Prepared for Venn Energy Pty Ltd

Planning Report

Cooba Solar Project

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Contents

Acronyms and abbreviations

AAR	Agricultural Assessment Report
AEP	Annual exceedance probability
AH Act	*Aboriginal Heritage Act 2006* (Vic)
AH Regulations	*Aboriginal Heritage Regulations 2018* (Vic)
AIAGGA	Aeronautical Impact Assessment and Glint and Glare Analysis
BESS	Battery energy storage system
BMO	Bushfire Management Overlay
BW	Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions
CC Act	*Climate Change Act 2017* (Vic)
CFA	Country Fire Authority
CFA Guidelines	Design Guidelines and Model Requirements for Renewable Energy Facilities v4, CFA 2023
CHMP	Cultural Heritage Management Plan
Cwth	Commonwealth
DELWP	Department of Environment, Land, Water and Planning
DTP	Department of Transport and Planning
EE Act	*Environment Effects Act 1978* (Vic)
EES	Environment Effects Statement
EMMP	Emergency Management Plan
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EPA Act	*Environment Protection Act 2017* (Vic)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwth)
EVC	Ecological vegetation class

FIA	Flood Impact Assessment
FMP	Fire Management Plan
FZ	Farming zone
FFG Act	*Flora and Fauna Guarantee Act 1988* (Vic)
GBBGW	Grey Box – Buloke Grassy Woodland
GBGW	Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
ha	hectares
km	kilometres
KOP	Key observation point
kv	kilovolt
LSIO	Land subject to inundation overlay
LVIA	Landscape and Visual Impact Assessment
m	metres
Native Vegetation Guidelines	Guidelines for the removal, destruction or lopping of native vegetation (DELWP, 2017)
NIA	Noise Impact Assessment
Noise Protocol	*Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* (EPA Publication 1826.4)
NVMP	Native Vegetation Management Plan
PE Act	*Planning and Environment Act 1987* (Vic)
PMST	Protected Matters Search Tool
PPF	Planning Policy Framework
Project	Cooba Solar Project
PV	Photovoltaic
REJI Act	*Renewable Energy (Jobs and Investment) Act 2017* (Vic)
RET	Renewable energy target

RMP	Risk Management Plan
RRLUS	Regional Rural Land Use Strategy
SEF Guideline	Solar Energy Facilities: Design and Development Guideline, DELWP 2022
SMO	Salinity management overlay
TMP	Traffic Management Plan
TRZ2	Transport Zone 2
TTA	Traffic and Transport Assessment
VBA	Victorian Biodiversity Atlas
Vic	Victoria

Executive summary

This report is provided in support of a planning permit application for the Cooba Solar Project (Project), a proposed 500 megawatt (MW) solar energy facility and 300 MW battery energy storage system (BESS) located at 124 Cornella Church Road and Plain Road, Colbinabbin, Central Victoria.

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

Legislative and policy response

The Project is consistent with objectives of planning in Victoria that are set out by the *Planning and Environment Act 1987* (PE Act). This includes the fair, orderly, economic, and sustainable use, and development of land; protection of natural resources; conserving places of historical interest or special cultural value; as well as balancing the present and future interests of all Victorians. Further, the Project will contribute to meeting both long term and interim greenhouse gas emissions reduction targets as well as contributing to meeting Victoria's renewable energy targets. In this respect, the Project will contribute to creating investment, supporting the reliability of Victoria's electricity supply, creating jobs, putting downward pressure on electricity prices, and reducing emissions from electricity generation.

The Project has been assessed against the Campaspe Planning Scheme, including the Planning Policy Framework (PPF), clause 35.07 'Farming zone', clause 53.13 'Renewable energy facility' and the Solar Energy Facilities: Design and Development Guideline, DELWP 2022 (SEF Guideline). This planning application is lodged pursuant to clause 53.22 Significant Economic Development for which the purpose is to prioritise and facilitate the planning, assessment and delivery of projects that will make a significant contribution to Victoria's economy and provide substantial public benefit, including jobs for Victorians. On balance, the Project is strongly supported by the range of policy direction that applies, including to protect the state's agricultural base by preserving productive farmland; to protect community amenity, human health and safety while facilitating appropriate uses with potential adverse off-site impacts; to facilitate the establishment and expansion of renewable energy facilities, in appropriate locations, with minimal impact on the amenity of the area; and to support the development of energy generation, storage, transmission, and distribution infrastructure to transition to a low-carbon economy.

Landscape and visual amenity

A Landscape and Visual Impact Assessment (LVIA) has been prepared by Orbit Solutions and is included at Appendix B. The purpose of this report is to assess the Project within the relevant policy framework to determine if it satisfies visual compatibility requirements and should be approved. Based on the analysis in the LVIA, the Project is evaluated to be satisfactory from the perspective of visual compatibility. The area can accept a strong magnitude of change, but the proposed magnitude of change (or visual impact) is low, and well within the acceptable level for the area. The LVIA outlines various recommended measures to avoid and further mitigate landscape and visual impacts. If a planning permit is granted, it is expected and accepted that relevant permit conditions will be included in relation to these recommendations, including for landscaping, material and surface treatments, reclamation, as well as soil and vegetation management. The LVIA has provided the basis for a landscape concept plan (included in Appendix B), with recommended plant species based on EVCs and other relevant characteristics as well as a planting strategy to achieve optimal outcomes. The plan proposes extensive landscaping around the site, which will be planted as tube stock for faster growing rates. Shrubs will reach maturity at around 10 years and trees at approximately 15 years. The photomontages which are included in this application show the landscaping at 80% of maturity. Overall, it found that the Project satisfies the direction provided by relevant planning policy.

Biodiversity

A Biodiversity Assessment has been prepared by Ecology & Heritage Partners and is included at Appendix C. Both desktop assessments and field assessments have been undertaken to inform the report's findings.

Regarding flora, most of the Project site comprises introduced pasture grass and cereal crops, but there are various patches of native vegetation and scattered native trees (large and small) that are representative of two ecological vegetation classes (EVCs).

Similarly with fauna, most of the Project site consists of improved exotic pastures but there is a variety of native vegetation that are suitable for an array of native fauna, with numerous birds observed and several frog species heard calling during field assessment. The report examines the significance of flora, fauna, and ecological communities, particularly in relation to Commonwealth and Victorian State legislation, with key findings around Spiny Rice-flower, Late-flower Flax-lily, Buloke, Common Sandpiper, Swift Parrot, Brown Treecreeper, Squirrel Glider, Brush-tailed Phascogale, Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (GBGW) community, Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions (BW) community, and Grey Box – Buloke Grassy Woodland (GBBGW) community.

The report asserts that the Project has been designed to avoid and minimise the loss of native vegetation through a variety of measures, including denoting conservation priority and applying No-Go zones, limiting impacts to large trees and small scattered trees, micro-siting to reduce impacts to native vegetation, altering the layout to avoid impacts to ecological communities of national or State significance, and designing the layout to retain high value native vegetation, among other measures. Combined, these measures satisfy the requirements of the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning, 2017) (the Native Vegetation Guidelines).

The project has undergone a number of iterations to avoid and minimise the removal of native vegetation. The proponent has gone through several iterations of the development to minimise impacts to native vegetation and large trees. The following iterations have been undertaken:

- The first iteration of the development plan proposed to impact 7.749 hectares (inclusive of scattered trees) of native vegetation, including 118 large trees.
- The second iteration proposed to impact 7.392 hectares (inclusive of scattered trees) or native vegetation and 93 large trees.
- The third iteration proposed to impact 7.456 hectares of native vegetation (inclusive of scattered trees) and 94 Large trees. Impacts associated with the third iteration of the development plan increased as a result of alterations to the access and egress points to accommodate-double trucks to enter the site at 12 locations, and the requirement to undertaken road upgrades along Heathcote-Rochester Road.

The fourth and most recent iteration proposed to impact 6.505 hectares of native vegetation (inclusive of scattered trees), 71 Large trees, including 12 large trees in patches and 59 scattered trees, and 11 small scattered trees. In relation to the vegetation to be removed, the study area is within Location 2, with 6.505 hectares of native vegetation proposed to be removed, including 71 large trees (12 Large Trees in Patches and 59 scattered Large Trees) and 11 small scattered trees. As such, the permit application falls under the Detailed Assessment pathway.

The offset requirement for native vegetation removal is 1.4770 General Habitat Units and 71 large trees with a Strategic Biodiversity Score of 0.1834 in the Goulburn Broken CMA/Campaspe Shire Council area.

According to DEECA's Native Vegetation Offset Register, (DEECA 2024d), there are two offset sites within the Goulburn Broken CMA or Campaspe Shire Council municipality that can be used to satisfy the General

Habitat unit and Large Tree offset requirements. An offset quote for this has been obtained and is in Appendix C.

If a planning permit is granted, it is expected and accepted that relevant permit conditions will be included to govern best practice mitigation, including a Native Vegetation Management Plan (NVMP). This plan would include information such as the location and area of all native vegetation that is permitted to be removed, all areas of native vegetation that must be retained and protected, the tree protection zones for each retained native tree, and other detailed measures to ensure the ongoing conservation of retained native vegetation.

Agriculture

An Agricultural Assessment Report (AAR) has been prepared by Meridian Pty Ltd and is included at Appendix D. This report observes that the soils on the Project site are of moderate to good quality for the area and finds that the land has no direct strategic importance but instead is like much of the surrounding farmland. The AAR notes that the land is conservatively managed for cropping and grazing and finds that sheep grazing could continue after the Project is constructed at comparable stocking rates to the current level.

Overall, the report concludes that the Project would have no long-term detrimental effect on the productive capacity of the soil, would not have a significant impact on the overall productivity of the region or the state, and would not impact on the ability of neighbouring businesses to operate for agricultural purposes. It is observed that the Project site is not in a declared irrigation district.

Noise

A Noise Impact Assessment (NIA) has been prepared by ADP and is included at Appendix E. This report predicts and assesses noise from the inverters, solar panel tracker motors, BESS modules, and generator(s). The inverters and BESS are expected to be the major sources of noise emissions. The Project is required to comply with the EPA Victoria's *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* (Publication 1826.4) (Noise Protocol). Based on a conservative approach, the NIA predicts that noise levels for the Project will comply with the required night-time criteria under the Noise Protocol for all nearby noise sensitive receivers. Compliance with the night-time criteria means the Project is also predicted to comply with the daytime and evening criteria under the Noise Protocol.

There is a relatively small margin of predicted compliance for two nearby noise sensitive receivers. The highest predicted noise level is 36dB for the night-time criteria limit of 36dB. As such, permit conditions would be accepted requiring a further pre-construction predictive noise assessment based on the final Project layout and equipment (including any required design features) as well as requiring post-construction noise compliance reports at a relevant point in time. The report outlines key recommendations to guide the design, including to distribute inverters evenly throughout the Project site, orient noisy components away from the nearest residential dwelling, and/or to construct acoustic barriers or acoustic enclosures where required. The plans show an acoustic buffer area in two locations.

Traffic

A Traffic and Transport Assessment (TTA) has been prepared by Impact Traffic Engineering and is included at Appendix F. This report examines the surrounding road network and assesses its suitability for the predicted traffic generation (both construction and operation) along the proposed vehicle access routes. The TTA finds that traffic generated by the Project can be comfortably accommodated by the existing road network without any material impacts on road infrastructure as well as operational safety and efficiency, albeit noting that road pavements may require upgrading or maintenance. Further, the report outlines design considerations for site access, turning lanes, and sight distances, but does not raise any concerns with these

matters, including that available sight distances from all site access points will exceed the minimum requirement. Finally, the TTA outlines the expectation for a detailed TMP to be prepared prior to the commencement of the construction to confirm certain arrangements as well as any required mitigation measures and works.

Glint and glare

An Aeronautical Impact Assessment and Glint and Glare Analysis (AIAGGA) has been prepared by Chiron Aviation Consultants and is included at Appendix G. The report has been prepared to assess the Project's glint and glare impacts and finds that the Project will have no impacts to aviation safety, roads, and dwellings.

Light spill, vibration, smell, and electromagnetic interference

External lighting would be internal within the Project site and a reasonable distance from any non-involved sensitive receivers (dwellings). Lighting can be designed and managed to comply with Australian Standard 4282 'Control of the obtrusive effects of outdoor lighting'.

The Project will not cause vibration and will not emit smell. If required, environmental measures can be put in place to manage the risk of odour.

Any electromagnetic interference impacts by the Project will be negligible and acceptable.

Fire hazards

The site is within a designated bushfire prone area but is not affected by the Bushfire Management Overlay (BMO). The Design Guidelines and Model Requirements for Renewable Energy Facilities v4, Country Fire Authority 2023 (CFA Guidelines) have been considered in the Project design, which includes a range of design and management features that will develop as the detailed design progresses. There is nothing to suggest that the Project will lead to an increase in bushfire risk; rather, it will reduce and manage risks at the site to an acceptable level through its design and management features. If a planning permit is granted, it is expected and accepted that a Risk Management Plan (RMP), Fire Management Plan (FMP), and Emergency Management Plan (EMMP) will be required to be submitted for approval via relevant permit conditions.

Flood hazards

A small portion of the Land Subject to Inundation Overlay (LSIO) crosses Plain Road approximately 1.1km north of the subject site and goes into the property to the north approximately 600m north of the subject site. Although the development is not affected by the LSIO, a Flood Impact Assessment (FIA) has been prepared by Water Technology and is included at Appendix H. The report assesses the potential flood risk and inundation at the Project site.

The FIA demonstrates that the Project is acceptable from the perspective of flood hazards, with infrastructure predominantly located on land that is free from flooding or on that where flooding is classified as H1 (low risk, generally safe for people, vehicles, and buildings). The Project will not impede overland flows and will not be unduly impacted by significant flood events.

The FIA provides several recommendations, including a 30 metre (m) set back from the top of banks for Cornella and Yallagalorrah Creeks, which have already been incorporated into the Project design, as well as the raising of solar panels and other critical infrastructure sufficiently above the 1% annual exceedance probability (AEP) flood levels. Solar panels should be at least 300mm above the 1% AEP flood level at its lowest level or 150mm above the natural surface (where flooding is not identified), while sensitive infrastructure should be at least 300-500mm above the 1% AEP flood level. Further, any rerouting of swales should maintain their drainage function, while any roadways or access tracks crossing waterways should be designed to maintain the drainage function of the waterways.

Aboriginal cultural heritage

The Project site is affected by mapped areas of Aboriginal cultural heritage sensitivity. In this regard, a mandatory Cultural Heritage Management Plan (CHMP) is required for the Project, which is currently underway. It is expected that a final CHMP will be approved in the third quarter of 2024 and that this will contain a range of measures in relation to Aboriginal cultural heritage, such that any impacts will be limited and acceptable. It is expected that any outcomes and recommendations that are included in the finalised CHMP will be taken into consideration in relation to the layout of the proposal.

Post-European heritage

The Project site is not affected by any Heritage Overlay or contain any place within the Victorian Heritage Registry. The site contains Wendell's House, which is listed on the Victorian Heritage Inventory (ref. H7824-0089). The statement of significance for this place states, *"Local grazier Finlay Rathjen believes it is the ruin of the first brick dwelling constructed in the Colbinabbin district, dating back to c1870"*. There is no proposed use or development of the land where the heritage place is located, with a suitable buffer from the solar panel array. As such, the Project will have limited and acceptable impacts on the significance of the heritage place.

Social and economic impacts

The proponent is committed to sharing the Project's benefits with neighbours and the wider community, with both a neighbour benefit sharing program and a community benefit sharing program being proposed. These programs are intended to have positive, lasting, and meaningful impacts for neighbours and the community. Further, the Project will provide employment opportunities during the construction and operation stages and will require the procurement of various goods and services from local businesses.

The SEF Guideline

The Project is consistent with the direction provide in the SEF Guideline. In particular, the Project has various strengths in relation to being ideally sited, will connect directly into an existing overhead line that runs through the Project site, is unlikely to result in any significant or discernible cumulative effects, and has been suitably designed to avoid any potential heat island effect.

Conclusion

The Project is strongly supported by the range of legislative and policy direction and is consistent with or not contrary to all relevant provisions of the Campaspe Planning Scheme. Further, the Project is acceptable with respect to all relevant thematic issues/impacts. If a planning permit is issued, suitable conditions are welcomed to secure certain outcomes, while avoidance or mitigation measures are outlined in this report or within the planning permit application. Overall, the Project achieves net community benefit and sustainable development for the benefit of present and future generations, and it is submitted that a planning permit should be granted subject to appropriate conditions.

1. Acknowledgement of Traditional Owners

We acknowledge that the land that is the subject of this planning permit application is part of the Taungurung Country.

We hereby express our respect for the Taungurung people, who are the Traditional Owners of the land.

We pay our respects to their leaders and Elders past, present and emerging, for they hold forever the memories, traditions, culture and hopes of all Taungurung people.

We express our gratitude for the sharing of this land, our sorrow for the personal, spiritual, and cultural costs of that sharing and our hope that we can walk forward together in harmony and the spirit of reconciliation.

2. Introduction

This report has been prepared for Venn Energy Pty Ltd and accompanies a planning permit application for the Project, key details of which are provided in Table 2-1 below. Overall, a planning permit is sought for the use and development of the land for a solar energy facility and utility installation with associated buildings and works, removal of native vegetation, and to construct and display signage. In general terms, the Project involves the construction and operation of a solar energy facility, BESS, and associated infrastructure.

The Project site is spread across multiple parcels, with the property addresses of 124 Cornella Church Road, Colbinabbin and Plain Road, Colbinabbin. The site is entirely within the Campaspe local government area. Currently, the land is used primarily for agriculture but with an existing dwelling and associated outbuildings in the northwest part. The Project site is largely cleared although with various scattered trees and patches of native vegetation. There are frontages to various roads, including Heathcote-Rochester Road, Cornella Church Road, Plain Road, Myola Road, and Davey Road. Similar properties adjoin and surround the site, with generally farm dwellings and outbuildings located on large agricultural landholdings. There are also various properties and activities associated with the viticulture industry in the surrounds.

The Project site is entirely within the Farming Zone (FZ), with no applicable overlays where the development of land is proposed.

This application is submitted in accordance with clause 53.22 Significant Economic Development, under which renewable energy facility and utility installation are relevant uses.

In accordance with clause 72.01-1 of the Campaspe Planning Scheme, the Minister for Planning is the responsible authority for the permit application because it relates to the use and development of land for an energy generation facility with an installed capacity of 1 megawatt or greater as well as a utility installation used to transmit or distribute electricity and store electricity if the installed capacity is 1 megawatt or greater.

This report provides various information relating to the Project and provides an assessment of the Project against the relevant provisions of the Campaspe Planning Scheme, including the SEF Guideline.

Table 2-1 Summary of site details

Item	Details
Address	124 Cornella Church Road and Plain Road with associated on and off site locations, Colbinabbin
Tenure	Agriculture with associated dwelling and outbuildings
Local government area	Campaspe
Planning scheme	Campaspe Planning Scheme
Zoning	Farming Zone Adjacent to Transport Zone 2 (TRZ2) – Principal Road Network
Overlays	None
Mapped	Designated bushfire prone area Aboriginal cultural heritage sensitivity

3. The proponent

In March 2019, Venn Energy and Aira Group entered into a long-term strategic partnership to develop over 1 GW of renewable energy (solar and energy storage) projects in Australia. Venn Energy's current renewable energy project portfolio in Australia.

The Banksia Solar Project in Queensland was the company's first development in Australia. The development application commenced in June 2019 and received approval from Bundaberg Regional Council in January 2021. The Banksia Solar Project is expected to commence construction in 2024. Other proposed projects include Lambruk Solar Project and Boree Solar Project in NSW, Moonah Solar Projects in Victoria.

Venn Energy focuses on fostering respectful, transparent, and lasting relationships with stakeholders, particularly landowners and the local community, and are committed to providing access to clear information and seeking community input throughout the approval and development process. Venn Energy's key contacts and information sources are as follows:

Company Name Venn Energy Pty Ltd
Applicant ABN 42 632 214 674
Applicant Address Level 22, Spencer Street 120, Melbourne, VIC, Australia, 3000
Project website *www.coobasolarproject.com.au*
Project email *info@coobasolarproject.com.au* .

4. The Project

It is proposed to construct the Cooba Solar Project, a 500MW solar energy facility and a 300MW BESS. The Project includes the following elements:

- **Approximately 700,000 solar photovoltaic (PV) panels** with a low reflectivity single axis tracking proposed with panels attached to mounting structures. Permission is sought for a maximum height of 5.5m above ground when the panels are at their steepest 60° incline, The panels will rotate to follow the sun's trajectory, with the tracking angle ranging 120° from +60 to -60°.
- **Approximately 100 solar power conversion units (PCUs)** housing transformers and inverters and sited throughout the site on access tracks between the panel arrays – away from property boundaries.
- **BESS** options include a centralised system concentrated in the electrical infrastructure area and a distributed BESS option with BESS modules located adjacent to inverters around the site.
- **Operations and maintenance facility** including offices, work areas, storage, and amenities as well as a yard for carparking, septic, water tanks, and further storage – located within the concentrated electrical infrastructure area.
- **Substations** to suit the grid connection arrangement and located within the concentrated electrical infrastructure area.
- **Switchyard** consisting of high voltage switching equipment to be located alongside the substation.
- **Grid connection** is proposed via the switchyard and substations, connecting directly to the existing 220 kilovolt (kV) overhead powerline that runs through the Project site.
- **New 33kV overhead powerlines (OHL)** throughout the Project site to the electrical infrastructure area.
- **Underground cabling** to extend throughout the layout, generally following the panel array, access tracks and power conversion stations.
- **OHL and cable crossings** of roads and watercourses (multiple).
- **External access points** for access/egress to maximise safety and for efficient movement (multiple).
- **Internal access tracks** for both construction and operation and located throughout the Project site to minimise road traffic. Tracks will be approximately 4m wide and constructed of locally sourced crushed gravel. This includes a perimeter track around the entirety of the Project.
- **Firefighting water tanks** to be located throughout the Project site (multiple).
- **Car parking** will be provided through the life of the Project but will be minimal and limited to maintenance and operations staff. Car parking will be provided in the operations and maintenance facility area.
- **Temporary compound areas** throughout the site to be used during construction to store equipment, materials, vehicles and the like.
- **Native vegetation removal** consisting of an extent of 6.505 ha, inclusive of 71 large trees (scattered and in patches) and patches of native vegetation.
- **Landscaping.** A specific landscaping approach has been prepared based on the visual assessment ratings presented in the LVIA. Landscape screening is shown in areas of the site that will then screen views to the Project from neighbouring dwellings or roadways. The landscape strategy proposes screening of varying species height at maturity. Species to be planted will be tube stock and a mix of hardy evergreen.
- **Security fencing** around the entire Project site to a minimum height of 1.8m to 2.5m (chain link design). This includes gates to allow vehicle and pedestrian access.
- **CCTV and lighting**. A CCTV security system may be installed with infrared lighting, which is not visible to the human eye. Further lighting is proposed for the operations and maintenance facility area.

- **Business identification signage** to a maximum of 3m^2 in area, for site entrance identification and safety information purposes to comply with Australian Standards.

Full development plans of the Project are contained at Appendix I.

The layout of the Project is shown inFigure 4-1below.

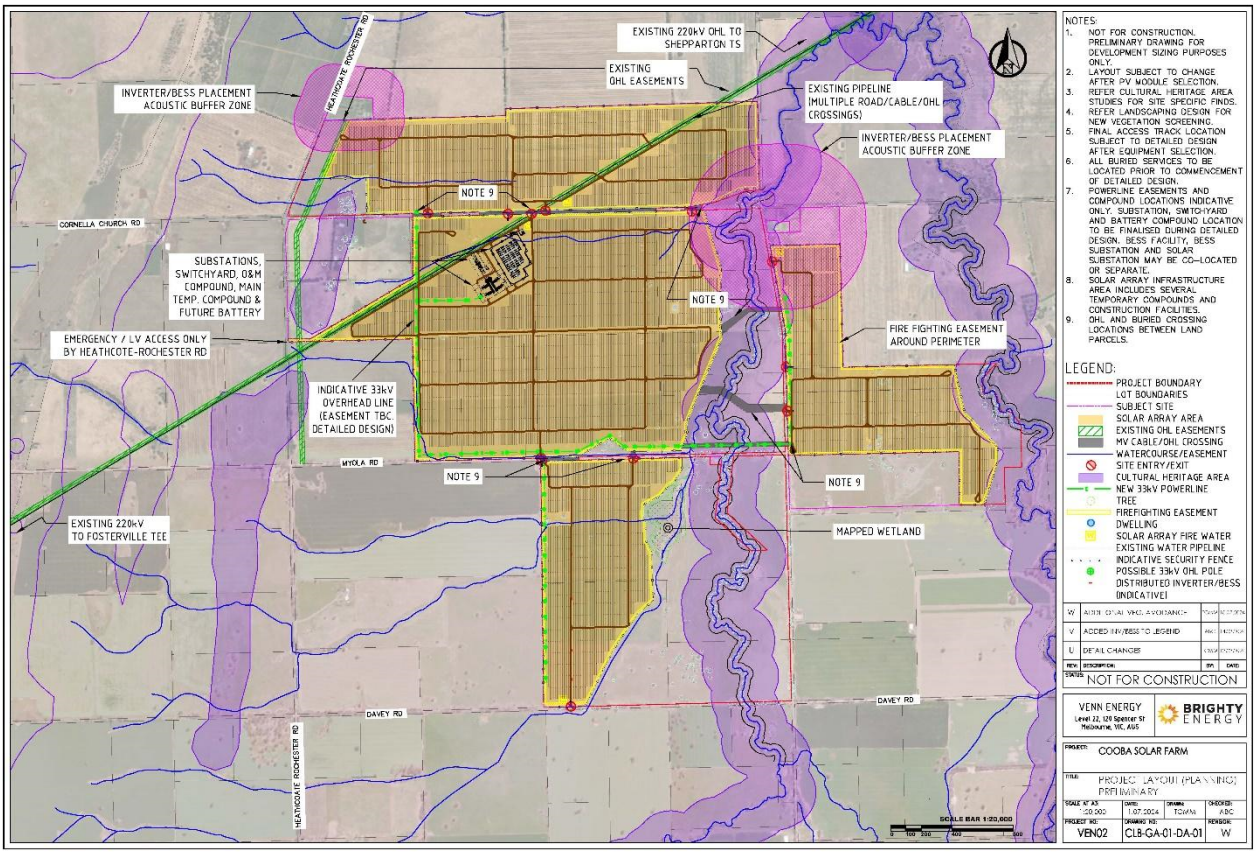

Figure 4-1 Site layout plan

Based on the characteristics of the Project site and surrounds as well as the assessment that follows, the location is assessed to be suitable for a solar energy facility.

The Project has the potential to generate enough renewable energy to power 180,000 average Victorian homes. On an annual basis, the calculated greenhouse benefits of this generation are equivalent to avoiding 303,030 tonnes of coal being burned or 733,333 tonnes of carbon dioxide being emitted.

4.1 Setbacks

The Project includes a minimum setback of 30m from any part of a solar panel to any neighbouring property boundary not forming part of the project. In places, this buffer may contain an access track, landscaping, and/or security fencing, as well as a minimum 10m fire break for fire protection purposes.

4.2 Life of the Project

Construction

It is expected that the construction of the Project will commence within 24 months of securing a planning permit, with the construction expected to take 18 months to complete. The construction may be broken into several separate stages.

The intention is to use local workers where possible, who will be supported by team leaders that will manage the construction process. Overall, the major teams involved will be made up of:

- Assemble team (unskilled labour)
- Electrical team (qualified electricians as well as unskilled labour)
- Civil team and,
- Environmental, health and safety team

The construction stages are:

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

Operation and maintenance

The Project will be operated by a small on-site workforce, with other remote monitoring activities to occur. Operational activities will generally not be discernible and will result in minimal traffic. Routine operations and maintenance activities will be carried out on a monthly or quarterly basis, as required.

The condition of the grass underneath the solar panel arrays will change in response to high and low rainfall years, drought, and other drivers. Keeping grass around the arrays to a maximum height of 100mm will be a necessity to avoid potential bushfire risk. Key control measures may include grazing and mowing.

4.3 Decommissioning

At the end of the Project's life, the landowner may require the Project owner to remove the various buildings and above ground structures to return the land to its previous state. However, depending on the landowner's views at the time, other options may also be available to the Project owner including to:

- Continue maintaining and operating the Project to produce renewable energy.
- Upgrade the Project to more current technology and generate higher levels of renewable energy into the future.

5. The site and surrounds

5.1 The site

The Project site is located about 4 kilometres (km) south of the small township of Colbinabbin in Central Victoria. The site is known as 124 Cornella-Church Road, Colbinabbin as well as Plain Road, Colbinabbin, and comprises multiple parcels. There are some areas of the roadside that may form part of the subject site due to roadworks, alteration to access arrangements and resulting removal of native vegetation. The formal description of the parcels comprising the Project site are outlined in Table 5-1 below. The site is irregularly shaped with a total area of approximately 1147ha, although solar panel arrays and the electrical infrastructure area will cover approximately 665ha of this area. There are frontages to various roads, including Heathcote-Rochester Road, Cornella Church Road, Plain Road, Myola Road, and Davey Road. The site is entirely within the FZ, adjacent to the TRZ2 (Heathcote-Rochester Road), while there are no overlays where the development of land is proposed. Figure 5-1below shows the Project site.

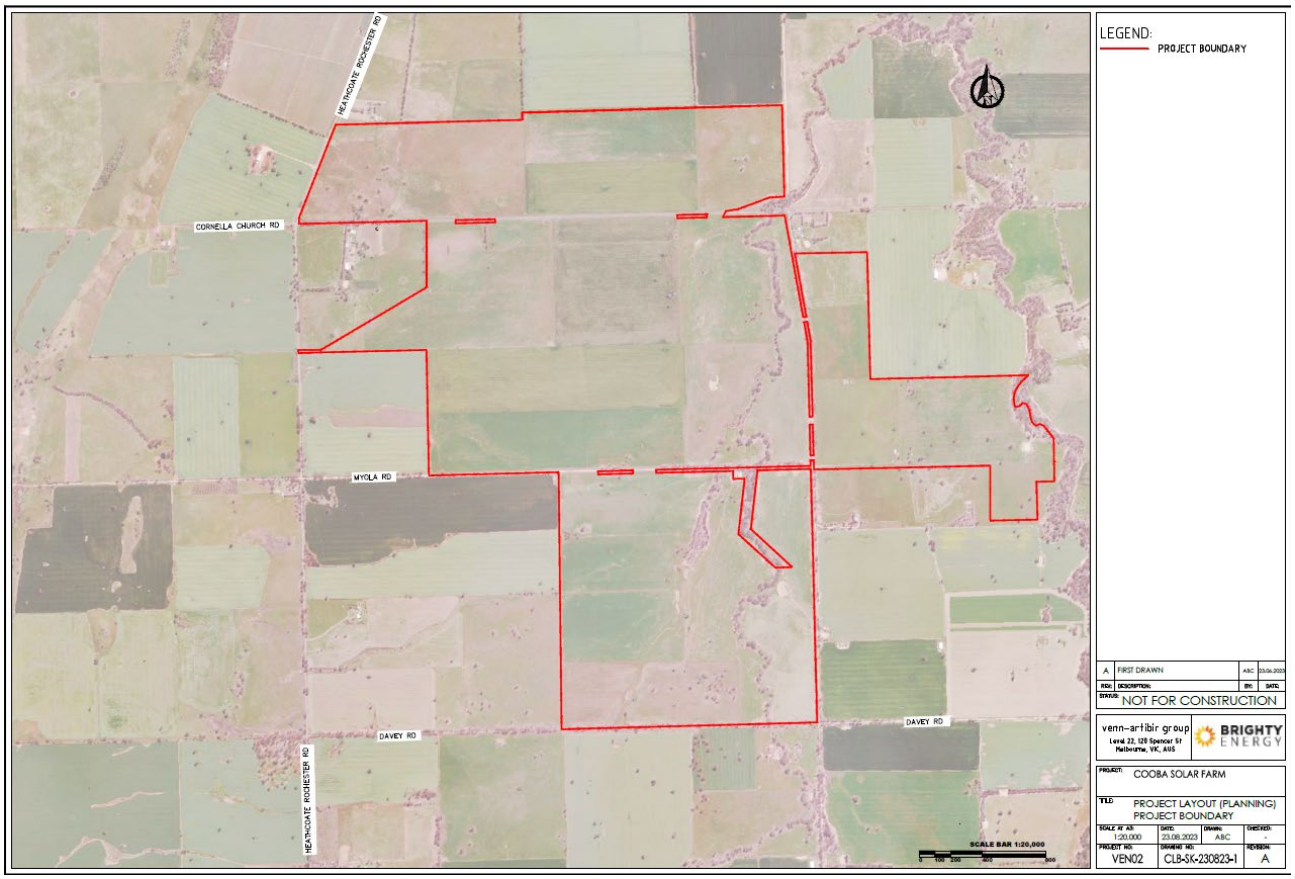

Figure 5-1 Subject site

The land is primarily used for low intensity agriculture (grazing and cropping), with an existing dwelling and associated outbuildings in the northwest part fronting Cornella Church Road. The topography is relatively flat with a modest fall from west to east, while Yallagalorrah Creek runs through the eastern portion of the Project site. The soils are mostly of moderate to good quality for the area. Regionally, the site has no direct strategic agricultural importance and is like much of the surrounding farmland.

A 220kV power line runs through the northern portion of the Project site in a southwest-northeast direction. The site has good solar characteristics with a high solar irradiation, suitable climatic conditions (annual rainfall, cloud coverage and temperatures), a low risk of flooding, and suitable geological conditions.

The Project site is largely cleared with most of the vegetation being introduced pasture grass and cereal crops, although there are numerous patches of native vegetation and scattered native trees. Most of the remnant native vegetation exists along creek lines as Creekline Grassy Woodland (EVC 68), while Plains Woodland (EVC 803) is present as small and isolated patches. There is a mapped wetland (ID 60129) within the southern portion of the site, on parcel Lot 3 TP375179, about 700m southwest of the intersection of Plain Road and Myola Road.

Areas in the eastern portion of the Project site associated with Yallagalorrah Creek as well as in the northwest of the site around the intersection of Heathcote-Rochester Road and Cornella Church Road are mapped areas of Aboriginal cultural heritage sensitivity.

While the entire Project site is within a designated bushfire prone area, none of it is affected by the BMO and the site is not adjoined by any forested or heavily vegetated areas. There are no applicable overlays relating to hazards such as erosion, salinity, floodway, and inundation, while the site is further unaffected by overlays relating to environmental significance, vegetation protection, and landscape significance. Some historic aerial images show some areas of dryland salinity on the subject site, such as to the north of the landowner dwelling. These trees were originally planted by the current landowner and they have been since cut down for firewood. The trees planted were not related to a government program for land degradation. This area is currently used for grazing as it is not suitable for cropping or other more intensive agricultural land uses. The Project site is not within a declared irrigation district and there is no irrigation infrastructure on the land. The Colbinabbin-Cornella irrigation pipe runs along the western boundary of the property. The pipeline provides limited access to water to landowners whose properties are adjacent to it including to the subject land. This water access and storage on site may be available for use by the Project

No crown land forms part of the subject site. Impacts to adjoining crown land will be limited to road works associated with access for construction and operation.

5.2 Title restrictions

There are no title restrictions that would prohibit the use and development of the Project on the land. Recent copies of the certificates of title are included at Appendix A, with an assessment of easements and restrictive instruments included in Table 5-1 on the following page.

Table 5-1 Parcel descriptions and title restrictions

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
124 Cornella Church Road, Colbinabbin 3559	Lot 1 on Title Plan 082687J	1\TP82687	09545/384	'Transmission of electricity' in favour of State Electricity Commission of Victoria. 'Pipeline for water' in favour of Coliban Region Water Authority. Both through centre of parcel in northeast-southwest direction.	Caveat AX018142J Section 234 (Water Act) agreement AB766180R Section 234 (Water Act) agreement AD276269N Section 234 (Water Act) agreement AE877404A	No building over an easement without consent of service authority. Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 1 on Title Plan 372228C	1\TP372228	04985/871	'Transmission of electricity' in favour of State Electricity Commission of Victoria. 'Pipeline for water' in favour	Caveat AX018142J Section 244 (Water Act) agreement AB314318M (most recent variation AL202403K) Section 234 (Water Act) agreement	No building over an easement without consent of service authority. Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
				of Coliban Region Water Authority. Both through eastern part of parcel in northeast-southwest direction.	AB322123H Section 234 (Water Act) agreement AB766180R Section 234 (Water Act) agreement AF168562B	over land, construction of works, and maintenance of works.
	Lot 2 on Title Plan 372228C	2\TP372228	04985/871	None	Caveat AX018142J Section 244 (Water Act) agreement AB314318M (most recent variation AL202403K) Section 234 (Water Act) agreement AB322123H Section 234 (Water Act) agreement AB766180R	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 3 on Title Plan 372228C	3\TP372228	04985/871	'Transmission of electricity' in favour of State Electricity Commission of	Caveat AX018142J Section 244 (Water Act) agreement AB314318M (most recent variation	No building over an easement without consent of service authority. Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
				Victoria. 'Pipeline for water' in favour of Coliban Region Water Authority. Both through central part of parcel in northeast-southwest direction.	AL202403K) Section 234 (Water Act) agreement AB322123H Section 234 (Water Act) agreement AB766180R Section 234 (Water Act) agreement AF168562B	interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 4 on Title Plan 372228C	4\TP372228	04985/871	'Transmission of electricity' in favour of State Electricity Commission of Victoria. 'Pipeline for water' in favour of Coliban Region Water Authority. Both through northern part of parcel in northeast-	Caveat AX018142J Section 244 (Water Act) agreement AB314318M (most recent variation AL202403K) Section 234 (Water Act) agreement AB322123H Section 234 (Water Act) agreement AB766180R Section 234 (Water Act) agreement AF168562B	No building over an easement without consent of service authority. Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
				southwest direction.		
	Lot 5 on Title Plan 372228C	5\TP372228	04985/871	None	Caveat AX018142J Section 244 (Water Act) agreement AB314318M (most recent variation AL202403K) Section 234 (Water Act) agreement AB322123H Section 234 (Water Act) agreement AB766180R	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 6 on Title Plan 372228C	6\TP372228	04985/871	None	Caveat AX018142J Section 244 (Water Act) agreement AB314318M (most recent variation AL202403K) Section 234 (Water Act) agreement AB322123H Section 234 (Water Act) agreement AB766180R	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
	Lot 7 on Title Plan 372228C	7\TP372228	04985/871	None	Caveat AX018142J Section 244 (Water Act) agreement AB314318M (most recent variation AL202403K) Section 234 (Water Act) agreement AB322123H Section 234 (Water Act) agreement AB766180R	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 1 on Title Plan 375179W	1\TP375179	04588/529	None	Caveat AX018142J	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.
	Lot 2 on Title Plan 375179W	2\TP375179	04588/529	None	Caveat AX018142J	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.
	Lot 3 on Title Plan 375179W	3\TP375179	04588/529	None	Caveat AX018142J	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
	Lot 1 on Title Plan 384871H	1\TP384871	08443/900	'Transmission of electricity' in favour of State Electricity Commission of Victoria. 'Pipeline for water' in favour of Coliban Region Water Authority. Both through northwestern part of parcel.	Caveat AX018142J Section 234 (Water Act) agreement AB322123H Section 234 (Water Act) agreement AF168562B	No building over an easement without consent of service authority. Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 2 on Title Plan 384871H	2\TP384871	08443/900	None	Caveat AX018142J Section 234 (Water Act) agreement AB322123H	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 3 on Title Plan 384871H	3\TP384871	08443/900	None	Caveat AX018142J Section 234 (Water Act) agreement AB322123H	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
						Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 4 on Title Plan 384871H	4\TP384871	08443/900	None	Caveat AX018142J Section 234 (Water Act) agreement AB322123H	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Lot 5 on Title Plan 384871H	5\TP384871	08443/900	None	Caveat AX018142J Section 234 (Water Act) agreement AB322123H	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Water Act agreements for rights of access for water supply, generally including access over land, construction of works, and maintenance of works.
	Crown Allotment 29 Section O Parish of Colbinabbin	29~C\PP2407	09011/481	None	Caveat AX018142J Minerals rights to the Crown	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Minerals rights to the Crown.

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
	Crown Allotment 14A Parish of Cornella	14A\PP2455	09415/609	None	Caveat AX018142J	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.
	Crown Allotment 15 Parish of Cornella	15\PP2455	09415/609	None	Caveat AX018142J	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.
	Crown Allotment 14C Parish of Cornella	14C\PP2455	09415/608	None	Caveat AX018142J	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.
	Crown Allotment 25A Parish of Cornella	25A\PP2455	01804/686	None	Caveat AX018139W Minerals rights to the Crown	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Minerals rights to the Crown.
	Crown Allotment 26A Parish of Cornella	26A\PP2455	01804/686	None	Caveat AX018139W Minerals rights to the Crown	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land. Minerals rights to the Crown.
	Crown Plain Road;	19B\PP2455	07756/048	None	Caveat AX050989N	Caveat for Cooba Solar Project claiming an

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
Colbinabbin 3559	Allotment 19B Parish of Cornella					interest in the land and preventing the registration of any instrument affecting their interest in the land.
	Crown Allotment 20 Parish of Cornella	20\PP2455	07756/048	None	Caveat AX050989N	Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.
	Crown Allotment 21A Parish of Cornella	21A\PP2455	10062/249	None	None	None
Plain Road, Colbinabbin 3559	Lot 1 on Plan of Subdivision 330195Q	1\PS330195	10161/042	'Powerline' in favour of SECV (State Electricity Commission of Victoria) through part of parcel.	Caveat AX018142J	No building over an easement without consent of service authority. Caveat for Cooba Solar Project claiming an interest in the land and preventing the registration of any instrument affecting their interest in the land.
Road reserves in the Shire of Campaspe	Heathcote-Rochester Road Cornella	-		-	-	• The corner of Cornella Church Road and Heathcote-Rochester Road, for the purpose of upgrading site access;

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments
	Church Road Myola Road Plain Road Davey Road					• The northern turning lane along Plain Road, 370-metres south of the Plain Road and Cornella Church Road intersection; • The central turning lane along plain road, 550-metres north of Myola Road and Plain Road intersection; • The southern turning lane along Plain Road, 270-metres north of Myola Road and Plain Road intersection; • The northern OHL which crosses Plain Road, 800-metres south of Plain Road and Cornella Church Road intersection; • The central OHL which crosses plain road, approximately 270-metres north of Myola Road and Plain Road intersection (occurs in the same position as the southern-most turning lane along Plain Road); • The Southern OHL which crosses Plain Road, approximately 50-metres north of Myola Road and Plain Road intersection; • The turning Lane along Davey Road, approximately 1.5-kilometres west of the Davey Road and Plain Road intersection.

Property address	Parcel description	Standard Parcel Identifier (SPI)	Volume / Folio	Easements	Restrictive instruments	Comments

5.3 The surrounds

The surrounding area is generally characterised by large agricultural landholdings, with dwellings, farm buildings and dams scattered in the landscape. While many of the agriculture uses are typical grazing and cropping activities, there are also various activities associated with the viticulture industry in the surrounding area; these are generally to the west of the Project site (including to the northwest and southwest). Surrounding land is almost entirely within the FZ apart from where it is in public land zones.

There are a number of non-involved dwellings and one church located within 1km of the Project site boundary. These are listed below and shown in Figure 5-2 below, with measurements being the approximate distance of the nearest part of the dwelling/church to the nearest part of the Project site boundary – and not the solar panel array.

- 2240 Heathcote-Rochester Road, Colbinabbin (50m – a viticulture activity).
- 2265 Heathcote-Rochester Road, Colbinabbin (750m –also a viticulture activity)
- 2 Cornella Church Road, Colbinabbin (850m – further to an array)
- 1993 Heathcote-Rochester Road, Colbinabbin (850m)
- 1892 Heathcote-Rochester Road, Cornella (950m)
- 824 Plain Road, Cornella (170m – further to an array)
- 507 Plain Road, Colbinabbin (50m)
- 522 Cornella Church Road, Colbinabbin (450m)
- 574 Cornella Church Road, Gobarup (400m – further to an array)
- Cornella Catholic Church, 518 Cornella Church Road, Colbinabbin (650m).

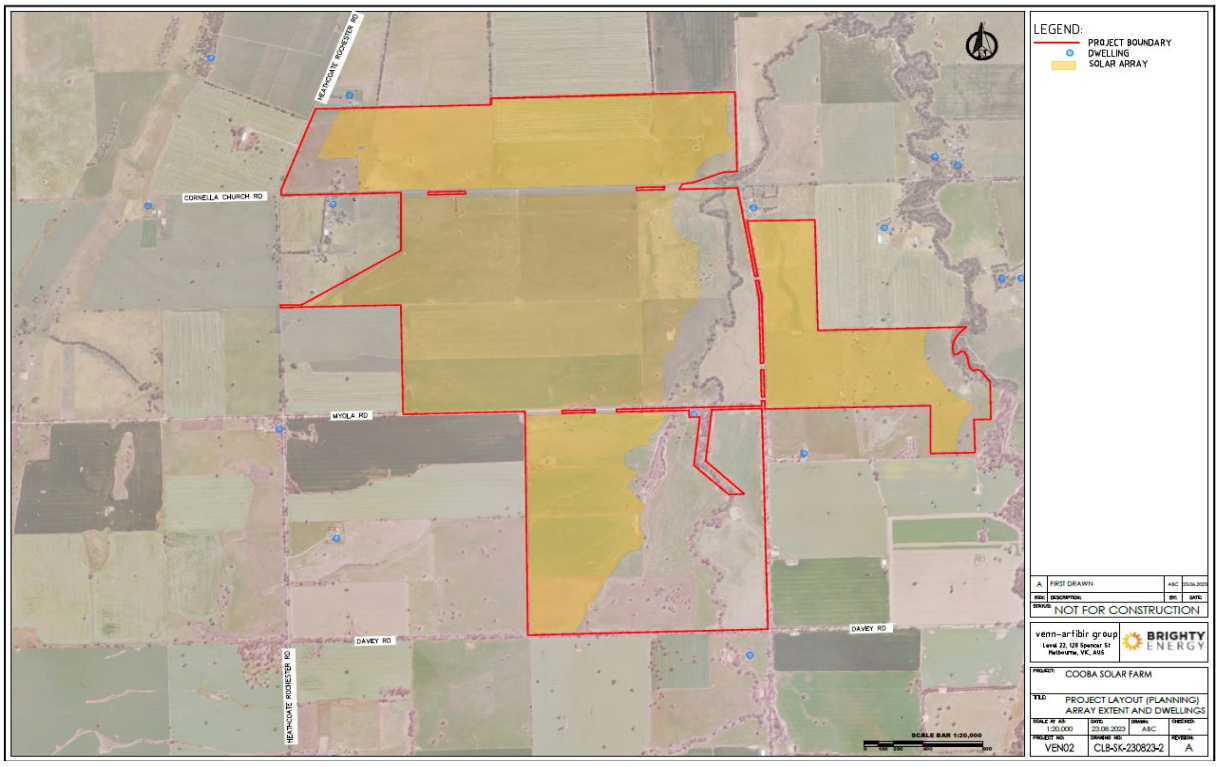

Figure 5-2 Location of nearby dwellings

The small township of Colbinabbin is located around 4 km to the north, with a population of around 300 people. The Bendigo CBD is located around 38 km to the west.

Heathcote-Rochester Road runs north-south to the west of the Project site and is in the TRZ2 as part of the Principal Road Network with an approximate 6m sealed width and 100 km/hr speed limit. It is the main road between Heathcote and Rochester and carries traffic up to river locations such as Echuca, located approximately 55 km to the north. Cornella Church Road is a sealed local road, while Plain Road, Myola Road, and Davey Road are all unsealed (gravel) local roads.

Heathcote-Graytown National Park is approximately 20 km to the southeast and the Greater Bendigo National Park is about 30 km to the west, while there are various other scattered conservation reserves and state forests.

The nearest operating solar energy facilities are about 25 km to the northeast, where there are several projects around Stanhope and Girgarre. There are four approved solar farms within 20km of the Project as follows:

- Corop Solar Farm 15km to the northeast
- Muskerry Solar Farm 13km to the southwest
- Axedale Solar Farm 20km to the west
- Fosterville Solar Farm 20km west.

6. Planning provisions

6.1 Permit triggers and Clause 53.22

Clause 53.22 is an applicable provision for a renewable energy facility over 1MW and for a utility installation.

A permit is required pursuant to the following provisions of the Campaspe Planning Scheme:

- Clause 35.07-1: for a renewable energy facility (other than wind energy facility) as a section 2 use of land, on the condition that it must meet the requirements of clause 53.13.
- Clause 35.07-1: for a utility installation as a section 2 use of land.
- Clause 35.07-4:
  - Construct a building or carry out works associated with a use in section 2 of clause 35.07-1.
  - Construct earthworks which change the rate of flow or the discharge point of water across a property boundary.
  - Construct a building that is within a 100m setback from a TRZ2, 20m setback from any other road, 100m setback from a dwelling not in the same ownership, and 100m setback from a waterway, wetlands, or designated floodplain.
- Clause 52.05-2: construct or put up for display a business identification sign.
- Clause 52.17-1: remove, destroy, or lop native vegetation, including dead native vegetation.
- The planning permit application also seeks to provide car parking spaces to the satisfaction of the responsible authority under clause 52.06-6.

6.2 Referrals

The permit application is required to be referred to relevant referral authorities pursuant to the provisions of the Campaspe Planning Scheme, as shown in Table 6-1 below.

Table 6-1 Referrals

Clause	Kind of application	Referral authority	Type
66.02-2	To remove, destroy or lop native vegetation in the Detailed Assessment Pathway	Secretary to DELWP	Recommending
66.02-4	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	Relevant electricity transmission authority	Determining
66.02-7	Applications for a utility installation where a fire protection quantity is exceeded under the	Victorian WorkCover Authority	Determining

	Dangerous Goods (Storage and Handling) Regulations 2012 (VDGR). The fire protection quantity for lithium-ion batteries is 20 tonnes under the VDGR. The battery technology type is not determined, however in the case that lithium-ion is decided upon, the weight of lithium-ion batteries is likely to exceed 20 tonnes.		

6.3 Planning Policy Framework

The assessment contained further within this report addresses the relevant provisions of the PPF.

6.4 Zones

6.4.1 35.07 Farming zone

Purpose

- 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.

6.5 Overlays

There are no overlays that apply to the Project site where the development of land is proposed.

It is acknowledged that a Land Subject to Inundation Overlay (LSIO) applies to land to the north and east of the project land, in particular a portion of the overlay crosses Plain Road to the north.

Although the development is not affected by the LSIO, a Flood Impact Assessment (FIA) has been prepared by Water Technology and is included at Appendix H. The report assesses the potential flood risk and inundation at the Project site.

6.6 Particular provisions

6.6.1 52.05 Signs

Purpose

- To regulate the development of land for signs and associated structures.
- To ensure signs are compatible with the amenity and visual appearance of an area, including the existing or desired future character.
- To ensure signs do not contribute to excessive visual clutter or visual disorder.
- To ensure that signs do not cause loss of amenity or adversely affect the natural or built environment or the safety, appearance or efficiency of a road.

6.6.2 52.06 Car parking

Purpose

- To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework.
- To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.
- To support sustainable transport alternatives to the motor car.
- To promote the efficient use of car parking spaces through the consolidation of car parking facilities.
- To ensure that car parking does not adversely affect the amenity of the locality.
- To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.

6.6.3 52.17 Native vegetation

Purpose

- To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the following 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):
    1. Avoid the removal, destruction or lopping of native vegetation.
    2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
    3. Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy, or lop native vegetation.
- To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.

6.6.4 53.13 Renewable energy facility

Purpose

- To facilitate the establishment and expansion of renewable energy facilities, in appropriate locations, with minimal impact on the amenity of the area.

6.6.5 Clause 53.22 Significant Economic Development

Clause 53.22 has the purpose of prioritising and facilitating the planning, assessment and delivery of projects that will make a significant contribution to Victoria's economy and provide substantial public benefit, including jobs for Victorians.

Clause 53.22-1 applies to an application under any provision of the planning schemes if the condition corresponding to a category in Table 1 is met. Category 1 in Table 1 has the condition *"the use must be specified in Table 2 and the condition corresponding to that use must be met."*

The requirement to have written advice form the Chief Executive Officer, Invest Victoria confirming the likely financial feasibility of the proposal does not apply to an application for the use or development of land for a renewable energy facility or utility installation.

In Table 2 the following relevant Use and Conditions apply:

Renewable Energy facility	An installed capacity of 1 megawatt or greater must be proposed.
Utility installation	A utility installation use to: Transmit or distribute electricity; or Store electricity if the installed capacity is 1 megawatt or greater must be proposed.

Clause 53.22-4 provides for the Exemption from Review stating that "an application under any provision of this planning scheme is exempt from the decision requirements of sections 64(1), (2) and (3) and the review rights of sections 82(1) of the Act.

The relevant decision guideline is as follows:

Before deciding on an application, in addition to the decision guidelines elsewhere in the planning scheme including in clause 65, the responsible authority must consider as appropriate the purpose of the clause.

6.7 General provisions

6.7.1 65.01 Approval of an Application or Plan

Pursuant to clause 71.02-3 of the Campaspe Planning Scheme, before deciding on an application or approval of a plan, the responsible authority must consider various matters, as appropriate.

6.8 Operational provisions

6.8.1 71.02 Operation of the Planning Policy Framework

Pursuant to clause 71.02-3 of the Campaspe Planning Scheme, responsible authorities should endeavour to integrate the range of planning policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development for the benefit of present and future generations.

6.8.2 Clause 72.04 Incorporated Documents

Incorporated documents of potential relevance to this application include:

EARTHWORKS CONTROLS IN THE SHIRE OF CAMPASPE, THE CITY OF GREATER SHEPPARTON AND THE SHIRE OF MOIRA 2022

This document provides for some exemptions to the permit requirement for earthworks triggered elsewhere in the Planning Scheme. Whilst the land is in the Farming Zone within which some relevant exemptions apply, this proposal is not exempt from the permit requirements as;

- The works are not within the Salinity management overlay (SMO) and not being undertaken on behalf of the Rural Water Corporation
- There is not a Whole farm Plan in place.

6.9 Other guidelines and policy

6.9.1 Solar Energy Facilities: Design and Development Guideline, DELWP 2022

The SEF Guideline provides an overview of the policy, legislative and statutory planning arrangements for solar energy facility projects in Victoria and provides:

- Information for solar energy facility developers (proponents), the community, regulators and decision-makers relating to the PE Act and the Victoria Planning Provisions.
- 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 SEF Guideline outlines what solar facilities are, how to identify suitable locations, best practice for proponents, and considerations in applying for a planning permit.

The SEF Guideline requires a site and context analysis as well as a design response to be prepared, including relevant written reports and assessments. Further, the document gives further detail around the decision guidelines of clause 53.13 ‘Renewable energy facility’.

6.9.2 Design Guidelines and Model Requirements for Renewable Energy Facilities, CFA V4 2023

The purpose of the CFA Guidelines is to provide standard considerations and measures in relation to fire safety, risk, and emergency management to be considered when designing, constructing and operating new renewable energy facilities, and upgrading existing facilities. The CFA Guidelines are designed to:

- Facilitate the consideration of fire risk management in the design, construction and operation of renewable energy facilities.
- Reduce the occurrence and consequences of fire at renewable energy facilities through risk-based design and enable safe and effective emergency response through the provision of fire protection systems.
- Inform fire and risk management processes for all phases of a facility's lifespan, through the preparation of RMPs and FMPs by facility operators.
- Support operators to prepare EMMPs that effectively consider bushfire.

The CFA Guidelines set out design guidelines and model requirements in relation to matters such as emergency vehicle access, firefighting water supply, fire protection systems, landscape screening and on-

site vegetation, fire breaks, separation of solar panel banks. Regarding these and other matters, the CFA recommend that facility operators develop a Fire and Risk Management Plans and an Emergency Management Plan.

6.9.3 Loddon Mallee North Regional Growth Plan

The Loddon Mallee North Regional Growth Plan details a regional approach to land use planning, including in the Campaspe Shire, with opportunities to encourage and accommodate growth and address challenges. Various future land use strategies and actions are outlined, and relevantly include:

- Support and develop emerging and potential growth sectors, such as nature-based tourism, mining and renewable energy generation and protect these activities from urban encroachment.
- Identify, manage, and facilitate access to locally sourced natural resources where appropriate, including sand and stone, minerals, timber, and renewable energy.
- Facilitate ongoing agricultural productivity and investment in high value agriculture by critically assessing proposals for non-agricultural uses within areas of strategic agricultural significance and preventing encroachment of incompatible uses.

6.9.4 Regional Rural Land Use Strategy: Campaspe, Greater Shepparton, and Moira

The purpose of the Regional Rural Land Use Strategy (RRLUS) is to provide a consistent regional response to the management of rural land. The outcomes and recommendations of the RRLUS are generally captured by the applicable policies of the Campaspe Planning Scheme that relate to agriculture, which are discussed within this report.

The Project site is not specifically identified as significant agricultural land within the RRLUS. The site is located within the Heathcote Wine Region where the growing of wine grapes occurs. The RRLUS does not specifically identify solar energy facilities or similar essential infrastructure as a threat to agricultural enterprises. Non-agricultural uses are generally discouraged where they conflict with agriculture. This largely focusses on dwellings, inappropriate subdivision, and the fragmentation of productive farmland.

6.10 Legislation

6.10.1 Planning and Environment Act 1987 (Vic)

The purpose of the PE 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 objectives of planning in Victoria 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).

(fa) to facilitate the provision of affordable housing in Victoria.

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

6.10.2 Environment Effects Act 1978 (Vic)

Under the *Environment Effects Act 1978* (EE Act), environment assessment of the potential environmental impacts or effects of a proposed development may be required. The process is not an approval process itself, rather it enables statutory decision-makers to make decisions about whether a project with potentially significant environmental effects should proceed. If the Minister for Planning decides that an Environment Effects Statement (EES) is required, the proponent is responsible for preparing the EES and undertaking the necessary investigations.

It is assessed that the Project does not require a referral under the EE Act as it does not trigger any criteria for individual potential environmental effects or criteria for a combination of potential environmental effects.

6.10.3 Environment Protection Act 2017 (Vic)

The *Environment Protection Act 2017* (EPA Act), as significantly amended by the *Environment Protection Amendment Act 2018* and other Acts, came into effect on 1 July 2021. It includes environmental obligations and protections for all Victorians and changes Victoria's focus for environment protection and human health to a prevention-based approach. It includes the general environmental duty and gives the Environment Protection Authority (EPA) enhanced powers and tools to prevent and minimise the risks of harm to human health and the environment from pollution and waste.

EPA employs a variety of tools collectively referred to as 'permissions,' encompassing licenses, permits, and registrations. These tools serve as EPA's authorisation for the management of activities with potential environmental impact. The framework is designed to facilitate businesses in fulfilling their environmental obligations effectively.

The determination of whether a license, permit, or registration is necessary hinges on the perceived risk and nature of the activity in question. The Permissions proposal pathway guideline, outlined in Publication 1995, offers valuable assistance in discerning the appropriate permission required and provides guidance on the application process.

Effective July 1, 2021, certain activities that previously did not require EPA authorisation now trigger obtaining a permission due to the associated risks they may pose. The use of land for a renewable energy facility falls outside the definition of a prescribed activity therefore no EPA approval in required.

6.10.4 Heritage Act 2006 (Vic)

The *Aboriginal Heritage Act 2006* (AH Act) provides for the protection of Aboriginal cultural heritage in Victoria. It allows different organisations, groups, and bodies to connect and better enforce and preserve policies regarding Aboriginal Heritage. It does this through:

- Establishing the Victorian Aboriginal Heritage Council.
- Establishing Registered Aboriginal Parties.
- Establishing the Victorian Aboriginal Heritage Register.
- CHMPs and Cultural Heritage Permit processes.

6.10.5 Aboriginal Heritage Regulations 2018 (Vic)

The *Aboriginal Heritage Regulations 2018* (AH Regulations) give effect to the AH Act. Principally, the AH Regulations define 'high impact activities' and 'areas of cultural heritage sensitivity'. Where a high impact activity is proposed in an 'area of cultural heritage sensitivity', a CHMP must be prepared to assess the likelihood of, and manage harm to, any Aboriginal cultural heritage in the activity area.

A mandatory CHMP is required for the Project, which is currently underway.

6.10.6 Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance. The objects of the EPBC Act are as follows:

a) to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance; and

b) to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and

c) to promote the conservation of biodiversity; and

(c-a) to provide for the protection and conservation of heritage; and

d) to promote a co-operative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples; and

e) to assist in the co-operative implementation of Australia's international environmental responsibilities; and

f) to recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and

g) to promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in co-operation with, the owners of the knowledge.

As noted in section 5.1 of the Biodiversity Assessment (refer Appendix C), impacts to Grey Box Grassy Woodlands and Derived Native Grasslands of South-eastern Australia are entirely avoided, with a referral unlikely to be required. There is suitable creek line habitat within the Project site for Spiny Rice-flower, with targeted flora surveys scheduled to occur within the impact footprint in areas of high-quality remnant vegetation. Further, there is suitable habitat within the site for Brown Tree Creeper, with avifauna surveys scheduled to be conducted to determine the presence/absence of this significant avifauna species.

Pending the outcomes of surveys, a referral under the EPBC Act may be required, but one has not currently been made.

6.10.7 Flora and Fauna Guarantee Act 1988 (Vic)

The *Flora and Fauna Guarantee Act 1988* (FFG Act) is the main Victorian legislation governing the conservation of threatened species and ecological communities and addresses the management of processes that threaten native flora and fauna. It enables the listing of threatened species and communities and threats to native species, and the declaration of critical habitat necessary for their survival.

There is suitable habitat within the study area (i.e., along roadsides) for a range of flora and fauna species. In this regard, targeted flora and fauna surveys are scheduled to occur to determine the presence/absence of these species, which for flora may include Buloke, Lightwood, Silver Wattle, and Fuzzy New Holland Daisy, while for fauna may include Squirrel Glider and Brush-tailed Phascogale. An FFG Act permit will be required for the Project for impacts to these are any other listed species and communities within road reserves.

6.10.8 Climate Change Act 2017 (Vic)

Among other purposes, the *Climate Change Act 2017* (CC Act) sets a long-term greenhouse gas emissions reduction target, provides for the setting of 5-yearly interim greenhouse gas emissions reduction targets; facilitates the consideration of climate change issues, and sets policy objectives and guiding principles to inform decision-making. Section 6 states that for the purposes of the CC 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".

6.10.9 Renewable Energy (Jobs and Investment) Act 2017

As legislated in the *Renewable Energy (Jobs and Investment) Act 2017* (REJI Act), Victoria's renewable energy targets are:

- 25% by 2020 (achieved)
- 40% by 2025
- 65 % by 2030
- 95% by 2035.

Meeting these targets will:

- Create investment in new renewable energy projects in Victoria.
- Support the reliability of Victoria's electricity supply.
- Create thousands of jobs.
- Put downward pressure on electricity prices.
- Reduce emissions from electricity generation.

7. Assessment

This section outlines how the Project responds to the provisions of the Campaspe Planning Scheme. Matters are addressed thematically.

7.1 Policy response

7.1.1 Legislation

For the reasons outlined further within this report, the Project is assessed to be consistent with objectives of planning in Victoria that are set out by the PE Act. In particular, this includes the fair, orderly, economic and sustainable use, and development of land; protection of natural resources; conserving places of historical interest or special cultural value; as well as balancing the present and future interests of all Victorians.

Further, the Project will contribute to meeting the long term and interim greenhouse gas emissions reduction targets of the CC Act. The decision on the Project should therefore appropriately take account of climate change considerations.

Finally, the Project will contribute to meeting Victoria's renewable energy targets, as legislated in the REJI Act. In this respect, the Project will contribute to creating investment, supporting the reliability of Victoria's electricity supply, creating jobs, putting downward pressure on electricity prices, and reducing emissions from electricity generation.

The Project does not result in emissions such as waste or environmental impacts. The use of a renewable energy facility does not require EPA approval.

7.1.2 Planning Policy Framework

11 Settlement

Clause 11.01-1S 'Settlement' has the objective to facilitate the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements. Through the delivery of a solar energy facility, the Project is generally consistent with a relevant strategy of the clause to deliver settlements that are sustainable by contributing to net zero greenhouse gas emissions through renewable energy infrastructure. **Clause 11.03-6S 'Regional and local places'** has the objective to facilitate integrated place-based planning. The design and location of the Project is asserted to be generally consistent with a relevant strategy of the clause to consider the distinctive characteristics and needs of regional and local places in planning for land use and development.

12 Environmental and Landscape Values

Clause 12.01-1S 'Protection of biodiversity' has the objective to protect and enhance Victoria's biodiversity while clause **12.01-1L 'Biodiversity'** has a relevant strategy to avoid the loss of riparian flora and fauna, biodiversity, habitat, and wetlands. For the reasons outlined further within this report, the Project is assessed to be consistent with these clauses. A highly relevant provision to this planning permit application is **clause 12.01-2S 'Native vegetation management'**, which has the objective to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. For the reasons outlined further within this report under the assessment of biodiversity, the Project is assessed to suitably apply the three-step approach of avoiding the removal of native vegetation, minimising removal that cannot be avoided, and providing an offset to compensate for the removal. Finally, the Project is considered to accord with clause **12.03-1S 'River and riparian corridors, waterways, lakes, wetlands and billabongs'**, which has the objective to protect and enhance waterway systems, as well as **clause 12.05-2S 'Landscapes'**, which has the objective to protect and enhance significant landscapes and open spaces that

contribute to character, identity and sustainable environments. In particular, reference is made to the results of the LVIA, which are outlined in more detail below.

13 Environmental Risks and Amenity

Clause 13.01-1S 'Natural hazards and climate change' has the objective to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning, while **clause 13.02-1S 'Bushfire planning'** has the objective to strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life. The Project is assessed to accord with the direction of these policies, although if a permit is granted, it is expected that conditions will be imposed requiring the submission and approval of an Emergency Management Plan incorporating a Fire Management Plan. **Clause 13.03-1S 'Floodplain management'** has the objective to assist the protection of life, property, and community infrastructure from flood hazard, including coastal inundation, riverine and overland flows; the natural flood carrying capacity of rivers, streams, and floodways; the flood storage function of floodplains and waterways; and floodplain areas of environmental significance or of importance to river, wetland, or coastal health. Provisions of central importance to this permit application include **clause 13.05-1S 'Noise management'**, which has the objective to assist the management of noise effects on sensitive land uses, as well as **clause 13.07-1S 'Land use compatibility'**, which has the objective to protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts. Detailed assessments of these matters are provided further below, and it is considered that the Project accords with both provisions. Community amenity and human health is not considered to be adversely impacted by noise emissions, including because of suitable siting, design and location, and any impacts are appropriate to the land use functions and character of the area. On balance, it is concluded that the Project is compatible with adjoining and nearby land uses and that, as far as reasonably practicable, any off-site impacts are avoided or otherwise minimised through siting, design, and operational measures.

14 Natural resource management

Clause 14.01-1S 'Protection of agricultural land' has the objective to protect the state's agricultural base by preserving productive farmland. **Clause 14.01-1L-03 'Non-agricultural land use in Campaspe'** has the strategy to discourage non-agricultural use and development in all rural areas other than those that support agriculture and lists specific non-agricultural land uses that are generally discouraged in the FZ. Solar energy facility and utility installation are not listed. **Clause 14.01-2L-01 'Sustainable agricultural land use in Campaspe'** has a relevant strategy to discourage land uses that have the potential to compromise agricultural activities or investment. Agricultural issues are a key consideration in this permit application and a detailed assessment of these matters is provided in the following sections of this report. The Project is considered to accord with the above clauses, including relevant strategies to avoid permanent removal of productive agricultural land from the state's agricultural base, 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, and protect strategically important agricultural and primary production land from incompatible uses. Due consideration has been given to the impacts of removing the land from primary production based on its agricultural productivity, the impacts on the continuation of primary production on adjacent land, compatibility between the Project and the existing use of the surrounding land, and the potential impacts of the spread of plant and animal pests into agricultural areas.

15 Built environment and heritage

Clause 15.01-6S 'Design for rural areas' has the objective to ensure development respects valued areas of rural character. The Project is assessed to be consistent with this objective and related strategies to ensure that the siting, scale, and appearance of development protects rural character, to protect the visual amenity of valued rural landscapes, and to site and design development to minimise visual impacts on surrounding natural scenery and landscape features. A more detailed assessment of visual amenity and landscape matters is provided below. **Clause 15.03-1S 'Heritage conservation'** has the objective to ensure the conservation of places of heritage significance, while **clause 15.03-2S 'Aboriginal cultural heritage'** has the objective to ensure the protection and conservation of places of Aboriginal cultural heritage significance. The Project is consistent with these objectives and their related strategies. This includes the protection of natural heritage sites and man-made resources, encouraging appropriate development that respects places with identified heritage values, ensuring an appropriate setting and context for heritage places is maintained or enhanced, identifying and assessing places of Aboriginal cultural heritage significance, providing for the protection and conservation of pre-contact and post-contact Aboriginal cultural heritage places, as well as ensuring that permit approvals align with the recommendations of any relevant CHMP. A more detailed assessment of heritage matters is provided below.

17 Economic development

Clause 17.01-1S 'Diversified economy' has the objective to strengthen and diversify the economy, while **clause 17.01-1R 'Diversified economy - Loddon Mallee North'** has the relevant strategy to support emerging and potential growth sectors such as renewable energy generation. The Project is broadly consistent with this direction and will support the rural economy to grow and diversify as well as facilitating employment in the region's emerging renewable energy sector.

18 Transport

Clause 18.01-1S 'Land use and transport integration' has the objective to facilitate access to social, cultural, and economic opportunities by effectively integrating land use and transport, while **clause 18.02-4S 'Roads'** has the objective to facilitate an efficient and safe road network that integrates all movement networks and makes best use of existing infrastructure. The Project is assessed to be consistent with these objectives as well as relevant strategies to protect existing transport infrastructure from detriment that would impact on the function of the asset, protect the Principal Road Network to provide high mobility for through traffic and the efficient movement of freight, as well as provide an adequate supply of car parking that is appropriately designed and located. A more detailed assessment of traffic matters is provided below.

19 Infrastructure

Clause 19.01-1S 'Energy supply' has the objective to facilitate appropriate development of energy supply infrastructure. The Project is assessed to accord with the direction of this clause, including relevant strategies to support the development of energy generation infrastructure to transition to a low-carbon economy, develop appropriate infrastructure to meet community demand for energy services, ensure energy generation projects are resilient to the impacts of climate change, support energy infrastructure projects in locations that minimise land use conflicts and that take advantage of existing resources and infrastructure networks, and facilitate energy infrastructure projects that help diversify local economies and improve sustainability and social outcomes. Provisions of central importance to this permit application include **clause 19.01-2S 'Renewable energy'**, which has the objective to support the provision and use of renewable energy in a manner that ensures appropriate siting and design considerations are met, as well as clause **19.01-2R 'Renewable energy - Loddon Mallee North'**, which has the related strategy to support and facilitate renewable energy generation and protect these activities from urban encroachment. It is concluded

that the Project is consistent with the direction provided, including to facilitate renewable energy development in appropriate locations as well as to consider the economic, social, and environmental benefits to the broader community of renewable energy generation while also considering the need to minimise the effects of a Project on the local community and environment. The Project is ideally located on the electricity grid network, with ready access to existing roads (including a main road), outside of a declared irrigation district and not on state-significant productive agricultural land, where there are a limited number of nearby sensitive receivers, where there is relatively low risk to natural hazards, and on relatively flat topography where extensive earthworks will not be required. Further, the Project has been designed to suitably avoid, minimise, and offset the removal of native vegetation.

7.1.3 35.07 Farming zone

Pursuant to clause 35.07-6, before deciding on an application, the responsible authority must consider various decision guidelines, as appropriate. The following assessment is provided against the decision guidelines that are relevant in this instance.

General issues

- As above, the Project is assessed to accord with the PPF. Additionally, the Project is consistent with the vision and strategic directions of the Municipal Planning Strategy.
- The land has the capability to accommodate the Project, where the disposal of effluent will be limited and able to be satisfactorily managed. The proposed operations and maintenance facility includes amenities and an associated septic system, but any effluent that is generate can be suitably treated and disposed of within the Project site. If a permit is granted, it is expected that standard conditions will be imposed in this regard.
- The Project site is suitable for the use and development, being on relatively flat land that has been largely cleared of native vegetation, adjacent to the existing electricity network, a sufficient distance from existing urban areas, adequately distant from other renewable energy facilities, away from floodplains as well as major water courses and wetlands, with ready access to main roads, and outside of a declared irrigation district. Further, the Project is compatible with adjoining and nearby land uses, with surrounding land being primarily used for agricultural activities. There are several dwellings near to the Project site, but it is assessed that any amenity or other impacts on these land uses are acceptable.
- The Project makes suitable use of existing infrastructure, including the electricity network and road network.

Agricultural issues and the impacts from non-agricultural uses

- While the Project will not directly enhance agricultural production, it will support agricultural production. The permit application is supported by an AAR, which finds that the land is currently grazed and cropped at conservative rates as well as that sheep grazing could continue after the Project is constructed at comparable stocking rates to the current level. Diversified income streams of can increase the resilience of primary producers.
- The AAR finds that when the Project is decommissioned, there will be no residual detrimental impact on the productivity of the site and that although soil fertility will decline over time, this can be corrected in a quickly through the addition of appropriate amendments. The land will not be permanently removed from agricultural production but will change in use while the Project operates, although retaining a level of agricultural production or 'agrophotovoltaics', as noted.
- The Project will have limited, if any, effect on the ability of surrounding property owners to use their land for agricultural purposes and will have negligible impact on the agricultural sector in the wider region.

- The agricultural qualities of the land are of no strategic importance. Instead, the land is like much of the surrounding farmland, with mostly moderate to good quality soils. The Project would not have a significant impact on the overall productivity of the region or the state.

Environmental issues

- The Project will have limited and acceptable impacts on the natural physical features and resources of the area, including soil and water quality. The operation of the Project presents no significant issues, while the construction process can be managed to avoid, mitigate, and remedy any impacts.
- While the Project involves the removal of native vegetation, the relevant three-step approach of 'avoid, minimise, and offset' has been appropriately followed. Native vegetation matters are addressed in further detail below. The Project is expected to have limited and acceptable impacts on any fauna on the site and in the surrounds.
- The Project is assessed to have acceptable impacts on the biodiversity of the area, with any impacts limited to the removal of native vegetation, which has been appropriately avoided and minimised, and will be offset. The provision of future landscaping will also perform a revegetating function and may provide habitat for fauna.
- The Project's on-site effluent disposal areas can be suitably located to avoid impacts on waterways and retained native vegetation.

Design and siting issues

- Given the scale and nature of the Project, there is limited need to locate buildings and structures in one area to avoid adverse impacts on surrounding agricultural uses and minimise the loss of agricultural land.
- The Project will have limited and acceptable visual amenity and landscape impacts, and suitably minimises any adverse impacts in terms of siting, design, height, bulk, and materials. This is further addressed in the assessment of landscape and visual amenity matters below.
- The Project has limited and acceptable impacts on the character and appearance of the area as well as features of historic or scientific significance or of natural scenic beauty or importance.
- The Project has been designed and located to take account of existing infrastructure, including roads and powerlines.
- While the Project is not expected to require significant traffic management measures during its operation, it will require such measures during its construction. It is anticipated that any permit that is issued will require the preparation and approval of a TMP. It is expected that suitable measures can be found and implemented. Traffic matters are commented on in further detail below.
- The Project is not located within 1km of a wind energy facility that is proposed, approved, operating or otherwise.
- The Project is not located within 500m from the nearest title boundary of land on which a work authority has been applied for or granted.

Based on the above, the Project is assessed to meet the purpose of the FZ.

7.1.4 53.13 Renewable energy facility

Clause 53.13 'Renewable energy facility' provides a framework for assessing themes relevant to a solar energy facility. Clause 53.13-3 requires that before deciding on the permit application, the responsible authority must consider various decision guidelines. The assessment contained elsewhere within this report addresses these decision guidelines, including the SEF Guideline. Based on this assessment, it is concluded that the Project meets the purpose of clause 53.13 to facilitate the establishment and expansion of renewable energy facilities, in appropriate locations, with minimal impact on the amenity of the area.

There are many complex factors that influence the design, layout and scale of this proposal. To find this site, factors such as the following were considered:

- Size of the landholding (one or few owners is preferable)
- Farming zoned land outside of an irrigation district
- Proximity to and density of surrounding sensitive receivers
- Proximity to the grid and the ability to connect
- The extent and type of environmentally sensitive areas on the land
- The ability to avoid or minimise harm to those sensitive areas.

The need for the scale of this project is linked type of connection to the grid. This includes consideration of the following:

- The cost of unit energy (MW) produced by the project would not be competitive enough to enable project financing or participation in electricity markets, as the high fixed costs associated with establishing a 220kV switchyard and substation to connect to the existing high voltage circuits traversing the site would be distributed across fewer solar PV modules.
- The project has secured 5.3.4A and 5.3.4B status in accordance with the National Electricity Rules, awarded by the Australian Energy Market Operator, both acting as National Connections capacity and as the Delegated Transmission Network Service Provider in Victoria based on a fixed export capacity (project size). The project export capacity now forms part of national electricity network planning and a reduction in project size would impact national electricity network power system modelling and planning.
- To further 'compress' the project through further reduction of row spacing between solar modules (bringing solar PV array trackers closer together) would not only erode commercial viability due to reduction in electricity output due to increased row-to-row shading, but also impose several other material constraints such as limited access for construction and operations of the plant.
- Creek crossings are required to connect the central parcel of land and western parcel of land forming part of the project. The quantity of creek crossings shown on the plans are required to avoid excessively long cables. It is not possible to reduce the quantity of crossings without introducing excessive electrical losses to the project, excessive construction costs and also increased differential terminal voltages at inverters that may lead to non-compliant performance of the generator, particularly during contingency events such as 'ride through' events where the network voltage changes rapidly.
- The overhead line creek crossing, and direct buried crossing combinations shown on plans have been prescribed to minimise overall ecological impact, with due consideration to the constraints noted above.
- Medium voltage cables running between land parcels cannot be installed using directional boring underneath creeks and instead must be installed using 'direct buried' methodology due to a combination of cable thermal rating, drum size/handling equipment and MV cable jointing limitations or as overhead lines.
- Directional boring would require cables to be installed at a significant depth (underneath the creeks), the additional burial depth would limit heat dissipation from the cable, and thus impose higher thermal stresses on each cable; this would exceed cable ratings and not be practical. Additionally, encasing cables in ducts or conduits further restricts cooling, leading to potential overheating and reduced cable lifespan.
- The direct burial approach allows for better heat dissipation, ensuring cables do not exceed their rated thermal loading. Maximum cable sizes compatible with inverter stations are already used on the project, and therefore it is not possible to simply increase cable size to overcome this limitation.

- Directional boring also necessitates pulling cables through pre-installed ducts, which can damage the cable sheath due to friction and tight bends in the cable route as it is dragged from a stationary large cable drum, rather than the typical practice of 'rolling cable off the drum' directly into the trench which does not threaten the integrity of the cable.

7.2 Landscape and visual amenity

An LVIA has been prepared by Orbit Solutions and is included at Appendix B. The purpose of this report is to assess the Project within the relevant policy framework to determine if it satisfies visual compatibility requirements and should be approved. The LVIA follows a process of establishment, analysis, evaluation, overview, recommendation, and assessment. A Landscape strategy has been prepared by CDA Design Group and is included in the body of the LVIA.

In its establishment, the LVIA report sets out key background to the Project, including relevant planning provisions, details of the site and surrounds, as well as the results of fieldwork, before outlining key assessment terms and assessment results. In analysis, the LVIA outlines findings in relation to six key observation points (KOPs), including the visual character units that serve to classify and evaluate the visual elements present in the Project and its surrounding environment. The report includes photographs and photomontages from the KOPs, with original/current views as well as views with the Project infrastructure in place. The analysis of visual impacts has been undertaken with a numerical rating system that allows for consistent application to ensure a fair and objective assessment of visual situations and examine the Project's degree of contrast from the KOPs. This includes analysis of distance, visual magnitude, slope, influence of adjacent scenery, frequency, duration, and lighting/seasons. Based on the analysis, the Project is averaged to provide a magnitude of change rating being low, and then evaluated to be satisfactory from the perspective of visual compatibility. In short, the area can accept a strong magnitude of change, but the proposed magnitude of change (or visual impact) is low, and well within the acceptable level for the area.

In terms of recommendations, the report outlines various measures to avoid and further mitigate landscape and visual impacts. It is noted that the LVIA includes various measures that are deemed to not be required or that have already been provided for by the Project. However, there are various other measures that the report suggests should be considered further or that are required. If a planning permit is granted, it is expected and accepted that relevant permit conditions will be included in relation to these recommendations, including for landscaping, material and surface treatments, reclamation, as well as soil and vegetation management. It is observed that a complete perimeter of landscaping around the Project is unlikely to be necessary or effective, but rather a more targeted approach towards eastern and western orientations is likely to be more successful. The LVIA has provided the basis for a preliminary on-site landscaping plan, with recommended plant species based on EVCs and other relevant characteristics as well as a planting strategy to achieve optimal outcomes.

Finally, in assessment, the LVIA comments on various planning provisions, finding that the Project satisfies policy considerations under the Campaspe Planning Scheme, including the Municipal Planning Strategy and PPF as well as zoning and overlay considerations. Further, the Orbit work has guided the landscape design to propose the optimal screening strategy, which is based on aspect mapping, validating viewsheds, and comparing screening options. The submitted on-site landscaping strategy has utilised this work to achieve effective screening outcomes. It is acknowledged that off-site solutions could also be used in an effective manner, with the agreement of relevant landowners although the proposed landscape strategy provides for appropriate landscape screening within the Project site.

The Landscape Strategy acknowledges that there is also existing vegetation that will be removed for the Project, but also notes that there is existing vegetation that will be retained on the site that will contribute some natural screening of the Project.

The Landscape Strategy responds to the visual sensitivity classifications in the LVIA and proposes suitable screening of varying heights depending on the views. The Landscape Strategy also considers the potential

impact of the additional landscaping on the solar array in terms of shadowing and therefore output for the project. The landscape zones utilise a mix of lower shrubs with taller trees and provides indicative siting of species of varying heights to balance these considerations. The Landscape proposal has been planned to facilitate treatments comprising evergreen screen planting of indigenous (derived from ecological vegetation classes – EVC 803 Plains Woodland (SYN. EVC 55 Plains Grassy Woodland) and EVC 68: Creekline Grassy Woodland) and native species (non-EVC species that are reliable and suitable for the area) to produce an informal appearance that will integrate with the surrounding landscape. Please note that the Landscape Strategy has been based on a panel height of up to 8m, whereas the proposed height of panels is 5.5m. Accordingly, there may be capacity to reduce the extent of proposed landscaping depending on the final height of the panels.

The proposed vegetation will be installed in a typical 10 metre wide buffer zone along section of the title boundary and also within the site, potentially in some of the mapped areas of cultural heritage sensitivity (the latter subject of approval by the RAP). The proposed ground plane will consist of pasture grass and maintained in order to manage fire risk. It is anticipated that most of the landscaping will be planted as tube stock as this has greater success for survival and faster growing rates than planting at semi-mature heights.

The proposed planting will replicate the rural landscape character of the area within an informal arrangement. Most of the landscaped areas will be self-managed, sheep grazing in some areas can control height of pasture grasses and spot spraying of weeds will occur as required. There will be some access gates at key locations on the fence line providing access for maintenance and for emergency vehicles if needed.

Overall, it is found that the Project is consistent with clause 12.05-2S 'Landscapes', which has the objective to protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments, and clause 15.01-6S 'Design for rural areas', which has the objective to ensure development respects valued areas of rural character.

7.3 Glint and glare

An AIAGGA has been prepared by Chiron Aviation Consultants and is included at Appendix G. The report has been prepared to assess the Project's glint and glare impacts to aviation safety, roads, and dwellings, based on the following criteria:

- **No impact:** a solar reflection is not geometrically possible, or it will not be visible from the assessed receptor. No mitigation required.
- **Low impact:** a solar reflection is geometrically possible, but the intensity and duration of an impact is small and can be mitigated with screening or other measure.
- **Moderate impact:** a solar reflection is geometrically possible and visible, but the intensity and duration of an impact varies according to conditions. Mitigation measures (such as through design, orientation, landscaping, or other screening method) to reduce impacts to an acceptable level will be required.
- **Major Impact:** a solar reflection is geometrically possible and visible under a range of conditions that will produce impacts with significant intensity and duration. Significant mitigation measures are required if the proposed development is to proceed.

Glint is a momentary flash of light that is caused by direct reflection of the sun from the surface of an object, while glare is a continuous, excessive source of brightness. Glint is generally more intense than glare.

The AIAGGA utilises the *Sandia National Laboratories Solar Glare Hazard Analysis Tool* (SGHAT). The SGHAT determines when and where glare can occur throughout the year to various observation points from a PV array. It provides results that comply with the United States of America Federal Aviation Administration (FAA) requirements. The Australian Civil Aviation Safety Authority (CASA) accepts these requirements.

The SGHAT tool is a web-based tool and methodology to evaluate potential glint/glare hazards associated with solar energy installations. It is a validated tool that provides a quantified assessment of when and where glare will occur, as well as information about potential ocular impacts. The tool, being web based using Google Earth mapping, considers the land topography. The locations of the roads and buildings are those shown on Google Earth and therefore within the SGHAT. The tool is used to analyse potential impacts of solar installations on aerodromes and overlaying flight paths. As noted above, the results are accepted by the FAA and CASA for aviation operations.

Regarding aviation safety, the AIAGGA identifies no certified or uncertified aerodromes within 15km of the Project site. This distance was used because the Project has no tall structures over 40m in height, except for new 'cut in' transmission tower(s) which will be consistent and co-located with existing transmission structures on the project site. The airspace above the site is Class G, where CASA regulations require aircraft to remain at least 500 feet above the terrain and any obstacle on it. Given this altitude, the report finds that aircraft flying over or near the Project will not be affected by glint and glare. However, the report notes that an aircraft engaged in authorised low flying below 500 feet will conduct dynamic risk assessments and extensive preflight planning to ensure their safety, and hence be aware of the Project. Overall, the AIAGGA finds that the Project will have no glint and glare impacts to aerodromes and airspace and will not be a hazard to aircraft safety.

In terms of roads, the report has considered Heathcote-Rochester Road, Cornella Church Road, Plain Road, Myola Road, and Davey Road, and observes the natural tree line screening that exists in many locations. The SGHAT analysis does not predict any glint or glare for any road, despite a finding that glare may be geometrically possible. Overall, the AIAGGA finds the Project will have no glint and glare impacts on roads.

Concerning dwellings, the report has assessed 16 dwellings, including observing that many are surrounded by vegetation that provides a visual barrier to any geometrically possible reflection from the Project. The SGHAT analysis does not predict any glint or glare for any dwelling. Overall, the AIAGGA finds that the Project will have no glint and glare impacts on dwellings.

Concluding, the AIAGGA finds that the Project will have no glint and glare impacts to aviation safety, roads, and nearby dwellings. Despite a lack of any impacts, the report notes that any apparent glare can be mitigated by landscape screening on the boundary, which is something that the Project does propose. A specific landscaping approach has not yet been proposed and will be developed post-approval, during detailed design. Overall, from a glint and glare perspective, it is found that the Project is consistent with clause 13.07-1S 'Land use compatibility', which has the objective to protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts.

7.4 Biodiversity

A Biodiversity Assessment has been prepared by Ecology & Heritage Partners and is included at Appendix C. The report identifies the native vegetation present within the study area (or Project site) and examines the likely presence of significant flora, fauna, and ecological communities. Further, the report presents the results of the assessment and discusses the potential ecological and legislative implications of the Project.

Both desktop assessments and field assessments have been undertaken to inform the report's findings about flora and fauna values. The purpose of the assessment was to identify the extent and type of native vegetation present within the study area and to determine the likely presence of significant flora and fauna species and/or ecological communities. The report presents the results of the assessment and discusses the potential ecological and legislative implications associated with the proposed action including the impacts on native vegetation and the need for offsets.

In relation to the vegetation to be removed, the study area is within Location 2, with 6.505 hectares of native vegetation proposed to be removed, including 71 large trees (12 Large Trees in Patches and 59 scattered Large Trees) and 11 small scattered trees. As such, the permit application falls under the Detailed Assessment pathway.

The offset requirement for native vegetation removal is 1.4770 General Habitat Units and 71 large trees with a Strategic Biodiversity Score of 0.1834 in the Goulburn Broken CMA/Campaspe Shire Council area.

According to DEECA's Native Vegetation Offset Register, (DEECA 2024d), there are two offset sites within the Goulburn Broken CMA or Campaspe Shire Council municipality that can be used to satisfy the General Habitat unit and Large Tree offset requirements.

According to NatureKit Map (DEECA 2024A) the study area is located within the Victorian Riverina bioregion, Goulburn Broken Catchment Management Authority (CMA) and Campaspe Shire Council.

Field assessments were undertaken on 8-11 November 2021 and 24 May 2023 to inspect the flora and fauna values on the site. Targeted surveys were undertaken for the spiny rice flower in August 2023 and the Late Flower Flax-lily and Velvet Daisy-bush in November 2023. Photos of trees taken on site by EHP accompany the planning application.

Targeted fauna surveys were undertaken in August, October and November 2023 including:

- Fixed Point Bird Council and Roaming Surveys (Diurnal); and
- Remote Infrared Cameras from 10 October to 13 November 2023 for the Brush-tailed Phascogale and Squirrel Glider.

Regarding flora, the report observes that several patches of native vegetation were recorded along the roadsides and creek-lines, and many scattered and native trees recorded within the study area. The report then notes that the majority of the study area comprises introduced pasture grass and cereal crops, with windrow and ornamental planting. Forty-five (45) flora species were observed, including 20 indigenous and 25 non-indigenous species (Appendix B includes a list of all species). Native vegetation is representative of two EVCs: Creekline Grassy Woodland (EVC 68) and Plains Woodland (EVC 803), with the report providing a description of these EVCs and their locations. A total of 600 large trees in patches were identified, including River Red-gum associated with EVC 68 as well as Buloke, Grey Box, Yellow Box and Yellow Gum associated with EVC 803. A further 277 scattered trees, were recorded within and adjoining the Project site, including 229 large trees and 48 small, scattered trees.

A large majority of the study area (over 90%) is noted to contain exotic pasture grass and cereal crops. In relation to introduced and planted vegetation the report notes:

Some portions of the study area were actively cropped while others were grazed by livestock. Scattered native grasses and rushes were occasionally present (ie 1-5% cover adjacent to cropped areas; 5-10% cover in grazed paddocks) in these areas, however they did not have the required 25% relative cover to be considered a patch. Ornamental plantings and windrows were present in the vicinity of dwellings and sheds.

In terms of fauna, the report reiterates that most of the study area consists of paddocks containing improved exotic pastures, which are likely to be used by common generalist bird species. It also notes that patches of native grassland occur throughout the Project site, which have habitat attributes that are suitable for an array of common native fauna, including snakes, lizards and skinks, and grassland birds. The report states that the following birds were observed during field assessments:

- Australian Wood Duck
- Galah
- Northern Mallard
- Pacific Black Duck
- Little Raven
- Australian Magpie
- Willie Wagtail
- Eastern Rosella
- Sulphur-crested Cockatoo
- Red Wattlebird
- White-necked Heron
- Black Kite
- Pied Heron
- Dusky Woodswallow
- Common Sandpiper
- Little Corella
- White-faced Heron
- Rainbow Lorikeet
- Pied Currawong
- White-wing Chough
- Whistling Kite

The report sets out that several frog species were heard calling along the creek lines during field assessments, including Eastern Common Froglet, Striped Marsh Frog, and Eastern Banjo Frog, as well as identifying that several common invasive species were recorded, including Red Fox, Cat, European Rabbit, European Hare, and Common Myna.

Concerning the significance of flora, the report sets out the following:

- The Victorian Biodiversity Atlas (VBA) contains previous records of one nationally significant species and 15 State significant species within 10km of the study area, with none of these records located within the study area. The Protected Matters Search Tool (PMST) nominated an additional 10 nationally significant species that have not been previously recorded but have the potential to occur (DCCEEW 2024).
- The FFG Act lists the Buloke as a critically endangered species. (DEECA 2024e) Buloke was recorded within the study area, with 89 individuals present, including nine identified as Large Trees within patches of native vegetation and 32 identified as scattered Large Trees in area of existing pasture. Of these, 11 Bulokes are proposed to be directly impacted by the implementation of the Project.
- Targeted flora surveys were undertaken in winter for the Spiny Rice Flower and spring for the FFG Act protected and listed species within areas of suitable habitat within the study area. (Creekline Grassy Woodland and roadside Plains Woodland remnants). No additional State or nationally significant flora were recorded.
- There is one record of the Late-flower Flax-lily within ten kilometres according to the VBA records (DEECA 2023a). Targeted surveys were undertaken but no species was identified within the study area. Black-anther Flax-lily was identified during the survey effort along roadsides.
- Based on the results of the targeted surveys, the report concludes that it is unlikely that the Late-flower Flax-lily occurs within the study area.
- A variety of FFG Act protected flora, (ie not listed threatened species) were identified within the study area and creeklines and roadsides, including Gold Dust Wattle, Golden Wattle, Broughton Willow, Vanish Wattle, Jersey Cud Weed, New Holland Daisy and Sifton Bush Concerning the significance of fauna, the report sets out the following:
- The VBA contains previous records of 12 nationally significant and 24 State significant species within 10km of the study area (DEECA 2023), with none of these records located within the study area. The PMST nominated an additional 15 nationally significant fauna species that have not been previously recorded but have the potential to occur in the locality.
- The State significant Common Sandpiper (listed as vulnerable under the FFG Act) was recorded within the study area during the site assessment. Due to the lack of important habitat attributes it's highly unlikely that the Common Sandpiper relies on the habitat within the study area for foraging or breeding purposes.
- The Nationally significant Brown Treecreeper (listed as Vulnerable under the EPBC Act) has been recorded 155 times within the 10 kilometre radius of the study area. Due to this number of records and the suitable habitat avifauna surveys were undertaken.
- Swift Parrot has been recorded about 20 times within 10km of the study area. Most of these records occur approximately 5km south of the study area in an area of contiguous native vegetation. Despite the presence of this species near the study area, it is unlikely it relies on habitat within the study area for foraging. Rather, the study area may be used as a movement pathway while accessing higher quality foraging habitat in the surrounding area. Additionally, only small patches of native vegetation along creek lines and roadsides are being impacted by the Project, with most impacts to scattered trees. It is highly unlikely that the Project would have a significant impact on Swift Parrot.
- One EPBC Act-listed species, Brown Treecreeper, has been recorded 155 times within 10km of the study area. Due to the high number of records and suitable woodland habitat present along the creek

lines and roadsides, avifauna surveys are scheduled from August 2023. These surveys would ensure that any additional EPBC Act or FFG Act-listed avifauna that may occur within the study area can be documented, such as Speckled Warbler and Crested Bellbird.

- Two FFG Act-listed species have the potential to occur within the study area, including Squirrel Glider and Brush-tailed Phascogale. Despite the lack of records within the surrounds for these species, the creek lines and roadsides provide suitable breeding habitat in the form of hollow-bearing trees and provide adequate habitat connectivity throughout the landscape. Despite the lack of recent records in the surrounding area, the study area was deemed to provide high quality habitat for the species, due to the presence of large hollow-bearing trees and suitable habitat connectivity throughout the study area. Brush-tailed Phascogale was detected in two locations; on two occasions along the Yallagalorrah Creek in the south of the study area and on one occasion in a vegetated area, near the intersection of Cornella Church Road and Plain Road.

  Given the species was detected in several spatially distinct locations, it's highly likely a resident population of the Brush-tailed Phascogale occurs within the study area. Additionally, habitat along the roadsides and creeklines provides adequate habitat connectivity for the species, aiding foraging and dispersal activities. As this species was detected on multiple occasions, a resident population of Brush-tailed Phascogale is likely to rely upon vegetated roadside and creek-line trees for nesting, foraging and/or as an important movement corridor. Based on the proposed impacts to confirmed and potential habitat for Brushtail Phascogale, it is highly unlikely this species will be significantly impacted by the proposed development. Very similar observations are made in the report relating to the Squirrel Glider.

  Due to the large study area, remnant eucalypts would provide suitable habitat for nesting, roosting, and foraging. However, they are generally confined to creek lines within a large extent of open modified grasslands/croplands and only highly mobile animals (birds and bats) are expected to utilise these trees. Despite the number of large native trees within the study area, approximately half had a sound structure and limited hollows, fissures, and spouts. However, the hollows, fissures and spouts that were present would provide valuable habitat for fauna species.

Concerning the significance of ecological communities, the report observes that five nationally listed communities are predicted to occur within 10km of the study area, including GBGW, BW, Natural Grasslands of the Murray Valley Plains, Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains, and White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland. The report finds that several patches of Plains Woodland EVC 803 within the Project site are consistent with the condition thresholds for GBGW. Further, the report notes that concentrations of scattered trees where Buloke is the dominant or co-dominant species were consistent with the description of BW, with much of the community within the study area being highly modified and present as small patches of native vegetation and scattered trees close together. Finally, the report observes that the FFG Act-listed Grey Box – Buloke Grassy Woodland community is present within the Project site, correlating with areas of GBGW and BW. These areas were consistent with the description of the threatened ecological community and occur where either Grey-box or Buloke occur in isolation, with much of the occurrence in areas that are highly modified, present as patches or scattered trees, where either species is the dominant or co-dominant species.

In order to facilitate an emergency egress point/access gate, drainage and surface works along Davey Road, 0.046 hectares of GBGW is proposed to be impacted on Davey Road. This ecological community is both EPBC listed and FFG Act listed.

Turning to the Native Vegetation Guidelines, the report at Section 5.1 asserts that the development footprint has been specifically designed to avoid and minimise the loss of native vegetation. An avoid and minimise statement is included in this section and outlines the efforts that have been made to reduce the impact of the project on native vegetation. Some of the measures to avoid and minimise impacts are outlined overleaf:

The proponent has gone through several iterations of the development to minimise impacts to native vegetation and large trees. The following iterations have been undertaken:

- The first iteration of the development plan proposed to impact 7.749 hectares (inclusive of scattered trees) of native vegetation, including 118 large trees.
- The second iteration proposed to impact 7.392 hectares (inclusive of scattered trees) or native vegetation and 93 large trees.
- The third iteration proposed to impact 7.456 hectares of native vegetation (inclusive of scattered trees) and 94 Large trees. Impacts associated with the third iteration of the development plan increased as a result of alterations to the access and egress points to accommodate-double trucks to enter the site at 12 locations, and the requirement to undertaken road upgrades along Heathcote-Rochester Road.

The fourth and most recent iteration proposed to impact 6.505 hectares of native vegetation (inclusive of scattered trees), 71 Large trees, including 12 large trees in patches and 59 scattered trees, and 11 small scattered trees.

ITERATION	1	2	3*	4
Hectares	7.749	7.392	7.456	6.505
Large trees	118	93	94	71

*Impacts associated with the third iteration of the development plan have increased due to the requirement to implement access and egress points to accommodate B-Double trucks to enter the site at 12 locations, and the requirement to undertake road upgrades along the Heathcote-Rochester Road.

- This fourth and latest iteration of the plan including the retention of two additional scattered tree groupings (Trees 130. 133, 134 and 155 and Trees 255-265 and some turning lanes have been microsited to avoid large trees.
- In order to facilitate the implementation, construction and maintenance of the proposed solar farm, 12 access and egress points are proposed along the roadside. The access and egress points are a worst case scenario, assuming that a B-double truck may require access to each of the locations. As this is a worst-case scenario, assuming that a B-double truck may require access at each of the locations. Based on this, some impacted trees may be able to be retained, including Tree 643. This fourth iteration has moved the location of the access and egress points to further minimise impacts to native vegetation. As such Trees 607 and 608, 639, 641 and 642 and Tree 295 and 696 are no longer being impacted.
- Impacts to native vegetation have been limited by denoting conservation priority. Native vegetation in the form of patches, scattered large trees and small scattered trees were denoted as No-Go zones, high, medium, or low priority. All patches of native vegetation along creek lines and associated 15m buffers were listed as No-Go zones. All other small patches of native vegetation and all Bulokes were listed as high priority. Scattered trees with the potential to form patches of native vegetation were listed as moderate priority. All remaining scattered trees were listed as low priority.
- The Project has minimised impacts to native vegetation by limiting impacts to large trees and small scattered trees, where possible. Some indirect impacts as a result of eg, slashing will occur to vegetation along the roadsides, primarily due to easement required between the boundaries and the solar panels for maintenance and bushfire measures. No direct impact to large trees will be incurred by this easement.
- Patches of Creekline Grassy Woodland will be impacted in three areas, primarily due to overhead transmission lines and access points/river crossings for servicing requirements. The Project layout within these areas has been micro-sited to reduce impacts to large trees and EPBC and FFG listed

communities. Vegetation within these areas is considered as lost; however, understorey vegetation will be able to reestablish after works.

- The Project layout has been altered to avoid patches of the EPBC Act-listed GBGW community that occur within the study area and roadsides, along Plain Road, Myola Road, and Davey Road.
- Patches of the FFG Act-listed Grey Box – Buloke Grassy Woodland Community occur but overlap entirely within the EPBC Act-listed GBGW and BW communities and do not occur outside this extent.
- The construction method to install the solar arrays is expected to. use steel posts on which the solar arrays are mounted are driven into the ground using a pole driver attached to the back of a soft-tyred vehicle and set 3m apart. The only physical impact to the ground is the width of the poles, with each one being approximately 10 centimetres in diameter. For the purposes of the assessment everything within the area of the solar array is presumed to be impacted, however ultimately this is unlikely to be the case.
- Once installed, there will be a minimum 2m separation distance between each solar array, which will allow sunlight to reach all native grass as the sun moves across the sky.
- The location of the BESS and infrastructure area in the north of the Project site has been designed to avoid impacts to trees and patches.
- Approximately 50.47 ha of native vegetation (including 588 large trees in patches) and 212 (i.e 166 large scattered trees and 46 small scattered trees) are proposed to be retained, including a 12.79 ha patch of Creekline Grassy Woodland in the paddock south of Myola Road.
- Of the 165 hollow-bearing trees observed within the study area, 11 hollow bearing trees are proposed to be impacted. 154 hollow-bearing trees are proposed to be retained.

The report observes that sheep grazing has occurred within the study area over a long timeframe and is likely to continue throughout the operation of the Project. The report notes that native vegetation is not considered to be adversely impacted by these activities as it is a continuation of existing farming practices. Similarly, the report recognises the periodic maintenance of infrastructure by light vehicles via constructed access tracks as well as by foot where not on access tracks. The report finds that these activities will not adversely impact the retained native vegetation.

In the context of the local and regional scale, the report states that the proposed removal of vegetation is not significant, especially given the presence of contiguous vegetation located 10km to the southeast at Gobarup Nature Conservation Reserve. The report states that the retention of native vegetation along Cornella Creek on the eastern border of the study area, which connects to this nature reserve, assists in providing contiguous vegetation for native fauna, maintaining habitat connectivity. Additionally, the report observes that Crosbie Nature Conservation Reserve and Mount Sugarloaf Nature Reserve are approximately 20km to the south-west and 30km to the west, respectively.

Overall, suitable steps to avoid and minimise the removal of native vegetation have been undertaken for the Project, which satisfies the requirements of the Native Vegetation Guidelines.

Based on the above, the report sets out the characteristics of the native vegetation to be removed, as outlined in Table 7-1 below.

Table 7-1 Removal of native vegetation

Assessment pathway	Detailed
Location category	2
Extent of proposed removal (ha)	6.505
Extent of past removal (ha)	0.000
Total extent (past and proposed) (ha)	6.505
Large trees (scattered and in patches) to be removed (no.)	71
Small, scattered trees to be removed (no.)	11
EVC conservation status of vegetation to be removed	Endangered

The associated offset requirements are outlined in Table 7-2 below.

Table 7-2 Offset requirements

The offset requirements for native vegetation removal is 1.4770 General Habitat Units and 71 Large Trees.

General offset amount	1.529 General Habitat Units
Vicinity	Goulburn Broken Catchment Management Authority / Campaspe Shire Council
Minimum strategic biodiversity value score	0.1834
Large trees	71

According to DEECA's Native Vegetation Offset Register, (DEECA 2024d), there are two offset sites within the Goulburn Broken CMA or Campaspe Shire Council municipality that can be used to satisfy the General Habitat unit and Large Tree offset requirements. A quote for suitable offsets has been provided by an offset broker.

Finally, the report comments on mitigation measures. If a planning permit is granted, it is expected and accepted that relevant permit conditions will be included to govern best practice mitigation measures, including a NVMP as part of an Environmental Management Plan (EMP). This plan would include details such as the location and area of all native vegetation that is permitted to be removed, all areas of native vegetation that must be retained and protected, the tree protection zones for each retained native tree, and other detailed measures to ensure the ongoing conservation of retained native vegetation. A draft preliminary EMP is prepared and included as Appendix J to this report.

One mapped wetland and two creek-lines occur within the study area. The mapped wetland occurs south of Myola Road (Figure 2t), and portions of the wetland occur within a patch of Plains Woodland (PW4). The development plan was designed to avoid impacts to the mapped wetland and associated contiguous native vegetation.

Yallagalorrah Creek extends from Cornella Church Road in the north-east to Davey Road in the south of the study area, and Cornella Creek occurs in the east of the study area. Both creek-lines conformed with the

Creekline Grassy Woodland EVC. The development plan was designed to mitigate impacts to the creek-lines as much as practically feasible. In the design phase, the creek-lines were designated as No-Go Zones and a 15-metre buffer was applied from the edge of native vegetation along the creek-lines to preserve contiguous native vegetation along the creek-lines. While no impacts are proposed to occur to Cornella Creek, it was determined that three OHL Crossings were necessary along Cornella Creek to connect the central parcel of land and the eastern parcel of land. The quantity of creek crossings shown on the plans are required to avoid excessively long cables. It is not possible to reduce the quantity of crossings without introducing excessive electrical losses to the project, increased construction costs and also increased differential terminal voltages at inverters that may lead to non-compliant performance of the generator, particularly during contingency events such as 'ride through' events where the network voltage changes rapidly. This has resulted in impacts to native vegetation occurring at each of the designated locations. The creek crossings are outlined on Figure 2j and Figure 2o of the Biodiversity Assessment. While these creek crossings are deemed necessary for the purpose, appropriate mitigation measures will be implemented during construction to minimise impacts to terrestrial and aquatic vegetation along this corridor. This includes mitigating erosion and sedimentation as a result of the construction activities, and ensure that best practice sedimentation and pollution control measures are undertaken. It's likely that a Biodiversity Management Plan or similar document/s will included, where appropriate, procedures for:

- Detailed design of mitigation measures, including but not limited to:
- Installation of nest boxes and fauna crossings
- Staff and contractor inductions to addre4ss the location of sensitive ecological value and their roles and responsibilities in the protection and /or minimisation of impacts to all native biodiversity;
- Hollow bearing tree management strategy, including but not limited to:
    - Pre-clearing fauna surveys;
    - Fauna salvage and translocation where practical; and,
    - Vegetation clearing protocols.
- Contingency measures to manage the potential unexpected discovery of listed flora and fauna species during construction and operation of the project.

The Biodiversity Management Plan will be important for enacting the 'avoid and mitigate' principals during the construction and operational phases and should include clear objectives and action including, where appropriate:

- Minimising human interfaces to flora and fauna;
- Minimising vegetation clearing/disturbance;
- Minimising impact to threat-listed species and communities; and,
- Ongoing monitoring of impacts of flora and fauna.

A project Risk Management Plan or similar documentation should detail the management of:

- Significant/Threatened Species Conservation;
- Significant Flora Salvage and Translocation;
- Weed Management; and,
- Disease and Biocontrol.
- As part of the Biodiversity Management Plan, a hollow bearing tree management strategy will be prepared for hollow bearing trees to be removed. The Biodiversity Assessment outlines a range of actions that can be undertaken including;
- Prior to tree removal, hollow bearing tress will be left standing for two nights after the surrounding vegetation has been cleared (where appliable) to encourage any native fauna species utilising the

habitat hollows to self-relocate. Tree guards will be installed at the base of the tree to prevent fauna that leave the tree from re-climbing.

- The felling of any habitat trees will be undertaken under the supervision of a suitably qualified ecologist in order to ensure the safety of any fauna found to be in the hollows.

Trees containing habitat hollows to be 'soft felled' by an experienced machine operator. Procedures for soft felling are also provided. The number and size of hollows within each habitat tree will be recorded after each habitat is felled. This information will inform the nest box installation works.

The assessment goes on to outline the approach to the installation and management of nest boxes.

If hollows are damaged during the tree removal and are deemed to retain habitat value by a qualified ecologist during tree removal, it will be retained as ground habitat within the creek lines or designated conservation areas.

Overall, it is found that the Project is consistent with clause 12.01-1S 'Protection of biodiversity', which has the objective to protect and enhance Victoria's biodiversity, clause 12.01-1L 'Biodiversity', which has a relevant strategy to avoid the loss of riparian flora and fauna, biodiversity, habitat, and wetlands, as well as clause 12.01-2S 'Native vegetation management', which has the objective to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

7.5 Agriculture

An AAR has been prepared by Meridian Pty Ltd and is included at Appendix D. This report observes that the soils on the Project site are mostly of moderate to good quality for the area, with mostly a cracking black clay as well as loam soils. There are some very good quality soils in the western part of the Project site, which the layout mostly avoids. The AAR notes that the land has been conservatively farmed, with approximately one third being cropped on a rotation of wheat, barley, and oats before being returned to pasture, with the remainder of the land being used for sheep grazing at a very conservative stocking rate. The report comments that the land has no direct strategic importance but instead is like much of the surrounding farmland. While the land area is a reasonable size, it constitutes about 0.046% of the cropping area in the Bendigo district and 0.16% of the grazing area in the same district.

The AAR assesses the agricultural productivity of the land, assessing potential crop yields and the associated income. Importantly, the report states that the removal of the land from agricultural production would, on average, result in a loss of around 1,200 tonnes of wheat per year, which is 0.01% of Victoria's predicted production for 2022–23. Further, the AAR comments on stock productivity and the potential stocking rate that could be achieved. In this regard, the report comments that after the Project is constructed, the current stocking rate should be able to be maintained and stock numbers increased, including to manage the extra land retired from cropping as well as for management to reduce fire risk. The AAR states that if grazing was to be considered, the most suitable agricultural use of the land under the solar panels would be sheep grazing, with trading stock or non-breeding animals likely to be the most appropriate. Further, the report comments that when the Project is decommissioned, there will be no residual detrimental impact on the productivity of the site and that soil fertility can be corrected quickly through the addition of appropriate amendments. From the commentary in the AAR, it is concluded that the Project would not have a significant impact on the overall productivity of the region or the state and would not impact on the ability of neighbouring businesses to operate for agricultural purposes.

Overall, it is found that the Project is consistent with the suite of relevant policies relating to agriculture, including clause 14.01-1S 'Protection of agricultural land', which has the objective to protect the state's agricultural base by preserving productive farmland.

The Project site is not in a declared irrigation district. The mapped irrigation district is primarily located to the northwest of the site, with some scattered areas to the west. No significant impacts are expected from the Project to the irrigation districts.

It is noted that the Project sits outside the southern edge of the Rocester Goulburn-Murray Irrigation District (GMID), with scattered parcels around the Project area still categorised as being within the irrigation district.

It is not expected that there will be future interest in the Project site for irrigation as part of the GMID. It is expected that the footprint of the irrigation district will continue to shrink into the future. Goulburn-Murray Water (GMW) is seeking to consolidate irrigation infrastructure to increase the efficiency and resilience of the district. Climate change is predicted to result in greater variability and less rainfall resulting in less reliable water sources. A smaller infrastructure footprint reduces whole-of-life operation and maintenance costs for GMW and its customers. Further detail on future directions is contained in various plans and strategies including the GMID Drainage Management Strategy 2022 and overarching plan Victorian Irrigation Drainage Program Strategic Directions 2021-2024.

7.6 Noise

An NIA has been prepared by ADP and is included at Appendix E. This report predicts and assesses noise from the inverters, solar panel tracker motors, BESS, and generator(s). The inverters and BESS are expected to be the major sources of noise emissions. The NIA has considered the consolidated BESS option and the distributed BESS option where modules would be sited next to the inverters. The Project is required to comply with the Noise Protocol. Based on a conservative approach, the report predicts that noise levels for the Project will comply with the required night-time noise criteria of 36 dB(A) under the Noise Protocol for all nearby and non-involved noise sensitive receivers (dwellings). Compliance with the night-time noise criteria (or noise limit) means the Project is also predicted to comply with the daytime and evening criteria under the Noise Protocol. It is acknowledged that while compliance with the night-time noise criteria/limit of 36 dB(A) is predicted for all nearby noise sensitive receivers, the predicted noise levels for two of these receivers have a relatively small margin of compliance, as outlined in Table 7-3 below.

Table 7-3 Receivers and predicted noise levels

Receiver	Noise criteria / limit	Predicted noise level	Comment
507 Plain Road, Colbinabbin	36 dB(A)	36 dB(A)	Assumption that no inverter/BESS module is within the dwelling boundary radius of 500m.
	36 dB(A)	34 dB(A)	Assumption that no inverter/BESS module is within the dwelling boundary radius of 600m.
2240 Heathcote-Rochester Road, Colbinabbin	36 dB(A)	35 dB(A)	Assumption that no inverter/BESS module is within the dwelling boundary radius of 200m, and each inverter is separated by minimum 200m up to

			500m radius from the dwelling boundary.
	36 dB(A)	33 dB(A)	Assumption that no inverter/BESS module is within the dwelling boundary radius of 300m, and each inverter/BESS module is separated by minimum 200m up to 500m radius from the dwelling boundary.

Due to the small margins of compliance, it is accepted that, if a permit is granted, conditions will be imposed requiring a further pre-construction predictive noise assessment based on the final Project layout and equipment as well as requiring post-construction noise compliance reports at a relevant point in time, such as three months after use of the Project commences. Further, standard conditions for complaints investigation and response are also expected and accepted. Finally, it is acknowledged that design features may need to be incorporated to satisfy the noise criteria/limit, which is addressed immediately below.

The NIA outlines key recommendations to guide the design, including to distribute inverters evenly throughout the Project site. Where assumed inverter separation distances (as outlined in Table 7-2 above) cannot be achieved, the report notes that acoustic enclosures may need to be considered as well as that inverters should be oriented so that the noisy component is facing away from the nearest residential dwelling. Further, the NIA sets out that the BESS and any generator(s) should similarly be oriented so that the noisy component is facing away from the nearest residential dwelling as well as that acoustic barriers may need to be constructed. These barriers would need to have certain characteristics, such as being located no more than 5m from the BESS and any generator(s), at the same maximum height, be gap free and solid for their length, and constructed of suitable materials. As above, when the final Project layout is known, a further pre-construction predictive noise assessment can be undertaken, with the results used to identify the need for any such design features.

Regarding construction noise, it is proposed that all activities would be undertaken in accordance with the guidance and direction contained in EPA Publication 1834: Civil construction, building and demolition guide. A standard permit condition for an EMP is expected in this regard and can suitably manage construction noise issues, which are expected to be limited and typical.

Overall, it is found that the Project is consistent with clause 13.05-1S ‘Noise management’, which has the objective to assist the management of noise effects on sensitive land uses.

7.7 Traffic

A TTA has been prepared by Impact Traffic Engineering and is included at Appendix F. This report examines the surrounding road network and assesses its suitability for the predicted traffic generation (both construction and operation) along the proposed vehicle access routes. Most traffic and particularly heavy vehicle movements will occur during the construction stage, with a limited amount of traffic during the Project’s operation. The TTA finds that traffic generated by the Project can be comfortably accommodated by the existing road network without any material impacts on road infrastructure as well as operational safety and efficiency, albeit noting that road pavements may require upgrading or maintenance. Further, the report outlines design considerations for site access, turning lanes, and sight distances, but does not raise any concerns with these matters, including that available sight distances from all site access points will exceed

the minimum requirement. Finally, the TTA outlines the expectation for a detailed TMP to be prepared prior to the commencement of the construction to confirm certain arrangements as well as any required mitigation measures and works. Overall, it is found that the Project is consistent with clause 18.01-1S 'Land use and transport integration', which has the objective to facilitate access to social, cultural, and economic opportunities by effectively integrating land use and transport as well as clause 18.02-4S 'Roads', which has the objective to facilitate an efficient and safe road network that integrates all movement networks and makes best use of existing infrastructure.

In terms of car parking, the Project will provide ample areas for on-site parking through the construction and operation of the facility. 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 to the south-western facilities section of the site. It is expected that staff will be present on the site regularly for maintenance and operational activities, as is typically the case with utility scale solar facilities. It is respectfully submitted that the Project provides an acceptable amount of car parking in accordance with clause 52.06.

7.8 Light spill, vibration, smell, and electromagnetic interference

Light spill, vibration, and smell

External lighting is proposed at various locations, such as site access points, the operations and maintenance facility, and control room. A CCTV security system may also be installed at various points, including around the perimeter. This system would likely have infrared lighting, which is not visible to the human eye. Given the locations of external lighting would be mainly internal within the Project site and some distance from any non-involved dwellings, any light spill impacts are assessed to be acceptable. However, if required, it is accepted that a condition be imposed requiring the Project to comply with Australian Standard 4282 'Control of the obtrusive effects of outdoor lighting'.

The Project will not cause vibration and will not emit smell. If required, these outcomes can be secured through a condition requiring an EMP to manage operational arrangements, particularly in relation to any risk of odour.

Electromagnetic interference

The SEF Guideline provides the following content on electromagnetic interference:

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 following statement from the 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."

Considering the above, any electromagnetic interference impacts by the Project are assessed to be negligible and acceptable.

Overall, from the perspectives of light spill, vibration, smell, and electromagnetic interference, it is found that the Project is consistent with clause 13.07-1S 'Land use compatibility', which has the objective to protect

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

7.9 Fire hazards

The site is within a designated bushfire prone area but is not affected by the BMO. The CFA Guidelines have been considered in the Project design, with features including a firefighting easement (or fire break) around the entire perimeter, multiple site access points, and several static water storage tanks. As the detailed design progresses, all-weather access tracks will be provided for the Project site, while the layout will achieve some separation between the solar panel banks. Finally, the ongoing operation of the Project would involve the appropriate maintenance of fuel loads, particularly grass below the panels, while the BESS and the infrastructure areas would incorporate fire protection systems and other fire water. There is nothing to suggest that the Project will lead to an increase in bushfire risk to adjacent land. Rather, it will reduce and manage risks at the site to an acceptable level through various design and management features.

It is observed that the CFA Guidelines explicitly seek that renewable energy facility operators develop a RMP, FMP, and EMMP – before development starts. If a planning permit is granted, it is expected and accepted that these plans will be required to be submitted for approval via relevant permit conditions. Further, these plans would address how the BESS complies with the *Dangerous Goods Act 1985*, the *Dangerous Goods (Storage and Handling) Regulations 2012*, and any other relevant standards.

Overall, it is found that the Project is consistent with clause 13.02-1S 'Bushfire planning', which has the objective to strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.

7.10 Flood hazards

A small portion of the Land Subject to Inundation Overlay (LSIO) crosses Plain Road approximately 1.1km north of the subject site and goes into the property to the north approximately 600m north of the subject site. Although the development is not affected by the LSIO, a Flood Impact Assessment (FIA) has been prepared by Water Technology and is included at Appendix H. The report assesses the potential flood risk and inundation at the Project site.

The assessment includes hydraulic modelling, which shows that the Project site has the potential to be partially inundated by shallow localised catchment inundation in a 1% AEP storm event with the maximum depth of 0.2m outside of river channels, open drain channels and dry riverbeds. The maximum flood velocities observed within the Project site are small outside of the river channels and the flood hazard category is only H1 (low risk, generally safe for people, vehicles, and buildings).

The FIA demonstrates that the Project is acceptable from the perspective of flood hazards and will not be unduly impacted by significant flood events, with infrastructure predominantly located on land that is free from flooding or on that where flooding is classified as H1. The Project will not impede overland flows given it is located on relatively flat topography with infrastructure and buildings are open in nature do not involve significant changes to the ground.

The FIA provides several recommendations, including a 30 metre (m) set back from the top of banks for Cornella and Yallagalorrah Creeks, which have already been incorporated into the Project design, as well as the raising of solar panels and other critical infrastructure sufficiently above the 1% annual exceedance probability (AEP) flood levels. Solar panels should be at least 300mm above the 1% AEP flood level at its lowest level or 150mm above the natural surface (where flooding is not identified), while sensitive infrastructure should be at least 300–500mm above the 1% AEP flood level. Further, any rerouting of swales should maintain their drainage function, while any roadways or access tracks crossing waterways should be designed to maintain the drainage function of the waterways.

Overall, it is found that the Project is consistent with clause 13.03-1S 'Floodplain management', which has the objective to assist the protection of life, property, and community infrastructure from flood hazard, including coastal inundation, riverine and overland flows; the natural flood carrying capacity of rivers, streams and floodways; the flood storage function of floodplains and waterways; and floodplain areas of environmental significance or of importance to river, wetland or coastal health.

7.11 Aboriginal cultural heritage

The Project site is affected by mapped areas of Aboriginal cultural heritage sensitivity. In this regard, a mandatory Cultural Heritage Management Plan (CHMP) is required for the Project, which is currently underway. It is expected that a final CHMP will be approved in due course and that this will contain a range of measures in relation to Aboriginal cultural heritage, such that any impacts will be limited and acceptable. It is expected that any outcomes and recommendations that are included in the finalised CHMP will be taken into consideration in relation to the final layout of the proposal that will be relied upon for construction.

Overall, it is found that the Project is consistent with clause 15.03-1S 'Heritage conservation' as the objective to ensure the conservation of places of heritage significance.

7.12 Post-European heritage

The Project site is not affected by any Heritage Overlay and does not contain any place within the Victorian Heritage Registry. The site contains Wendell's House, which is listed on the Victorian Heritage Inventory (ref. H7824-0089). The statement of significance for this place states, *"Local grazier Finlay Rathjen believes it is the ruin of the first brick dwelling constructed in the Colbinabbin district, dating back to c1870"*. There is no proposed use or development of the land where the heritage place is located, with a suitable buffer from the solar panel array. As such, it is considered that the Project will have limited and acceptable impacts on the significance of the heritage place. Overall, it is found that the Project is consistent with clause 15.03-2S 'Aboriginal cultural heritage' has the objective to ensure the protection and conservation of places of Aboriginal cultural heritage significance.

7.13 Social and economic impacts

The proponent is committed to sharing benefits with neighbours of the Project and the wider community. Consultation with neighbours and the wider community has commenced and will continue throughout the entirety of the planning permit application process and beyond. Both a neighbour benefit sharing program and a community benefit sharing program are proposed. The criteria for the neighbour benefit sharing program will be based on the proximity of a neighbour to the Project site and the assessed level of visual impact. The community and neighbour benefit sharing program will have a fund of $250,000 per year, which equates to $6 million over the 30-year operational life of the Project. The proponent wants this fund to have a positive, lasting, and meaningful impact for the local community and Registered Aboriginal Party; hence, it will be designed to evolve with changing community needs and respond to the matters that are important to the community. The fund will be administered by a community-led committee who will apply clear criteria to differentiate between funding requests and decide how the funds are utilised within the community.

The Project will provide employment opportunities for up to 250 employees and contractors during the construction phase and 5 permanent positions for its ongoing operation. In addition, the Project will require the procurement of goods and services from local businesses for accommodation, meals, machinery contractors, construction trades, surveyors, cleaning services, security services, training service providers, building supplies, waste contractors etc.

7.14 The SEF Guideline

Ideal siting conditions

The SEF Guideline sets out that well-sited, carefully designed solar energy facilities have minimal impacts on surrounding communities, the environment, and other land use activities. The Project has been specifically designed in response to the Project site and surrounding context. The key strengths of the Project in relation to ideal siting include:

- The topography is relatively level, which avoids the need for excessive earthworks or changes to the natural landscape.
- There are limited sensitive land uses in the surrounds. There are nine dwellings located within 1km of the Project site boundary, with the nearest two dwellings being within 100m of the Project site boundary. The Project will incorporate landscaping in various locations to mitigate and reduce visual impacts on the surrounding area and sensitive land uses. A specific landscaping approach has not yet been proposed and will be developed post-approval, during detailed design.
- The site is largely cleared with suitable effort given to avoiding, minimising, and offsetting the removal of remnant patches of native vegetation and scattered native trees.
- The site is located directed on the existing electricity network, which minimises the need for additional infrastructure.
- The site is a sufficient distance from existing urban areas. The small township of Colbinabbin is located around 4km to the north, while the Bendigo CBD is around 38km to the west.
- There is adequate space between other solar energy facilities to avoid cumulative impacts. The nearest operating solar energy facilities are about 25km to the northeast, where there are several projects around Stanhope and Girgarre. Other projects that have been approved or are under consideration are about 15km to the northeast and 20km to the west.
- The site is away from any floodplain. While there are watercourses and a wetland within the site, the Project has largely been designed to avoid these.
- The site has ready access to main roads for construction and operation, including Heathcote-Rochester Road, which is part of the Principal Road Network.
- The Project has avoided land in a declared irrigation district and the land has no strategic agricultural importance.
- The site is not affected by the BMO, although is within a designated bushfire prone area. Consideration has been given to the CFA Guidelines and the design of the Project includes various bushfire avoidance, mitigation, and response measures.

Further to the above, the Project will not lead to:

- The loss or interruption of supply to the immediate or broader electricity network.
- The loss of vegetation, habitat, or species of environmental importance.
- The loss of cultural heritage or landscape values of significance.
- The loss of productive, state-significant agricultural land.
- Increased exposure of the area to fire, flood or other natural or environmental hazard.

Connecting to the electricity transmission network

The SEF Guideline addresses solar energy facilities connecting into the National Energy Market (NEM). These must meet certain performance standards and obtain connection agreements. The Project will connect to the NEM via the existing overhead 220kV line that traverses the Project site. The Project has also completed comprehensive grid connection studies that verify the suitability of the connection and

performance of the Project. Studies performed consider the electricity market dynamics, seasonal variation in power flows, transmission loss factors and physics of the electricity system under both normal and contingency operations. Connection studies have been reviewed and approved by the Australian Energy Market Operator operating in its capacity as the Delegated Transmission Network Service Provider in Victoria and also acting as the party responsible for overseeing national connections to the NEM. The Project has been awarded a 5.3.4A and 5.3.4B approval under the National Electricity Rules and is cleared in this respect for connection to the electricity network.

Cumulative effects

The SEF Guideline acknowledges that clustering of solar energy facilities can result in efficiencies by sharing infrastructure. However, too many solar energy facilities in an area have the potential to cause adverse impacts, including on values such as on agricultural land, landscape, and biodiversity. The SEF Guideline sets out that cumulative effects can be reduced by having a mix of land use activities in an area, employing agrophotovoltaics, and having enough distance between solar energy facilities to minimise or avoid impacts. In this regard:

- The surrounding area is characterised by agricultural uses (including viticulture) with a low density of rural-residential dwellings.
- A level of agricultural activity can continue, as the land has the potential to support sheep grazing alongside the operation of the proposed solar energy facility. In other words, agrophotovoltaics is achieved with some agricultural productivity being retained, and the AAR finds that sheep grazing could continue at comparable stocking rates to the current level.
- The nearest operating solar energy facilities are about 25km to the northeast, where there are several projects around Stanhope and Girgarre. The proposed Corop Solar Farm is about 15km to the northeast and the proposed Muskerry Solar Farm is about 13km to the southwest; both are understood to currently be under consideration. The approved Axedale Solar Farm is about 20km to the west as is the Fosterville Solar Farm, which is understood to be under consideration.

Given the above, the Project is assessed as being acceptable in respect of cumulative effects. It is noted that cumulative effects are further assessed in the ‘landscape and visual amenity values’ section of this report.

Heat island effect

The SEF Guideline states that where a solar energy facility is proposed adjacent to existing horticultural or cropping activities, a minimum 30m separation is appropriate – measured from the property boundary to any part of the panel array. The SEF Guideline notes there are few studies of the heat island effect, but these studies accept the potential for temperatures within a solar energy facility to increase by 3° to 4°. However, the SEF Guideline acknowledges these studies also found the heat dissipated rapidly over a short distance, with some studies finding negligible temperature differences at 30m.

Consistent with the above, the heat island effect was considered in the Panel Report for the Greater Shepparton Solar Energy Facility Planning Permit Applications. The panel accepted expert evidence regarding the scientific consensus that solar energy facilities will affect air and soil temperatures within the panel array perimeter. However, the panel also concluded there is enough scientific evidence to determine that a solar energy facility will not increase temperature beyond 30m of a panel array. For the Shepparton proposals, the panel required the external edge of any panel array to be at least 30m from the closest adjoining property boundary not forming part of the project, although the panel confirmed that features such as road reserves and vegetation could be included within this 30m setback.

Consistent with the above, the Project proposes a minimum setback of 30m from any part of a solar panel to any neighbouring property boundary not forming part of the project. In places, this buffer may contain an access track, landscaping, and/or security fencing – but no part of a panel array. It is accepted that a condition may be included on any permit issued requiring the dimensioning of setbacks within each part of the Project.

8. Conclusion

The Project is consistent with objectives of planning in Victoria that are set out by PE Act. This includes the fair, orderly, economic, and sustainable use, and development of land; protection of natural resources; conserving places of historical interest or special cultural value; as well as balancing the present and future interests of all Victorians. Further, the Project will contribute to meeting both long term and interim greenhouse gas emissions reduction targets as well as contributing to meeting Victoria's renewable energy targets. In this respect, the Project will contribute to creating investment, supporting the reliability of Victoria's electricity supply, creating jobs, putting downward pressure on electricity prices, and reducing emissions from electricity generation.

The Project has been assessed against the relevant provisions of the Campaspe Planning Scheme, with particular reference to the PPF, clause 35.07 'Farming zone', clause 53.13 'Renewable energy facility', and the SEF Guideline. On balance, the Project is strongly supported by the range of policy direction that applies, including to protect the state's agricultural base by preserving productive farmland; to protect community amenity, human health and safety while facilitating appropriate uses with potential adverse off-site impacts; to facilitate the establishment and expansion of renewable energy facilities, in appropriate locations, with minimal impact on the amenity of the area; and to support the development of energy generation, storage, transmission, and distribution infrastructure to transition to a low-carbon economy.

In relation to landscape and visual impacts, the Project is evaluated to be satisfactory from the perspective of visual compatibility. The area can accept a strong magnitude of change, but the proposed magnitude of change (or visual impact) is low, and well within the acceptable level for the area. If a planning permit is granted, relevant conditions would be welcomed in relation to landscaping, material and surface treatments, reclamation, as well as soil and vegetation management to avoid and further mitigate impacts. In particular, the LVIA has provided the basis for a final on-site landscaping plan to be developed, with recommended plant species based on EVCs and other relevant characteristics as well as a planting strategy to achieve optimal outcomes.

Concerning biodiversity, most of the Project site comprises introduced pasture grass and cereal crops, but there are various patches of native vegetation and native trees (large and small) that are suitable for an array of native fauna. The significance of various flora, fauna, and ecological communities have been examined, including in relation to Commonwealth and Victorian State legislation, with no significant impacts identified, although further survey work has occurred for several species/communities. The Project has been designed to avoid and minimise the loss of native vegetation through a variety of measures, including denoting conservation priority and applying No-Go zones, limiting impacts to large trees and small scattered trees, micro-siting to reduce impacts to native vegetation, altering the layout to avoid impacts to ecological communities of national or State significance, and designing the layout to retain high value native vegetation. Combined, these measures satisfy the requirements of the Native Vegetation Guidelines. Despite this, the Project will result in the removal of 6.505 ha of native vegetation and 71 large trees, while associated offset requirements will need to be met. If a planning permit is granted, a condition for a NVMP would be welcomed to address details such as the location and area of all native vegetation that is permitted to be removed, all areas of native vegetation that must be retained and protected, the tree protection zones for each retained native tree, and other detailed measures to ensure the ongoing conservation of retained native vegetation.

In terms of agricultural matters, the Project site has no direct strategic importance but instead is like much of the surrounding farmland, while sheep grazing could continue after the Project is constructed at comparable rates to the current level. The Project would have no long-term detrimental effect on the productive capacity of the soil, would not have a significant impact on the overall productivity of the region or the state, and would not impact on the ability of neighbouring businesses to operate for agricultural purposes. Further, the Project site is not in a declared irrigation district.

Regarding noise, a conservative approach has been applied in predicting that noise levels for the Project will comply with the required night-time criteria under the Noise Protocol for all nearby noise sensitive receivers. There is a relatively small margin of predicted compliance for three nearby noise sensitive receivers, which can be appropriately managed through permit conditions for a further pre-construction predictive noise assessment and post-construction noise compliance reports.

In relation to traffic, the surrounding road network is suitable for the predicted traffic generation along the proposed vehicle access routes, while satisfactory arrangements can be made for site access, turning lanes, and sight distances. A detailed TMP could further manage these matters and include requirements for any mitigation measures and works.

The Project will have no glint and glare impacts to aviation safety, roads, and dwellings.

Lighting can be designed and managed to comply with Australian Standard 4282 'Control of the obtrusive effects of outdoor lighting' and in any case would be mainly internal within the Project site and some distance from any non-involved sensitive receivers. The Project will not cause vibration and will not emit smell, although odour can be controlled by environmental management measures, if required. Any electromagnetic interference impacts by the Project will be negligible and acceptable.

The site is within a designated bushfire prone area but is not affected by the BMO. The Project design includes a range of design and management features that will develop as the detailed design progresses, in accordance with the CFA Guidelines. There is nothing to suggest that the Project will lead to an increase in bushfire risk; rather, it will reduce and manage risks at the site to an acceptable level through its design and management features. If a planning permit is granted, it is expected and accepted that a RMP, FMP, and EMMP will be required to be submitted for approval via relevant permit conditions.

The Project is acceptable from the perspective of flood hazards, with infrastructure predominantly located on land that is free from flooding or on that where flooding is classified as H1 (low risk, generally safe for people, vehicles, and buildings). The Project will not impede overland flows and will not be unduly impacted by significant flood events. Solar panels and other critical infrastructure will be sufficiently raised above the 1% AEP flood level, while the drainage function of swales and waterways will be maintained.

The Project site is affected by mapped areas of Aboriginal cultural heritage sensitivity and a mandatory CHMP is currently underway. It is expected that an approved CHMP will contain a range of measures in relation to Aboriginal cultural heritage, such that any impacts will be limited and acceptable.

The Project will have limited and acceptable impacts on any post-European heritage matters, including Wendell's House, which is listed on the Victorian Heritage Inventory.

The proponent is committed to sharing the Project's benefits with neighbours and the wider community, with both a neighbour benefit sharing program and a community benefit sharing program being proposed. These programs are intended to have positive, lasting, and meaningful impacts for neighbours and the community. Further, the Project will provide employment opportunities during the construction and operation stages and will require the procurement of various goods and services from local businesses.

The Project is consistent with the direction provided in the SEF Guideline. In particular, the Project has various strengths in relation to being ideally sited, will connect directly into an existing overhead line that runs through the Project site, is unlikely to result in any significant or discernible cumulative effects, and has been suitably designed to avoid any potential heat island effect.

The assessment contained within this report suitably addresses all relevant matters. In particular, it is concluded that the Project acceptably satisfies clause 65.01, with particular reference to the matters set out in section 60 of the PE Act; the PPF; the purpose of the zone and particular provisions; the orderly planning of the area; and the effect on the environment, human health and amenity of the area.

Based on the assessment within this report, it is concluded that the Project meets the relevant test of net community benefit and sustainable development for the benefit of present and future generations. As such, it is respectfully submitted that the Project warrants the grant of a planning permit subject to conditions.

Appendix A Certificates of title

Appendix B Landscape and Visual Impact Assessment

Appendix C Biodiversity Assessment

Appendix D Agricultural Assessment Report

Appendix E Noise Impact Assessment

Appendix F Traffic and Transport Assessment

Appendix G Aeronautical Impact Assessment and Glint and Glare Analysis

Appendix H Flood Impact Assessment

Appendix I Development Plans

Appendix J Draft EMP

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