sensitivity: High	435m (to nearest panels)	High	Medium	Low moderate	Very short distance views extend from the dwelling and curtilage toward the project site with some partial screening between the dwelling and the project site.	Moderate

7.5 Visual impact summary

This LVIA identified a total of 15 rural dwellings located within an approximate 1km viewshed surrounding the project site. This LVIA determined that:

- 2 dwellings would experience a moderate high visual impact
- 3 dwellings would experience a moderate visual impact
- 6 dwellings would experience a low visual impact and
- 4 dwellings would experience a negligible visual impact.

The determination of low (and generally negligible) visual impact for the majority of residential dwellings surrounding the solar farm site reflect the high degree of localised screening provided by low undulating landform extending across the landscape, as well as tree screening alongside road corridors and within surrounding agricultural land. Five dwellings have been determined to have a moderate to moderate high visual impact due to proximity and lack of screening between the dwelling and the project site. Visual mitigation works to screen views from sensitive view locations would minimise visual impacts from proximate residential view locations.

7.6 Views from local roads and highway

There are a small number of local roads which connect localities and residential dwellings within the surrounding landscape surrounding the proposed solar farm site. Views from local roads were photographed and assessed during the site inspection. The roads from which views may extend toward the proposed solar farm site are illustrated on **Figure 10** and include:

- Midland Highway (R1 and R2)
- Poole Road (R5)
- McEwen Road (R3); and
- McCague Road (R4).

Available views toward the proposed solar farm site from surrounding local roads will tend to be indirect and of a short duration from moving vehicles. Road corridors also support some tree planting, including tree planting along proximate road locations such the Midland Highway which will generally block and/or filter views toward the proposed solar farm site.

7.7 Views from agricultural land

This LVIA acknowledges that the proposed solar farm project may have the potential to impact people engaged in predominantly farming activities, where views toward the solar project occur from surrounding and non-associated agricultural areas. Ultimately the level of impact would depend on the type of activities engaged in as well as the location of the activities together with the degree of screening provided by local vegetation within individual properties. Whilst views toward the solar farm could occur from surrounding rural

agricultural land, this LVIA has determined that the sensitivity of visual impacts is less for those employed or carrying out work in rural areas compared to potential views from residential dwellings; however the sensitivity of individual view locations will also depend on the perception of the viewer.

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Cumulative impact assessment

Section 8

8.1 Cumulative impact assessment

A cumulative visual impact could result from elements of the proposed solar farm being constructed in conjunction with other existing or proposed developments which could be either associated or separate to it. Separate developments could also occur or be located within a local context where visibility is dependent on a journey between each site or within the solar farm viewshed.

There are several proposed, approved, and operational solar farm projects surrounding Stanhope. These include the:

- Stanhope Solar Farm and Projects (1 – 5)
- Corop Solar Farm
- Girgarre Solar Farm and
- Carag Carag Solar Farm.

Other solar farm project locations are illustrated on **Figure 1**. The potential for an associated cumulative impact between the proposed solar farm and other solar farm infrastructure will be minimised by the visual relationship between the proposed project site and other solar farm localities. The proposed solar farm is unlikely to result in a visual extension of approved solar farm infrastructure. Where visible the proposed solar farm would be viewed and generally perceived as a standalone visual element.

Some potential might exist for sequential cumulative visual impacts to occur where views from vehicles on the Midland Highway, or whilst travelling along local roads extend toward multiple solar farm sites during a journey. Views from vehicles toward solar farms would be largely indirect, partially screened by roadside vegetation in places and generally of a short duration.

The proposed solar farm is considered to have limited potential to increase the significance of cumulative visual impact with regard to existing large-scale visual elements located beyond the proposed solar farm site. This is also largely due to visual screening surrounding the proposed solar farm site for most receiver locations and the location of proposed constructed elements relative to existing infrastructure.

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Visualisations

Section 9

9.1 Visualisations

The visualisation location was selected to illustrate a viewpoint with a direct line of sight toward the proposed solar farm including the location of the substation, control building and battery storage facility. The visualisation location is illustrated in **Figure 2** and the visualisations are presented in **Figures 11** and **12**.

The visualisation location was selected from an accessible section of the Midland Highway corridor. It represents a typical viewpoint location and illustrate the potential influence of both distance and existing tree cover on visibility.

The visualisation demonstrates that the overall visual bulk and scale of proposed solar farm will not be visually significantly in the landscape following completion of the construction works and following installation of landscape visual mitigation works.

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Midland Highway

Poole Road



Photo PM1 Existing view toward proposed Viewbank Solar Farm site from Midland Highway

Midland Highway

Solar array

Substation

Battery facility (control room beyond)

Solar array

Poole Road

Solar array



Photomontage PM1 Proposed view post construction toward Viewbank Solar Farm site from Midland Highway

Midland Highway

Visual mitigation planting

Substation

Visual mitigation planting

Poole Road

Solar array



Photomontage PM1 Proposed view toward Viewbank Solar Farm site from Midland Highway with visual mitigation planting works (at post construction plus 5 years)

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Figure 11
Photomontage PM1
Existing and proposed views
from Midland Highway

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DESIGN
architects

Viewbank Solar Farm LVIA



Photomontage PM1 Proposed view post construction toward Viewbank Solar Farm site from Midland Highway



Photomontage PM1 Proposed view toward Viewbank Solar Farm site from Midland Highway with visual mitigation planting works (at post construction plus 5 years)

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Viewbank Solar Farm LVIA

Figure 12
 Photomontage PM1 Detail
 Existing and proposed views
 from Midland Highway
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GREEN ARCHITECTS

Pre-construction and construction

Section 10

10.1 Potential visual impacts

There are potential visual impacts that may occur during both pre-construction and construction phases of the proposed solar farm. The key pre-construction and construction activities that may be visible from areas surrounding the Project include:

- ongoing detailed site assessment including technical investigations
- various minor civil works at access points
- construction facilities, including portable structures and laydown areas
- various construction and directional signage
- excavations and earthworks and
- various construction activities including erection of solar panels with associated electrical infrastructure works.

Most of the pre-construction and construction activities, some of which would result in physical changes to the landscape are generally temporary in nature and for the most restricted to various discrete areas within or beyond the immediate proposed site.

While extensive earthworks are not proposed, some minor land forming (including localised cut and fill areas) may be undertaken to achieve more consistent gradients beneath the array where necessary. However, the areas of disturbance would be rehabilitated, and the surrounding groundcover would be retained. Areas of earthworks would be subject to dust control measures that would aim to minimise any airborne dust that could affect local visibility.

Most of the pre-construction and construction activities would be unlikely to result in an unacceptable level of visual impact for their duration and temporary nature.

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Mitigation measures

Section 11

11.1 Mitigation measures

While the overall visual impact of the proposed solar farm has been determined as low for most surrounding receiver locations, mitigation measures should be considered to minimise the level of residual visual impacts during construction and operation.

The mitigation measures generally involve reducing the extent of visual contrast between the visible portions of the proposed structures and the surrounding landscape, and/or screening direct views toward the proposed solar farm where possible.

11.2 Detail design

Mitigation measures during the detail design process should consider:

- further refinement in the design and layout which may assist in the visual mitigation of proposed structures
- consideration in selection and location for replacement tree planting which may provide partial screening or backdrop setting for constructed elements and
- a review of materials and colour finishes for selected components including the use of non reflective finishes to structures where possible.

11.3 Construction

Mitigation measures during the construction period should consider:

- minimise tree removal where possible
- avoidance of temporary light spill beyond the construction site where temporary lighting is required
- rehabilitation of disturbed areas and
- protection of mature trees within the proposed solar farm site where retained.

11.4 Operation

Mitigation measures during the operational period should consider:

- ongoing maintenance and repair of constructed elements;
- replacement of damaged or missing constructed elements; and
- long term maintenance (and replacement as necessary) of tree planting within the solar farm site to maintain visual filtering and screening of external views where appropriate.

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Conclusion

Section 12

12.1 Summary

- This LVIA concludes that the proposed Viewbank Solar Farm would have an overall low visual impact on people living in or travelling through the landscape surrounding the proposed solar farm.
- The landscape surrounding the solar farm site has a moderate to high visual absorption capability and contains characteristics that will partially filter and/or screen views from most sensitive view locations.
- Landscape features surrounding the proposed solar farm are robust and the introduction of constructed elements associated with the solar farm would not be incongruous with the surrounding landscape.
- The proposed solar farm would generally complement the scale, landform and land use pattern of the surrounding landscape and will not create a noticeable deterioration in existing views from most sensitive view locations.
- The visual magnitude of the proposed solar farm is not expected to result in significant loss or alteration to pre-development views.
- Views toward the proposed solar farm from sections of the Midland Highway corridor would be screened and/or partially filtered by roadside tree planting and trees within the south west portion of the proposed solar farm site.
- The proposed solar farm site would be visible to local traffic from Poole Road, McEwen Road and McCague Road. Views would be transitory and short term in nature but likely to occur on a regular basis for those travelling to and from local dwellings.
- Views toward the proposed solar farm from most surrounding dwellings would be largely indirect and screened or partially filtered by tree planting around dwellings.
- Any potential residual visual effects would be positively mitigated through a range of appropriate measures at detailed design, construction and operational stages including development of landscape planting plans to mitigate visual effects from key sensitive view locations.
- This LVIA notes approved solar farms including the Stanhope Solar Farm projects around 5 km to the south, and 1 – 2 km west of the proposed solar farm site. The potential for direct and indirect cumulative visual impacts would be largely mitigated by distance between solar farms as well as tree cover surrounding dwellings. Sequential cumulative visual impacts may occur from the Midland Highway but would be limited where approved solar farms are offset and not visible from the highway corridor.
- Sun glint or glare is not anticipated to occur at surrounding residential dwellings or the Midland Highway and local roads.

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