ENERGY FORMS

Mangalore Solar Farm
Planning Application Report

For Tetris Energy Pty Ltd

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Prepared for Tetris Energy

Version	Author	Date	Description of changes
1	Tim Doolan	27/02/21	First draft
2	Fi Cotter	07/04/21	Updated Draft

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EXECUTIVE SUMMARY

This report in provided in support of a planning permit application for Mangalore Solar Farm, a proposed 5MW solar energy facility located 10km north of Seymour in Central Victoria.

The subject site includes a single parcel of land known as Lot 18A Parish of Mangalore part property 299 Oconnors Road, Mangalore, inclusive of Rawson Road and Seymour-Avenel Road, rail-line and land at 858 Seymour-Avenel Road for connection of the power line. The subject land is also referred to as 101 Coombs Road, Mangalore.

The proposal is for the use and development of the land for the purposes as a solar energy facility and utility installation.

The following permit triggers apply:

- Clause 35.07 Farming Zone (FZ)
  - Use and development of a solar energy facility, and associated earthworks
  - Use and development of a utility installation
  - Buildings within 20 metres from a road and 5 metres from a boundary (Schedule to FZ)
- Clause 36.01 Public Use Zone, Transport (PUZ4)
  - Use and development of a utility installation
- Clause 52.05 Signs
  - Business identification signage
- Clause 52.17 Native vegetation
  - Removal of native vegetation

The project is proposed by Australian developer Tetris Energy, who have helped to deliver over 400 MW of renewable energy projects now connected and operational in Australia.

This application has been assessed against the relevant policies and guidelines of the Strathbogie Planning Scheme, including the provisions of Clause 53.13 Renewable Energy Facility and the Solar Energy Facilities Design and Development Guideline DELWP 2019 (Solar Farm Guidelines). The proposal is strongly supported by the range of policies and guidelines that apply, particularly those which seek to facilitate renewable energy facilities in locations that will have minimal amenity impacts and protect important agricultural land.

A brief summary of the relevant thematic issues is provided below for consideration. This includes reference to technical expert reports that accompany the application.

Flora and fauna impacts

An Ecological Assessment has been prepared by Ecology Heritage and Partners and is included at Appendix A.

Vegetation within 101 Coombes Road is reported to contain a mixture of exotic pasture grass and native grasses, rushes and trees of various ages, while vegetation on public land consisted of native woodlands. One large Yellow Box and three scattered trees were recorded within the study area. These are not impacted due to the deliberate positioning of the solar panels, access road and associated infrastructure. The power cable running from the inverter and battery storage facility within 101 Coombes Road to the overhead powerlines connection point south-east of Seymour-Avenel Road will use directional drilling underground to navigate under the road and rail reserves to avoid the removal of native vegetation. A variety of grassland is present on the site which is potential habitat for the Golden Sun Moth. Targeted surveys for the Golden Sun Moth were undertaken with no individuals recorded.

The total extent of native vegetation removal is 4.513 ha which requires an offset of 0.816 General Habitat Units with a minimum Strategic Biodiversity Value of 0.334.

Heritage

The site is not affected by any Heritage Overlay or registered heritage sites.

An Area of Cultural Heritage Sensitivity (ACHS) covers the southern corner of the site (approximately 1.5ha) however all works, including fencing, deliberately avoids this area. As the works are not in the mapped area, a mandatory Cultural Heritage Management Plan (CHMP) is not required.

Geotechnical and hydrology

A Geotechnical Investigation was completed by Geotechnical Testing Services (GTS) to accompany the application, included at Appendix B.

The investigation included involved the drilling boreholes to assess general subsurface conditions with a view to providing comments and design parameters for the proposed construction of a solar farm.

The report found that the site is suitable for construction of a solar energy facility subject to recommendations as outlined in the report. Soil profile is relatively uniform, with some sections of dense sand that may prove difficult for driving of piles. Groundwater inflow was not encountered over the investigated depths.

Agricultural impacts

An agricultural assessment prepared by Page Street Services Pty Ltd accompanies this report at Appendix C - Agricultural Impact Assessment.

The report outlines that the subject site is not inherently valuable agricultural land and that the proposal will not have any significant impact on the agricultural capabilities of the property or the surrounding properties. The land is currently used for sheep grazing with no farm infrastructure on site. The land is not in an irrigation district.

The proposal is consistent with policies that seek to protect valuable agricultural land.

Traffic Impacts

A Traffic and Transport Assessment prepared by Impact Traffic Engineering is attached at Appendix D.

The main recommendations from this assessment are:

- Station Road (unsealed rural road and main access to site) may need either upgrading or entering into an agreement with Council to maintain and repair the road through construction of the project.
- The Traffic and Transport Assessment also recommends that the relevant road authority be consulted in relation to the potential need to utilise shoulder and unsealed sections for passing vehicles on Station and Oconnors Road

All other impacts on the road network through construction and operational will be comfortably within the design capabilities and expected traffic volumes of the relevant road network, therefore acceptable and in accordance with the relevant sections of the Strathbogie Planning Scheme, subject to the provision of a suitable Traffic Management Plan on any permit that may issue.

Aviation Safety and Glint and Glare Impacts

An aviation assessment was completed is included at Appendix E.

There are three aerodromes within 20km of the Mangalore Solar Farm; Mangalore, Puckapunyal and Locksley Field Aerodromes. Mangalore Aerodrome is the closest at 2nm (3.6km) north of the solar farm boundary. The facility will have No Impact (no mitigation required) on these aerodromes.

There are two roads considered in the analysis, being Station Road and the Seymour – Avenal Road. Both roads are shielded from possible solar reflection by extensive tree lines along the road verges, with No Impact on either road.

All nearby dwellings are shielded from possible solar reflection by the extensive tree lines along the road verges and other tree groves between the dwellings and the solar farm. There will be No Impact on amenity of nearby dwellings.

The report demonstrates that the facility will not cause unreasonable adverse impacts on surrounding aviation facilities, nor on surrounding residences or roads in terms of glare and glint.

Noise impacts

A Noise Impact Report has been prepared by ARUP is included at Appendix F. The report found that the facility will comply with the relevant policies and guidelines in relation to noise. The nearest sensitive receivers were identified as 544 Oconnors Road and 984 Seymour-Avenel Road. A night time noise limit of 36dB(A) applies, and compliance with this limit means compliance with all other limits/times of day. Compliance with nearest receivers means compliance at all other more distant receivers. The highest predicted noise level is 35dB(A) at 544 Oconnors Road, which indicates the facility complies with the relevant noise requirements of the Solar Farm Guidelines at Clause 52.13.

Visual amenity and landscape impacts

Viewpoints from all around the site were assessed with three main views considered representative to assess the visual impact of the proposal on public views and the landscape.

Photomontages prepared by GbLA Landscape Architects accompany the application at Appendix G- Photomontages. The photomontages demonstrate the proposal will have acceptable impact on the landscape, with the most prominent views of the facility occurring on Station Road approaching the facility from the north. The facility is visible but low impact and acceptable within the context of the site and wider landscape. All other viewpoints are of lesser impact with a large proportion of views to the site obscured by landforms or existing vegetation.

There are no views to the facility from private receivers/dwellings. No landscape overlays or additional policies that given greater significance to the landscape apply.

The proposed design of solar panel banks is considered to be befitting of the undulating landscape where a range of built and natural forms existing, including pasture, rural dwellings and structures and patches of remanent forest vegetation.

Conclusion

The balance of policies under the Strathbogie Planning Scheme supports the proposal, with particular reference to key provisions of Clause 35.07 (Farming Zone), Clause 52.13 (Renewable Energy Facility) and the Solar Farm Guidelines.

1 INTRODUCTION

This report has been prepared for Tetris Energy and accompanies a planning application to use and develop a solar energy facility at Lot 18A Parish of Mangalore part property 101 Coombs Road and 299 Oconnors Road, Mangalore. The proposed connection route is on the subject land, across the railway line, over Seymour-Avenel Road and into the property at 858 Avenel Road, Mangalore.

The facility will comprise up to 4.99MW ac solar array with allowance for battery storage.

The subject site is a cleared parcel under agricultural use, fronting Rawson Road to the south east and Station Road to the west. Some remnant vegetation exists along the edges of the site and in the southern corner.

The subject land for the solar farm is entirely within the Farming Zone where a permit is required for the use and development of a solar energy facility. The connection (utility installation) is also located within the Public Use Zone.

This report outlines the proposal, permit triggers and how the proposal complies with the relevant provisions of the Strathbogie Planning Scheme including the Solar Farm Guidelines.

Table 1 Site summary

PROJECT TITLE:	Mangalore Solar Farm
ADDRESS	101 Coombs Road, 299 Oconnors Road, Mangalore Public Land located approximately 250m north east of the southern boundary of the subject site from the boundary of the land over the railway line and Seymour-Avenel Road. 858 Seymour-Avenel Road, Mangalore.
REAL PROPERTY DESCRIPTION	Lot 18A Parish of Mangalore (SPI 18A\PP3053) Lot 5 TP97266 (SPI 5\TP97266) Lot 40A Parish of Mangalore (SPI 40A\PP3053)
TENURE	Agriculture
REGIONAL GROWTH PLAN	Hume
LOCAL GOVERNMENT	Strathbogie Council
PLANNING SCHEME	Strathbogie Planning Scheme
ZONING	Farming Zone Public Use Zone
OVERLAYS	Bushfire Management Overlay
NEARBY OVERLAYS	Airport Environs Overlay (Schedule 2)

2 The proponent

Tetris Energy is a specialist renewable energy development company, developing a range of energy and storage projects in Australia and providing energy solutions for social infrastructure projects (schools, hospitals, transport) for its sister company Tetris Capital. Tetris Energy is headquartered in Melbourne with offices in Sydney and South Australia.

Tetris Energy have collectively delivered over 400 MW of energy projects that are now connected and operational in Australia. Recent projects include:

- South Australia: Mannum, Streaky Bay and Coonalpyn Solar Farms
- Northern Territory: Batchelor and Manton Dam Solar Farms.

3 The Proposal

3.1 Development Summary

Solar Array

Details of the facility are shown on the Layout Plan accompanying the application, and include:

- Approximately 18,256 low reflectivity single axis tracking photovoltaics panels rotating through 120 degrees from east to west.
- Single inverter
- Battery storage and site facilities area
- New chain mesh perimeter fence around the entire facility to 2.3m in height
- Access track from site entrance on Station Road to battery storage and site facilities area.

The facility will have an AC capacity of 4.99 MW.

The layout of the proposal is shown in Figure 1 below.

Figure 1 Site Layout Plan

Grid connection

An existing 22KV power line is located opposite the site to the south east which will provide the point of connection to the national electricity market. Connection will require construction of approximately 150m of new power line, from the site facilities/inverter location on site to the power line opposite, crossing an existing rail line, Rawson Road and Seymour-Avenel Road. The power line will be underground on site, then both underground and overhead outside the site boundary.

Access and parking

Site access is proposed via Station Road. This will involve construction of a new crossover and accessway built to accommodate construction traffic associated with the project.

Parking required through the life of the facility will be minimal and limited to maintenance and operations staff. Ample parking for these activities will be able to be provided alongside relevant site facilities on site.

Signage

Business identification signage of no greater than 3sqm will be installed at the site entrance on Station Road.

Setback/buffer areas

The following setbacks are associated with the solar farm site plan.

Table 2 Setbacks associated with the proposal

Renewable Energy Facility Component	Distance to Nearest Neighbour Property Boundary (m)	Distance to Nearest Road (m)
Solar modules	30m or more	20m plus road reserve
Battery and inverter	60m	140m

Proposed Delivery Station, control Room and Site Office	30m	200m
Fencing	25m	25m

3.2 Construction Process and commissioning

It is expected that the construction of the solar farm will commence within 12 months of securing a planning permit, with the actual construction period expected to take 6 months to complete.

Local workers will be supported by team leaders who will manage the construction process. The workforce will be made up of up to 80-workers.

The teams involved will be made up of:

- assemble team (unskilled labour)
- electrical team (qualified electricians as well as unskilled labour)
- civil team for balance of plant foundations and construction of cable trenches
- high voltage team for connection of plant

The construction stages are:

- Mobilisation
- Site establishment
- Construction
- Pre-commissioning
- Commissioning/grid connection
- Demobilisation

Number of Operations Staff

Once the facility is established it will be managed by staff. Operations and maintenance for the facility will occur on a quarterly or bi-annual basis. Service providers will be contracted for operations and maintenance of the energy facility.

The solar farm will be managed remotely and with regular service crews.

Operation and Maintenance

The solar farm will be monitored remotely 24 hours per day under an agreement with an operations and maintenance service provider. There will be no routine weekly operations and maintenance staff on site. Under a long-term maintenance agreement, routine scheduled maintenance will be undertaken every six months.

The condition of the grassland underneath the solar panels will change in response to high and low rainfall years, drought and other climate drivers. Keeping grass and vegetation low around panels (100mm) is a necessity as the smallest overshadowing can cause significant reductions in efficiency and create a potential bushfire risk.

Predominant vegetation control measures will be both grazing and mowing.

3.3 Decommissioning

The Lease Agreement in place with the landowner outlines the decommissioning option to remove the solar PV arrays from the land at the end of the 30-year lease period or enter into a subsequence lease.

However, depending upon the landowner's acceptance or otherwise of a new agreement, the following options may also be available:

- Continue maintaining and operating of the solar facility to produce renewable energy.

- Upgrade the solar facility to more current technology and generate higher levels of renewable energy into the future.
- Remove the solar facility in accordance with the Landowner Lease Agreement.

It is expected a continuation or upgrade of the solar farm at the end of the lease period will require new permits and conditions.

4 Subject Site and Surrounds

4.1 Subject site analysis

The subject land is made up of a titled lot and a small portion of the public land located to the south east where the connection to the existing power line will occur. The relevant titles are:

- Lot 18A Parish of Mangalore (known as 101 Coombs Road/299 Oconnors Road, Mangalore)
- Lot 5 TP97266 (known as 858 Seymour-Avenel Road, Mangalore)
- Lot 40A Parish of Mangalore (public land/rail corridor land)

Crown Allotment 18A PP3053 Parish of Mangalore is triangular parcel situated at the corner of Station and Russell Road, with a total area of approximately 17.29ha. The site is one of a number of discontinuous parcels referred to as 101 Coombs Road and 299 Oconnors Road, Mangalore. The public land is referred to as the land located approximately 250m east from the southern corner of the lot and includes the connection over the railway reserve and Seymour-Avenel Road into 858 Seymour-Avenel Road.

The site fronts Station Road to the west and Rawson Road Mangalore. Both adjoining roads are unmade, rural roads.

Currently the parcel forms part of a larger agricultural property that extends further north. There is an unformed government road shown on the certificate which forms the subject site's northern boundary.

The site is currently under low intensity agricultural use in the form of sheep grazing. Topography is generally flat with a fall to the south. Soil is sandy clay loam. There is no irrigation infrastructure on or associated with the land.

The southern corner of the site (approximately 1.5ha) is a designated Area of Cultural Heritage Sensitivity and will be avoided by the project, with all infrastructure set back from any Area of Cultural Heritage Sensitivity.

Native vegetation on site includes four trees and scattered grasses.

4.2 Title restrictions

There are no restrictions or easements affecting the certificate of title.

4.3 Surrounding area

Built and operating wind farm Cherry Tree Wind Farm 16.5km to the southeast. There are no known existing or approved solar farms within 30km of the site.

The township of Mangalore is located approximately 150m to the south-west of the site and has a population of approximately 182 people (as of 2016 census).

Nearest sensitive receivers in each direction includes:

- Dwelling at 544 Oconnors Road approximately 500m to the south (nearest dwelling that is part of Mangalore township)
- Dwelling at 984 Seymour-Avenel Road approximately 760m to the east
- Dwellings at 340 and 380 Oconnors Road approximately 1690m to the west
- Dwellings at 35 and 57 Station Road approximately 2370m to the north

The surrounding area is generally flat or with some slight variations in landform and topography. The surrounding uses are mostly agricultural with paddocks supporting dryland agriculture and sparsely populated dwellings, small services associated with Mangalore Township.

5 Planning Provisions

5.1 Permit Triggers

A permit is required under the following provisions of the Strathbogie Planning Scheme:

- Clause 35.07 Farming Zone (FZ)
  - Use and development of a solar energy facility, and associated earthworks
  - Use and development of a utility installation
  - Buildings within 20 metres from a road and/or 5 metres from a boundary (Schedule to FZ)
- Clause 36.01 Public Use Zone, Transport (PUZ4)
  - Use and development of a utility installation
- Clause 52.05 Signs
  - Business identification signage exceeding 3 sqm, Category 4 Sensitive Areas
- Clause 52.17 Native vegetation
  - Removal of native vegetation

This application also seeks to provide car parking spaces to the satisfaction of the responsible authority under Clause 52.06-6.

5.2 Referrals

The following referral provisions apply:

- Clause 66.02-2 Native vegetation – Applications to remove vegetation under the Detailed Assessment Pathway must be referred to the Secretary to the DELWP as a recommending referral authority.
- Clause 66.02-4 Major electricity line or easement – Applications to construct a building or construct or carry out works on land within 60 metres of a major electricity transmission line (220 Kilovolts or more) or an electricity transmission easement.

5.3 Zoning

Clause 35.07 Farming zone (FZ)

Under the provisions of the Farming Zone at Clause 35.07 a permit is required to use and develop the land for the purposes of a solar energy facility and utility installation.

A solar energy facility is a non-specified Section 2 permit required use. Utility installation is a Section 2 use. A permit is triggered for buildings and works associated with a Section 2 use.

The relevant objectives of the Farming Zone are:

> *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
>
> *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.

The relevant decision guidelines for the responsible authority to consider are:

General issues

The Municipal Planning Strategy and the Planning Policy Framework.

Any Regional Catchment Strategy and associated plan applying to the land.

The capability of the land to accommodate the proposed use or development, including the disposal of effluent.

How the use or development relates to sustainable land management.

Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.

How the use and development makes use of existing infrastructure and services.

Agricultural issues and the impacts from non-agricultural uses

Whether the use or development will support and enhance agricultural production.

Whether the use or development will adversely affect soil quality or permanently remove land from agricultural production.

The potential for the use or development to limit the operation and expansion of adjoining and nearby agricultural uses.

The capacity of the site to sustain the agricultural use.

The agricultural qualities of the land, such as soil quality, access to water and access to rural infrastructure.

Any integrated land management plan prepared for the site.

Environmental issues

The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.

The impact of the use or development on the flora and fauna on the site and its surrounds.

The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.

The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.

Design and siting issues

The need to locate buildings in one area to avoid any adverse impacts on surrounding agricultural uses and to minimise the loss of productive agricultural land.

The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.

The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.

The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.

Whether the use and development will require traffic management measures.

Clause 36.01 Public use zone (PUZ4)

Under the provisions of the Public Use Zone (PUZ4 Transport) at Clause 36.01 a permit is required to use and develop land for a utility installation. The proposal includes the construction of a power line over the railway line and road to the south-east of the site, to connect to the existing power line opposite the site.

Clause 36.01-3 – Application must be accompanied by written consent of the public land manager indicating that they consent to the application being made.

The relevant objectives of the Public Use Zone are:

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To recognise public land use for public utility and community services and facilities.

To provide for associated uses that are consistent with the intent of the public land reservation or purpose.

The relevant decision guidelines for the responsible authority to consider are:

The Municipal Planning Strategy and the Planning Policy Framework.

The comments of any Minister or public land manager having responsibility for the care or management of the land or adjacent land.

Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.

5.4 Overlays

Clause 44.06 Bushfire Management Overlay (BMO)

The Bushfire Management Overlay affects part of the road and rail reserves as shown in Figure 2. Best efforts have been made to avoid the BMO area where the facility proposes to connect into the national electricity market.

A permit is not triggered for the proposed use and development of a utility installation under the BMO.

Airport Environs Overlay

Part of the subject land but not the subject parcel is within the Airport Environs Overlay.

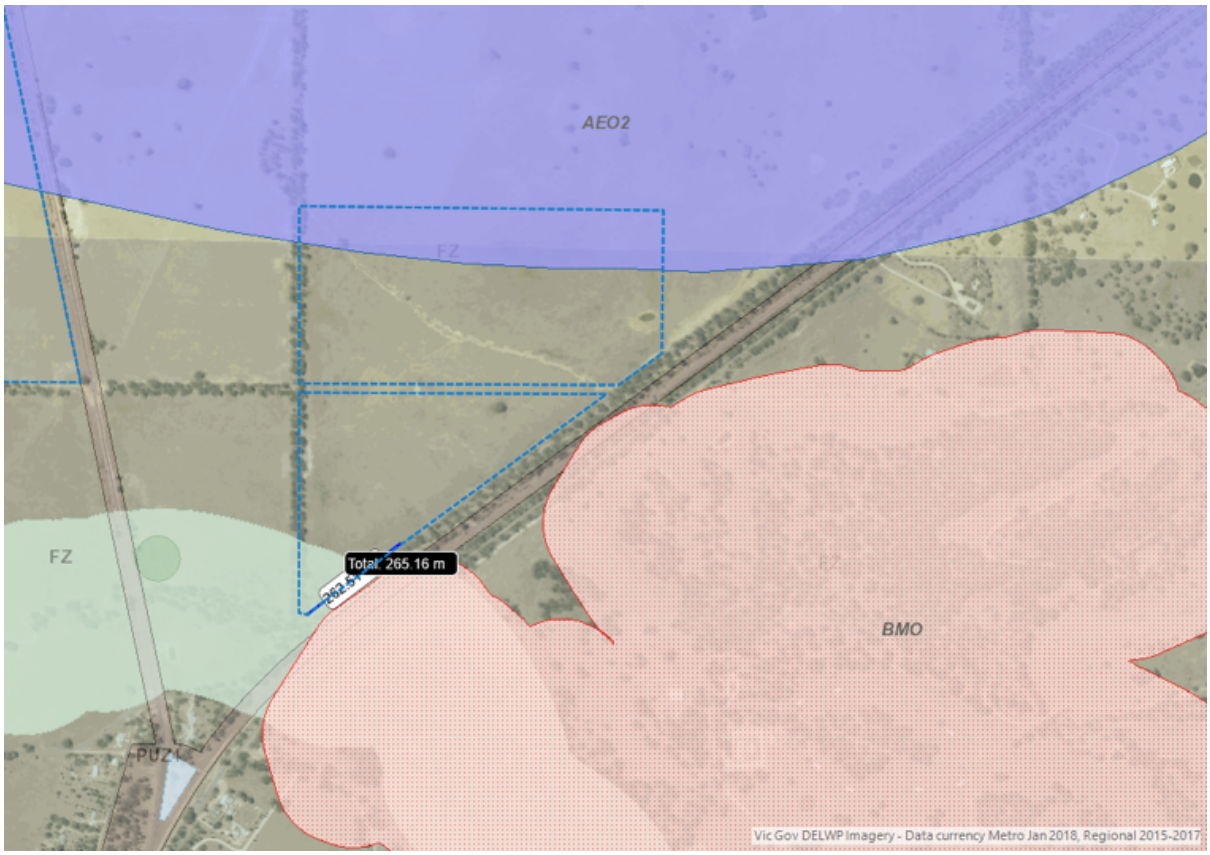


Figure 2 Overlays

5.5 Particular Provisions

Clause 52.06 Car Parking

Table 1 at Clause 52.06 of the Strathbogie Planning Scheme outlines the car parking requirements associated with various uses. A solar energy facility is not listed in Table 1.

Clause 52.06-6 states that:

> *Where a use of land is not specified in Table 1 or where a car parking requirement is not specified for the use in another provision of the planning scheme or in a schedule to the Parking Overlay, before a new use commences or the floor area or site area of an existing use is increased, car parking spaces must be provided to the satisfaction of the responsible authority.*

Therefore, no permit is required under Clause 52.06 for the application, however parking for the new use of a solar energy facility must be provided to the satisfaction of the responsible authority and this application seeks that approval.

Clause 52.17 Native Vegetation

A permit is required for the removal of native vegetation pursuant to Clause 52.17.

The *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) (DELWP 2017) is an Incorporated Document under the Victorian Planning Provisions. The purpose of the Guidelines is to set out and describe the application of Victoria's statewide policy in relation to assessing and compensating for the removal of native vegetation.

Clause 53.13 Renewable Energy Facility

This clause applies to the assessment of any renewable energy facility application (other than wind energy facility) under the Strathbogie Planning Scheme.

The purpose of this clause is to facilitate the establishment and expansion of renewable energy facilities, in appropriate locations, with minimal impact on the amenity of the area. The following decision guidelines are relevant to the application and must be considered in deciding on the application:

> *The Municipal Planning Strategy and the Planning Policy Framework.*
>
> *The effect of the proposal on the surrounding area in terms of noise, glint, light spill, vibration, smell and electromagnetic interference.*
>
> *The impact of the proposal on significant views including visual corridors and sightlines.*
>
> *The impact of the proposal on strategically important agricultural land, particularly within declared irrigation districts.*
>
> *The impact of the proposal on the natural environment and natural systems.*
>
> *The impact of the proposal on the road network.*
>
> *Solar Energy Facilities Design and Development Guideline (Department of Environment, Land, Water and Planning, August 2019)*

Further guidance on each of these decision guidelines is contained within the Solar Farm Guidelines which is discussed in following sections of this report.

5.6 General Provisions

The responsible authority must decide whether the proposal will produce acceptable outcomes in terms of the decision guidelines contained at Clause 65.01 Approval of an application or plan.

This includes:

The matters set out in section 60 of the P&E Act

The Municipal Planning Strategy and the Planning Policy Framework

The purpose of the zone, overlay or other provision and any matter required to be considered in the zone, overlay or other provision

The orderly planning of the area

The effect on the amenity of the area

The proximity of the land to any public land

Factors likely to cause or contribute to land degradation or salinity or to reduce water quality

Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site

The extent and character of native vegetation and the likelihood of its destruction; and whether native vegetation is to be or can be protected, planted or allowed to regenerate

The degree of flood, erosion or fire hazard associated with the location of the land and the use, development or management of the land to minimise any such hazard

The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.

5.7 Planning Policy Framework

This section outlines the policies of the Strathbogie Planning Scheme that are of particular relevance to this application.

This includes the Municipal Strategic Statement and Local Planning Policies that are to be integrated into the Planning Policy Framework.

Municipal Strategic Statement

Clause 21.01 outlines the municipal profile of Strathbogie Shire. Key parts of this clause that are relevant to the application include the following:

The natural environment is under increasing pressures from development, agricultural practices and the emerging threat of climate change. Through the protection of water, native vegetation and fauna and the encouragement of investment in renewable energy, the Shire will continue to assist in the protection and enhancement of the natural environment into the future.

Clause 11 Settlement

This clause is an overarching policy for settlement in Victoria. Of particular note to this application are the following policies:

Planning is to prevent environmental and amenity problems created by siting incompatible land uses close together.

Planning is to facilitate sustainable development that takes full advantage of existing

settlement patterns and investment in transport, utility, social, community and commercial infrastructure and services.

Clause 11.02-1S Supply of urban land

Objective

To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses.

Strategies

Maintain access to productive natural resources and an adequate supply of well-located land for energy generation, infrastructure and industry.

Clause 12 Environmental and Landscape Values

This clause focuses on protecting ecological systems, biodiversity, and identified environments or landscapes.

Clause 12.01-S Protection of biodiversity

Objective

To assist the protection and conservation of Victoria's biodiversity.

Strategies

Use biodiversity information to identify important areas of biodiversity, including key habitat for rare or threatened species and communities, and strategically valuable biodiversity sites.

Strategically plan for the protection and conservation of Victoria's important areas of biodiversity.

Ensure that decision-making takes into account the impacts of land use and development on Victoria's biodiversity, including consideration of:

- *Cumulative impacts.*
- *Fragmentation of habitat.*
- *The spread of pest plants, animals and pathogens into natural ecosystems.*

Avoid impacts of land use and development on important areas of biodiversity.

Consider impacts of any change in land use or development that may affect the biodiversity value of national parks and conservation reserves or nationally and internationally significant sites; including wetlands and wetland wildlife habitat designated under the Convention on Wetlands of International Importance (the Ramsar Convention) and sites utilised by species listed under the Japan-Australia Migratory Birds Agreement (JAMBA), the China-Australia Migratory Birds Agreement (CAMBA), or the Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).

Assist in the identification, protection and management of important areas of biodiversity.

Clause 12.01-2S Native Vegetation Management

Objective

To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

Strategies

Ensure decisions that involve, or will lead to, the removal, destruction or lopping of native vegetation, apply the three-step approach in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017):

Avoid the removal, destruction or lopping of native vegetation.

Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.

Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

Clause 12.03-1S River corridors, waterways, lakes and wetlands

Objective

To protect and enhance river corridors, waterways, lakes and wetlands.

Strategies

Protect the environmental, cultural and landscape values of all water bodies and wetlands.

Ensure development responds to and respects the significant environmental, conservation, cultural, aesthetic, open space, recreation and tourism assets of water bodies and wetlands.

Ensure development is sensitively designed and sited to maintain and enhance environmental assets, significant views and landscapes along river corridors and waterways and adjacent to lakes and wetlands.

Ensure development does not compromise bank stability, increase erosion or impact on a water body or wetland's natural capacity to manage flood flow.

Clause 12.05-2S Landscapes

Objective

To protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments.

Strategies

Recognise the natural landscape for its aesthetic value and as a fully functioning system.

Ensure important natural features are protected and enhanced.

Clause 13 Environmental Risks and Amenity

This clause addresses environmental risks and amenity. The head provision outlines the following policies:

Planning should strengthen the resilience and safety of communities by adopting a best practice environmental management and risk management approach.

Planning should aim to avoid or minimise natural and human-made environmental hazards, environmental degradation and amenity conflicts.

Planning should identify and manage the potential for the environment and environmental changes to impact on the economic, environmental or social wellbeing of society.

Planning should ensure development and risk mitigation does not detrimentally interfere with important natural processes.

Planning should prepare for and respond to the impacts of climate change.

Clause 13.01-1S Natural hazards and climate change

Objective

To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.

Strategies

Consider the risks associated with climate change in planning and management decision making processes.

Identify at risk areas using the best available data and climate change science.

Integrate strategic land use planning with emergency management decision making.

Direct population growth and development to low risk locations.

Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time.

Ensure planning controls allow for risk mitigation or risk adaptation strategies to be implemented.

Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.

Clause 13.02-1S Bushfire planning

This clause applies to all land within a designated Bushfire Prone Area, therefore applies to the subject site. Bushfire risk is a consideration for any solar project.

Objective

To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.

Strategies

Bushfire hazard identification and assessment

Identify bushfire hazard and undertake appropriate risk assessment by:

Applying the best available science to identify vegetation, topographic and climatic

conditions that create a bushfire hazard.

Considering the best available information about bushfire hazard including the map of designated bushfire prone areas prepared under the Building Act 1993 or regulations made under that Act.

Considering and assessing the bushfire hazard on the basis of:

Landscape conditions - meaning conditions in the landscape within 20 kilometres (and potentially up to 75 kilometres) of a site;

Local conditions - meaning conditions in the area within approximately 1 kilometre of a site;

Neighbourhood conditions - meaning conditions in the area within 400 metres of a site; and

The site for the development.

Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.

Clause 13.05-1S Noise abatement

Objective

To assist the control of noise effects on sensitive land uses.

Strategy

Ensure that development is not prejudiced and community amenity is not reduced by noise emissions, using a range of building design, urban design and land use separation techniques as appropriate to the land use functions and character of the area.

Clause 13.07-1S Land use compatibility

Objective

To protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts.

Strategies

Ensure that use or development of land is compatible with adjoining and nearby land uses.

Avoid locating incompatible uses in areas that may be impacted by adverse off-site impacts from commercial, industrial and other uses.

Avoid or otherwise minimise adverse off-site impacts from commercial, industrial and other uses through land use separation, siting, building design and operational measures.

Clause 14 Agriculture

Clause 14.01-1S Protection of agricultural land

Objective

To protect the state's agricultural base by preserving productive farmland.

Strategies

Identify areas of productive agricultural land, including land for primary production and intensive agriculture.

Consider state, regional and local, issues and characteristics when assessing agricultural quality and productivity.

Avoid permanent removal of productive agricultural land from the state's agricultural base without consideration of the economic importance of the land for the agricultural production and processing sectors.

Protect productive farmland that is of strategic significance in the local or regional context. Protect productive agricultural land from unplanned loss due to permanent changes in land use.

In considering a proposal to use, subdivide or develop agricultural land, consider the:

- *Desirability and impacts of removing the land from primary production, given its agricultural productivity.*
- *Impacts on the continuation of primary production on adjacent land, with particular regard to land values and the viability of infrastructure for such production.*
- *Compatibility between the proposed or likely development and the existing use of the surrounding land.*
- *The potential impacts of land use and development on the spread of plant and animal pests from areas of known infestation into agricultural areas.*
- *Land capability.*

Clause 14.01-2S Sustainable agricultural land use

Objective

To encourage sustainable agricultural land use.

Strategies

Ensure agricultural and productive rural land use activities are managed to maintain the long-term sustainable use and management of existing natural resources.

Support the development of innovative and sustainable approaches to agricultural and associated rural land use practices.

Support adaptation of the agricultural sector to respond to the potential risks arising from climate change.

Encourage diversification and value-adding of agriculture through effective agricultural production and processing, rural industry and farm-related retailing.

Assist genuine farming enterprises to embrace opportunities and adjust flexibly to

market changes.

Support agricultural investment through the protection and enhancement of appropriate infrastructure.

Facilitate ongoing productivity and investment in high value agriculture.

Facilitate the establishment and expansion of cattle feedlots, pig farms, poultry farms and other intensive animal industries in a manner consistent with orderly and proper planning and protection of the environment.

Ensure that the use and development of land for animal keeping or training is appropriately located and does not detrimentally impact the environment, the operation of surrounding land uses and the amenity of the surrounding area.

Clause 14.02-1S Catchment planning and management

Objective

To assist the protection and restoration of catchments, water bodies, groundwater, and the marine environment.

Strategies

Ensure that development at or near waterways provide for the protection and enhancement of the environmental qualities of waterways and their instream uses.

Require appropriate measures to restrict sediment discharges from construction sites.

Ensure planning is coordinated with the activities of catchment management authorities.

Clause 15 Built Environment and Heritage

This head clause seeks to ensure the recognition of the importance of energy and resource efficiency in the built environment.

Clause 15.02-1S Energy resource efficiency

Objective

To encourage land use and development that is energy and resource efficient, supports a cooler environment and minimises greenhouse gas emissions.

Strategies

Improve efficiency in energy use through greater use of renewable energy technologies and other energy efficiency upgrades.

Clause 15.03-2S Aboriginal cultural heritage

Objective

To ensure the protection and conservation of places of Aboriginal cultural heritage significance.

Strategies

Provide for the protection and conservation of pre-contact and post-contact Aboriginal cultural heritage places.

Ensure that permit approvals align with the recommendations of any relevant Cultural Heritage Management Plan approved under the Aboriginal Heritage Act 2006.

Clause 17 Economic Development

This clause seeks to provide for economic well-being.

Clause 17.01-1S Diversified economy

Objective

To strengthen and diversify the economy.

Strategies

Protect and strengthen existing and planned employment areas and plan for new employment areas.

Facilitate regional, cross-border and inter-regional relationships to harness emerging economic opportunities.

Facilitate growth in a range of employment sectors, including health, education, retail, tourism, knowledge industries and professional and technical services based on the emerging and existing strengths of each region.

Improve access to jobs closer to where people live.

Support rural economies to grow and diversify.

Clause 17.01-1R Diversified Economy – Hume

Strategy

Encourage appropriate new and developing forms of industry, agriculture, tourism and alternative energy production.

Clause 18 Transport

Clause 18.02-3S Road System

Objective

To manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure.

Strategies

Plan and regulate the design of transport routes and nearby areas to achieve visual standards appropriate to the importance of the route with particular reference to landscaping, the control of outdoor advertising and, where appropriate, the provision of buffer zones and resting places.

Clause 18.02-4S Car Parking

Objective

To ensure an adequate supply of car parking that is appropriately designed and located.

Strategies

Allocate or require land to be set aside for car parking subject to the existing and potential modes of access including public transport, the demand for off-street car parking, road capacity and the potential for demand management of car parking.

Encourage the efficient provision of car parking by consolidating car parking facilities.

Design and locate local car parking to:

Protect the role and function of nearby roads.

Enable easy and efficient use.

Enable the movement and delivery of goods.

Clause 18.04-1S Planning for airports and airfields

Objective

To strengthen the role of Victoria's airports and airfields within the state's economic and transport infrastructure, facilitate their siting and expansion and protect their ongoing operation.

Strategies

Protect airports from incompatible land uses.

Plan the location of airfields, nearby existing and potential development, and the land-based transport system required to serve them as an integrated operation.

Plan the visual amenity and impact of any use or development of land on the approaches to an airfield to be consistent with the status of the airfield.

Plan for areas around all airfields such that:

Any new use or development that could prejudice the safety or efficiency of an airfield is precluded.

Any new use or development that could prejudice future extensions to an existing airfield or aeronautical operations in accordance with an approved strategy or master plan for that airfield is precluded.

Clause 19 Infrastructure

Clause 19.01-1S Energy Supply

Objective

To facilitate appropriate development of energy supply infrastructure.

Strategies

Support the development of energy facilities in appropriate locations where they take advantage of existing infrastructure and provide benefits to industry and the community.

Support transition to a low-carbon economy with renewable energy and greenhouse emission reductions including geothermal, clean coal processing and carbon capture and storage.

Facilitate local energy generation to help diversify the local economy and improve sustainability outcomes.

Clause 19.01-2S Renewable Energy

Objective

To promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.

Strategies

Facilitate renewable energy development in appropriate locations.

Protect energy infrastructure against competing and incompatible uses.

Develop appropriate infrastructure to meet community demand for energy services.

Set aside suitable land for future energy infrastructure.

Consider the economic 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.

Clause 19.01-2R Renewable Energy – Hume

Strategy

Create renewable energy hubs that support co-location of industries to maximise resource use efficiency and minimise waste generation.

Clause 19.03-5S Waste and resource recovery

Objective

To reduce waste and maximise resource recovery so as to reduce reliance on landfills and minimise environmental, community amenity and public health impacts.

Strategies

Ensure future waste and resource recovery infrastructure needs are identified and planned for to safely and sustainably manage all waste and maximise opportunities for resource recovery.

Encourage technologies that increase recovery and treatment of resources to produce energy and other marketable end products.

Integrate waste and resource recovery infrastructure planning with land use and transport planning.

Encourage development that facilitates sustainable waste and resource recovery.

Clause 21.00 Municipal Strategic Statement

Clause 21.04-2 Climate Change

Objective

To anticipate and adapt to the effects of climate change

Strategies

Encourage development to be responsive to potential environmental risks. Encourage and support sustainable development and use of renewable energy.

Clause 21.04-4 Native vegetation and biodiversity

Objective

To protect and enhance the natural environment.

Strategies

Encourage the protection, restoration and management of biodiversity values.

Encourage environmental connectivity between vegetation corridors such as roadsides and waterways.

Encourage the protection of medium to very high quality roadside vegetation.

Clause 21.04-5 Renewable Energy

Objective

To encourage renewable energy sources, the reduction of greenhouse gas emissions and innovative waste management practices.

Strategies

Support renewable energy resource opportunities across the region.

Promote Strathbogie Shire as a centre of excellence for renewable energy technology and infrastructure.

Encourage developments which are energy-efficient and greenhouse friendly.

Clause 21.04-7 Bushfire

Objective

To minimise the risk to life, property and the environment from bushfire.

Strategies

Discourage development in high risk bushfire areas where alternative all weather road access is not available.

Clause 21.06-2 Adapting and diversifying agriculture

Objective

To support and encourage the retention and diversification of agriculture.

Strategies

Provide new opportunities for existing and emerging agricultural practices and complimentary industries.

Clause 21.06-4 Transport

Objective

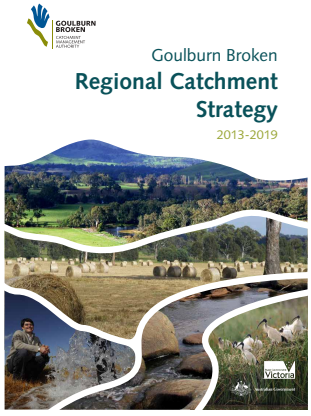
To recognise and maximise the transport networks and facilities within the Shire.

Strategies

Protect the operation of the Mangalore Airport.

5.8 Other Policies and Guidelines

Goulburn Broken Regional Catchment Strategy 2013-2019



The Goulburn Broken Regional Catchment Strategy (GBRCS) provides the integrated planning framework or 'blueprint' for management of land, water and biodiversity resources. It is the overarching strategy for directing action, under which there are sub-strategies and action plans that implement priorities of government and the community.

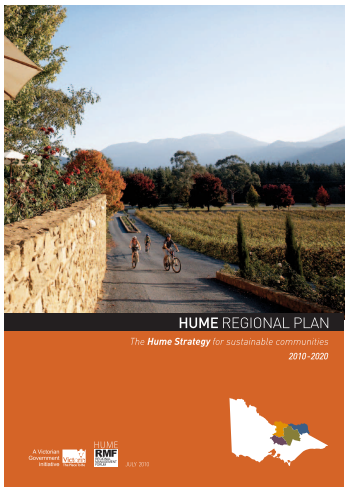
In accordance with the Farming Zone at Clause 35.07, any Regional Catchment Strategy and associated plan applying to the land must be considered in coming to a decision on the planning merits of a proposal.

Under the GBRCS the subject site is within what is designated the Productive Plains. The GBRCS lists six strategic priorities for this area:

1. Increase biodiversity as part of agricultural land-use
2. Capture opportunities from land development
3. Deliver water to waterways and wetlands
4. Establish sustainable agricultural practices
5. Adapt to climate variability risks
6. Respond to and from climatic events

The GBRCS also discusses the need for agriculture to leverage opportunities for diversification and stabilisation, such as through the opportunities that are presented through the shift away from carbon-based energy.

Hume Regional Plan 2010-2020



The Hume Strategy for Sustainable Communities (Hume Strategy) is a 10 year strategic plan that was developed by the Hume Regional Management Forum (RMF) to provide advice and make recommendations to inform decision making and investment in the Hume Region.

The Hume Strategy has five themes and 20 related key directions which form the framework for priority strategies and actions presented in the Hume Strategy and regional and sub regional plans. The relevant themes/key directions from the Hume Strategy are as follows:

Environment Theme: Natural resources protected and enhanced for current future generations

1. Anticipating and adapting to the effects of climate change.

3. Protecting native habitat and biodiversity.

4. Harnessing renewable energy sources, reducing greenhouse gas emissions and pursuing innovative waste management approaches.

Communities Theme: Healthy, vibrant and resilient communities

8. Strengthening communities, increasing resilience and enhancing liveability.

Economic Theme: A thriving and dynamic economy

9. Strengthening a capable workforce.

10. Adapting and diversifying agriculture in an environment of change.

11. Facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business.

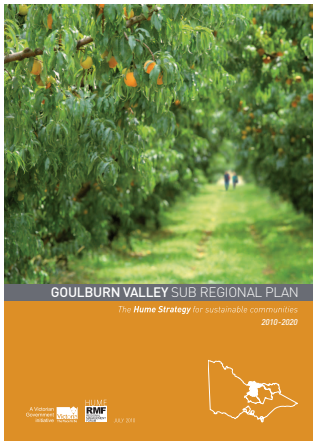
12. Developing information and communications technology (ICT) and energy infrastructure that builds on existing competitive advantages.

Land Use Theme: An efficient and sustainable pattern of urban and rural land use and development

18. Maximising use of existing infrastructure and services and facilitating strategic investment in future infrastructure and services.

19. Retaining productive rural land for agriculture and other compatible rural uses.

20. Ensuring efficient use of land use planning resources in the region.



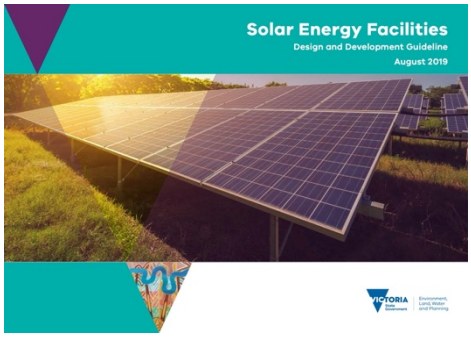
Goulburn Valley Subregional Plan 2010-2020

The Hume Strategy for Sustainable Communities (Hume Strategy) is an integrated plan connecting the four distinct sub regions that make up the Hume Region in North East Victoria and provides a framework for long term cooperation and investment.

The Goulburn Valley Sub Regional plan is one of five volumes that describe the Hume Strategy and is a companion document to the Hume Regional plan. The Goulburn Valley Sub Regional plan sits alongside the Upper Hume, Central Hume, and Lower Hume Sub Regional plans.

Key directions are taken from the Hume Regional Strategy and expanded upon, essentially highlighting the importance of regional energy planning, innovation, and supporting appropriate projects.

Solar Energy Facilities – Design and Development Guideline (DELWP 2019)



The Victorian Government has developed the *Solar Energy Facilities - Design and Development Guideline* (August 2019) aiming to help outline the assessment and development process for large-scale solar energy facilities in Victoria.

This guideline provides:

- information for solar farm developers (proponents), the community, regulators and decision-makers (responsible authorities) relating to the Planning and Environment Act 1987 (the P&E Act) and the Victoria Planning Provisions (VPPs)
- information and direction about the policy, legislative and statutory planning requirements
- relating to the siting and design of solar energy facilities
- an overview of best-practice advice relating to each stage of the site selection, design, construction, operation and decommissioning continuum.

The document outlines what solar facilities are, how to identify suitable locations, best practice for proponents, and information and considerations for applying for a planning permit.

The Solar Farm Guidelines require a site analysis and design response to be prepared. There are detailed matters that are required as part of the design response as follows:

- detailed plans and elevations of the proposed development including the layout and height of the facility and associated building and works, and their materials, reflectivity, colour, lighting and landscaping
- detailed plans and elevations of the proposed transmission infrastructure and electricity utility works required to connect the facility to the electricity network, access roads and parking areas
- accurate visual simulations illustrating the development in the context of the surrounding
- area and from key public viewpoints
- the extent and assessment of any vegetation removal
- a rehabilitation plan for the site.

The design response should also include one or more written reports and assessments including:

- a description of the proposal including the types of process to be utilised, materials to be stored and the treatment of waste
- an explanation of how the proposed design derives from and responds to the site analysis including cumulative impacts with any other existing and proposed renewable energy facilities in the surrounding area
- an explanation of agricultural values and production including irrigation infrastructure impacts and whether any land is productive farmland of strategic significance
- whether a works approval or licence is required from EPA Victoria or another authority administering the regulatory requirements of the Dangerous Goods Act 1985
- a description of how the proposal responds to any significant landscape features for the area identified in the planning scheme.
- An assessment of:
    - the potential amenity impacts (such as noise; glint or glare; light spill; emissions to air, land or water; vibration; smell and electromagnetic interference): an assessment of potential noise impacts should have regard to EPA Victoria's Noise from industry in regional Victoria guidelines
    - the effects of traffic to be generated on roads
    - the visual impact of the proposal on the surrounding landscape
    - the visual impact on abutting land that is described in a schedule to the National Parks Act 1975 and Ramsar wetlands and coastal areas
    - the impact of the proposal on any species (including birds and bats) listed under the Flora and Fauna Guarantee Act 1988 or the Environment Protection and Biodiversity Conservation Act 1999
    - the impacts on Aboriginal or non-Aboriginal cultural heritage

The Solar Farm Guidelines also give further detail around the decision guidelines of Clause 53.13 Renewable Energy Facility as follows:

The effect of the proposal on the surrounding area in terms of noise, glint, light spill, vibration,

smell and electromagnetic interference.

- whether the impact is acceptable of can be managed in accordance with relevant Australian and New Zealand standards or other regulatory requirements.
- if the assessment was undertaken by a suitably qualified person
- the spatial extent, length and duration of the impact and whether it is for a limited or extended period
- whether the impact can be mitigated via an appropriate built form, landscaping or other management response.

The impact on significant views including visual corridors and sightlines

- the amount of change proposed by works including earthworks, and the sensitivity of the landscape features to that change
- the visibility of the solar energy facility from vantage points accessible to the public and the ability to screen areas of development from view
- the locations and distances from which a solar energy facility can be viewed from a sensitive land use
- the significance of the landscape as described in the planning scheme including in an overlay, a relevant strategic study or by landscape features referenced in the planning scheme
- landscape values associated with nearby land such as specified areas of landscape and environmental significance, specified coastal locations and areas identified to accommodate future population growth of regional cities and centres.

The impact of the proposal on strategically important agricultural land, particularly within a declared irrigation district

- the impact on (including numbers of) irrigators downstream of the proposed site that depend on the ongoing operation of irrigation assets traversing the site
- the usage level of water compared to the actual capacity of the irrigation infrastructure servicing the site, based on rural water corporation mapping
- whether or not the irrigation infrastructure servicing the site has benefitted from Commonwealth or state government investment in infrastructure modernisation
- whether the proposed site is connected to the modernised irrigation infrastructure and is integral to the rural water corporation's current and/or future planning for the viability of the irrigation district
- whether or not the overall change in land use at the site aligns with a rural water corporation's asset management planning strategy for the viability of the irrigation district
- whether the change in land use closes off any future opportunities for a rural water corporation to make irrigation footprint adjustments identified under a plan or strategy.

The impact of the proposal on the natural environment and natural systems

- how any onsite earthworks, buildings or other works will alter the natural processes occurring on land

- whether the removal, lopping or destroying of any vegetation can be avoided or minimised through alternative design arrangements
- proximity to natural and man-made water courses and the establishment of appropriate setbacks from these to maintain habitat and natural processes
- impacts on landscape values associated with nearby public land described in a schedule to the National Parks Act 1975 or with Ramsar wetlands
- how bushfire and flood management measures will be dealt with to the satisfaction of the relevant referral authorities.

The impact of a proposal on the local road network.

- whether access to and from the site meets requirements established by the relevant road management authority
- the impact of traffic movements to and from the site with the road network operating normally
- the impact of traffic movements causing wear and tear on the road network.

CFA Guidelines for Renewable Energy Installations (CFA 2019)

The purpose of these guidelines is to provide details about standard measures and processes in relation to fire safety, risk and emergency management that should be considered when designing, constructing and operating new renewable energy facilities, and upgrading existing facilities.

Renewable energy facilities that support the generation of electricity in Victoria include wind farms, solar farms, and battery storage facilities, which are the focus of this guideline.

CFA requires that facility operators develop an emergency management plan consistent with the requirements of Australian Standard 3745*: Planning for emergencies in facilities.* It is expected this to be a condition of any planning permit that may issue.

There are certain access requirements some of which include:

Adequate access to and within the facility will assist CFA in responding to and managing fires on-site. To enable access for fire vehicles, CFA requires that the following provisions be considered:

3.1.1 A four (4) metre perimeter road should be constructed within the ten (10) metre perimeter fire break.

3.1.2 Roads are to be of all-weather construction and capable of accommodating a vehicle of 15 tonnes.

3.1.3 Constructed roads should be a minimum of four (4) metres in trafficable width with a four (4) metre vertical clearance for the width of the formed road surface.

Specific guidelines for solar energy facilities include:

6.1.1 Solar facilities are to have a 6 metre separation between solar panel banks/rows.

6.2.1 Solar farm operators must provide specifications for safe operating conditions for

temperature and the safety issues related to electricity generation, including isolation and shut-down procedures, if solar panels are involved in fire. This information must be provided within the content of the emergency information book.

6.3.1 Solar arrays are to have grass vegetation maintained to 100mm under the array installation or mineral earth or non-combustible mulch such as stone.

6.3.2 Where practicable, solar energy installations can be sited on grazed paddocks. In this case, vegetation is to be managed as per the requirements of this guideline, or as informed through a risk management process.

Whilst the subject site is not within a Bushfire Management Overlay (BMO) the recommendations for fuel management will be considered and contained in any Fire Management Plan that may be required.

5.9 Legislation

Planning and Environment Act 1987 (Vic)

The purpose of the Planning and Environment Act is to establish a framework for planning the use, development and protection of land in Victoria in the present and long-term interests of all Victorians.

The Planning and Environment Act 1987 objectives are:

a) to provide for the fair, orderly, economic and sustainable use, and development of land

b) to provide for the protection of natural and man-made resources and the maintenance of ecological processes and genetic diversity

c) to secure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria

d) to conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value

e) to protect public utilities and other assets and enable the orderly provision and co-ordination of public utilities and other facilities for the benefit of the community

f) to facilitate development in accordance with the objectives set out in paragraphs (a), (b), (c), (d) and (e)

g) to balance the present and future interests of all Victorians.

Environment Protection Act 2018 (Vic)

The Environment Protection Act establishes the legislative framework for protecting the environment in Victoria. It regulates certain activities with the potential to impact on the environment and prohibits the occupier of 'scheduled premises' from doing any act or thing (installing any plant, equipment or process) that is likely to cause the discharge or emission of waste to the environment unless authorized to do so.

A number of State Environment Protection Policies (SEPPs) have been prepared under this Act, which typically set standards, guidelines and environmental quality objectives and indicators to protect beneficial uses of the environment, including noise surface and groundwater, land contamination and air quality. SEPPs express in law the community's expectations, needs and priorities for using and protecting the environment.

The EPA and the legislation it administers is currently undergoing a transformation:

- The EP Act 1970 is in force and contains all currently operational substantive provisions and some currently operational procedural provisions.
- The Environmental Protection Act 2017 (2017 Act) is in force and contains currently operational procedural and administrative provisions. The 2017 Act establishes the EPA and sets out its objectives.
- The Environment Protection (Amendment) Act 2018 (2018 Act) received assent on 28 August 2018 but most provisions will commence on the earlier of a day to be declared or 1 December 2020. The Victorian Government's intention is that the Act will commence on 1 July 2020. The 2018 Act introduces substantive provisions into the 2017 Act and repeals the EP Act 2017. Many aspects of the 2018 Act require regulations to activate the substantive provisions.
- The 2017 Act as it will be amended by the 2018 Act (New EP Act) takes a fundamentally different approach to environmental regulation from the approach taken in the former Act.

The focus moves from protecting the environment per se, to preventing pollution and waste. At the highest level, prescriptive offences will be replaced by duties, most prominently the general environmental duty.

The general environmental duty applies to any person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste, and requires such a person to minimise those risks, so far as reasonably practicable (New EP Act, s 25(1)). 'Reasonably practicable" places a limit on what needs to be done, balancing risk and cost. A failure to comply with the general environmental duty is an indictable offence (proof beyond reasonable doubt- a higher standard), and civil penalties (proof on the balance of probabilities – a lower standard) are also available for breach.

This project, if approved will be developed under the provisions of the new Act.

Environment Protection and Biodiversity Conservation Act 1999 (Aus)

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) came into force on 16 July 2000. The EPBC Act protects matters of National Environmental Significance. The objectives of the EPBC Act are as follows:

- To provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- To promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- To promote the conservation of biodiversity;
- To provide for the protection and conservation of heritage;
- To promote a cooperative approach to the protection and management of the environment involving governments, the community, landholders and Indigenous peoples;
- To assist in the cooperative implementation of Australia's international environmental responsibilities;
- To recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- To promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

Flora and Fauna Guarantee Act 1988 (Vic)

Victoria's Flora and Fauna Guarantee Act 1988 (FFG Act) provides a framework for biodiversity conservation in Victoria. The FFG Act provides for the listing of threatened species, communities of flora and fauna and potentially threatening processes. A number of non-threatened flora species are also protected under the Act.

A permit is required to remove species protected under the Act from public land and may also be required to remove protected species from private land in certain circumstances.

Climate Change Act 2017 (Vic)

The Climate Change Act 2017 commenced operation on 1 November 2017 and seeks, among other purposes, to set a long-term greenhouse gas emissions reduction target and to provide the setting for five-yearly interim reduction targets to reach the long-term target. Section 6 states that for the purposes of the Act, "the long term emissions reduction target for the State is an amount of net zero greenhouse gas emissions by the year 2050".

Section 20 states:

The Government of Victoria will endeavour to ensure that any decision made by the Government and any policy, program or process developed or implemented by the Government appropriately takes account of climate change if it is relevant by having regard to the policy objectives and the guiding principles.

Renewable Energy Target (RET) Legislation

Australia has a large scale generation target of 33,000 GWh by 2020 which equates to 23.5% of the country's energy generation from renewable sources in 2020. The Clean Energy Regulator oversees the operation of the RET scheme in accordance with the RET legislation. The RET includes legislated annual targets which will require significant investment in new renewable energy generation capacity in coming years.

On 30 October 2019, the Renewable Energy (Jobs and Investment) Amendment Bill 2019 (Vic) passed the Victorian Parliament, bringing the VRET 2030 target into legislation. The increased target of 50% by 2030 will now be embedded in the Renewable Energy (Jobs and Investment) Act 2017 (Vic), building on the existing, legislated renewable energy generation targets of 25% by 2020 and 40% by 2025.

Aboriginal Heritage Act 2006 (Vic)

In Victoria, Aboriginal cultural heritage is primarily protected by the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018. Under this legislation Aboriginal cultural heritage is protected by requiring planning permit applicants to prepare Cultural Heritage Management Plans (CHMP) if and when their proposed actions pose a risk to Aboriginal cultural heritage. Under the Aboriginal Heritage Act, actions are considered to pose a risk to Aboriginal cultural heritage, and therefore require the preparation of a mandatory CHMP, when they are both a "high impact activity" and occur in an "area of cultural heritage sensitivity".

No part of the activity area is in an area of cultural heritage sensitivity therefore a mandatory CHMP is not required.

6 Planning Assessment

This section outlines how the proposal responds to the provisions and guidelines of the Strathbogie Planning Scheme. Matters are addressed thematically.

Clause 53.13 Renewable Energy Facility provides a framework for assessing amenity and design themes relevant to a solar renewable energy facility. The Solar Farm Guidelines as directed by Clause 53.13 also forms an integral part of assessment.

6.1 Design Response

The key strengths of the proposed site are:

- its unobtrusive position with substantial existing vegetative screening that will be retained
- close proximity to the electricity grid and existing grid connection
- limited sensitive receivers in close proximity
- low agricultural value of the land.

The design responds to the site by:

- avoiding removal of native vegetation and existing farm dam in the north east
- locating the infrastructure away from Areas of Cultural Heritage Sensitivity in the south
- setting infrastructure back from vegetation that surrounds the site to the west, south and east of infrastructure
- utilising existing screening
- having regard to the CFA guidelines for renewable energy facilities

The proposed solar energy facility on the agricultural land will implement a range of techniques to reduce soil degradation by:

- maintaining soil permeability
- avoiding fertilisers or herbicides
- avoid bringing 'alien' soil to the site
- monitoring activities across the year.

6.2 Protecting Environmental Values and Flora and Fauna

A full description of the ecological values of the site is included in Appendix A.

This assessment was undertaken in late 2020 and reported in April 2021 and the objective was to determine the extent of native vegetation and ascertain the presence of any threatened flora and fauna species or associated habitats within the project area.

The key findings of that assessment are as follows:

A permit is triggered for the removal of native vegetation pursuant to Clause 52.17. As stated in the report the principles of avoid and minimise were applied during the planning phase of the project. The ecological assessment was undertaken and found that the study area is located within the Victorian Riverina bioregion, Goulburn Broken Catchment Management Authority (CMA) and Strathbogie Shire Council.

A field assessment was undertaken on 9 December to obtain information on the flora and fauna values within the study area. Potential habitat for the for the Golden Sun Moth was found so targeted surveys were then conducted. Golden Sun Moth typically occur in native grassland, grassy woodland, dominated by greater then 40% cover of wallaby-grass. The study area was found to support broad areas of suitable habitat for the species as indicated by areas of habitat

containing wallaby-grass. The results of the targeted surveys did not find Golden Sun Moth present on the site.

Vegetation within the subject site was recorded as a mixture of exotic pasture grass and native grasses, rushes and trees of various ages, while vegetation on public land consisted of native woodlands. Plains Grassy Woodland (PGW) was found to be present as two habitat zones (PGW1 & PGW2) of differing quality. This is described in more detail at page 13-14 of the EHP Ecology report. One Large Yellow Box within a patch was recorded towards the southern corner of the study area. A total of three scattered trees (Yellow Box and White Box) were recorded within the study area, which consisted of two Large Trees and one small scattered tree. Areas not supportive of native vegetation accounted for approximately 4.41 hectares (25%) of the site.

The proposed solar farm was sited so as to avoid the removal of the large trees on the site. All scattered trees and the Large Tree in a patch will not be impacted due to the deliberate positioning of the solar panels, access road and associated infrastructure away from these trees. All construction works will occur within the impact area, with no indirect construction impact buffers required as part of these works.

Other vegetation which will be avoided is discussed on page 17 of the EHP report as follows:

> *"None of the vegetation within PGW2 will be impacted, as the power cable running from the battery storage facility within Coombes Road to the overhead powerlines connection point (shown as an aqua blue circle on Figure 2a) south-east of Seymour-Avenel Road will use directional drilling underground to navigate under the road and rail reserves.*
>
> *Vegetation within the Station Road reserve, i.e. where the access point is to 101 Coombes Road (Figure 2a), is an unsealed single land carriage way (Plate 6). It has a clearance width and height of approximately six and 12 metres respectively, which is large enough to allow large truck to pass through without needing to remove, lop or prune any roadside vegetation."*

The original concept for the solar farm had panels extending to the northern and eastern boundaries which was amended following the field assessment to avoid the patches of native vegetation. The revised concept reduces the footprint impacting native vegetation by 45% from 8.140 hectares to 4.513 hectares.

The existing access point from Station Road will be used for the solar farm development further removing the need for removal of native vegetation. The construction method used to install the solar panels is expected to have minimal physical impact of the patches of native grasses in PGW1. The steel posts on which the solar panels are mounted are driven into the ground using a pole driver attached to the back of a soft-tyred vehicle. The only physical impact to the ground is therefore the width of the poles, with each one being approximately 10 centimetres in diameter. It is unclear whether the grass in the 6m separation between the solar panels will survive so for the purpose of offsetting it has been assumed lost, however it may well survive. (Page 24, EHP)

The project will result in the removal of 4.513 hectares of native vegetation. The offset requirement is 0.816 General Habitat Units with a minimum strategic biodiversity score of 0.334.

The ecology report confirms that there are five offset sites within the Goulburn Broken CHA or Strathbogie Shire Council region that can be used to satisfy this offset requirement.

The proposal suitably avoids and minimises the loss of native vegetation consistent with Guidelines and the provisions of Clause 52.17. The development of the land for an energy facility is consistent with Clause 19.01 whilst still also having regard to Clause 12.01-1S seeking to protect biodiversity.

6.3 Geotechnical and hydrology

Geotechnical investigations were conducted by Geotechnical Testing Services and involved drilling of boreholes to assess general subsurface conditions with a view to providing comments and design parameters for the proposed construction of a solar farm. Full details of the investigation are contained in at Appendix B.

The report found that the site is suitable for construction of a solar energy facility subject to recommendations as outlined in the report. Soil profile is relatively uniform, with some sections of dense sand that may prove difficult for driving of piles. Groundwater inflow was not encountered over the investigated depths.

The main conclusions of the report are:

- The field investigation indicated that the soil profile is relatively uniform across the site.
- Groundwater inflow was not encountered over the investigated depths.
- For solar panel construction, minimum founding depths of between 200-600mm are appropriate across the borehole locations surveyed. For associated infrastructure such as inverter and battery storage, there is an allowable bearing pressure of 100kPa available for the expected raft slab / strip and pad (stump) footings.
- It was noted that the clayey sand material in the upper profile of BH6 was considered dense, and with the Silty Clay material being very stiff in several locations where the DCP count was in excess of 10 per 100mm. As such, driving of piles, particularly in the dense sand of BH6 may prove difficult.

The site is generally suitable for a solar energy facility, with no undue geotechnical risks that would affect the viability of the project. Salinity, landslip or erosion risks are minimal, in accordance with the Solar Farm Guidelines and General Provisions at Clause 65.01. Any potential for adverse impacts may be suitably managed through appropriate permit conditions.

6.4 Agricultural impact

An Agricultural Impact Assessment prepared by Page Street Services Pty Ltd accompanies this report at Appendix C.

The report concludes that the proposal will have no significant impact on the agricultural capability of the property or surrounding properties, and existing farm infrastructure will not be impacted.

The main conclusions of the report as relevant to this application are:

- *The existing commercial scale pasture-based sheep enterprise will be able to continue without disruption on the remaining 330 hectares* (page 34).
- *Cropping is not a likely option* [on the subject site] (page 34)
- *There is no farm infrastructure within the proposed solar area. Grazing by sheep can continue between solar panels* (page 40)
- *The land is not inherently capable for intensive soil-based agriculture* (page 40)

A detailed assessment against the relevant provisions of Clause 14.01-1S is also provided at page 40 of the report.

Given the site is not highly productive or strategic agricultural land, is not under irrigation, and does not have any other unique agricultural characteristics for consideration, it is appropriate to redirect the sunlight resource from agricultural use to energy production.

The provisions of the Farming Zone require consideration of agriculture in any alternate proposed use. The solar farm will remove the land from its current agricultural capacity, however, will still

allow for the co-location of sheep grazing through the array.

With suitable ground cover and water management the land will be able to be returned to agricultural use would this be the requirement at the end of the life of the project. It is expected that such a condition would be on any permit and address decommissioning requirements. This will enable the land to be protected for future agricultural use.

The proposal is consistent with policies that seek to protect valuable agricultural land.

6.5 Amenity Impacts

Noise

A Noise Impact Report prepared by ARUP forms part of the application and is included at Appendix F. The report includes an assessment of the proposal against the requirements of EPA's Noise from Industry in Regional Victoria Publication 1411 (NIRV).

Noise levels were assessed for all noise sources from the solar farm which include:

- Noise from the combined transformer and inverter units (SMA 4600 inverter/transformer)
- Battery storage system (SMA 4.5 MWh Energy Storage Station)
- Tracking solar panel motors (NEXTracker motor)

The nearest sensitive receivers were identified as 544 Oconnors Road and 984 Seymour-Avenel Road. The results from the report are replicated below, demonstrating compliance with the NIRV noise limits. Compliance with the nighttime limit means compliance with all other limits/times of day under the NIRV.

Table 3 Predicted noise levels (ARUP)

Location	Noise limit - Night, Leq dB(A)	Predicted noise level - Night, L_{eq} dB(A)	Complies?
544 Oconnors Road	36	35	✓
984 Seymour-Avenel Road	36	32	✓

The results listed in the report represent the most affected locations, and therefore infer compliance at all other sensitive receivers.

The proposal therefore complies with the relevant noise requirements of the planning scheme, including the requirements of the DELWP Solar Guidelines at Clause 52.13.

The surrounding area will continue to be farmed and therefore there will continue to contribute to seasonal machinery noises and dust.

Visual and Landscape Impacts

We undertook a site inspection to understand key public and private realm views of the subject site. Views considered most important are those from the nearest dwellings and also the visibility of the solar array from Rawson Road/Seymour Avenel Road to the east and Station Road to the west.

High resolution photomontages prepared by GbLA Landscape Architects accompany the application at Appendix G.

The subject site presents in a typical rural setting with minimal concentration of sensitive receivers, and does not have any features of architectural, scientific or cultural heritage

significance, or of natural scenic beauty, that would increase the need to minimise adverse impacts on the character and appearance of the area. The site is not within a significant landscape or within a relevant overlay.

Dwellings

The area is sparsely populated, with no dwellings having direct views to site infrastructure due to generally flat topography and high amount of screening vegetation. The impact of the facility on residential amenity will therefore be negligible.

Viewpoints

Viewpoints from all around the site were assessed with three main views considered representative to assess the visual impact of the proposal on public views and the landscape.

View 1 - Station Road, looking north-east towards solar farm, nearest solar panel 190m

This viewpoint demonstrates that there is minimal visual impact resulting from the proposal with glimpses of panel infrastructure visible through an access corridor flanked by existing vegetation.

View 2 - Station Road, looking south-east towards solar farm, nearest solar panel 500m

This viewpoint depicts the impact of the facility on receivers approaching from the north, with the greatest penetration and scope of views to infrastructure out of the selected viewpoints.

This viewpoint demonstrates that the solar farm will be a visible but not overwhelming component of the landscape in the immediate area, with minimal and acceptable impact on the landscape. Vegetation and landforms restrict any views from farther afield, minimising impacts to this immediate location travelling along Station Road. Station Road is a minor rural road without a high level of traffic.

View 3 - Seymour-Avenel Road looking north-west towards the solar farm, nearest solar panel 130m

This viewpoint depicts views from Seymour-Avenel Road which is the road with the highest level of traffic in the area. Views are through a moderate amount of existing vegetation, tempering views to the site.

This viewpoint demonstrates that the visual impact of the facility on receivers travelling along Seymour-Avenel Road will be low and acceptable.

Electromagnetic Interference

The risk of EMI from PV systems is typically very low. This is validated by advice from the Australian Radiation Protection and Nuclear Safety Agency contained within the Victorian Solar Energy Facilities – Design and Development Guidelines July 2019:

"Electrical equipment produces electromagnetic radiation. Radiation produced by transformers and inverters is reduced through performance standards that apply to standard components.

The Australian Radiation Protection and Nuclear Safety Agency advises that the strength of this radiation will decrease with distance from the source, and it will become indistinguishable from background radiation within 50m of a high-voltage power line and within 5 to 10m of a substation. The design and layout of the facility should account for this information."

This is further validated by the statement from American Federal Aviation Administration.

"Due to their low profiles, solar PV systems typically represent little risk of interfering with radar transmissions. In addition, solar panels do not emit electromagnetic waves over distances that could interfere with radar signal transmissions, and any electrical facilities that do carry

concentrated current are buried beneath the ground and away from any signal transmission."

In light of the above, the risk posed by the facility is low-negligible. There are no sensitive receivers within close proximity to proposed major electrical infrastructure. The proposal complies with the relevant policy directives at Clause 53.13 and under the Victorian Solar Farm Guidelines in relation to EMI and no further assessment is required.

6.6 Aviation and Glint and Glare

An Aeronautical Impact Assessment and Glare Analysis has been undertaken by Chiron Aviation Consultants and is included at Appendix E.

The report utilised the Sandia National Laboratories Solar Glare Hazard Analysis Tool (SGHAT) and notes that the Australian Civil Aviation Safety Authority (CASA) accepts these results.

The report demonstrates that the facility will not cause unreasonable adverse impacts on surrounding aviation facilities, nor on surrounding residences or roads in terms of glare and glint.

A summary of the main conclusions from the report are provided below. The criteria for glint and glare effects outlined in the report are:

- No Impact (no mitigation required)
- Low Impact
- Moderate Impact
- Major Impact

The definition of each of these impact criteria are further explained in the report.

Aircraft Safety

In relation to the impacts of the solar farm on aircraft safety, the report concludes that:

- The Mangalore Solar Farm is not a hazard to aviation safety.
- There are three aerodromes within 20km of the Mangalore Solar Farm; Mangalore, Puckapunyal and Locksley Field Aerodromes. Mangalore Aerodrome is the closest at 2nm (3.6km) north of the solar farm boundary.
- **No Impact.**

Road Impacts

In relation to impacts on nearby roads:

- There are two roads considered in the analysis. They are Station Road and the Seymour – Avenal Road. Both roads are shielded from possible solar reflection by extensive tree lines along the road verges. The SGHAT analysis predicts no glare or glint.
- **No Impact.**

Dwelling Amenity

In relation to impacts on nearby dwellings:

- All the nearby dwellings are shielded from possible solar reflection by the extensive tree lines along the road verges and other tree groves between the dwellings and the solar farm. The SGHAT analysis predicts no glare or glint.
- **No Impact.**

6.7 Natural Hazard Management

Bushfire

The proposal accords with the relevant sections of the scheme, in particular, Clause 13.02-1S (Bushfire planning) in relation to managing fire risks. The CFA Guidelines for Renewable Energy Installations have also been considered and applied to the design. The site is within a Designated Bushfire Area under the Building Act 1993 however is not affected by any bushfire specific overlays.

The proposal has incorporated key fire safety design parameters from the CFA Guidelines:

- A 10m fire break will be maintained around the entire facility, allowing emergency access around the perimeter of the facility.
- At least 2 access points will be provided. A secondary access gate will be provided near main site facilities.
- A minimum 6m separation between panel banks is provided as per 6.1.1 of the CFA guidelines.
- Grass no longer than 100m will be maintained beneath the panels in accordance with 6.1.1.

Appropriate fire management, including emergency information, will be included in a Fire Management Plan for the project which would be expected to be a condition on any permit that may issue. This would include maintenance of grass beneath the panels and other ongoing obligations.

Flood

The relevant planning controls (the absence of any overlay) together with the technical reports demonstrate that flooding is not a significant risk for the development. No flooding overlays apply.

The Geotechnical report demonstrates there is no significant impacts on groundwater. Groundwater inflow was not encountered over the investigated depths.

There is no significant impact on overland flows due to the open nature of the solar panel structures themselves and the minimum of site infrastructure and buildings required for the facility.

6.8 Cumulative Impacts

There are currently no other solar energy facilities in the area that would result in a significant cumulative impact, either in terms of noise, visual impacts, electromagnetic impact, or cumulative impacts on agriculture in the area.

6.9 Traffic and Transport

A Traffic and Transport Assessment prepared by Impact Traffic Engineering provides a detailed assessment of the impact of the proposal on traffic and the road network and is attached at Appendix D.

In relation to operation of the use of a solar energy facility at the site:

- There will be negligible impact on the traffic of the local road network, which is typical of solar energy facilities in general. There will be no routine weekly operations and maintenance staff, with the site being remotely monitored and operated. Other

maintenance (quarterly or yearly) such as potential replacement of solar panels, transformer testing will have no discernible impact outside of this. Quarterly site attendance would be attended by a single commercial vehicle.

In relation to construction impacts:

- The facility is expected to take 6 months to complete, with a peak estimated average one-way construction traffic impact of 9 light vehicle movements and 3.1 heavy vehicle per day. These movements will primarily operate along the route of Seymour-Avenue Road – Oconnors Road - Station Road (primary site access). All traffic will sit comfortably within the acceptable capacity of relevant roads with exception of Station Road.
- Station Road is an unsealed local road designed to cater up to 150 vehicles on a daily basis. With 86 daily vehicle movements projected for the project this level of traffic sits comfortably within the acceptable range for this classification of road. However, Station Road is not preapproved for the haulage of higher mass delivery vehicles such as B-doubles.
- The Traffic and Transport Assessment recommends that an agreement be entered into to ensure the ongoing maintenance and repair of Station Road is undertaken during construction. This may be included as a condition on any permit that may issue.
- The Traffic and Transport Assessment also recommends that the relevant road authority be consulted in relation to the potential need to utilise shoulder and unsealed sections for passing vehicles on Station and Oconnors Road.
- Recommendations for any Traffic Management Plan that may be implemented via permit condition are included on page 21 of the Traffic and Transport Assessment.

With an agreement to maintain and repair Station Road, the traffic and transport impacts of the operation and construction of the proposal will be comfortably accommodated by the existing road network, in accordance with Clause 18.02-3S Road System, Clause 21.06-4 Transport and the DELWP Solar Guidelines at Clause 53.13 Renewable Energy Facility.

Car Parking

The proposal will provide ample areas for on-site parking when the facility is in operation.

Detailed design has not yet been determined for car parking, however it is expected that during operation of the facility, all staff vehicles will be accommodated on-site within a vehicle parking area located adjacent to the site office/site facilities area that is shown adjacent in the south of the site.

It is expected that a small number of staff will be present on the site some days in a week for maintenance and operational activities, as is typically the case with small utility scale solar facilities.

The proposal therefore provides an acceptable amount of car parking in accordance with Clause 52.06.

7 CONCLUSION

The proposed solar energy facility has been assessed against the relevant sections of the Strathbogie Planning Scheme, with particular reference to key provisions of Clause 35.07 (Farming Zone), Clause 52.13 (Renewable Energy Facility) and the *Solar Energy Facilities Design and Development Guideline*.

The balance of policies strongly supports the solar energy facility at the proposed location. The land is of low-agricultural significance and is not within an irrigation district. Ecological impacts are minimal and acceptable.

Bushfire risk will be managed to an acceptably low level in accordance with CFA guidelines.

The proposed facility will have minimal impact on the amenity of the surrounding area in terms of noise, glint, light spill, vibration, smell and electromagnetic interference. Significant views including visual corridors and sightlines will not be impacted by the proposed solar farm.

There will be negligible impact on aircraft safety.

The impact to local roads will be minimal due to the short construction period and limited construction workers on site, with ongoing impacts from operation of the facility being negligible.

It is respectfully submitted that the proposed solar energy facility is in accordance with the relevant policies and warrants the issue of a planning permit subject to conditions.

It is also submitted that the proposal provides an appropriate level of parking spaces in accordance with Clause 52.06 and warrants the approval of the responsible authority.