Winton North Solar Farm

Marble Solar Pty Ltd

Planning Assessment Report

9 December 2020

Project No.: 0517510

ERM

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09 December 2020

Winton North Solar Farm

Planning Assessment Report

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EXECUTIVE SUMMARY

This Planning Report supports a planning permit application for a solar farm (and associated battery storage facility and substation) in Winton North, Victoria (the Project) and is pursuant to the Benalla Planning Scheme (the Planning Scheme).

The 100 MW grid connected solar farm is expected to generate enough power to supply 42,000 typical Victorian homes. The battery energy storage system ("BESS") will be a 100 MW 2-hour system (200 MWh) intended to provide grid stability services to the electricity network, which will further enable increased penetration of green, renewable energy into the National Electricity Market. The Winton North Solar Farm will help reduce greenhouse gas emissions by up to 170,000 tonnes of CO2 each year and will be connected to AusNet Service's existing 66kV distribution network, which runs through the subject site.

The site is located entirely within the Farming Zone. The Vegetation Protection Overlay Schedule 3 covers the southern portion of the site. Under the provisions of the Planning Scheme, a Planning Permit is required for the use and development of a renewable energy facility (solar farm) and associated battery storage, buildings and works and removal of native vegetation.

Detailed assessments have been undertaken which consider planning, biodiversity, surface water, agricultural, heritage and traffic implications of the proposal. All technical assessments are referred to in this report and included as part of the planning permit application. The project demonstrates compliance with the Planning Scheme.

The assessments have found that the project is a supported land use under the provisions of the Planning Scheme. Care was taken in the design stage to avoid and protect native vegetation, particularly areas of significant vegetation.

Subject to conditions that will ensure appropriate land management, including native vegetation protection and pest and weed control is undertaken, the project is not considered to pose detrimental impact to the surrounding agricultural land, amenity or safety of the area or habitat for native species, and will generate renewable energy in a location serviced by existing electricity infrastructure. In this regard the project is considered suitable for planning support.

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged by Marble Solar to facilitate the planning approval of the Winton North Solar Farm (the Project), on a 295ha site in Winton North (the subject site).

This Planning Report provides the overarching explanation of the Project including an outline of the operations, potential for impacts and assessment against relevant policy provisions. Technical assessments have been conducted to inform the concept design of the Project and support the Planning Application. The key findings of these technical assessments are summarised in this report, with the assessments included as appendices to this report.

This report concludes that the Project is consistent with relevant policies and provisions of the Benalla Planning Scheme and should be supported by way of issuing of planning approval, with appropriate conditions as identified within this report and throughout the planning assessment process.

1.1 About Marble Solar

Marble Solar Pty Ltd is an Australian developer of utility-scale solar farm generators. The company has a dedicated team, highly experienced in electricity network connection planning, renewable generation facilities development and operation, and renewable project financing.

Marble Solar recognises the need to increase renewable energy penetration in the National Electricity Market to reduce energy costs to consumers, reduce the country's reliance on fossil-fuel generations, and protect the world for future generations to enjoy. Developing and operating clean, renewable facilities strongly aligns with this philosophy.

2. SITE DESCRIPTION AND ANALYSIS

This Section includes a description of the subject site and the surrounding area. Refer to Appendix B for Figures illustrating the context provided below.

2.1 Subject Site

The subject site is approximately 232 km northeast of Melbourne, and 22km southwest of Wangaratta. The subject site is illustrated in Figure 2-1 overleaf. The subject site is approximately 295 ha. The topography of the land is generally flat, gently declining gently toward the north and west of the site, with a sharper decline toward the Eleven Mile Creek which runs through the site, and a ridge at the far north of the site, and the surrounding area is generally used for grazing or broad field cropping.

There are two easements running through the site in the southern area, containing a gas pipeline and power line. The titles which comprise this site are outlined below. A copy of each title is included within Appendix A.

The site comprises the following lots:

- Crown Allotments 21 Parish of Glenrowen (vol 09361 fol 072)
- Crown Allotments 21D Parish of Glenrowen (vol 08036 fol 361)
- Crown Allotments 22 Parish of Glenrowen (vol 09361 fol 072)
- Crown Allotments 29 Parish of Glenrowen (vol 02533 fol 526)
- Crown Allotments 30C Parish of Glenrowen (vol 08331 fol 557)
- Lot 1 on Title Plan 710960R (formerly known as part of Crown Allotment 42A Parish of Glenrowen) (vol 09415 fol 644)
- Lot 1 on Title Plan 079998J (formerly known as part of Crown Allotment 42B Parish of Glenrowen)(vol 09415 fol 643)
- Lot 1 and 2 on Title Plan TP399947 (formerly known as part of Crown Allotment 34B, part of Crown Allotment 35 Parish of Glenrowen) (vol 04754 fol 632)
- Ashmead Road Reserve*

*Impacts to the road reserve will only be in relation to electricity cable crossing and site entry points.

There is a covenant associated with Volume 9361 Folio 072 and Volume 08036 Folio 361 with Gas and Fuel Corporation of Victoria (now APA) for a high-pressure gas line easement.

APA have advised that they will likely require a Construction Management Plan and a third part works approval for works on the easement.

APA correspondence is attached at Appendix N. Legal advice prepared by Minter Ellison regarding the covenant is available as Appendix N which confirms the requirements of the covenant.

Figure 2-1 Subject Site

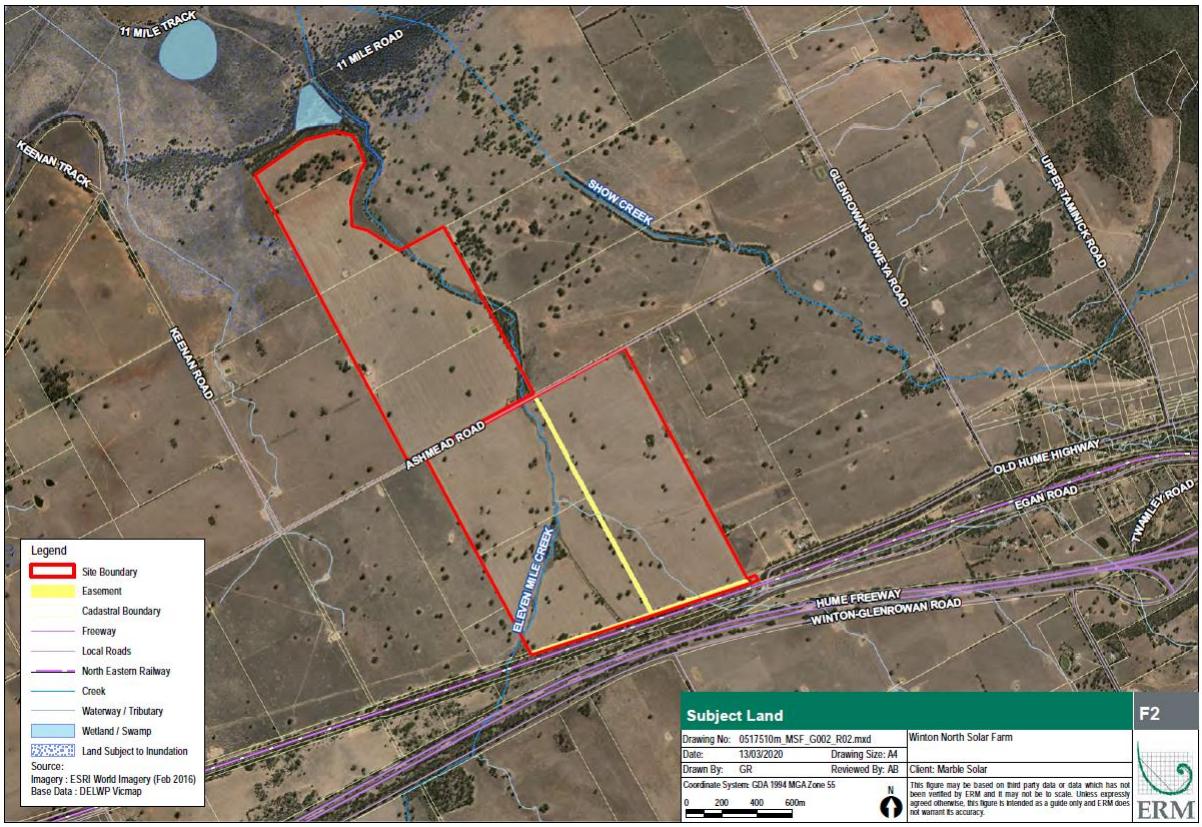


Figure 2-2 Site Photographs

Looking west to northwest toward the site from Intersection Old Hume Highway and Glenrowan-Boweya Road

Looking northeast to southeast toward the site from the western middle point of the site on Ashmead Road

Looking southeast to northwest at the eastern middle point of site from Ashmead Road.

Looking northwest to northeast from Egan Road railway crossing at the south eastern corner of site.

2.2 Area

Immediately surrounding the subject site is agricultural properties, some with dwellings. The Hume Freeway and Winton-Glenrowan Road are located to the south boundary of the site. There is also the V/Line passenger train line that connects from Melbourne to Albury/Wodonga.

The broader area is generally used for agriculture with associated dwellings and infrastructure (such as the power lines bisecting the south of site), with the notable exceptions being;

- Winton Wetlands which directly abuts the north of site;
- Warby-Ovens National Park approximately 9 km east;
- Reef Hills State Park approximately 30 km west; and
- Winton township approximately 13 km west.
- Lake Mulwala and Murray River approximately 50 km north.

2.3 Native Vegetation

The subject site is located within the Victorian Riverina and Central Victorian Uplands Bioregions and Broken River Basin.

The native vegetation and habitat of the site has been a key driver of the proposed layout, and Marble has taken care to retain as many of the larger trees as possible, refer Section 3.3 of this report for additional detail.

2.4 Waterway

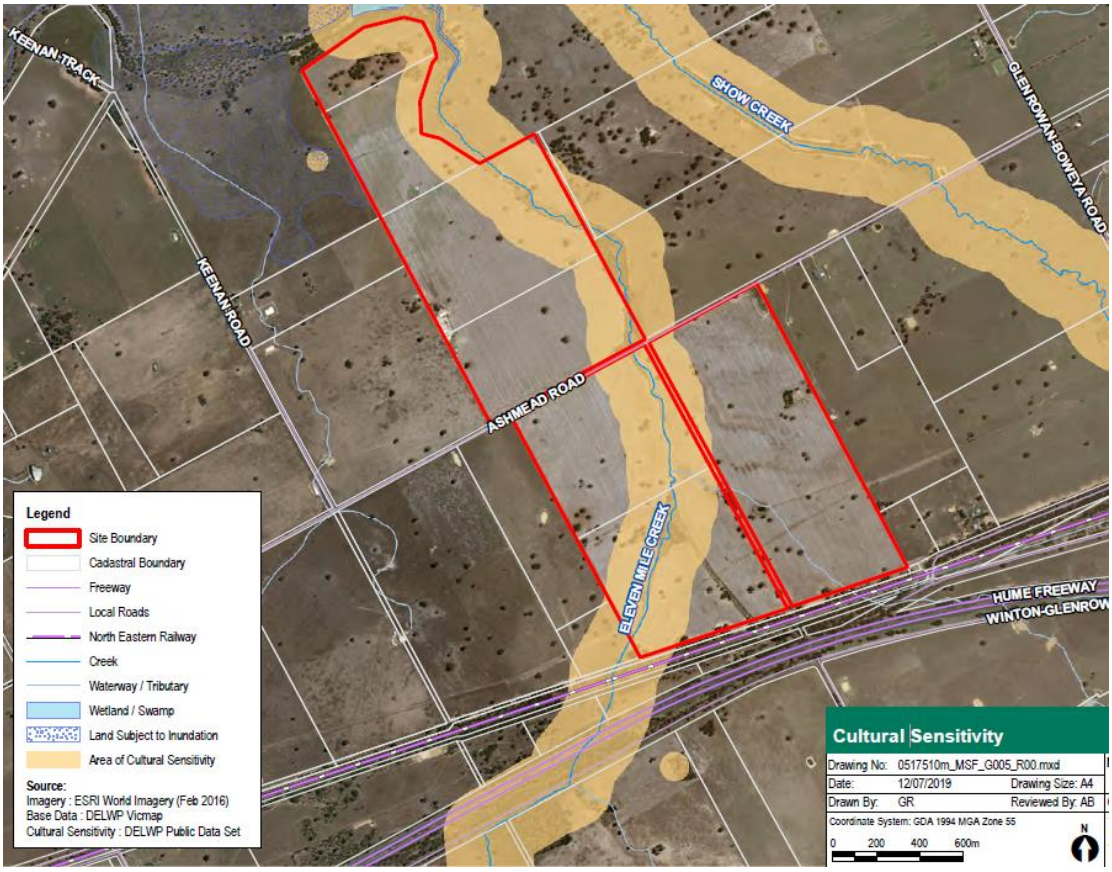
Eleven Mile Creek runs north south through the subject site with a fork toward the south. There is a range of creek vegetation on the edge of the creek which has been assessed in the Biodiversity Report.

2.5 Heritage

As shown in Figure 2-3, the subject site is located within close proximity to an area of Aboriginal Cultural Heritage Sensitivity. There is no heritage overlay or historic heritage mapped on the site or within the broader area.

A mandatory Cultural Heritage Management Plan (CHMP) is currently being prepared for the project. The heritage walk over has occurred with the Registered Aboriginal Parties (RAPs) as part of a complex assessment and no artefacts were found. A draft CHMP has been prepared and will be endorsed by the RAPs shortly.

Figure 2-3 Area of Cultural Heritage Sensitivity



3. PROPOSAL

3.1 Project Description

The 100 MW grid connected solar farm is expected to generate enough power to supply 42,000 typical Victorian homes. The battery energy storage system ("BESS") will be a 100 MW 2-hour system (200 MWh) intended to provide grid stability services to the electricity network, which will further enable increased penetration of green, renewable energy into the National Electricity Market. The Winton North Solar Farm will help reduce greenhouse gas emissions by up to 170,000 tonnes of CO2 each year and will be connected to AusNet Service's existing 66kV distribution network, which runs through the subject site.

It should be noted that Solar PV panels are increasing in efficiency and hence watt-ratings every year, which means that the final generating capacity of the as-built solar farm within the development footprint (ie. its nameplate rating) will not be known until after the commencement of construction. This will not alter the proposed development footprint. The PV panels will be arranged in rows spaced several metres apart, either on a fixed tilt or single axis-tracking system. It is noted that the final design detail has not been finalised and the use of 'fixed' or 'tracking' panels is yet to be determined, therefore it is important that the assessment is based on the 'worst case scenario' as relevant to each aspect. Based on preliminary designs, the Winton North Solar Farm will involve:

- Separate arrays of PV modules (the maximum height of the panels will be 2.63m including the full tracker) including inverters and an underground cable network, with the following setbacks:
  - Minimum of 5m setbacks between the solar panel rows
  - Minimum of 4m perimeter road constructed within a 10m perimeter setback around the subject site to provide a fire break
  - Minimum of 10m setback from the APA gas line easement
  - Minimum of 30m setback from Eleven Mile Creek
  - Setback from neighbouring properties (minimum 30m)
- Battery Energy Storage System (BESS) of a 100MW 2 hour system (200MWh). The maximum height of the BESS will be 2600mm;
- An on-site dedicated solar farm substation to connect the Project to AusNet's electricity distribution network. The maximum height of the substation will be 4550mm;
- Site office (to include firefighting supplies) and associated staff car parking;
- Several access points onto Ashmead Road including:
  - One (emergency) access point onto the private property of Lake Mokoan Road;
  - Taminick 3675 (Allot. 2008 Parish of Glenrowan); and
  - One access point to the Old Hume Highway via Ashmead Road Winton North 3673 (Allot. 30c Parish of Glenrowan).
- Internal access tracks;
- Stock-proof security fencing around each of the solar fields to enable safe grazing for livestock. The maximum height of the fence will be 2500mm; and
- Landscaping:
  - 20m wide solid screen planting along western site boundary (north of Ashmead Road) and eastern site boundary (south of Asmead Road);
  - 10m and 5m wide solid screen planting along western site boundary (south of Ashmead);

- 5m wide scattered infill planting along southern site boundary where there are breaks in the existing vegetation and western site boundary (south of Ashmead Road).

PV modules will be fixed to and supported by a ground-mounted framing structure, aligned in rows oriented in a north-south direction. Single axis tracking technology is being considered for the project as it is currently the most cost competitive tracking structure. With this technology the rows of PV modules will be spaced out approximately 5-8 meters apart along the east-west axis. The use of single axis tracking technology would enable the PV modules to rotate from east to west during the day, tracking the sun's movement.

Sheep are able to graze around and between the panels, providing useful management of groundcover, and continuing the agricultural use of the land.

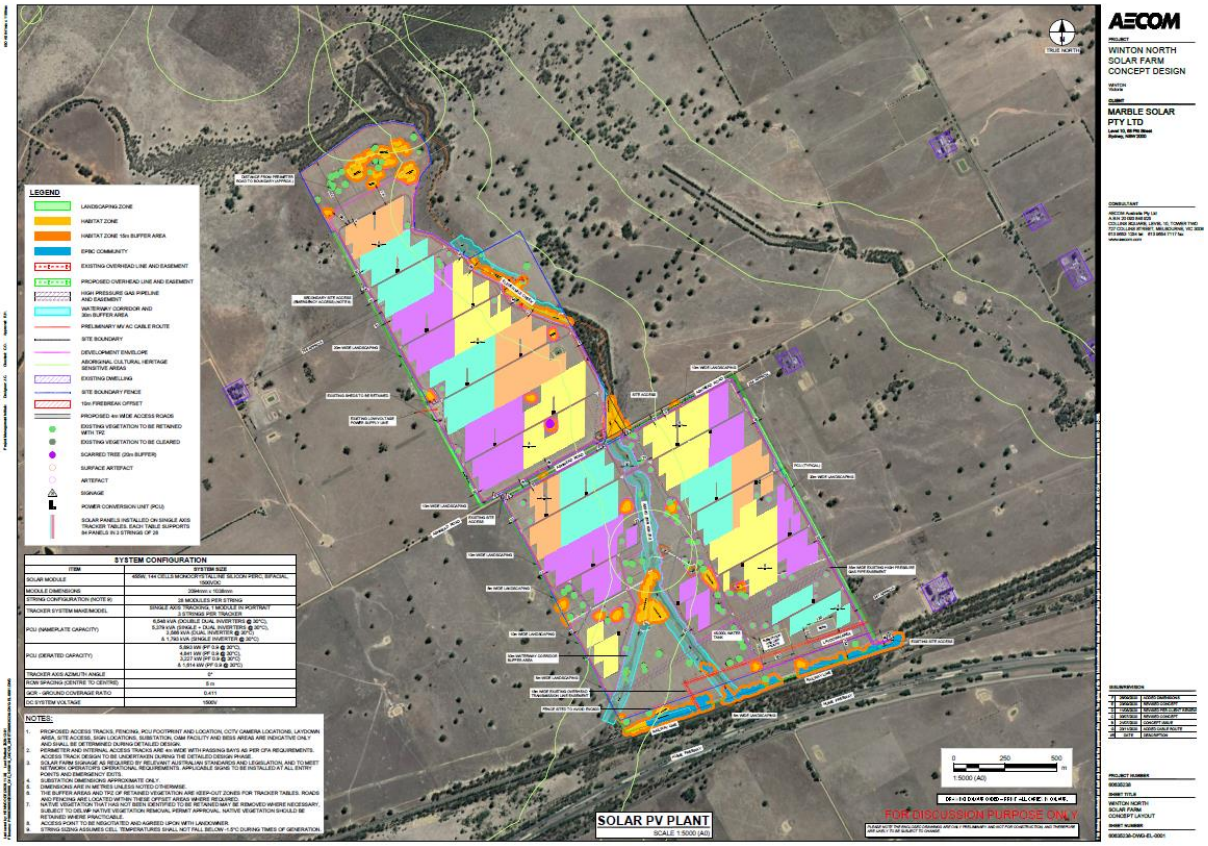
The construction period of the project is expected to be up to 18 months. During construction, a site office compound and temporary laydown areas will be established.

The lifespan of the project is estimated to be 30 years. At the end of its useful life, the solar farm can be decommissioned and traditional agricultural use will resume back on site (noting the planning controls relevant at the time of decommissioning will be applicable).

A copy of the site layout plan is provided below and at Appendix C which includes a detailed explanation of the constraints identification process undertaken to guide the concept layout, setbacks together with any relevant assumptions.

Technical drawings of all solar farm infrastructure has been included in this submission, which includes fencing, tracker, BESS, switch room, control room, substation, and PCU. Design drawings have also been provided for typical cable trenching and road design. Please refer to Appendix C for these details and also an outline by AECOM of the updates to the concept design over time.

Figure 3-1 Site Layout Plan



3.2 Infrastructure Connections and Licences

In terms of making best use of existing infrastructure, the subject site intersects a 66kV distribution line to the southern portion of the site which the project is proposing to connect into via an on-site substation. This removes the need to establish further distribution lines in this area.

An electrical line easement is proposed across Ashmead Road to electrically connect the northern and southern parts of the project site.

3.3 Vegetation Removal

The Biodiversity Assessment prepared by Biosis surveyed the native vegetation onsite. This is detailed in Appendix D. The proposed development would require the removal of 16 scattered trees from within location category 2 and no removal of patch vegetation. The strategic biodiversity value score of the native vegetation to be removed ranges between 0.110 and 0.598 indicating that the site has low to medium biodiversity values according to DELWP's mapping. The trees to be removed have been assessed against the large tree values assessment requirements outlined in the DELWP (2018) Assessors Handbook. This assessment indicates the trees are of low to medium value in the landscape as most of the trees are isolated and provide poor physical habitat connectivity and range in health from poor to healthy. The species of native vegetation to be removed includes:

- 11 Grey Box trees;
- 2 White Box trees;
- 2 dead trees; and
- 1 River Red-Gum tree.

The vegetation in patches corresponds to three Ecological Vegetation Classes across Victorian Riverina and Central Victorian Uplands bioregions. The removal of trees will be managed according to the *Victorian Guidelines for the removal, destruction or lopping of native vegetation*. The removal of native vegetation forms a key assessment of the planning application. Marble Solar has undertaken extensive design work to support the retention of existing native vegetation on the site, particularly patches around the Eleven Mile Creek. The removal of vegetation along Eleven Mile Creek will be avoided.

A few scattered paddock trees will need to be removed to enable construction of the project.

Management measures for the protection of native vegetation during the construction, operation and decommissioning stages of the solar farm are welcomed to be included in a Construction Management Plan required by the planning approval. Guidance for the required protection areas is included within the Biodiversity Assessment and the proposed layout incorporates the required tree protection zones for the retained trees and vegetation patches.

3.4 Traffic and Access

The proposed access to the site for construction vehicles is from the Hume Freeway, to Bowers Road, Lee Road, Gould Road and Ashmead Road. This route was selected as the condition of the road was suitable for temporary construction activity proposed for the project, and the number of residences impacted by passing construction traffic is low. Please refer to the Traffic Assessment prepared by Impact Traffic Engineering in Appendix E.

3.5 Surface water

The Eleven Mile Creek which bisects the site has been assessed for flood impacts by Water Technology and a meeting with the Goulburn Broken Catchment Management Authority (CMA). A 30 meter setback has been provided either side of the waterway to satisfy the requests of the CMA. General storm water management principles such as maintaining appropriate groundcover under the panels, to increase filtration and avoid sediment loading from the catchment are expected to be

detailed as part of a construction management and operational management plan. This application includes referral comments provided by Goulburn Broken CMA, please refer to Appendix J.

3.6 Agricultural land

The subject site is within an area of agricultural land and has historically supported cropping and grazing. The site represents a small proportion of the total available land to dryland agriculture within the Benalla region and is unlikely to have any strategic effect.

The site is surrounded by grazing enterprises, which characterise this area of Benalla. Broadacre cropping is challenging for this area as it requires a high standard of active management otherwise there will be soil structure decline and susceptibility to waterlogging.

This site and region is not identified as being Strategic Agriculture Land with respect to the Hume Regional Growth Plan released by DELWP (see Figure 4.6.2). An agricultural assessment has been prepared by Phillips Agribusiness for the project; refer to Appendix F.

3.7 Construction Process

Marble Solar hopes to commence construction in 2021 and to commence operations in 2022. It is expected that a Construction Management Plan will be required to be prepared and submitted to the responsible authority for approval as a condition of the planning permit.

3.8 Stakeholder Engagement and Community Benefits

3.8.1 Stakeholder Engagement

A stakeholder engagement plan has been prepared for the project (see appendix G) that outlines the project's commitment to engage key stakeholders and community members throughout the development and construction phase. Initial discussions with neighbours and several other key stakeholder groups such as Benalla Rural City Council, Goulburn Broken CMA, APA Group, CFA and DELWP have already occurred as part of the pre-application process.

Furthermore, a community webinar session was held on Thursday 15 October, hosted by Marble Solar and community consultation experts KJA. Nearby residents and key community stakeholders were sent letterbox invitations to attend. The webinar was also advertised in the local newspapers, The Boarder Mail and the Benalla Ensign. Supporting material including the slide presentation is attached under Appendix G.

3.8.2 Employment, Supplier and Business

A range of employment and supplier opportunities will be generated during construction. Construction is expected to take between 12-18 months and require a peak workforce of up to 250 people. Where possible, Marble (through its construction contractor) will maximise the opportunities provided to local businesses and contractors. Non-local staff are likely to reside in the Benalla, Glenrowan and/or Wangaratta. During this stage of the project, accommodation, meals and support services will be required to support construction activities, which will stimulate business locally. Additionally, there will be opportunities for local companies to supply raw materials and construction plant.

After the facility has been constructed and is operational there will be a requirement for support services as part of the maintenance regime of the solar farm. This includes preventative maintenance for the solar farm equipment, washing solar panels, and land management (eg weed spraying). It is expected that two full-time staff would be required during operation of the solar farm.

3.8.3 Community Benefit Sharing Initiative

Marble has committed to supporting a $20,000 per annum community benefit fund, which will commence when the solar farm begins operating and generating revenue. Marble will work with the

Benalla Shire Council and the local community to finalise details on how the fund will operate, including the types of projects which will receive support and how the funds will be administered.

4. RELEVANT VICTORIAN PLANNING PROVISIONS

The *Planning and Environment Act 1987* (the Act) provides the legal framework for Victoria's planning system. The purpose of the Act is to establish a framework for planning the use, development and protection of land in Victoria. The Act enables the establishment of the Victorian Planning Provisions and Planning Schemes.

The subject site is affected by the planning controls, policies and provisions of the Benalla Planning Scheme.

4.1 State and Regional Planning Policy Framework

- Clause 12 Environmental and Landscape Values
  - Clause 12.01 Biodiversity
  - Clause 12.01-2 Native Vegetation Management
  - Clause 12.03 Water Bodies and Wetlands
  - Clause 12.05-2 Landscapes
- Clause 13 Environmental Risks and Amenity
  - Clause 13.02-1 Bushfire Planning
  - Clause 13.05 Noise
- Clause 14 Natural Resource Management
  - Clause 14.01-1 Protection of Agricultural Land
  - Clause 14.02-1 Catchment Planning and Management
- Clause 17 Economic Development
  - Clause 17.01R Diversified Economy – Hume
- Clause 19 Infrastructure
  - Clause 19.01-1S Energy Supply
  - Clause 19.01-2S Renewable Energy
  - Clause 19.01-2R – Renewable Energy - Hume

4.2 Local Planning Policy Framework

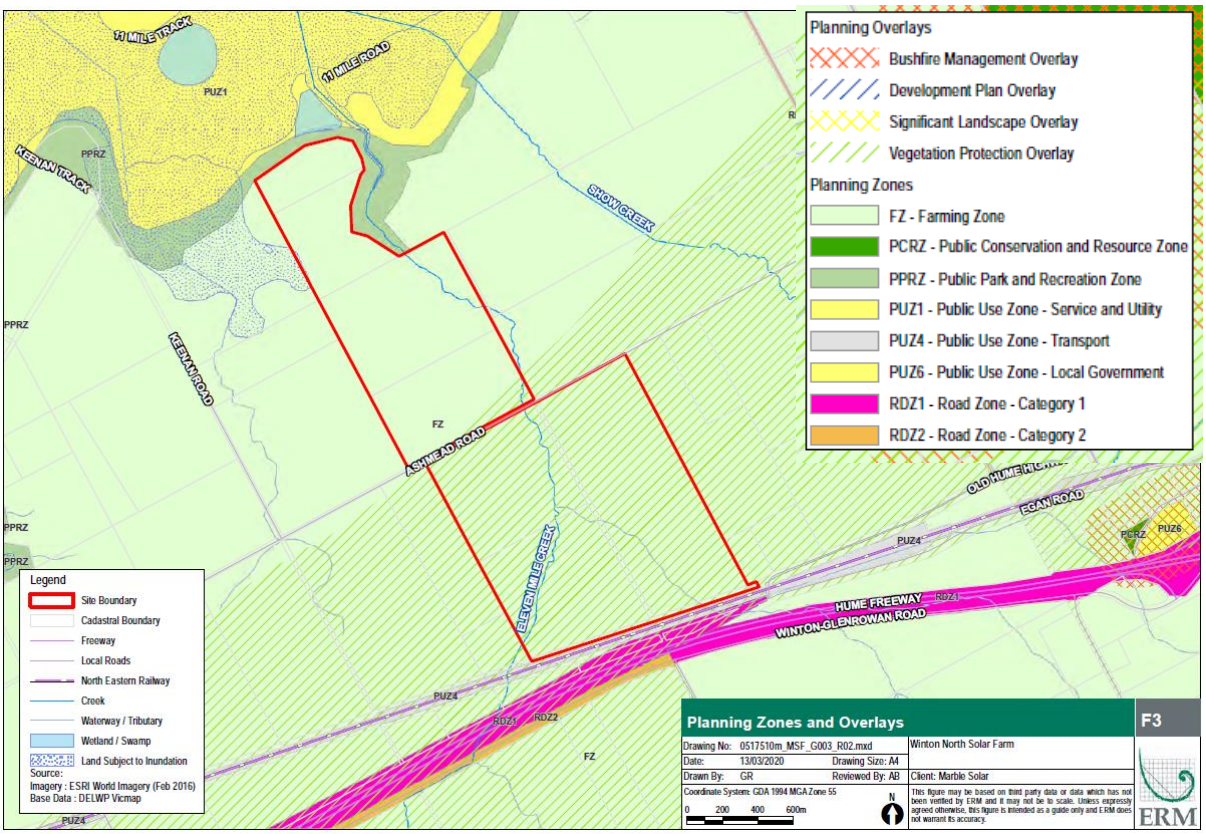
- **Clause 21.03-1 Flora and Fauna** aims to conserve and protect native vegetation and fauna.
- **Clause 21.03-2 Landscape Character** seeks to manage and protect the landscape character of the municipality, including Warby Ranges Park, and features including ridges and view corridors.
- **Clause 21.03-3 European and Aboriginal Heritage** aims to protect sites and environs of heritage significance.
- **Clause 21.04-1 Flooding** seeks to discourage development in areas affected by flooding.
- **Clause 21.04-2 Bushfire** requires consideration of development on the most suitable site to minimise the threat from bushfire.
- **Clause 21.04-3 Climate Change** recognises the need to plan for climate change and variability, and strategies to support new technology to reduce greenhouse emissions.
- **Clause 21.04-4 Land Use Conflicts** provides strategies to ensure industrial and residential development is suitably located with buffers from natural landscapes to reduce the risk of adverse amenity impacts.

- **Clause 21.05-1 Agriculture** aims to consider proposals for non-agricultural uses in rural areas if they provide broader community benefit and are compatible with surrounding agricultural use.
- **Clause 21.05-2 Water** seeks to discourage development in the catchment that is detrimental to water quality.

4.3 Planning Controls

The site is affected by the Farming Zone, and the Vegetation Protection Overlay – Schedule 3.

Figure 4-1 Planning Zones and Overlays Map



4.3.1 Farming Zone

The site is located within the Farming Zone pursuant to Clause 35.07 of the Planning Scheme.

The purpose of this zone is:

- *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.*

Under the provisions of **Clause 35.07-1**, a planning permit is required for the use of the site a renewable energy facility (solar farm). The use must meet the requirements of Clause 53.13.

Pursuant to Clause 35.07-1, a planning permit is required for the use of the site as a minor utility installation (substation). The use must meet the requirements of Clause 53.13.

Pursuant to Clause 35.07-1, a planning permit is required for the use of a utility installation (battery storage). The use must meet the requirements of Clause 53.13.

Pursuant to Clause 35.07-4, a permit is required for building and works for Section 2 (permit required) uses.

4.4 Overlays

4.4.1 Vegetation Protection Overlay

The purpose of this zone is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To protect areas of significant vegetation.*
- *To ensure that development minimises loss of vegetation.*
- *To preserve existing trees and other vegetation.*
- *To recognise vegetation protection areas as locations of special significance, natural beauty, interest and importance.*
- *To maintain and enhance habitat and habitat corridors for indigenous fauna.*
- *To encourage the regeneration of native vegetation.*

Clause 1.0 of Schedule 3 of the Vegetation Protection Overlay, defines the "Statement of nature and significance of vegetation to be protected" as follows:

This area provides one of the limited habitat areas remaining of the Regent honeyeater which is listed as an endangered species under the Fauna and Flora Guarantee Act.

The area also provides habitat for Squirrel gliders, Brush-tailed phascogales (Tuan), Grey-crowned babblers, Bush stone curlews and Quools, which are listed as rare or endangered under the Fauna and Flora Guarantee Act.

The area maintains vegetative links between the Warby Range and the Great Dividing Range used as habitat and migratory routes by the indigenous fauna species.

Permit requirement:

Under the provisions of Clause 42.02, a permit is required to remove, destroy or lop any vegetation specified in a schedule to this overlay, unless listed in table to Clause 42.02-3 or if in accordance with a native vegetation precinct plan specified in the schedule to Clause 52.16. Application requirement:

An application must show the species of native vegetation proposed for removal and measures proposed to minimise the removal of Mugga Ironbark, White Box, Yellow Box and Blakeley's Red Gum all of which support the survival of the Regent honeyeater and the other threatened species

4.5 Particular Provisions

4.5.1 Clause 52.02 – Easements, Restrictions and Reserves

The purpose of this provision is:

'To enable the removal and variation of an easement or restrictions to enable use or development that complies with the planning scheme after the interests of affected people are considered.'

Before deciding on an application, in addition to the decision guidelines in clause 65, the responsible authority must consider the interests of affected people.

4.5.2 Clause 52.17 – Native Vegetation

The purpose of this provision is to ensure that impacts on native vegetation do not result in a net loss to biodiversity and do not significantly degrade the land and water. This provision necessitates meeting the requirements of the *Guidelines,* an incorporated document to the Planning Scheme discussed in Biosis' biodiversity assessment.

Pursuant to this clause, a permit is required to remove, destroy or lop native vegetation, including dead native vegetation. Exclusions are listed in Clause 52.17-7. It is proposed to remove 16 scattered trees.

4.5.3 Clause 53.13 – Renewable Energy Facility (Other Than Wind Energy Facility

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.'*

This Clause applies to an application under any provision of the Planning Scheme to use or develop land for a renewable energy facility (other than a wind energy facility). The Clause provides an outline of Application Requirements and Decision Guidelines.

4.5.4 Referral Provisions

The table below outlines the referral requirements for the project under the Benalla Planning Scheme.

Table 1 Referral Provisions

Control	Kind of Application	Referral Authority	Type of Authority
Clause 66.02-2 Native Vegetation	To remove, destroy or lop native vegetation in the Detailed Assessment Pathway as defined in the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017).	Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987)	Recommending referral authority
Clause 66.02-4 Major electricity line or easement	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.	The relevant electricity transmission authority	Determining referral authority

4.6 Other Relevant Documents

4.6.1 Solar Energy Facilities Design and Development Guidelines (Department of Environment, Land, Water and Planning, 2019)

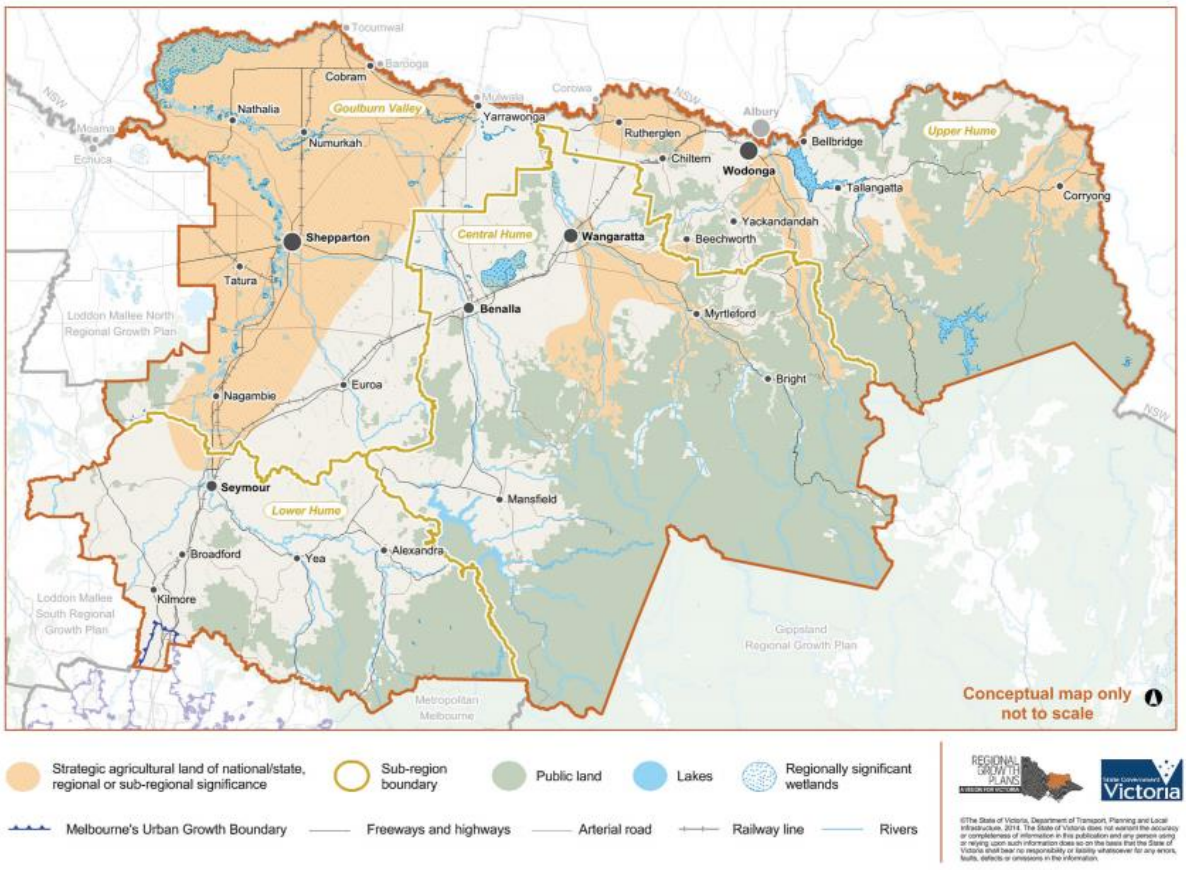
These guidelines were developed to provide applicants, the community, regulators and responsible authority information around the assessment and development process for large-scale solar energy facilities in Victoria. They provide proponents guidance around improving their proposal to minimise impacts on local communities and address the appropriate legislation. A detailed response to this is provided in Section 5.15 of this report.

4.6.2 The Hume Regional Growth Plan

The Hume Regional Growth Plan (HRGP) provides a regional approach and understanding of land use planning in the Hume Region, which includes Benalla.

The HRGP also maps strategic agricultural land within the region which is of state or sub-regional significance. The subject site and surrounding area is not considered as strategic agricultural land, as shown in *Figure 4-2* below.

Figure 4-2: Strategic Agricultural Land, Hume Regional Growth Plan



Source: Hume Regional Growth Plan

4.6.3 Goulburn Broken Catchment Management Strategy

The site is located within the Productive Plains sub-catchment social-ecological systems (SES) which is identified as the foothills and floodplains towards the north of the Catchment.

The area includes:

- Habitat provided by vegetation along waterways, roadsides, ranges and spring soak wetlands

  Dryland farming includes cattle, sheep, cropping and viticulture and many farms remain in same families for generations with average farming populations ageing
- Rivers and creeks in moderate condition and wetlands in moderate to good condition.
- Landcare and conservation management networks establish sustainable farming practices and protect threatened species
- More habitat loss, ageing farming populations and declining social connection are threats to biodiversity and farming futures

Major threats to biodiversity in this SES include continued fragmentation and loss of species diversity resulting in a shift from the fragmented (10-30 per cent extent) to a relictual ecosystem (relictual is defined as less than 10 per cent native vegetation cover).

Threatened species and communities include the threatened woodland bird community, Bush Stone-curlew, Grey-crowned Babbler, Swift Parrot and Regent Honeyeater, and flora such as the Euroa Guinea flower, orchids and species associated with grasslands. Focus communities include Box Grassy Woodlands, and creek line Grassy Woodlands in the Goldfields Bioregion.

Agriculture is a dominant land use in the SES, however land use varies in relation to soil type and climatic condition as a result of erosion, organic matter decline, soil acidification and contamination, compaction, salinization and biodiversity decline which are all a threat to soil in the SES.

The SES also recognises the Winton Wetlands as one of the largest restoration projects in the southern hemisphere. The wetland complex provided important habitat for a large number of waterbird species including the migratory Lathams Snipe and protects seven nationally threatened flora species.

The document species that the productive Plains SES's relative stability presents an opportunity to address incremental threats and to develop general resilience in advance of an uncertain future. Management measures relevant to the project include:

- Work with landholders to protect and improve biodiversity on private land and build understanding of its contribution to sustainable and profitable farming
- Create awareness and acceptance of sustainable management practices to improve land and soil condition

5. PLANNING ASSESSMENT

5.1 Renewable Energy, Employment and Social Benefits

5.1.1 Renewable Energy Production and Sustainable Development

Victoria's Renewable Energy Action Plan recognises that renewable energy is already the cheapest and cleanest new power generation source, and that by acting now on renewable energy, we give ourselves the best opportunity to capitalise on the transformation and transition, reducing the risk of higher late adoption costs. The Planning Policy Framework recognises this broader aim, most specifically within Clause 19.01-2 of the Planning Scheme, which establishes that the development of well sited renewable energy facilities is to be facilitated in Victoria.

The Project would generate clean and renewable energy, enough to power approximately 42,000 average Victorian homes and avoid the production of over 170,000 tonnes of CO_2 per annum, on average over the project's expected 30-year lifetime. There is existing electricity transmission infrastructure crossing the southern portion of the subject site that the facility will connect into via an on-site substation.

By producing renewable energy and reducing greenhouse gas emissions, the proposal is consistent with Clause 15.02-1S, which seeks to encourage land use and development which minimises greenhouse gas emissions. Further, the Project would contribute positively to the economic diversity and development within the municipality and would generate clean and renewable energy for the benefit of all Victorians (Clause 11.12-1).

The site is well located for a solar facility in terms of its proximity to existing infrastructure, as it makes use of the existing electricity network, minimising the footprint of the required high voltage electrical infrastructure that would be needed to connect the solar farm to the grid. Subsequently, this avoids the need to impact neighbouring land and remove vegetation for transmission line easements, and deriving further benefit from the existing infrastructure, as sought under Clause 19. Avoidance of native vegetation has been a key driver of the layout and protection of adjoining land uses has been recognised through adequate setbacks. Impacts will be further mitigated through the implementation of appropriate construction and operational management requirements.

5.1.2 Economic Benefit

As mentioned in Section 3.9 of this report, the project will create jobs and supplier opportunities during construction and operation which can be sourced locally. Construction is expected to last between 12-18 months and will require a peak workforce of up to 250 people. During construction, accommodation, meals and support services will be required to support construction activities, which will create indirect business opportunities in the local area. These various employment, supplier and business opportunities will assist in achieving the objectives of Clause 31.07-1, Clause 17 and local and regional policy objectives for a diversified local economy.

The operation of the site will create two full time jobs, further supporting local employment opportunities.

The opportunity to support diversification of the economy, with specific reference to solar generation opportunities, is also recognised in the Hume Regional Growth Plan.

5.2 Impact on Land

Clause 35.07 (Farming Zone) seeks to, amongst other things, provide for and conserve agricultural land, encourage the retention of employment and population to support rural communities and encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision. The site is also located close to other industrial land uses including a mine and several quarries.

The land is capable of hosting a solar farm of this scale and the location makes use of existing infrastructure, being in close proximity to the electricity grid to enable connection to the network.

The proposed land use will provide local employment, supplier and business opportunities. In this regard, the proposed land use directly responds to the purpose of the Farming Zone where it seeks to encourage the retention of employment and population to support rural communities. Land management practices are expected to be a requirement of the permit, expressed through permit conditions for a Construction and Operational Management Plan.

While the primary land use of the site may change from agriculture after the solar farm is established on the site, grazing will continue. This has the added benefit of assisting in the maintenance of the vegetation ground cover. In this regard the land will continue to provide agriculture use.

Whilst it is noted that the proposal will result in a change in the visual appearance of the site which includes panels, infrastructure, substation and battery storage, it is not considered to have an adverse impact on the surrounding environment. This is because the views will only be occasional while driving along surrounding roads that are not primary tourist routes. The site is also located in an area where existing electricity infrastructure is present and the scale of the proposal coupled with existing infrastructure will not result in a detrimental amenity outcome.

Given the subject site does not form a significant view or vistas and that views would be broken up by existing roadside vegetation, the visual change proposed by the development is not considered unreasonable.

5.2.1 Avoiding State Strategic Agricultural Land and Irrigated Land

The Hume Regional Growth Plan is supportive of renewable energy development to diversify the economy and ensure security. The plan recognises the economic benefit that uses other than traditional agriculture can provide to the regions.

The project would be located on land currently used for agricultural grazing and some cropping. Noting the approximate 30-year lifespan of the solar farm, the land will be rested from dry-land cropping activities. It is anticipated that sheep will be able to be grazed on the subject site during the operation of the solar farm, which will reduce the need for mechanical slashing on the vegetative ground cover underneath and in between the solar arrays and provide useful maintenance of the ground cover, particularly in summer when bushfire prevention is necessary. Considering the 30-year lifespan of the project, it is intended that this is a temporary use and that the land can be used for agricultural purposes in the near future.

At the end of the solar farm's lifespan, the land is anticipated to return to agricultural land use once it is decommissioned. The project will not result in the fragmentation of land. It is expected a condition on any permit issued will include requirements for a decommissioning plan to be prepared at the time of decommissioning.

An Agricultural Land Assessment was prepared by Phillips Agribusiness (Appendix F) to analyse the local climate, soils and topography and vegetation to assess agricultural capability and capacity. The site represents a small proportion of the total available land to dryland agriculture within the Benalla region and is unlikely to have any strategic effect.

The property lies within the Mokoan Land Unit, a sub system of the Benalla Land System. The Mokoan Plains land unit is classified as 3 or 'average.' The A Horizon is a clay loam with an increasing clay content with depth and overlies a brown clay subsoil. The cropping enterprise on the property is based on direct drilling technology (to avoid deterioration in soil structure, retain soil fertility levels and avoid erosion risk) where cereals and oilseeds are the major crops. The grazing enterprise on the land is wool production, followed by beef and prime lamb. The subject site is not identified as being strategic agricultural land within the Hume Regional Growth Plan or within the Benalla Planning Scheme. In this regard the proposal does not impact prime agricultural land (as established in land

use planning), meeting the objective of Clause 14.01-1 and as discouraged within the *Solar Energy Facilities - Design and Development Guidelines, August 2019* prepared by the Department of Environment, Land, Water and Planning.

Critically, the site is not within an irrigation district.

The Hume Regional Growth Plan is generally supportive of renewable energy development to diversify the economy and ensure security. The plan recognises the economic benefit that uses other than traditional agriculture can provide to the regions, and such uses are broadly supported.

It is not considered that the removal of the site land will have a negative impact on regional agriculture. The quality of the land on site is considered 'moderate' and favours broadacre cropping and limited grazing activity. Whilst the current grazing production is productive under a minimum cropping regime, care needs to be taken in soil management to avoid soil structure decline and susceptibility to waterlogging. The loss of land to the solar farm represents a small proportion of the total available land to dryland agriculture within the Benalla region and unlikely to have any strategic effect. The loss of agricultural income is offset by the value of the proposal. The subject site is only part of the landowner's total land holdings and there is no loss or retirement of rural skills. Should a planning permit be issued, conditions requiring management plans would be required and include measures that would address potential impacts to neighbouring agricultural uses.

The current cropping enterprise is to service the grains market, both cereals and oilseeds. The major marketing channel is GrainCorp Limited. There are a number of privately owned stock feed companies in the region that serve as alternative market outlets. The current livestock enterprise is limited to lamb fattening and occurs on a seasonal basis (usually between April – September and February – March). The dry sheep equivalents involved are estimated at 1500 and play a minor role in the support of continuous cropping regimes. At this level, any loss is unlikely to have an impact on the viability of livestock operations across the region.

5.3 Amenity Impacts

This section outlines a response to each of the potential impacts to the site and surrounding residences and how the proposal aims to mitigate impacts.

5.3.1 Visual Impact

The Project will result in a change in the visual appearance of the site. Visual change does not equate to a negative or detrimental impact, particularly when the views are only occasional or occur while driving along roads that are not primary tourist routes.

The site is located in a rural setting, where land modified by agricultural uses dominate, but where existing electricity infrastructure also is visually present. There are no Significant Landscape Overlays or local policies which identify important views or vistas which include the subject site. In this regard, it is considered that visual change can be accommodated in the immediate area.

Similarly, there are no places of assembly or public parks which would be visually impacted by the solar farm. Aside from views from private property, views to the site would largely occur when driving past the solar farm.

Photomontages have been prepared, refer to Appendix H for the images.

These photomontages were modelled assuming the highest potential ground coverage and tallest potential infrastructure being considered for this project. The infrastructure modelled has panels with a width of 2m and a maximum tip height of 3 metres.

A landscape plan has also been provided by AECOM (Appendix K) that provides detail of the proposed planting, including species, density and separation. The Landscape Plan proposes the following planting:

- 20m wide solid screen planting along the following boundaries:

- Western – north of Ashmead Road, for the length of solar panel infrastructure.
- Eastern – south of Ashmead Road (except for south east corner to allow for site access)

- 10m wide solid screen planting along the following boundaries:
  - Western – south of Ashmead Road (for length of panels only, 5m wide where there are no panels).
  - Ashmead Road interface – north and south of the Road.
- 5m wide scattered infill planting along the following boundaries:
  - Southern (where there are breaks in the existing vegetation).
  - Western – south of Ashmead Road (small sections only)

The Landscape Visual Impact and Glare Assessment (Appendix I) assessed the project for cumulative impacts and concluded that although there will be some visual impact, the predominant views would be along Hume Freeway which would be fleeting and filtered by existing and proposed vegetation. Given the subject site does not form a significant view or vistas and that views would be broken up by existing roadside vegetation, the visual change proposed by the development is not considered unreasonable. The project will also include other infrastructure such as the battery storage and substation. The larger of the two - the proposed substation is proposed to be located near the 66kV transmission line and will house a substation, switchyard, operations and maintenance facilities, a small car park and access tracks. The buildings and structures within the facility will be of a similar scale and height to other existing rural infrastructure such as farm sheds. Therefore, these structures are not considered to have a detrimental visual impact.

5.3.2 Glare/Glint

The glare assessment prepared by ERM, whereby the results are based on Forge Solar Glare Gauge Analysis Tool, indicated that:

> *No glare will be experienced from any of the identified locations. Specifically, no green or yellow glare was experienced. This is due to the proposed single-axis PV array, which are designed to optimise the efficiency of energy collection, by reducing the angle of incidence over the course of the day. This design reduces the potential for glare hazards to occur. Glare hazards can be caused due to the reflective PV surfaces used, angel of incidence and strength of the light sources.*

5.3.3 Noise

When operational, the project would not be considered to produce noise which would impact the surrounds' amenity and wildlife.

During the construction period, the core hours of onsite activity are between 7am and 5pm each weekday. Work may need to be undertaken on Saturdays from time to time. Construction hours on a Saturday would be 9am to 5pm unless otherwise advised. If work is to occur outside normal working hours as defined by the EPA, the project will comply with the applicable noise limits specified in EPA publication 1254 for work undertaken outside of normal working hours.

It is expected that a condition on any permit issued will require a Construction Management Plan, which will specify construction hours and noise requirements.

5.3.3.1 EPA's Noise from Industry in Regional Victoria (NIRV)

A Noise Assessment has been provided by AECOM (Appendix M).

The main sources of noise from the operation of the proposed solar farm will be the Power Conversion Units (PCUs) comprising the battery storage facility inverters, the substation transformer and the solar panel tracking motors.

As there are residences located in the vicinity of the site of the proposed solar farm. The EPA Guidelines Noise from Industry in Regional Victoria (NIRV) will apply to noise emissions from the proposed solar farm at these nearby residences.

The Recommended Maximum Noise Levels have been determined in accordance with the procedures of NIRV for each period at the nearest and potentially worst noise-affected residential locations.

The determined Recommended Maximum Noise Levels are presented in Table 2, below. The Recommended Maximum Noise Levels presented apply to the noise emitted from the proposed solar farm, outdoors within 10 metres of the dwellings at the identified nearest receptors.

Table 2: Recommended Maximum Noise Levels

NIRV Time Period	Time	Recommended Maximum Noise Level [dB(A)]
Day	7am to 6pm Weekdays 7am to 1pm Saturdays	46
Evening	6pm to 10pm Weekdays 1pm to 10pm Saturdays 7am to 10pm Sundays and Public Holidays	41
Night	10pm to 7am	36

Computer noise modelling was performed to predict the solar farm operational noise levels at the nearest residential locations. The noise levels were predicted for neutral weather conditions, and with a moderate breeze assisting noise propagation towards the sensitive receptor locations.

The inverters are proposed to operate at up to 100% load during the hours 7am to 10pm, which covers the NIRV Day and Evening periods, and at no greater than 50% load (thus emitting less noise), from 10pm to 7am, which is the Night period.

Under these proposed operating conditions, the predicted Effective Noise Levels are compliant with the Recommended Maximum Noise Levels at all receivers for all three periods under both modelled weather conditions.

The modelled noise levels under conditions favouring noise propagation towards the receivers are in excess of the Recommended Maximum Noise Levels at two locations:

- 6dB in excess of the Night Period Recommended Maximum Level at 530 Old Hume Highway;
- 5dB in excess of the Night Period Recommended Maximum Level at 131 Ashmead Road.

Noise mitigation to achieve the required noise level reductions has been included in section 6.0 of the Noise Assessment including the use of localised acousting screening around PCUs to control noise. The required 10dB reduction can be achieved by installing localised acoustic screening to the PCUs.

5.3.4 Heat Island Effect

The DELWP *Solar Energy Facilities Design and Development Guideline* (2019) identifies that:

- A proponent should consider providing a minimum setback of 30m from any part of a component that makes up a solar pod or zone, or other building or structure, measured from the neighbouring property boundary.
- Where a solar energy facility is proposed adjacent to existing horticultural or cropping activities, a minimum 30m separation distance is appropriate, measured from the property boundary to any part of the physical structure of the facility.

The updated Concept Layout and Design (part of Appendix C) clearly delineates the setback of the facility (including solar panel infrastructure and other associated buildings and structures) from each

external boundary. Some boundaries contain less than the 30m setback suggested above, as setbacks have been provided in response to the immediate site context. This includes:

- **Northern Boundary**: The site is bound to the north by the Winton Wetlands which does not support horticultural or cropping activities. Due to the steep terrain, aboriginal heritage significance and existing ecological features in the northern portion of the site, no solar panels or associated infrastructure has been proposed within 335m of the boundary. In addition, a 10m fire break is located adjacent to the boundary.
- **Eastern Boundary (north of Ashmead Road)**: North of Ashmead Road, the site is generally bound to the east by Eleven Mile Creek and associated vegetation. Given the extent of existing vegetation and significant distance to any sensitive receptor (dwelling) from this boundary, solar panels and associated infrastructure has been proposed a minimum of 19m of the boundary and 40m of the Creek. In addition, a 10m fire break is located adjacent to the boundary or Creek buffer area.
- **Eastern Boundary (south of Ashmead Road):** South of Ashmead Road, the eastern boundary of the site contains limited existing vegetation screening, with two sensitive receptors located in proximity to the site, comprising:
  - A single dwelling house located along the Old Hume Highway approximately 300m from the boundary (sensitive receptor A).
  - A single dwelling house located along Ashmead Road approximately 225m from the boundary (sensitive receptor B).

Due to the limited existing vegetation and the proximity of the sensitive receptors, a 20m solid screen planting zone plus 10m fire break are located adjacent to the boundary. Solar panels and associated infrastructure are therefore proposed a minimum of 30m from this boundary, approximately 250m from sensitive receptor A and 340m from sensitive receptor B.

- **Southern Boundary:** The site is bound to the south by the Melbourne to Albury regional railway line, with the Old Hume Highway and Hume Freeway further south. Due to the existing ecological features and a transmission line easement in the southern portion of the site, no solar panels or associated infrastructure has been proposed within 154m of the boundary. In addition, a 5m infill planting zone is located adjacent to the boundary to optimise screening. In addition, a 10m fire break is proposed along the perimeter security fencing sited approximately 84m inwards of this boundary.
- **Western Boundary (north of Ashmead Road)**: North of Ashmead Road, the western boundary of the site contains limited existing vegetation screening, with a sensitive receptor located in proximity to the site, comprising:
  - A single dwelling house located along Keenan Road approximately 720m from the boundary (sensitive receptor C).

Due to the limited existing vegetation and the proximity of the sensitive receptor, a 20m solid screen planting zone plus 10m fire break are located adjacent to the boundary. Solar panels and associated infrastructure are therefore proposed a minimum of 30m from this boundary, approximately 755m from sensitive receptor C.

- **Western Boundary (south of Ashmead Road):** South of Ashmead Road, the western boundary of the site contains limited existing vegetation screening and there are no sensitive receptors (dwellings) within proximity of this boundary. Solar panels and associated infrastructure proposed along this boundary extends for 750m south of Ashmead Road, and a 10m solid screen planting zone plus 10m fire break has been provided adjacent to the panel locations. Where no solar panels or infrastructure is provided adjacent to the boundary, a reduced to 5m infill planting has been proposed. The solar panels and associated infrastructure are a minimum of 22m from the boundary.

5.3.5 Other impacts to neighbouring properties

Fencing is to be included for the Project, including perimeter security fencing to protect the public and stock from entering the solar farm facility where there will be live electricity in parts. Fencing will also help prevent any pests that enter the site from passing onto neighbouring properties. Fencing is to be managed as part of the overall site maintenance.

It is expected a condition on the permits will require a Construction Management Plan and Operation Management Plan be submitted. By managing pests and weeds and setting clear operational requirements, potential for direct offsite impacts to other agricultural uses would also be managed.

Communication between Marble Solar and adjoining land owners (and the broader community) is already underway and will continue and a feedback process will be put in place should any concerns arise.

5.3.6 Responding to Community Concerns

A Stakeholder Management Plan has been prepared for the project, which outlines how community or stakeholder concerns or feedback will be able to be communicated to Marble Solar, and what the grievance management process will be. Refer Appendix G for the Stakeholder Management Plan.

During construction, the appointed lead construction contractor would establish and maintain a hotline for complaints and concerns relating to amenity impacts related to on-site activities. Marble Solar will monitor the contractor's handling of complaints and ensure that the community receives appropriate responsiveness and that issues are being addressed appropriately.

5.4 Environmental Matters

5.4.1 Flora and Fauna Impacts

Protection of native vegetation is a key driver of the proposed layout. Refer to the Flora and Fauna Assessment undertaken by Biosis within Appendix D for further information on the vegetation removal.

Overall, as part of the Flora and Fauna assessment, the subject site was found to include three ecological vegetation classes. Of significance is the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) threatened ecological community: Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, which is present to the south of the subject site. Care has been taken to avoid the removal of vegetation in this area, as can be seen on the layout plan (refer Appendix C).

Marble Solar has undertaken extensive design work to support the retention of existing native vegetation on the site, particularly patches around the Eleven Mile Creek

As part of the preparation of this planning application, targeted surveys were undertaken for Sloane's Froglet, a species listed under the EPBC Act with potential habitat on the project site. The targeted survey concluded that there was a low likelihood of occurrence of the Sloane's Froglet.

Further, the site is identified as having potential habitat for the Swift Parrot (listed under the EPBC Act as critically endangered). Critically, the site does not contain key Swift Parrot feed species such as Mugga Ironbark but supports Grey Box and White Box trees that will be impacted. 11 Grey Box and 2 White Box trees will be removed but this tree removal is not considered to constitute a significant impact on the Swift Parrot.

As identified above, impacts on remnant patches of vegetation representing the Grey Box Grassy Woodland community along the southern boundary of the site will be completely avoided.

In terms of vegetation to be removed, all patches of vegetation are to be protected, and of the 156 scattered paddock trees, it is proposed to remove 16 trees. This is a reduction from the original proposal which included the removal of 28 trees. The strategic biodiversity value score of the native vegetation to be removed ranges between 0.110 and 0.598.

Clause 12.01-1 of the Benalla Planning Scheme outlines that decision making when it comes to impacts on biodiversity should take into consideration cumulative impacts, fragmentation of habitat and the spread of pest plants, animals and pathogens into natural ecosystems. DELWP Hume Region provided information on the number of trees removed for other solar farms of a similar scale in the region including:

- Goorambat (66 trees);
- West Makoan (58 trees);
- Glenrowan (58 trees);
- Winton (46 trees);
- Kennedys Creek (16 trees);
- Goorambat-Stewarton (11 trees)

The Winton North Solar Farm proposes to remove 16 scattered trees and no patch vegetation. Based on the above list, this is on the lower end of tree removal and biodiversity impacts for projects of a similar scale in the region.

Clause 21.03-1 of the Benalla Planning Scheme includes objectives to minimise vegetation removal for new development and encourage the linking and protection of remnant native vegetation to improve habitat. Given the high level of vegetation protected onsite, and noting the care that has been taken in the layout plan to protect the vegetation onsite, the application is considered to demonstrate an avoid, minimise and offset approach in accordance with DELWP's expectations.

Offsets of vegetation to be removed will be sought through required measures, refer to the Biosis Flora and Fauna Report within Appendix D for additional information.

5.4.2 Vegetation Protection Overlay Assessment

The VPO3 seeks to protect Regent Honeyeater Habitat and Lurg Ironbark Vegetation.

The overlay seeks to retain and protect White Box, Yellow Box and Blakely's Red-gum, which are all present and grow together in the subject site on the low rise in the north and will be protected.

The overlay also seeks to protect habitat for provides habitat for Squirrel gliders, Brush-tailed phascogales (Tuan), Grey-crowned babblers, Bush stone curlews and Quools. In the biodiversity report, the Regent Honeyeater was assessed to have a low likelihood of occurrence in the study area.

See Section 5.9.1 of this report for further comments.

5.4.3 Bushfire Risk

The site is not subject to a Bushfire Management Overlay, although it is within a designated bushfire prone area and the provisions of Clause 13.02-1S are relevant. Engagement with the CFA has occurred as part of preparing this application.

Clause 13.05 places a strong emphasis on the protection of human life over all other policy considerations. Careful consideration has been given to the design and siting of the proposal in accordance with the *Guidelines for Renewable Energy Installation, 2019* with specific measures incorporated to minimise and reduce fire risk.

ERM has prepared a response bushfire assessment and response to the Guidelines for Renewable Energy Installations (see Appendix L).

The predominant vegetation within the subject site is grazed or cropped low lying paddock vegetation and sporadic occurrences of dense vegetation along the creek and Winton Wetlands. The predominant vegetation class within the Site and surrounding lands is grazed pasture and cropping land and the dominant fire hazard is grassfire (as opposed to a densely treed or vegetated bushfire).

In accordance with Section 4.2 of the Guidelines for Renewable Energy Installations, grass is to be maintained at below 100mm in height during the declared Fire Danger Period and would be specified within an Environmental Management Plan (EMP) for the site. This can be dealt with as a condition to any permit issued.

Construction and ongoing maintenance of the solar farm will be a potential source of ignitions, with a greater risk within the declared fire danger period (typically from August to March). All activities that involve flame cutting, grinding, welding or soldering (hot works) are to be performed under a 'hot work permit' system or equivalent hazard or risk management process.

The bushfire hazard associated with these activities is considered manageable through appropriate access arrangements, fuel load reduction programs, safety protocols during periods of high fire risk and the implementation of an Emergency Response Plan (ERP), which would be developed in consultation with the CFA and included as a sub plan of the EMP. This can be dealt with as a condition to any permit issued.

In accordance with Section 4.1 of the Guidelines for Renewable Energy Installations, all maintenance and repair activities that involve flame cutting, grinding, welding or soldering (hot works) will be performed under a 'hot work permit' system or equivalent hazard or risk management process and will be outlined within the Emergency Response Plan (ERP), which would developed in consultation with the CFA and included as a sub plan of the EMP.

Standard requirements addressing bushfire (and grassfire) protection that are relevant to the Solar Farm, include maximising the separation distance between the infrastructure and the hazard; and providing access for emergency service vehicles. This has been incorporated into the design or can be added as conditions or specified within the EMP.

In terms of the solar farm, battery storage and substation layout plan, the following CFA suggested design features have been incorporated:

- 10m fire break area around facility (from the boundary of facility or vegetation screening inside the property boundary), electricity compounds and substations (including any battery installations)
- 4m wide perimeter road within 10 metre perimeter firebreaks (include passing bays at least every 600m which must be at least 20m long and have a minimum trafficable width of 6m. Where roads are less than 600m long, include at least one passing bay).
- At least two (2) access points to the site.
- A 45,000 litre static water storage tank.

5.4.4 Surface Water Impact

It is recognised that Eleven Mile Creek runs through the subject site. Critically, a 30m setback has been provided either side of the mapped waterway, meeting the strategy of Clause 14.02-1S, which seeks to retain natural drainage corridors. It is recognised that any works on the waterway, such as cable and vehicle crossings, would require a Works on a Waterway approval under the *Water Act 1989*.

Prior to the lodgement of the application, advice was sought from Goulburn Broken Catchment Management Authority (CMA). Their response (dated 19 November 2019) is included in Appendix J. Critically, they advised that the Goulburn Broken CMA would not object to the proposed Solar Farm, subject to the following conditions:

> *The proposed DC cable crossing of the Eleven Mile Creek is subject to a Works on Waterway permit from the Goulburn Broken CMA.*

Further to the advice of the Goulburn Broken CMA, it is noted that the stormwater draining of the solar panels is expected to be of a similar quality to rainwater. Runoff from the uphill panels will flow across

the ground and under the downhill panels and it is unlikely to affect baseline surface water quality in the receiving environment. It is expected that a condition on any permit issued will require appropriate measures to manage stormwater as part of both construction and operation of the solar farm.

5.4.5 Managing Environmental Risks

As required by Clause 13, planning should, amongst other things, aim to avoid or minimise natural and human-made environmental hazards, environmental degradation and amenity conflicts, and adopt a best practice environmental management and risk management approach.

As discussed elsewhere in this report, Marble Solar has considered potential risks upfront, so they can be proactively minimised or mitigated. This is reflected in the layout of the project, particularly in terms of;

- Avoiding removal of much of the vegetation onsite;
- Implementing appropriate tree protection zones to ensure the native vegetation which is not to be removed is to be appropriately protected;
- Providing a 30m setback from the waterway onsite;
- Locating access to the site to avoid roadside and onsite native vegetation; and
- Implementing appropriate setbacks from the site boundaries.

It is expected a condition on any permit issued will require Marble Solar, in managing environmental risks, to prepare and manage a Construction Management and Operational Management Plan. This will provide further opportunity for Marble Solar to demonstrate what steps are being taken to minimise or negate environmental risks.

5.5 Heritage

A mandatory Cultural Heritage Management Plan is currently being prepared for the project. The heritage walk over has occurred with RAPS for the complex assessment and no artefacts were discovered. The results and CHMP are expected to be drafted shortly.

5.6 Traffic

5.6.1 Traffic Impact

Impact Traffic were engaged by Marble Solar to undertake a traffic impact report, assessing the impact of heavy vehicles to the local road network during construction and operations. Refer to Appendix E for a copy of the report. The expected impact is as follows:

During construction:

The traffic impact report estimates approximately 8,411 one-way vehicle movements (59 daily vehicle movements) will be generated by the subject site during construction.

After construction:

During operations up to ten (10) daily vehicle movements associated with routine maintenance are estimated on site. On occasion some additional movements associated with more thorough maintenance are expected. The report suggests that Marble Solar enter a roads repair and maintenance agreement with Benalla Rural City Council and Regional Roads Victoria.

5.6.2 Access

The traffic impact report identifies the proposed access route into the site is as follows:

Hume Freeway - Bowers Road - Lee Road - Gould Road - Ashmead Road - Subject Site

This route along Bowers Road, Lee Road and Gould Road is the preference to minimise impact to local residences and traffic in the area, and to avoid travelling through the Glenrowan town fringe. The site will be accessed primarily from Ashmead Road, which will link to defined internal tracks on site. The current road condition of this route is appropriate when considering the temporary impact during the short construction period.

The traffic impact report presented a desktop assessment (using AustRoads Guide SISD values) for sight distances along Ashmead Road. The section of the road in the vicinity of the site is flat and straight, with the limited vegetation and trees generally set back by at least 5m from the road. An on-site validation on sight distances will be performed prior to construction.

When exiting the site and heading south towards Melbourne, it is suggested that haulage vehicles turn left from Bowers Road onto the Hume Freeway and then undertake a U-turn over the Hume Freeway, at the Winton-Glenrowan Road bridge, rather than attempting to turn right by crossing the freeway.

We note that no roads which form part of the haulage route from the Hume Freeway are pre-approved for the haulage of B-double vehicles. However, all of these roads are pre-approved for the haulage of PBS Level 1 compliant vehicles (vehicles up to 20 metres in length). It is recommended in the report that if a permit is sought for B-double sized vehicles, the spatial capacity for such vehicles should be tested on site.

It is recommended to enter into a roads repair and maintenance agreement with Benalla Rural City Council to ensure roads are appropriately maintained during construction and restored to its original condition post construction.

5.6.3 Car Parking

Temporary car parking facilities will be provided on site during the construction. Permanent car parking for an appropriate number of spaces will be available post construction. The traffic report states the following in relation to parking:

> *A detailed car park design has yet to be determined, however it is assumed that:*
>
> *– During construction, vehicles (managerial staff only) will be parked either at designated laydown areas, storage locations, or where construction activities are occurring:*

During operations, operational and maintenance staff vehicles will be accommodated on-site within a vehicle parking area located adjacent to the site office.

5.7 Relevant Planning Policy Provisions

Policies of the State Planning Policy Framework have been assessed above (largely in Section 5.1), the relevant local policies will be assessed below.

5.7.1 Local Planning Policies

The Project utilises modern technology to facilitate economic growth and sustainable energy options. Given the nature of solar farms, there is potential for environmental risks, as detailed in Clause 21.04, during both construction and operational phases. Environmental Management can form a component of the Construction and Operational Management Plans that are expected to be a condition on any permit issues.

As mentioned in Section 3.9 - Community Benefits, the Project has the capacity to support local employment and business for the surrounding towns in the Benalla region during the construction phase of the development. The project is expected to provide up to 250 jobs during the peak of construction, and two employees during operations, satisfying aims of Clause 21.06 (Economic Development).

5.8 Clause 35.07 Farming Zone

Clause 35.07 seeks to, amongst other things, provide for and conserve agricultural land, encourage the retention of employment and population to support rural communities and encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision. The site is also located close to other industrial land uses including a mine and several quarries.

The land is capable of hosting a solar farm of this scale and the location makes use of existing infrastructure, being in close proximity to the electricity grid to enable connection to the network.

The proposed land use will provide local employment, supplier and business opportunities. In this regard, the proposed land use directly responds to the purpose of the Farming Zone where it seeks to encourage the retention of employment and population to support rural communities. Land management practices are expected to be a requirement of the permit, expressed through permit conditions for a Construction and Operational Management Plan.

While the primary land use of the site may change from agriculture after the solar farm is established on the site, grazing will continue. This has the added benefit of assisting in the maintenance of to assist with the maintenance of the vegetation ground cover. In this regard the land will continue to provide agriculture use.

5.9 Overlays

5.9.1 Vegetation Protection Overlay, Schedule 3

The VPO3 seeks to protect Regent Honeyeater Habitat and Lurg Ironbark Vegetation.

The overlay seeks to retain and protect White Box, Yellow Box and Blakely's Red-gum, which are all present and grow together in the subject site on the low rise in the north and will be protected.

The overlay also seeks to protect habitat for Squirrel gliders, Brush-tailed phascogales (Tuan), Grey-crowned babblers, Bush stone curlews and Quools. In the biodiversity report, the Regent Honeyeater was assessed to have a low likelihood of occurrence in the study area. The Project meets the objectives of the VPO3 by ensuring the protection of native vegetation patches and minimising the extent of scattered tree removal.

The project has also responded to the VPO by protecting stands of White Box and Blakely's Red-gum on the rise at the northern end of the study area and by retaining and buffering established revegetation along Eleven Mile Creek. There are no natural stands of Mugga Ironbark in the study area. It is also noted that 11 out of 16 of the trees to be removed are Grey Box, which are not listed within the VPO. Furthermore, only two White Box trees will be impacted and these trees occur together as a group of tree paddock trees that are highly isolated from other trees and woodland habitat. The level of isolation means that they are unlikely to provide a habitat for Regent Honeyeater or other threatened species that rely on White Box.

5.10 Particular Provisions

In addition to the objectives and strategies of State and Local Policies, there are a number of Particular Provisions which detail specific requirements relevant to the proposed amendment.

5.10.1 Clause 52.17 Native Vegetation

The purpose of this provision is to ensure that impacts on native vegetation do not result in a net loss to biodiversity and do not significantly degrade the land and water. This provision refers to the requirements of the *Guidelines for the removal, destruction or lopping of native vegetation, 2017,* an incorporated document to the Planning Scheme. An assessment against the above mentioned guidelines has been discussed in Biosis' Biodiversity Assessment (refer Appendix D).

Pursuant to this clause, a permit is required to remove, destroy or lop native vegetation, including dead native vegetation. Exclusions are listed in Clause 52.17-7. The project proposes the removal of 28 large trees (including three dead trees), as such, a permit is required pursuant to Clause 52.17-1. Offsets are to be provided, as specified within the Biosis report (refer Appendix D).

5.10.2 Clause 53.13 Renewable Energy Facility (Other than Wind Energy Facility)

Clause 53.13 of the Planning Schemes provides specific guidance on planning applications for renewable energy facilities. An assessment against the specific provision of Clause 53.13 is detailed in Table 3 below.

Table 3: Clause 53.13 Decision Guideline

Decision Guideline	Response
The effect of the proposal on the surrounding area	The proposal will minimise its impact on the surrounding area through measures detailed within the project's Construction and Operations Management Plans. Management approaches including surface water management, vegetation protection, and pest management will minimise adverse impacts to the surrounding area. Refer Section 5.3 of this report for additional detail.
The impact of the proposal on significant views	There are no significant views relevant to this site. Localised views have also been considered within the Landscape Visual Impact and Glare Assessment (Appendix I). Refer Section 5.3 of this report.
The impact of the proposal on the natural environment and natural systems	Environmental management and protection of natural environment is a core driver of the design of the site layout. Refer Section 5.9 of this report.
Whether the proposal will require traffic management measures	Some traffic management measurements may be required, refer Section 5.6 of this report.

The proposal complies with the provisions of Clause 53.13.

6. CONCLUSION

This report supplements a planning permit application for the use and development of Winton North Solar Farm. The layout of the solar farm was designed by carefully considering the subject site's context, natural environment, constraints and advice received from pre-application meetings with relevant authorities. Existing 66kV distribution lines run through the subject site, which allows for the evacuation of the electricity generated by the solar farm via a new on-site substation. This means a minimal footprint for other distribution line easements that would have otherwise been required and makes efficient use of existing infrastructure.

The land is not identified as Strategic Agricultural Land as defined in the Hume Regional Growth Plan, and is not within an irrigation district. The Project will not make permanent changes to the land and the land would revert back to its current agricultural land use once the solar farm is decommissioned at the end of its 30 year lifespan.

The Project provides an opportunity to diversify the local economy and land use. The Winton North Solar Farm will generate employment during construction and operation as well as opportunities for suppliers and contractors. Indirect economic benefits will also occur as part of the Project, particularly during construction where there will be a number of people working onsite who are likely to utilise local businesses, including food and drink premises.

The design of the solar farm has sought to minimise and avoid the removal of native vegetation wherever possible, with a specific focus on protecting the vegetation identified as providing habitat for significant species.

It is proposed to remove 16 large scattered trees. There is specific focus on protecting all the native vegetation patches and vegetation that may provide valuable habitat. A 30m setback has been applied from Eleven Mile Creek. In this regard, the proposal is considered to achieve the 'avoid, minimise and offset' approach required for native vegetation removal.

Given the above, we submit the Winton North Solar Farm is suitable for planning support.

APPENDIX A CERTIFICATES OF TITLE

APPENDIX B CONTEXT FIGURES PREPARED BY ERM

APPENDIX C LAYOUT PLANS AND INDICATIVE FIGURES BY MARBLE SOLAR

APPENDIX D BIODIVERSITY ASSESSMENT PREPARED BY BIOSIS

APPENDIX E TRAFFIC ASSESSMENT PREPARED BY IMPACT TRAFFIC ENGINEERING

APPENDIX F AGRICULTURAL ASSESSMENT BY PHILLIPS AGRIBUISNESS

APPENDIX G STAKEHOLDER ENGAGEMENT PLAN PREPARED BY KJA

APPENDIX H PHOTO MONTAGE PREPARED BY ERM

APPENDIX I LANDSCAPE VISUAL IMPACT AND GLARE ASSESSMENT

APPENDIX J CORRESPONDENCE FROM GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

APPENDIX K LANDSCAPE PLAN PREPARED BY AECOM

APPENDIX L CFA GUIDELINES ASSESSMENT BY ERM

APPENDIX M NOISE ASSESSMENT PREPARED BY AECOM

APPENDIX N COVENANT, LEGAL ADVICE, APA CORRESPONDENCE

APPENDIX O APPLICATION FORM

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