



NGH



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Corop Solar Farm

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Table of contents

Proposal summary tables	vii
1. Introduction.....	1
2. Site analysis and design response	2
2.1. Subject site	2
2.2. Title details	5
2.3. Native vegetation.....	5
2.4. Hydrology and mapped wetlands.....	6
2.5. Heritage	7
2.6. Farming history.....	8
2.7. The surrounds	8
2.8. Design response	10
3. The proposal.....	11
3.1. Solar energy facility	11
3.2. Solar panels.....	11
3.3. Setbacks.....	12
3.4. Inverters.....	12
3.5. Substation and Battery Energy Storage System (BESS).....	13
3.6. Site facilities.....	13
3.7. Access	13
3.8. Signage	15
3.9. Native Vegetation	15
3.10. Landscape screening	15
3.11. Construction.....	15
3.12. Operation and maintenance	15
3.12.1. Ongoing agricultural use	16
3.12.2. Land management practices.....	16
4. Community consultation	17
4.1. Communications plan for community consultation.....	17
4.2. Consultation attendance.....	18
4.3. Engagement of Traditional Owners.....	18
4.4. Ongoing and proposed future engagement	18
5. Planning policy and relevant legislation.....	18
5.1. Permit triggers	18
5.2. Referrals	19

5.2.1.	Goulburn Broken Catchment Management Authority	19
5.2.2.	Secretary to DELWP	19
5.2.3.	Goulburn Murray Water	19
5.2.4.	AusNet Services	19
5.2.5.	Workcover	19
5.3.	Zone and overlay provisions	19
5.3.1.	Clause 35.07 Farming Zone	19
5.3.2.	Clause 44.03 Floodway Overlay	20
5.3.3.	Clause 44.04 Land Subject to Inundation Overlay	20
5.3.4.	Clause 45.12 Specific Controls Overlay Schedule 2: Goulburn- Murray Water: Connections Project and Water Efficiency Project Incorporated Document, November 2021	21
5.4.	Particular provisions	21
5.4.1.	Clause 52.05 Signs	21
5.4.2.	Clause 52.06 Car parking	21
5.4.3.	Clause 52.17 Native vegetation	21
5.4.4.	Clause 53.13 Renewable energy facility	22
5.5.	Planning Policy Framework	23
5.5.1.	Municipal Strategic Statement	23
5.5.2.	Settlement	23
5.5.3.	Environmental and Landscape Values	24
5.5.4.	Environmental risks and amenity	26
5.5.5.	Natural resource management	29
5.5.6.	Built Environment and Heritage	33
5.5.7.	Economic Development	34
5.5.8.	Transport	35
5.5.9.	Infrastructure	36
5.6.	Other policies and guidelines	37
5.6.1.	Design Guidelines and Model Requirements: Renewable Energy Facilities (CFA Guidelines) (March 2022)	39
5.6.2.	Loddon Mallee North Regional Growth Plan	40
5.7.	Legislation	40
5.7.1.	Planning and Environment Act 1987 (Vic)	40
5.7.2.	Environment Protection Act 2018 (Vic)	40
5.7.3.	Environment Protection and Biodiversity Conservation Act 1999 (Aus)	41
5.7.4.	Flora and Fauna Guarantee Act 1988 (Vic)	41
5.7.5.	Climate Change Act 2017 (Vic)	41
5.7.6.	Renewable Energy Target (RET) Legislation	41

5.7.7.	Aboriginal Heritage Act 2006 (Vic).....	42
6.	Planning assessment.....	43
6.1.	Design response and suitability of the site.....	43
6.2.	Amenity.....	43
6.2.1.	Noise.....	43
6.2.2.	Electromagnetic Interference.....	45
6.2.3.	Aviation, glint and glare.....	45
6.2.4.	Visual and landscape impacts.....	46
6.3.	Agricultural impact.....	49
6.4.	Protecting environmental values.....	49
6.4.1.	Ecology.....	49
6.5.	Natural Hazard Management.....	50
6.5.1.	Flooding.....	50
6.6.	Traffic and Transport.....	51
6.7.	Heritage.....	52
6.8.	Cumulative and other impacts.....	52
6.8.1.	Heat island effect.....	53
6.8.2.	Air quality and climate, light spill, emissions to air, vibration.....	53
6.8.3.	Signage.....	53
7.	Environmental management.....	54
7.1.	Environmental management framework.....	54
8.	Conclusion.....	55

Figures

Figure 2-1	Extract from proposed site plans showing the subject site, land parcels and stages of the proposal.....	2
Figure 2-2	Looking north down Geodetic North Road with subject site to right.....	3
Figure 2-3	Looking north from Old Corop Road with planted native vegetation in foreground.....	3
Figure 2-4	Looking east to subject site at intersection of Old Corop road and Geodetic North Road.....	4
Figure 2-5	Looking east down Bedwell Road from intersection with Geodetic North Road being the break between Stage 1 and Stage 2 of the project.....	4
Figure 2-6	Looking north east across Stage 2 land from corner of Geodetic North Road and Bedwell Road.....	4
Figure 2-7	Looking south across subject site from Carag Road (northern most edge of Stage 2).....	5
Figure 2-8	Looking east across subject site from Geodetic North Road (Stage 1 section) towards patch of native trees (either regrowth or planted).....	5
Figure 2-9	Mapped Wetlands No's 60108 and 60106 - Land.vic.au - State Government of Victoria source ..	7
Figure 2-10	Mapped Wetland 60109 - Land.vic.au - State Government of Victoria source.....	7

Figure 2-11 Detail of dwelling at 622 Old Corop Road to the west of the subject site	9
Figure 2-12 Receiver map from Acoustic Report by Renzo Tonin and Associates	10
Figure 3-1 Dimensioned elevation of proposed panels	11
Figure 3-2 Example of a single axis tracking system	12
Figure 3-3 Example of an inverter station.....	13
Figure 3-4 Proposed site access	14
Figure 6-1 Sensitive receivers map excerpt from Acoustic Report by Renzo Tonin and Associates	44
Figure 6-2 Viewpoints for photomontages.....	47
Figure 6-3 Indicative vegetation planting layout.....	48

Tables

Table 2-1 Indicative farming history.....	8
Table 5-1 Relevant permit triggers	18

Appendices

Appendix A Plans	A-I
Appendix B Acoustic report	B-I
Appendix C Glint and glare assessment	C-I
Appendix D Agricultural assessment report	D-I
Appendix E Ecology assessments	E-I
Appendix F Fire assessment.....	F-I
Appendix G Hydrology assessments.....	G-I
Appendix H Traffic assessments	H-I
Appendix I Approved CHMP.....	I-I
Appendix J Titles	J-I
Appendix K Photomontages	K-I
Appendix L Community and Stakeholder Engagement Plan	L-I

Acronyms and abbreviations

CEMP	Construction Environmental Management Plan
CFA	Country Fire Authority
CFA Guidelines	CFA Design Guidelines and Model Requirements for Renewable Energy Facilities
Cwth	Commonwealth
DELWP	Department of Environment, Land, Water and Planning (VIC)
EE Act	Environmental Effects Act 1978 (VIC)
EP Act	Environment Protection Act 2017 (VIC)
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i> (Cwth)
EPC	Engineering Procurement and Construction
ES Act	<i>Electricity Safety Act 1998</i> (VIC)
EVC	Ecological Vegetation Class
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i> (VIC)
ha	hectares
Heritage Act	Heritage Act 2017
km	kilometres
m	metres
MW	mega watt
MNES	Matters of National Environmental Significance under the EPBC Act (<i>c.f.</i>)
P&E Act	<i>Planning and Environment Act 1987</i> (VIC)
PP	Planning Permit
PR	this Planning Report
RAP	Registered Aboriginal Party
sqm	Square metres
the proposal	Corop Solar Farm
the proposal site	the development footprint (within the subject site, total impact area for the proposed solar infrastructure and associated works)

the subject site	the land where the proposal would be sited, including all parcels with any proposed works
VIC	Victoria(n)
VPP	Victorian Planning Provisions

Executive summary

This report accompanies a planning permit application for the use and development of a solar energy facility in the municipality of Campaspe, referred to as the Corop Solar Farm.

The proposal is for an approximate 440MW DC solar energy facility with Battery Energy Storage System (BESS) capacity of up to 800MWh. Connection to the electricity network would be via a proposed switching station near Old Corop Road which would be connected to the 220kV line that runs through the site.

The facility may be built in two stages, referred to as Stages 1 and 2 throughout this report.

The subject site is located about 5km to the west of the Rushworth township and about 6km to the south of Stanhope. The land comprises 12 titles with a combined area of 1,099.68ha.

The project is being developed by Corop Solar Farm Pty Ltd.

Proposal summary tables

A summary of the key features of the proposal are provided in the table below.

Proposal element	Description
Proposal	Corop Solar Farm
Proponent	Corop Solar Farm Pty Ltd
Capacity	Approximately 440 MW (PV DC) / 400MW/800MWh BESS
Subject site	Approximately 1100ha
Site description	Located at 344 Old Corop Road, Rushworth (Stage 1) and Bedwell Road, Rushworth (Stage 2). A full list of parcels is provided in the following sections of this report. All land zoned as Farming Zone (FZ) under the Campaspe Planning Scheme.
Local Government Area	Campaspe Council LGA.
Solar array	Up to 1,193,000 panels Row spacing of approximately 6m Maximum height of approximately 4.35m at full tilt towards the horizon Up to 85 solar inverters
Substation	Substation area approximately 77m x 125m.
Energy storage – Battery Energy Storage System (BESS)	Electricity storage capacity of up to 800MWh Up to 208 BESS containers with inverters and 104 transformers BESS area of 190m x 129m Modular enclosures or shipping container style enclosures. The final number of units would be determined by the technology chosen. Total weight would exceed 20t (referral to Workcover Victoria would be required).
Access	Access tracks would be via three entrances, on Old Corop Rd and Bedwell Road for construction and operations and one entrance for the stage 2 area on Geodetic North Rd for operations and emergency access (CFA) Internal access tracks would be approximately 4m wide with passing bays and turning bays as needed to meet CFA requirements.
Operations and	Operations facility to accommodate a site office and maintenance building

Proposal element	Description
maintenance buildings and fencing	with a maximum height of 6m, located in Stage 1. Steel security fence to maximum 2.1m high.
Workforce	Construction - Maximum construction workforce of 704 people Operation – Maximum 12 staff on site in any one day
Operation period	Anticipated to be 40 plus years
Decommissioning	The site would be returned to an agreed state. The site would be rehabilitated consistent with land use requirements.

As demonstrated in this report, the proposal accords with the relevant policies of the Campaspe Planning Scheme, particularly those that seek to facilitate renewable energy generation in well suited locations and minimise adverse impacts of these facilities.

A summary of the key findings of the assessment are provided below.

Assessment area	Assessment summary
Noise	Noise impacts have been assessed by Renzo Tonin and Associates in the accompanying Acoustic Report at Appendix B. The proposal will comply with the applicable standards. A limit of 36dB applies for night time noise under the relevant EPA standard, with a maximum predicted noise level of 35dB for the nearest sensitive receiver, in compliance with the standard. No operational limits are required for the facility to meet the standard.
EMI	There are no predicted significant adverse impacts in relation to electromagnetic interference from the proposed facility.
Aviation and glint and glare	Glint and glare impacts are assessed in the Glint and Glare Assessment report prepared by Moir Landscape Architects which is attached at Appendix C. There are no known aviation facilities within proximity to the site and there would be no significant impact on aviation. There are some predicted impacts of glint and glare on private and public receptors. These impacts may be mitigated by screen plantings along the edge of the project as discussed within the glint and glare report. With vegetative screening impacts will be minimal and acceptable.
Visual impact	Photomontages for the proposed facility are provided at Appendix K. The facility will be visible from public locations but will be an acceptable addition to the area given its rural context with low population density and low rise topography. There are no dwellings within 300m of proposed infrastructure and impacts on any private viewpoints will be minimal and acceptable.
Agricultural impact	An Agricultural Assessment Report has been prepared by Meridian Agriculture and is included at Appendix D. The site is within the Goulburn Murray Irrigation District. The proposal would have no significant impact on the agricultural capability of the property or surrounding properties. There would be no significant impact on declared irrigation districts with the decommissioning of the site and the unsuitability of the site for irrigation.
Ecology / flora	Ecological values have been assessed across three ecology reports at Appendix E

Assessment area	Assessment summary
and fauna	<p>including a Flora and Fauna Assessment prepared by Greenedge Environmental, Additional Fauna Information prepared by Greenedge Environmental, and Roadside Vegetation Assessment, prepared by NGH.</p> <p>The assessments confirm the ecological values present on the site and the location of native vegetation and wetlands. The proposal has avoided impacts to native vegetation with no native vegetation removal being proposed under Clause 52.17.</p> <p>The proposal would satisfy the intent of the various environmental policies under the scheme relating to ecology, biodiversity and environmental impact.</p>
Bushfire	<p>A Risk Management Plan and Fire Safety Study has been prepared by Fire Risk Consultants and is included at Appendix F, including a full assessment against the CFA Design Guidelines and Model Requirements for Renewable Energy Facilities (CFA Guidelines). The proposal complies with these guidelines and will not present an unreasonable fire risk for the area.</p>
Flooding	<p>A Hydrologic Report has been prepared by Fifteen50 and is included in Appendix G. The site is partially affected by the Floodway Overlay and Land Subject to Inundation Overlay.</p> <p>The assessment details that the proposal can be accommodated by the site despite flooding constraints. In particular, the proposal would not impede or redirect floodwaters in accordance with Clause 13.03. The proposal is appropriate and can accommodate the floodway function of the land subject and is in accordance with the purpose of the FO and LSIO and Clauses 44.03 and 44.04 respectively.</p>
Traffic and transport	<p>A Traffic Impact Assessment report has been prepared by O'Brien Traffic and is included at Appendix H.</p> <p>The assessment details that the traffic and transport impacts of the operation and construction of the proposal would be comfortably accommodated by the existing road network and would not cause any unreasonable impacts to road infrastructure or to road safety. A Traffic Management Plan may suitably manage potential impacts, particularly in relation to the main impacts of the construction phase of the project.</p>
Heritage	<p>Areas of cultural heritage sensitivity affect the site and a Cultural Heritage Management Plan has been prepared and approved for the project, included at Appendix I. Construction of the project would be carried out in accordance with the approved CHMP and would ensure protection and conservation of places of Aboriginal cultural heritage significance.</p>
Cumulative	<p>There are no existing, approved or proposed solar energy facilities within close proximity to the site. There would be no significant cumulative impacts.</p>
Heat island	<p>All solar infrastructure would be set back greater than 30m from neighbouring property boundaries, ensuring that there would be no unreasonable heat island effects on neighbouring properties or agricultural enterprises.</p>
Signage	<p>Business signage of up to 3sqm would take the form of a routine site identification notice at the entry to the site. There would be no adverse impacts relating to clutter or unnecessary visual intrusion.</p>

1. Introduction

This report accompanies a planning permit application for the use and development of a large-scale solar energy facility referred to as the Corop Solar Farm. The proposal is within the municipality of Campaspe. The facility would have a capacity of approximately 440MW DC and may be built in two stages. Where consideration is given to the separate stages of the facility, they are referred to as Stage 1 and Stage 2 within this report. The facility would have a dedicated switching station near Old Corop Road which would be connected to the 220kV line.

The subject site is located about 5km to the west of the Rushworth township and about 6km to the south of Stanhope. The land comprises 12 titles with a combined area of 1,099.68ha.

The location has a favourable Global Horizontal Irradiance (GHI) of 1,747 kWh/m² per annum and comprises flat cleared land with the 220 kV Shepparton Terminal Station (SHTS) to Fosterville Tee Terminal Station (FVTS) transmission line crossing the south and east boundaries in the southeast corner of site.

The project is being developed by Corop Solar Farm Pty Ltd, a part of Leeson Group of companies. Leeson Group is a Melbourne based renewable energy company which has successfully developed multiple solar farms throughout Victoria.

As demonstrated in this report the proposal:

- Accords with the relevant policies of the Campaspe Planning Scheme, particularly those that support renewable energy generation in well suited locations and seek to minimise adverse impacts of these facilities.
- Complies with the provisions of the Solar Energy Facilities – Design and Development Guideline (DELWP 2019) (DELWP Guidelines).
- Complies with the Design Guidelines and Model Requirements for Renewable Energy Facilities (CFA 2022) (CFA Guidelines).
- Would have a significant positive impact on the Victorian State Renewable Energy Target.
- Would provide a positive economic and social impact on the local area.

2. Site analysis and design response

The site analysis and design response is derived from the site conditions, the nature of the surrounds and also influenced by community engagement and feedback.

2.1. Subject site

The site is located approximately 5 kms of Rushworth and has frontages to Old Corop Road, Geodetic North Road, Bedwell Road, and Carag Road.

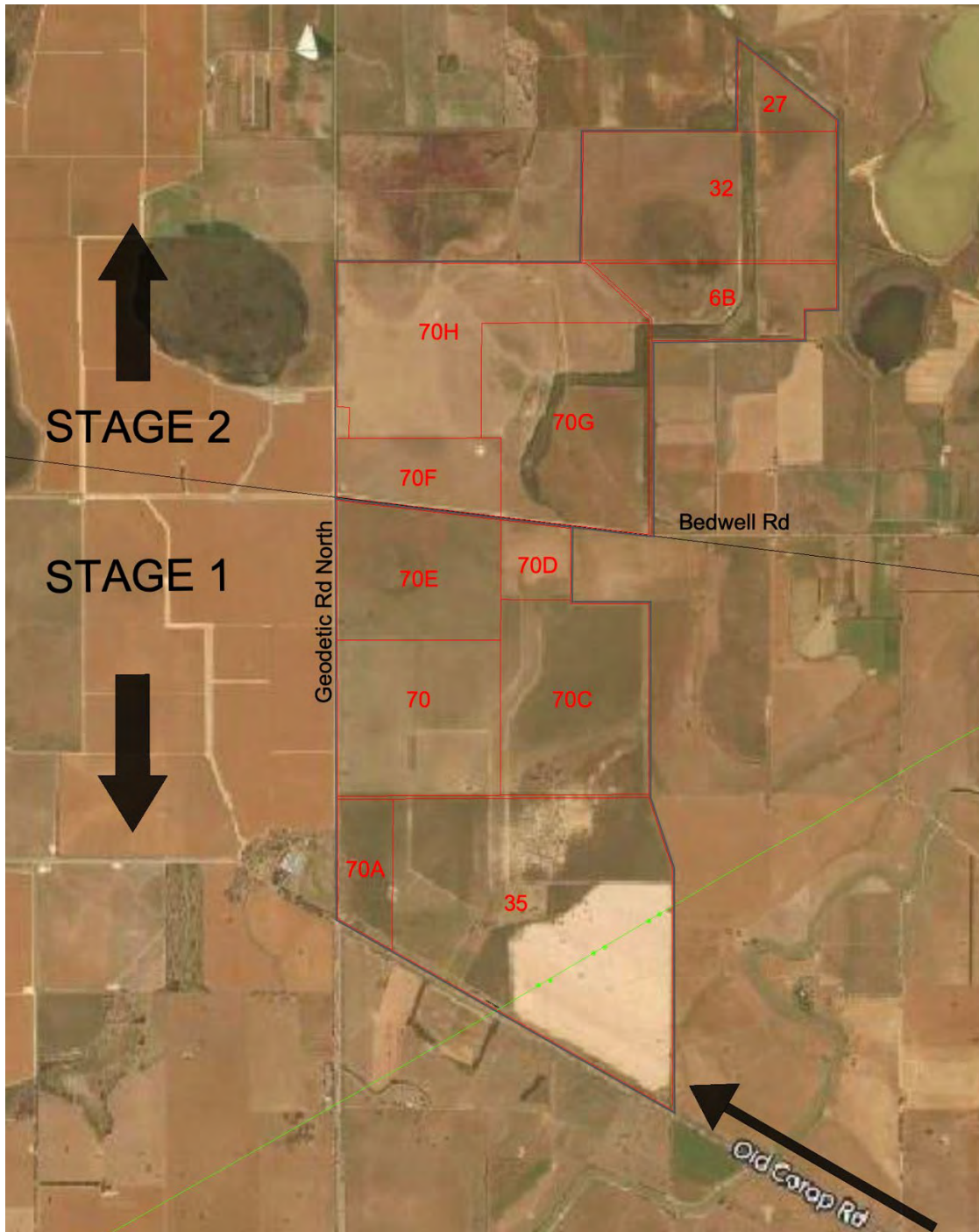


Figure 2-1 Extract from proposed site plans showing the subject site, land parcels and stages of the proposal

The land consists of 12 parcels totalling 1,099 hectares of flat agricultural land used for grazing sheep and cropping. A Site Context Plan is provided at Appendix A showing the subject site and surrounding area.

The land is comprised of large fields for agricultural use with scattered stands of native vegetation and an established drainage system that runs north. Some vegetation follows drainage lines and includes planted vegetation. A number of small dams are scattered across the property. The land is described in more detail in the Ecology and Hydrology assessments which are referred to further below. Plans showing existing native vegetation and wetlands are included at Appendix A.

The land is occupied by a small brick dwelling off Old Corop Road with a farm machinery shed. Open sided sheds are also located in the southeast corner of the land. The dwelling would be demolished upon commencement of the project.



Figure 2-2 Looking north down Geodetic North Road with subject site to right



Figure 2-3 Looking north from Old Corop Road with planted native vegetation in foreground



Figure 2-4 Looking east to subject site at intersection of Old Corop road and Geodetic North Road



Figure 2-5 Looking east down Bedwell Road from intersection with Geodetic North Road being the break between Stage 1 and Stage 2 of the project



Figure 2-6 Looking north east across Stage 2 land from corner of Geodetic North Road and Bedwell Road



Figure 2-7 Looking south across subject site from Carag Road (northern most edge of Stage 2)



Figure 2-8 Looking east across subject site from Geodetic North Road (Stage 1 section) towards patch of native trees (either regrowth or planted)

2.2. Title details

The subject site is comprised of 12 parcels across three separate properties at addresses 344 Old Corop Road and Bedwell Rd, Rushworth, including 5 roads.

The combined area of the land is approximately 1100ha.

A list of the formal descriptions of the land including a copy of the relevant certificates of title is included at Appendix J.

2.3. Native vegetation

Native Vegetation impacts have been assessed by the Flora and Fauna Assessment by Green Edge Environmental and Roadside Vegetation Assessment by NGH.

The Flora and Fauna Assessment found that:

- *The site assessment revealed no functional EVC/s located within the footprint of the proposed development. The area has been highly disturbed through continual cropping, grazing and the development of water management infrastructure (page 13).*

- *The proposed solar farm footprint is located in heavily modified, cropped grazing land. The change to vegetation through seasonal farming practices has created a landscape which does not support habitat required by many of the threatened species such as a requirement for heavily vegetated ground cover and understory vegetation, logs and habitat trees. The irrigation has been rationalised and irrigation water has been removed from the area. The proposed development works footprint is well defined and will occur in a highly modified area. Some native scattered trees occur, but through design, impacts to scattered trees can be minimised and avoided (page 14).*
- *The site does contain areas of revegetation or shelterbelts, containing planted or direct seeded native species (page 15).*

The location of existing native vegetation is shown on the plans that accompany the application at Appendix A. This includes:

- Scattered trees including Buloke, Grey Box, River Red Gum, Yellow Box, and unknown species with most located in the southern central section of Stage 1.
- Mapped wetland areas.

2.4. Hydrology and mapped wetlands

A detailed Hydrologic Report has been undertaken by Fifteen 50 which has established the hydrology characteristics of the subject site. Findings of note include the following:

- The site is within the Goulburn Murray Irrigation District but is not currently irrigated. The property does not currently have an irrigation outlet or a formal Water Use License (WUL).
 - The northern property (Stage 2) is flood prone as there is limited scope for drainage due to the contours (flatness of the land).
 - The land is in a dry state by each November/December which demonstrates there are no enduring waterbodies or wetlands.
 - The land has a natural drainage function from south to north as part of the local catchment.
- 1.

The Stage 1 land has two Mapped Wetlands No's 60108 and 60106, however they would not be subject to any works under the planning application and a setback of 20 meters for any construction activities would be provided as shown in the proposed plans.



Figure 2-9 Mapped Wetlands No's 60108 and 60106 - Land.vic.au - State Government of Victoria source

The Stage 2 land presents a Mapped Wetlands 60109 which would not be subject to any works under the planning application and a setback of 20 meters for any construction activities is to be provided as shown in the solar farm layout plan.



Figure 2-10 Mapped Wetland 60109 - Land.vic.au - State Government of Victoria source

2.5. Heritage

The site is partially affected by designated areas of aboriginal cultural heritage sensitivity having regard to the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018.

A Cultural Heritage Management Plan has been prepared and approved for the project and is included at Appendix I.

2.6. Farming history

Discussions with landowners has established that a small area of the site was once a dairy in the 70's and 80's and the remainder of the site was cropped or with permanent pasture mainly for sheep but some beef. Currently, the Stage 1 land comprises 350 acres which are cropped, and the remaining land is grazed.

In 2002 the entire farm was graded for drainage and has had several areas excluded by fencing for native vegetation. Table 2-1 is a brief history of the agricultural land use.

Table 2-1 Indicative farming history

Period	Stage 1 land	Stage 2 land
1970	Land used as a dairy.	Cropping / grazing. Used for dairy cattle during some wet winters.
1980	The current land-owner occupied the land and home, purchasing adjacent properties to grow the farm size to 579.2 ha.	Cropping / grazing. Used for dairy cattle during some wet winters.
1990	Until this date, this was the permanent pasture mainly for sheep but some beef (covered 150 acres). The remaining land at the site was grazing.	
2002 - 2005	Each Autumn the land was sprayed and sown to pasture.	
2007-2019	210 acres acquired in the northwest corner and the land was cropped in 2009.	Crops of wheat, canola, oats, barley and field peas for a number of years and then most paddocks were sown with a number of pasture species. In recent years, the owner wound back the amount of crop sown in favour of grazing sheep and also to produce hay and silage. The flood way was constructed by the previous owners of the land. Now it runs through the property for the purpose of draining parts of the land by pumping surface water into the floodway to support irrigated pasture and crops. At this stage most of the internal fencing was erected and the tree plantations established.
Currently	There are 350 acres which are cropped, and the remaining land is grazed.	Grazing.

2.7. The surrounds

The subject site is located in a generally broadacre farming area to the west of Rushworth, with a predominance of large properties. The general vicinity is sparsely populated, and dwellings are notably dispersed. There are no known aviation facilities within 30 kilometres of the subject site.

Directly west of the subject site is a large cropping property for grain production with several large silos with an associated dwelling further west which cannot be seen from the subject site.

The nearest dwelling is located approximately 300m to the west at 622 Old Corop Road 300m.



Figure 2-11 Detail of dwelling at 622 Old Corop Road to the west of the subject site

Relevant private properties including dwellings and sensitive receivers is shown in Figure 1 of the Acoustic Report at Appendix B, reproduced below.

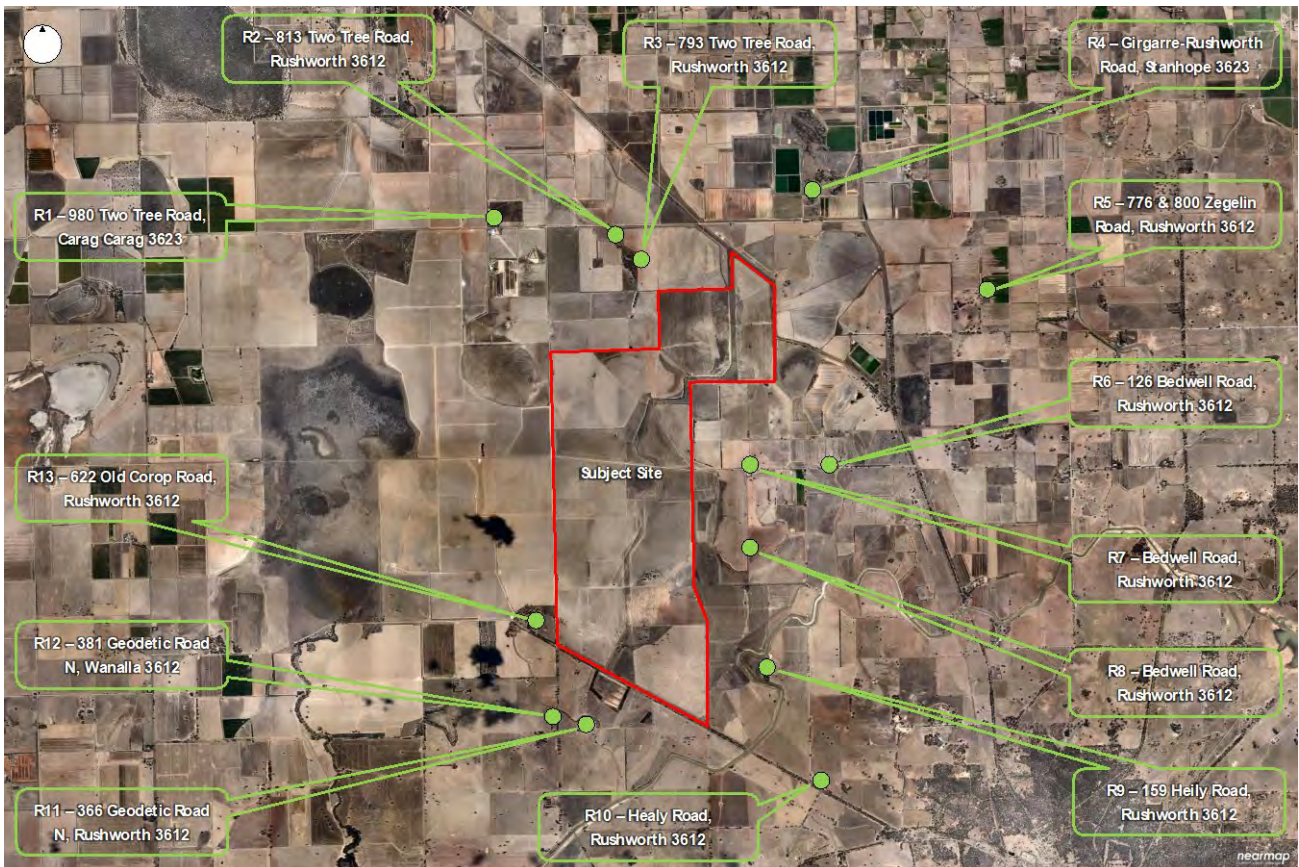


Figure 2-12 Receiver map from Acoustic Report by Renzo Tonin and Associates

2.8. Design response

The siting of the infrastructure for the proposal has been an iterative process, specifically to:

- Avoid and minimise impacts to areas of quality native vegetation.
- Allow for farming to continue in a capacity suitable for the landowners.
- Avoid areas of Aboriginal cultural heritage sensitivity and historic heritage (non-Aboriginal specific heritage) items.
- Allow for best practice bushfire management.
- Minimise impacts of noise and traffic (specifically volumes and access).
- Minimise visual and glint and glare impacts and allow for screening where needed.
- Limit access across waterways and improve waterways where possible.
- Minimise soil disturbance and impacts of overland flow/localised flooding.

Further details of the design response are provided in the assessment section of this report.

The proposal area has been designed with flexibility but a clearly identified footprint. The impacts of the infrastructure options for the substation and BESS have been assessed in the following sections of this report.

Clear avoidance areas and reasonable setbacks from boundaries have been identified for the proposal to protect the environment and amenity of near neighbours. These matters are discussed further below and in the supporting studies that accompany this application.

3. The proposal

A description of the key components of the proposal are provided below. The component specifications are subject to change during detailed design. Where required, upper limit quantities and power level estimates are provided to ensure the assessment and any subsequent approval maintains the flexibility required in the detailed design stage, post approval.

Refer to the development plans at Appendix A for further details of the project layout and proposed infrastructure.

3.1. Solar energy facility

It is proposed to construct and operate a 440-Megawatt (DC) solar energy facility. The facility may be built in two stages. Pending electrical grid connection approval and all relevant state, federal and local government approvals, construction would then commence shortly following financial close.

The existing dwelling would be demolished as it is beyond continued upkeep given its age.

The development, construction and operation of the proposed 440MW DC solar energy facility is summarised below.

3.2. Solar panels

There would be an estimated 1,193,000 solar panels mounted on a north/south axis to slowly track the horizontal movement of the sun from east to west. The metal mounting structures would be pile driven into the ground to minimise ground disturbance and the use of concrete. The panels would have a maximum height not exceeding 4.35m when facing at the highest angle east or west. A dimensioned elevation with indicative measurements is shown below.

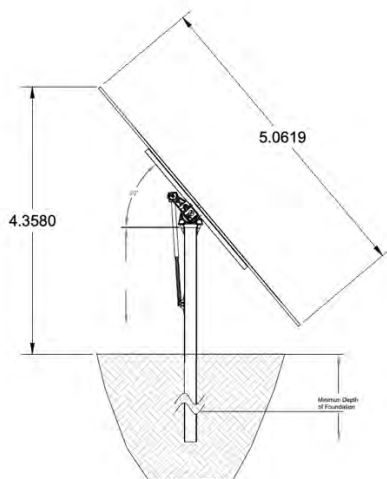


Figure 3-1 Dimensioned elevation of proposed panels

The rows of modules would be spaced approximately 6m apart to ensure no shading occurs and allows for ease of access for maintenance purposes which includes adequate room for maintenance vehicles if required.



Figure 3-2 Example of a single axis tracking system

3.3. Setbacks

Key setbacks are as follows. Further detail on setbacks is shown on the Solar Farm Setbacks plan that accompanies the application at Appendix A:

- Solar infrastructure set back a minimum of 26m from all site boundaries and 32m from mapped wetlands
- Solar infrastructure set back a minimum of approximately 374m from the nearest dwelling at 622 Old Corop Road
- Substation and BESS set back a minimum of 50m from site boundaries.

3.4. Inverters

Each solar array would have an inverter station which contains the inverters, step-up transformers and switchgear which converts the electricity from DC to AC and steps it up to 33kV for reticulation around the site. From the inverter station medium voltage cables are installed underground to an onsite substation and then connect to the 220 kV Shepparton Terminal Station (SHTS) to Fosterville Tee Terminal Station (FVTS) transmission line via a dedicated switching station.

There would be up to 85 inverters with each measuring approximately 8.1m long, 5.5m wide and 5.5m high as shown on the Inverter Station Dimensions plan at Appendix A.

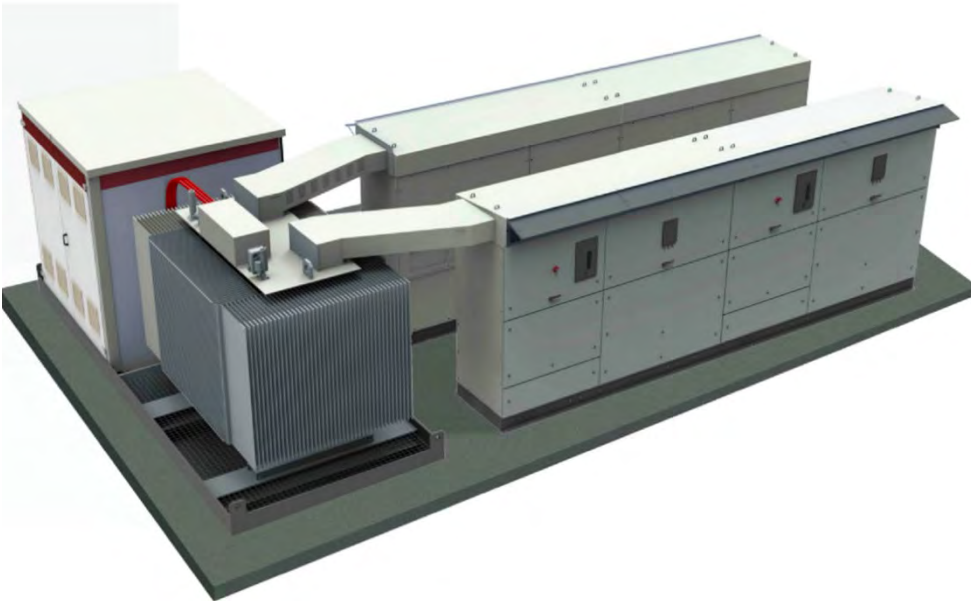


Figure 3-3 Example of an inverter station

3.5. Substation and Battery Energy Storage System (BESS)

The internal solar farm substation is located in the centre of the south boundary set back a minimum of 50 meters from the southern site boundary as shown in Appendix A. The substation would convert the 33kV electricity from the inverters to 220kV which is the voltage of the electrical transmission network, the substation would be owned by the solar farm operator and constructed to AEMO requirements to ensure that the project maintains the distribution and transmission networks power quality.

Adjacent to the substation and within the same area would be a 400MW/800MWh BESS. The BESS would be a containerised system connecting into the 33kV substation.

Additionally, to connect to the electrical transmission network (interface) a Dedicated Switching Station would be built which would connect the internal substation to the 220 kV Shepparton Terminal Station (SHTS) to Fosterville Tee Terminal Station (FVTS) transmission line.

3.6. Site facilities

The proposal would include the construction of an operations facility with a car parking area comprised of a site office and maintenance building with a maximum height of 6m. This would be located in Stage 1. The building would be a shed style design and would be setback from the Old Corop Road. A floor plan and elevations can be provided as a condition of the sought permit. The finished floor level of the operations facility is expected to be at least 300mm above natural ground level as per the CMA's advice.

3.7. Access

The solar panel array areas would be accessed from three entrances on Old Corop Rd and Bedwell Road for construction and operations and one entrance for the stage 2 area on Geodetic North Rd for operations and emergency access (CFA). The traffic route would be from Geodetic North Road via Old Corop Road, via the Bendigo-Murchison Road. A Traffic Management Plan is expected as a condition of the sought permit.

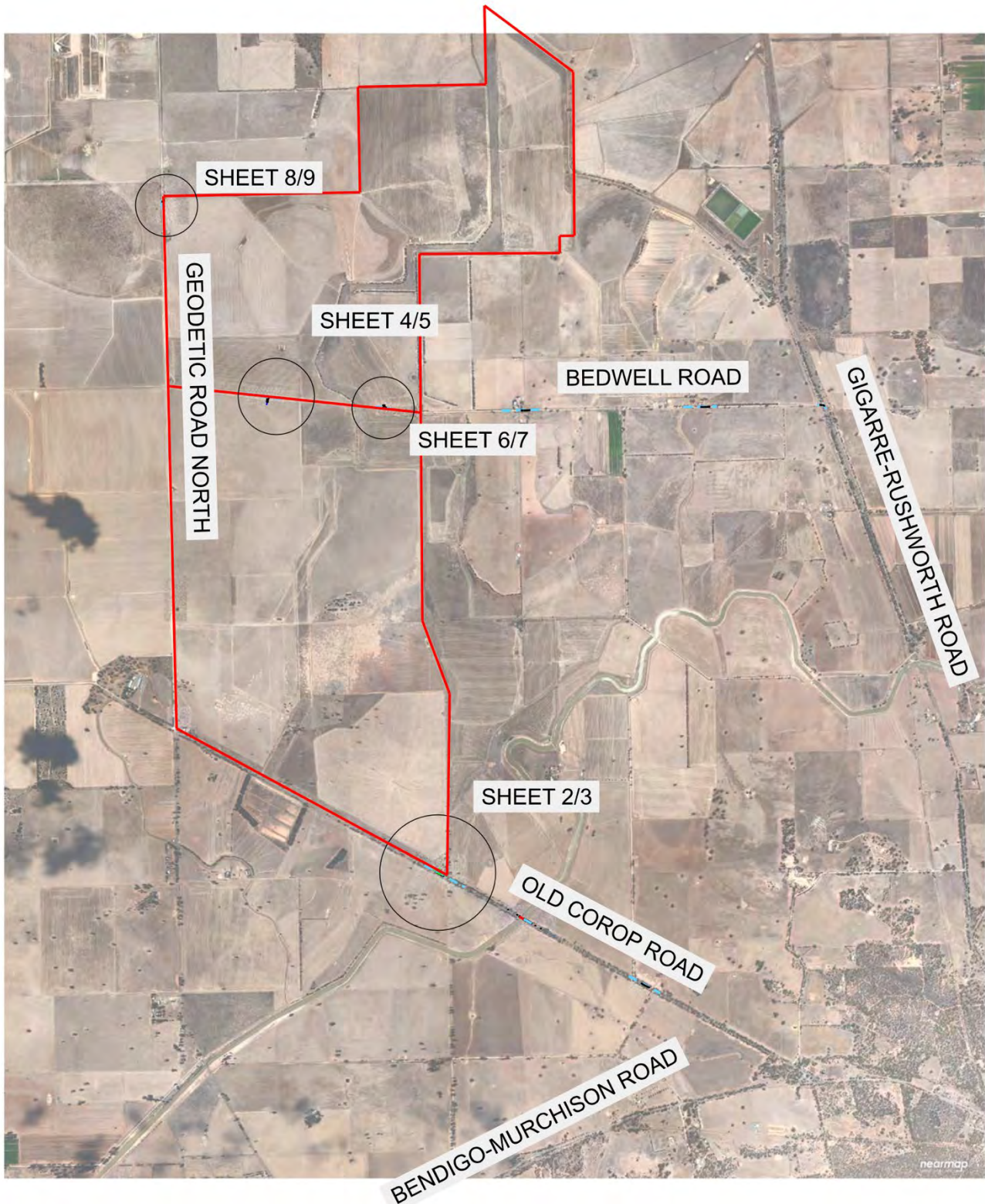


Figure 3-4 Proposed site access

The perimeter of, and internally within, the solar farm would have all-weather access tracks for CFA and general operational access, the perimeter tracks would be 4 metres in width and would have passing bays every 600 metres as per CFA Guidelines. The panels would be wired through underground conduits from the solar arrays to inverters. Each central inverter converts electricity from Direct Current to Alternating Current which is essential before it connects to the distribution network.

3.8. Signage

Business identification signage would be required to identify the site at its main entrance. Signage would be a maximum of 3sqm and sited at the boundary of the site.

3.9. Native Vegetation

The project seeks to avoid biodiversity values within the study area including native vegetation. A Flora and Fauna Assessment by Green Edge Environmental and Roadside Vegetation Assessment by NGH has been prepared, demonstrating that the proposal does not require native vegetation removal.

3.10. Landscape screening

To reduce the visual impact of the solar farm within its rural context, the boundaries of the facility would be screened with vegetation.

The landscaping would have four rows of planted vegetation. Further details of proposed planting including its effect on visual impact is contained at Section 6 of this report. A Landscape Plan with a detailed planting and management regime can be provided as a condition of the sought permit.

3.11. Construction

The construction phase would utilize access to the land from Old Corop Rd, Geodetic North Rd and Bedwell Rd. The solar mounting system is constructed with vertical piles driven into the earth and a horizontal beam running on a north south axis on which the solar modules mount.

Electrical wiring would connect the solar modules to the inverter stations and then to the substation and the electrical transmission network.

The construction activities of the project would include:

- Labourers and Trade Assistant - General Labour, Installation of panels and Mounting System, Foreman/Supervisors
- Electricians - Installation of Solar Panels, Electrical DC and AC Wiring, Installation of Inverters, Installation of conduits and cabling, Testing and Commissioning
- HV Electricians - Installation and Termination of High Voltage Cabling
- Mechanical Fitters - Cyclone Fences and Gates, Mounting System
- Traffic Management
- Civil Works – Trenching, Excavation, Compaction, Soil Testing, Piling, Roads and Tracks, Concreting, Form Work and Pouring of Pits, Footings for Inverters, Transformers and Switch rooms
- Plant Operators – Forklifts, Cranes, Excavators, Compaction, Trucks, Landscaping, Earthworks, Irrigation, Planting, Demolition of existing dwellings and sheds
- Transport and logistics - Delivery of containers and materials, Soil, Sand and Rock, Concrete
- Management - First Aid, Occupational Health and Safety, Site and Project Managers, Operations and Logistic – Site Management, Engineering and Consultants

3.12. Operation and maintenance

Routine operation and maintenance would be required on the solar farm and would be carried out by up to 12 stages at any one time, tasks would include:

- Cleaning the solar panels to maximise their efficiency
- General maintenance
- Management of agriculture and livestock

- Land and vegetation management, and
- Operational monitoring.

The project is designed to operate for up to 40 years. After that period the solar farm could be upgraded in line with future technology advancement and innovation or decommissioned and returned to agriculture.

A Site Management / Emergency Management plan if required would be provided as a condition of the sought permit.

3.12.1. Ongoing agricultural use

Analysis for the dual use of land for the solar farm and agricultural use is ongoing, the current assessment shows that the most effective and sustainable method to manage the land is to implement grazing however cropping is still being assessed. Whilst grazing with sheep would be the most likely outcome the assessment suggest that some areas of the site may be viable for cropping pending further investigation of the land, soil, drainage and paddock access.

3.12.2. Land management practices

Appropriate land use management protocols would be implemented to ensure that the spread of weeds, and risk of fire, associated with the solar farm is reduced. The solar array areas would be kept weed free by routine spraying and appropriate land use and biosecurity measures, whilst fire risk would be reduced through pasture management and fire breaks.

A Construction Management Plan and an Operational Management Plan would be developed as part of the conditions to the sought Planning Permit. The proposed plans would be overseen by a local contractor and managed by the project's operations and maintenance team. It is expected that suitable permit conditions would ensure a land management plan is prepared and implemented to the satisfaction of Council and stakeholders.

4. Community consultation

It was considered appropriate given the scale of the project, to undertake a robust community consultation process prior to lodgement of the application.

The proponent held a direct consultation session with each of the neighbours in the proximity of the solar farm site. A collaborative approach was considered appropriate to achieve the outcome agreeable to all stakeholders.

The intention of the community engagement for the Corop Solar Farm was to create and build a relationship with the local community ensuring that the community remains engaged and informed with the progress, status and methods of the development, construction and operation of the Corop Solar Farm, in overview the process is as follows:

- improving coordination and integration
- reducing complexity
- better communication and participation
- effective land use controls
- development of efficient processes for planning and review.

The participation process has the following characteristics:

- **Timely:** Participation is carried out on time
- **Inclusivity:** Participants are selected in a way that is not open to manipulation
- **Community-focused:** Focus on what the community consider appropriate in their role as citizens
- **Interactivity:** Avoid reducing questions to a simplistic either/or response but allow consideration of the big picture, so people can really become engaged
- **Effectivity:** The decision has to be explained so that participants know and understand the impact of their involvement
- **Significance:** A strong likelihood is necessary that any recommendations which emerge from the consultative process is adopted
- **Cost effective:** Some questions require broader consultation, others more targeted. Although the cost of consultation may vary, the process selected has been well resourced.
- **Flexibility:** Having considered a number of consultation mechanisms we believe in this circumstance a collaborative approach is most appropriate.

4.1. Communications plan for community consultation

A community consultation session was held on the 22nd of May 2019. It was arranged to engage and discuss the project information, status and progression with the local community. It was advertised to the local community through different media platforms and also direct emailing and meetings as detailed below:

- Rushworth Community Facebook Page
- Waranga News
- Neighbour letters
- Flyer distribution on site: Rushworth Bakery, Rushworth Community House, local supermarket
- (Coghlan's), Rushworth Hardware Emporium
- Slide presentation.

A registration page on the Corop Solar Farm website www.leesongroup.com.au/event was included in the marketing material to provide an indication of likely attendance.

Ten people registered for the community consultation.

4.2. Consultation attendance

Attendance for the session was registered as being 19 persons.

Interest was based around economic benefits to the local community, pathways for business growth and employment and opportunities for locals.

A feedback form was available for attendees. The questions are shown in with answers showing a summary of the feedback received. The project was presented, discussed and a detailed session of Q&A was undertaken, continued consultation would be undertaken as the Corop Solar Farm progresses and project updates become available.

4.3. Engagement of Traditional Owners

The Registered Aboriginal Party was consulted in the preparation of the CHMP. The CHMP has been submitted for assessment.

4.4. Ongoing and proposed future engagement

Project updates and details for contacting the project proponent are available via the project website. It is intended to keep a complaints and resolution register for the life of the project to record responses to community concerns.

A community and stakeholder engagement plan for the project is included at Appendix L.

5. Planning policy and relevant legislation

5.1. Permit triggers

The relevant permit triggers under the Campaspe Planning Scheme are summarised below.

Table 5-1 Relevant permit triggers

Planning provision	Relevance to project	Permit trigger
Clause 35.07 Farming Zone	The project site is within the FZ.	A permit is required for: <ul style="list-style-type: none"> - Use and development of solar energy facility (Section 2 use) - Use and development of a utility installation (Section 2 use) - Earthworks
Clause 44.03 Floodway Overlay	The FO covers large areas in the northern section of the site where solar infrastructure and fencing is proposed.	A permit is required to construct a building or carry out works, including a fence.
Clause 44.04 Land Subject to Inundation Overlay	The LSIO covers large areas in the southern section of the site where solar infrastructure and fencing is proposed.	A permit is required to construct a building or carry out works, including a fence.
Clause 52.05	Business identification	A permit is required for display of business

Planning provision	Relevance to project	Permit trigger
Signs	signage would be required to identify the project site.	identification signage in the Farming Zone (Category 4, Sensitive areas). Business identification signage exceeding 3sqm is prohibited.

5.2. Referrals

5.2.1. Goulburn Broken Catchment Management Authority

Under Clause 44.03-6 (FO), 44.04-7 (LSIO) and 66.03 an application under the FO and LSIO must be referred to the relevant floodplain management authority as a recommending referral authority. It is understood that Goulburn Broken Catchment Management Authority is the relevant floodplain management authority.

5.2.2. Secretary to DELWP

Under Clause 66.04 an application for works must be referred to the Secretary to DELWP as a determining referral authority under Clause 5 to the Incorporated Document at Clause 81 Earthworks Controls in the Shire of Campaspe, City of Greater Shepparton and Moira Shire – August 2015.

Under Clause 66.02-12 an application to use or develop a renewable energy facility located within an irrigation district declared under Part 6A of the *Water Act 1989* must be referred to the Secretary to DELWP as a recommending referral authority.

5.2.3. Goulburn Murray Water

Under Clause 66.04 an application for works must be referred to Goulburn Murray Water as a determining referral authority under Clause 5 to the Incorporated Document at Clause 81 Earthworks Controls in the Shire of Campaspe, City of Greater Shepparton and Moira Shire – August 2015.

5.2.4. AusNet Services

Under Clause 66.02-4, an application 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, must be referred to the relevant electricity transmission authority (AusNet Services) as a determining referral authority.

5.2.5. Workcover

Under Clause 66.02-7 an application for a utility installation where a fire protection quantity is exceeded under the Dangerous Goods (Storage and Handling) Regulations 2012 must be referred to the Victorian Workcover Authority as a determining referral authority. The fire protection quantity for lithium-ion batteries is 20 tonnes under the Dangerous Goods (Storage and Handling) Regulations 2012. The weight of lithium-ion batteries that is proposed would exceed this quantity therefore referral is required.

5.3. Zone and overlay provisions

5.3.1. Clause 35.07 Farming Zone

The relevant purposes of the Farming Zone (FZ) at Clause 35.07 are:

- To implement the Municipal Planning Strategy and the Planning Policy Framework
- To provide for the use of land for agriculture
- To encourage the retention of productive agricultural land
- To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture
- To encourage the retention of employment and population to support rural communities
- To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision, and
- An application for a solar energy facility must meet the requirements of Clause 53.13 Renewable energy facility.

5.3.2. Clause 44.03 Floodway Overlay

The relevant purposes of the Floodway Overlay (FO) at Clause 44.03 are:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To identify waterways, major flood paths, drainage depressions and high hazard areas which have the greatest risk and frequency of being affected by flooding.
- To ensure that any development maintains the free passage and temporary storage of floodwater, minimises flood damage and is compatible with flood hazard, local drainage conditions and the minimisation of soil erosion, sedimentation and silting.
- To protect water quality and waterways as natural resources by managing urban stormwater, protecting water supply catchment areas, and managing saline discharges to minimise the risks to the environmental quality of water and groundwater.
- To ensure that development maintains or improves river and wetland health, waterway protection and flood plain health.

In addition to the Decision Guidelines in Clause 44.03-5 the Incorporated Document *Earthworks Controls in the Shire of Campaspe, City of Greater Shepparton and Moira Shire*, 2010 must be considered in any application under the FO.

The objectives of this document are:

- to manage and provide for long term land sustainability, improved salinity, and a reduction in nutrient levels leaving a property.
- to manage the drainage system for the region in a way that allows the reasonable flow of water through the region.
- to provide a consistent approach to earthworks and drainage management in the catchment regardless of municipal boundaries or whether land is within the irrigation region.
- to allow floodplains to function so as to provide flood conveyance and flood storage.

5.3.3. Clause 44.04 Land Subject to Inundation Overlay

The most relevant purposes of the Land Subject to Inundation Overlay (LSIO) at Clause 44.04 are:

- To implement the Municipal Planning Strategy and the Planning Policy Framework
- To identify flood prone land in a riverine or coastal area affected by the 1 in 100 (1 per cent Annual Exceedance Probability) year flood or any other area determined by the floodplain management authority
- To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, responds to the flood hazard and local drainage conditions and would not cause any significant rise in flood level or flow velocity
- To minimise the potential flood risk to life, health and safety associated with development.
- To protect water quality and waterways as natural resources by managing urban stormwater, protecting water supply catchment areas, and managing saline discharges to minimise the risks to the environmental quality of water and groundwater

- To ensure that development maintains or improves river, marine, coastal and wetland health, waterway protection and floodplain health.

In addition to the Decision Guidelines in Clause 44.03-5 the Incorporated Document *Earthworks Controls in the Shire of Campaspe, City of Greater Shepparton and Moira Shire*, 2010 must be considered in any application under the LSIO.

It is understood from Goulburn Broken CMA that: *The floor levels of the inverter, operations and maintenance buildings should be set at least 450 millimetres above the ground level within the flood extent as indicated by the flood overlays, elsewhere 300 millimetres should be applied.* This approach ensures the proposal would respond appropriately to the purpose and objectives of the Overlay and the constraints of the subject site.

5.3.4. Clause 45.12 Specific Controls Overlay Schedule 2: Goulburn-Murray Water: Connections Project and Water Efficiency Project Incorporated Document, November 2021

This overlay applies specific controls designed to achieve a particular land use and development outcome in extraordinary circumstances. The controls in the SCO may allow or restrict use and development and override any other conflicting policy in the planning scheme.

The SCO2 relates to the Goulburn-Murray Water connections project incorporated document. This document allows Goulburn-Murray Water to carry out use and development associated with certain water irrigation upgrade projects without requiring planning approval.

The SCO2 is not relevant to the subject application and no permit trigger applies.

5.4. Particular provisions

5.4.1. Clause 52.05 Signs

A permit is required for business identification signage within the Farming Zone, pursuant to Clause 52.05-14 and Clause 35.07-7 which defines the Farming Zone as within Category 4 – Sensitive Areas. Total display area for each premises must not exceed 3sqm.

5.4.2. Clause 52.06 Car parking

Table 1 at Clause 52.06 of the Planning Scheme outlines the car parking requirements associated with various uses. A solar energy facility or any use under which it is nested is not listed in Table 1.

Clause 52.06-6 states that:

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

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

5.4.3. Clause 52.17 Native vegetation

No permit is required for native vegetation removal under this clause. The proposal has avoided the existing tree vegetation and mapped wetlands on site.

The site assessment revealed no functional Ecological Vegetation Classes (EVCs) located within the footprint of the proposed development. The area has been highly disturbed through continual cropping, grazing and the development of water management infrastructure.

The purpose of this clause is 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) (the Guidelines):

- Avoid the removal, destruction or lopping of native vegetation
- Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided
- Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.

The purpose of this clause is also to manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.

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

5.4.4. Clause 53.13 Renewable energy facility

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

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

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

Further guidance on each of these decision guidelines is contained within the Solar Energy Facilities Design and Development Guideline which is discussed in following sections of this report.

5.5. Planning Policy Framework

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

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

5.5.1. Municipal Strategic Statement

Clause 21.01 outlines the municipal profile of Campaspe Shire, including an overview of main employment sectors and environmental challenges for the municipality. Among other goals, the municipal vision at Clause 21.02 seeks to build sustainable communities.

5.5.2. Settlement

Clause 11 provides an overarching policy for settlement in Victoria. Of particular note are the following policies:

- Planning is to prevent environmental and amenity problems created by siting incompatible land uses close together.
- Planning is to facilitate sustainable development that takes full advantage of existing settlement patterns and investment in transport, utility, social, community and commercial infrastructure and services.

Clause 11.02-1S Supply of urban land

Objective

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

Strategies

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

Clause 11.03-5S Distinctive areas and landscapes

Objective

To recognise the importance of distinctive areas and landscapes to the people of Victoria and protect and enhance the valued attributes of identified or declared distinctive areas and landscapes.

Strategies

Recognise the unique features and special characteristics of these areas and landscapes.

Protect the identified key values and activities of these areas.

Enhance conservation of the environment, including the unique habitats, ecosystems and biodiversity of these areas.

Support use and development where it enhances the valued characteristics of these areas.

Avoid use and development that could undermine the long-term natural or non-urban use of land in these areas.

Protect areas that are important for food production.

Clause 11.03-5S Regional and local places

Objective

To facilitate integrated place-based planning

Strategies

Integrate relevant planning considerations to provide specific direction for the planning of sites, places, and neighbourhoods and towns.

Consider the distinctive characteristics and needs of regional and local places in planning for future land use and development

Clause 21.02-6 Sensitive interfaces

Objective

To ensure an appropriate separation between industry and sensitive land uses.

Strategies

Discourage industries with adverse amenity potential from locating near existing residential areas
Protect existing rural residential uses from unreasonable amenity impacts from industry

Maintain a buffer of at least 100 metres between existing rural residential development and any new industrial lots.

Objective

To ensure the design and layout of new development protects the amenity of existing buildings and adjoining residential areas.

5.5.3. Environmental and Landscape Values

These clauses focus on protecting ecological systems, biodiversity, and identified environments or landscapes.

Clause 12.01-S Protection of biodiversity

Objective

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

Strategies

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

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

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

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

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

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

Migratory Birds Agreement (JAMBA), the China-Australia Migratory Birds Agreement (CAMBA), or the Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).

Assist in the identification, protection and management of important areas of biodiversity.
Assist in the establishment, protection and re-establishment of links between important areas of biodiversity, including through a network of green spaces and large-scale native vegetation corridor projects.

Clause 12.01-2S Native Vegetation Management

Objective

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

Strategies

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

- Avoid the removal, destruction or lopping of native vegetation.
- Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
- Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

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

Objective

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

Strategies

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

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

Ensure development is sensitively designed and sited to maintain and enhance environmental assets, significant views and landscapes along river corridors and waterways and adjacent to lakes and wetlands.
Ensure development does not compromise bank stability, increase erosion or impact on a water body or wetland's natural capacity to manage flood flow.

Clause 12.05-2S Landscapes

Objective

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

Strategies

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

Ensure important natural features are protected and enhanced.

Clause 21.3-2 Biodiversity

Objective

To protect, manage and restore native vegetation, including grasslands and wetland vegetation.

Strategies

Encourage land owners to protect, maintain and re-establish indigenous vegetation.
Encourage the retention of existing riparian vegetation.

Objective

To increase the extent and quality of native vegetation and biodiversity across the shire.

Strategies

Encourage the development of wildlife corridors and links across the municipality
Development and operate a native vegetation offset bank based on council parks and reserves to address offset requirements.

Encourage public and private land managers to permanently protect and manage areas of native vegetation for biodiversity.

Objective

To avoid and minimise impacts on environmental and biodiversity values.

Strategies

Protect native vegetation with a biodiversity risk of high or moderate in areas subject to land use change, including future industrial and residential areas and road reserves:

- Provide effective management of road reserves, railway lines and other public land
- To protect, manage and restore native vegetation, including grasslands and wetland vegetation.
- To increase the extent and quality of native vegetation and biodiversity across the shire.
- To avoid and minimise impacts on environmental and biodiversity values.

5.5.4. Environmental risks and amenity

This clause addresses environmental risks and amenity. The head provision of Clause 13 outlines the following policies:

- Planning should strengthen the resilience and safety of communities by adopting a best practice environmental management and risk management approach.
- Planning should identify, prevent and minimise the risk of harm to the environment, human health, and amenity through:
 - Land use and development compatibility
 - Effective controls to prevent or mitigate significant impacts.
- Planning should identify and manage the potential for the environment and environmental changes to impact on the economic, environmental or social wellbeing of society
- Planning should ensure development and risk mitigation does not detrimentally interfere with important natural processes
- Planning should prepare for and respond to the impacts of climate change.

Clause 13.01-1S Natural hazards and climate change

Objective

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

Strategies

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

Identify at risk areas using the best available data and climate change science.
Integrate strategic land use planning with emergency management decision making.

- Direct population growth and development to low risk locations.
- Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time.
- Ensure planning controls allow for risk mitigation or risk adaptation strategies to be implemented.
- Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.

Clause 21.04-2 Climate Change

Objective

To adapt to the effects of climate change.

Strategies

Evaluate use and development proposals with regard to climate change implications.
Evaluate applications with a view to limiting potential greenhouse effects.

Clause 13.02-1S Bushfire planning

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

Objective

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

Strategies

Protection of human life

Give priority to the protection of human life by prioritising the protection of human life over all other policy considerations.

Bushfire hazard identification and assessment

Identify bushfire hazard and undertake appropriate risk assessment by:

Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.

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

Considering and assessing the bushfire hazard on the basis of:

- Landscape conditions - meaning conditions in the landscape within 20km (and potentially up to 75km) of a site
- Local conditions - meaning conditions in the area within approximately 1km of a site
- Neighbourhood conditions - meaning conditions in the area within 400m of a site, and
- The site for the development.

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

Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures.

Clause 21.04-3 Bushfire

Objective

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

Strategies

Direct development to locations of lower bushfire risk.

Avoid development in locations of extreme bushfire risk.

Avoid development in areas where planned bushfire protection measures may be incompatible with other environmental objectives.

Objective

To ensure that new land use and development does not increase the level of bushfire risk.

Strategies

Ensure that use and development includes adequate bushfire protection measures.

Require adequate bushfire protection measures as conditions of planning permission.

Clause 13.03-1S Floodplain management

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 floodway's
- The flood storage function of floodplains and waterways
- Floodplain areas of environmental significance or of importance to river, wetland or coastal health.

Strategies

Identify land affected by flooding, including land inundated by the 1 in 100 year flood event (1 per cent Annual Exceedance Probability) or as determined by the floodplain management authority in planning schemes.

Avoid intensifying the impact of flooding through inappropriately located use and development.

Plan for the cumulative impacts of use and development on flood behaviour.

Locate use and development that involve the storage or disposal of environmentally hazardous industrial and agricultural chemicals or wastes and other dangerous goods (including intensive animal industries and sewage treatment plants) outside floodplains unless site design and management is such that potential contact between such substances and floodwaters is prevented, without affecting the flood carrying and flood storage functions of the floodplain.

Ensure land use on floodplains minimises the risk of waterway contamination occurring during floods and floodplains are able to function as temporary storage to moderate peak flows and minimise downstream impacts.

Clause 21.04-2 Flooding

Objective 4

To protect life, health, safety and community wellbeing from flood hazard.

Strategies

Preserve the natural flood carrying capacity of rivers, streams and floodways.

Protect property and community infrastructure from flood damage.

Objective 5

To minimise the impact of flooding on the community.

Strategies

Ensure the floodway is maintained, and that the free passage and temporary storage of flood waters is not compromised.

Preserve the natural function of the floodplain to convey and store flood waters.

Clause 13.05-1S Noise abatement

Objective

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

Strategy

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

Clause 13.07-1S Land use compatibility

Objective

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

Strategies

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

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

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

5.5.5. Natural resource management

This clause addresses conservation and wise use of natural resources including energy, water, land, stone and minerals. This clause contains the following policy:

- Planning should ensure agricultural land is managed sustainably, while acknowledging the economic importance of agricultural production.

Clause 14.01-1 Protection of agricultural land

Objective

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

Strategies

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

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

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

Protect productive farmland that is of strategic significance in the local or regional context.
Protect productive agricultural land from unplanned loss due to permanent changes in land use.
Protect strategically important agricultural and primary production land from incompatible uses.
Identify areas of productive agricultural land by consulting with the Department of Economic Development, Jobs, Transport and Resources and using available information.

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

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

Balance the potential off-site effects of a use or development proposal (such as degradation of soil or water quality and land salinisation) against the benefits of the proposal.

Clause 14.01-2S Sustainable agricultural land use

Objective

To encourage sustainable agricultural land use.

Strategies

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

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

Support adaptation of the agricultural sector to respond to the potential risks arising from climate change. Encourage diversification and value-adding of agriculture through effective agricultural production and processing, rural industry and farm-related retailing.

Assist genuine farming enterprises to embrace opportunities and adjust flexibly to market changes.

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

Facilitate ongoing productivity and investment in high value agriculture.

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

Clause 14.01-2R Agricultural productivity – Loddon Mallee North

Strategies

Protect and maintain productive irrigation assets necessary to help grow the region as an important food bowl for domestic and international exports.

Clause 14.02-3S Protection of declared irrigation districts

Objective

To plan and manage for sustainable change within irrigation districts declared under Part 6A of the Water Act 1989

Strategies

Identify and plan for the future needs of communities to adapt and adjust to land use change within an irrigation district.

Protect agricultural land serviced by irrigation infrastructure to ensure the future viability of an irrigation district.

Ensure non-agricultural land use does not undermine the integrity of irrigation infrastructure and complements existing and future agricultural production.

Ensure land use change within an irrigation district does not negate the potential opportunities for a rural water corporation to make adjustments to the footprint of an irrigation district that are identified under an approved plan or strategy.

Ensure land use change does not limit the ability of future investment in irrigation infrastructure that achieves the intended benefits of minimising water loss, and improved irrigation service efficiency to the farm gate and overall agricultural production.

Clause 21.05-1 Agriculture

This clause highlights that some of the region is irrigated agriculture which is very important to the region's economy. It is increasingly evident that prospective agricultural investment is jeopardised, deterred, or lost by land use and development that has the potential to compromise the scale and location of such investment. In particular, agricultural investment is far less likely where the ownership of land is fragmented with housing dispersed throughout.

The provisions seek to minimise fragmentation and land use and development which would undermine the productivity of irrigated areas.

Objective

To ensure that agriculture is and remains the major economic driver in the region.

Strategies

Facilitate growth of existing farm businesses.

Facilitate growth of new agricultural investment.

Discourage land uses that have the potential to compromise agricultural investment.

Objective

To ensure that use and development does not pose a threat to the sustainable productive capacity of the shire's agriculture economic base.

Strategies

Ensure that new uses and developments:

- Are located on land that has the capability to sustain the development.
- Do not impact on significant native vegetation or habitat.
- Include appropriate revegetation and tree planting programs.
- Do not impact on adjoining environmentally sensitive areas.
- Minimise the prospects for soil erosion.

Encourage proposals which incorporate sound carbon storage principles, including retention of remnant native vegetation, revegetation and tree planting.

Clause 22.01 Agriculture

Clause 22.01 Agriculture generally relates to subdivision and dwellings in the Farming Zone and is not of particular relevance to this application.

Clause 22.04 Non-agricultural uses in the Farming Zone policy

Clause 22.04 Non-Agricultural uses in the Farming Zone policy builds on the MSS strategies at Clause 21.05 regarding potential land uses and developments that may impact on agricultural activities and investment. The preferred mix of land uses include those that support agricultural activities and associated rural industries that maintain and build the economic base of the shire. Uses that are discouraged include those not directly related to agriculture or that have an adverse impact on agriculture and future agricultural opportunities.

The Clause lists land uses which are encouraged or discouraged in the Farming zone. Renewable energy or its nested uses do not appear in either list.

Objectives

To identify a preferred mix of land uses in rural areas.

To promote appropriate land use and development within rural areas.

To discourage non-agricultural use and development in all rural areas, other than those that support agriculture.

Relevant decision guidelines include:

- Whether the proposed use, development or subdivision is in association with an existing agricultural use on the land.
- Whether the proposed use, development or subdivision complements an existing agricultural use that is on or adjoining the land

Clause 14.02-1S Catchment planning and management

Objective

To assist the protection and restoration of catchments, waterways, estuaries, bays, water bodies, groundwater, and the marine environment

Strategies

Consider the impacts of catchment management on downstream water quality and freshwater, coastal and marine environments.

Retain natural drainage corridors with vegetated buffer zones at least 30 metres wide along each side of a waterway to:

- Maintain the natural drainage function, stream habitat and wildlife corridors and landscape values,
- Minimise erosion of stream banks and verges, and
- Reduce polluted surface runoff from adjacent land uses.

Undertake measures to minimise the quantity and retard the flow of stormwater from developed areas. Require appropriate measures to filter sediment and wastes from stormwater prior to its discharge into waterways, including the preservation of floodplain or other land for wetlands and retention basins. Ensure that development at or near waterways provide for the protection and enhancement of the environmental qualities of waterways and their instream uses.

Ensure land use and development minimises nutrient contributions to water bodies and the potential for the development of algal blooms.

Require appropriate measures to restrict sediment discharges from construction sites.
Ensure planning is coordinated with the activities of catchment management authorities.
Ensure that water quality infrastructure is designed to minimise risk of harm to surface waters and groundwater.

Clause 14.02-2S Water quality

Objective

To protect water quality

Strategies

Discourage incompatible land use activities in areas subject to flooding, severe soil degradation, groundwater salinity or geotechnical hazards where the land cannot be sustainably managed to ensure minimum impact on downstream water quality or flow volumes.

Clause 21.05-2 Water

Objective

To ensure that the quality, quantity and availability of water is maintained.

Strategies

Ensure any new use or development does not cause water pollution or land degradation.
Ensure that development proposals do not detrimentally impact on the quantity and quality of surface water, groundwater or infrastructure such as dams, irrigation channels and drainage systems.
Protect the health of waterways, wetlands and floodplain areas of environmental significance.
Encourage agriculture and other industries to conserve and minimise waste.

Objective

To protect and improve water quality and river health.

Strategies

Provide buffers to waterways to maintain water quality.
Protect and enhance waterway corridors through use of water sensitive urban design, appropriate plantings and land management.

5.5.6. Built Environment and Heritage

The relevant provisions of this head clause at Clause 15 seek to ensure the recognition of the importance of energy and resource efficiency in the built environment and ensure rural development responds to its context.

Clause 15.01-6S Design for rural areas

Objective

To ensure development respects valued areas of rural character.

Strategies

Ensure that the siting, scale and appearance of development protects and enhances rural character.
Protect the visual amenity of valued rural landscapes and character areas along township approaches and sensitive tourist routes by ensuring new development is sympathetically located.

Site and design development to minimise visual impacts on surrounding natural scenery and landscape features including ridgelines, hill tops, waterways, lakes and wetlands.

Clause 15.02-1S Energy resource efficiency

Objective

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

Strategies

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

Encourage retention of existing vegetation and planting of new vegetation as part of development and subdivision proposals.

Clause 15.03-1S Heritage conservation

Objective

To ensure the conservation of places of heritage significance

Strategies

Provide for the conservation and enhancement of those places that are of aesthetic, archaeological, architectural, cultural, scientific or social significance.

Clause 15.03-2S Aboriginal cultural heritage

Objective

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

Strategies

Identify, assess and document places of Aboriginal cultural heritage significance, in consultation with relevant Registered Aboriginal Parties, as a basis for their inclusion in the planning scheme.
Provide for the protection and conservation of pre-contact and post-contact Aboriginal cultural heritage places.

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

5.5.7. Economic Development

Clause 17 seeks to provide for economic well-being.

Clause 17.01-1S Diversified economy

Objective

To strengthen and diversify the economy.

Strategies

Protect and strengthen existing and planned employment areas and plan for new employment areas.
Facilitate regional, cross-border and inter-regional relationships to harness emerging economic opportunities.

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

Improve access to jobs closer to where people live.
Support rural economies to grow and diversify.

Clause 17.01-1R Diversified Economy – Loddon Mallee North

Strategies

Support further diversification of the primary production, service, manufacturing and tourism industries.
Support emerging and potential growth sectors such as nature-based tourism, mining and renewable energy generation and protect these activities from urban encroachment.

Clause 21.07-1 Economic growth

Clause 21.07-1 Economic growth implements the core themes of the Council Plan including to strengthen and diversify the agricultural sector.

Objective

To facilitate a vibrant and dynamic economic environment.

Strategy

Provide a balanced approach to economic development, taking into account economic, social and environmental values.

Facilitate new development and employment opportunities in the Shire of Campaspe.

Ensure adequate land availability for industrial and commercial growth.

Clause 17.01-2S Innovation and research

Objective

To create opportunities for innovation and the knowledge economy within existing and emerging industries, research and education.

Strategy

Encourage the provision of infrastructure that helps people to be innovative and creative, learn new skills and start new businesses in locations identified to accommodate employment and economic growth.

5.5.8. Transport

Clause 18 relates to Transport.

Clause 18.01-3S Sustainable and safe transport

Objective

To facilitate an environmentally sustainable transport system that is safe and supports health and wellbeing.

Strategy

Protect, conserve and improve the natural environment by supporting forms of transport, energy use and transport technologies that have the least environmental impact.

Clause 18.02-4S Roads

Objective

To facilitate an efficient and safe road network that integrates all movement networks and makes best use of existing infrastructure.

This clause also contains policy relating to car parking and seeks to ensure an adequate supply of car parking that is appropriately designed and located.

Clause 21.08 Transport and infrastructure

This clause provides the local content to Clause 18 and 19, with an overarching theme to maximising use of existing public infrastructure to accommodate growth.

5.5.9. Infrastructure

This section of the planning policy framework contains the key energy specific clauses relevant to this application.

Clause 19.01-1S Energy Supply

Objective

To facilitate appropriate development of energy supply infrastructure.

Strategies

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

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

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

Clause 19.01-2S Renewable energy

Objective

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

Strategies

Facilitate renewable energy development in appropriate locations.

Protect energy infrastructure against competing and incompatible uses.

Develop appropriate infrastructure to meet community demand for energy services.

Set aside suitable land for future energy infrastructure.

Consider the economic and environmental benefits to the broader community of renewable energy generation while also considering the need to minimise the effects of a proposal on the local community and environment.

Clause 19.01-2R Renewable energy – Loddon Mallee North

Strategy

Support and facilitate renewable energy generation and protect these activities from urban encroachment.

5.6. Other policies and guidelines

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

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



This Solar Farm Guideline provides:

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

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

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

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

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

1. a description of the proposal including the types of process to be utilised, materials to be stored and the treatment of waste
2. an explanation of how the proposed design derives from and responds to the site analysis including cumulative impacts with any other existing and proposed renewable energy facilities in the surrounding area
3. an explanation of agricultural values and production including irrigation infrastructure impacts and whether any land is productive farmland of strategic significance
4. whether a works approval or licence is required from EPA Victoria or another authority administering the regulatory requirements of the Dangerous Goods Act 1985
5. a description of how the proposal responds to any significant landscape features for the area identified in the planning scheme.
6. An assessment of:
 - the potential amenity impacts (such as noise; glint or glare; light spill; emissions to air, land or water; vibration; smell and electromagnetic interference): an assessment of potential noise impacts should have regard to EPA Victoria's Noise from industry in regional Victoria guidelines
 - the effects of traffic to be generated on roads
 - the visual impact of the proposal on the surrounding landscape

- the visual impact on abutting land that is described in a schedule to the National Parks Act 1975 and Ramsar wetlands and coastal areas
- the impact of the proposal on any species (including birds and bats) listed under the Flora and Fauna Guarantee Act 1988 or the Environment Protection and Biodiversity Conservation Act 1999
- the impacts on Aboriginal or non-Aboriginal cultural heritage

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

1. The effect of the proposal on the surrounding area in terms of noise, glint, light spill, vibration, smell and electromagnetic interference.
 - whether the impact is acceptable or can be managed in accordance with relevant Australian and New Zealand standards or other regulatory requirements.
 - if the assessment was undertaken by a suitably qualified person
 - the spatial extent, length and duration of the impact and whether it is for a limited or extended period
 - whether the impact can be mitigated via an appropriate built form, landscaping or other management response.
2. The impact on significant views including visual corridors and sightlines
 - the amount of change proposed by works including earthworks, and the sensitivity of the landscape features to that change
 - the visibility of the solar energy facility from vantage points accessible to the public and the ability to screen areas of development from view
 - the locations and distances from which a solar energy facility can be viewed from a sensitive land use
 - the significance of the landscape as described in the planning scheme including in an overlay, a relevant strategic study or by landscape features referenced in the planning scheme
 - landscape values associated with nearby land such as specified areas of landscape and environmental significance, specified coastal locations and areas identified to accommodate future population growth of regional cities and centres.
3. The impact of the proposal on strategically important agricultural land, particularly within a declared irrigation district
 - the impact on (including numbers of) irrigators downstream of the proposed site that depend on the ongoing operation of irrigation assets traversing the site
 - the usage level of water compared to the actual capacity of the irrigation infrastructure servicing the site, based on rural water corporation mapping
 - whether or not the irrigation infrastructure servicing the site has benefitted from Commonwealth or state government investment in infrastructure modernisation
 - whether the proposed site is connected to the modernised irrigation infrastructure and is integral to the rural water corporation's current and/or future planning for the viability of the irrigation district
 - whether or not the overall change in land use at the site aligns with a rural water corporation's asset management planning strategy for the viability of the irrigation district
 - whether the change in land use closes off any future opportunities for a rural water corporation to make irrigation footprint adjustments identified under a plan or strategy.
4. The impact of the proposal on the natural environment and natural systems
 - how any onsite earthworks, buildings or other works will alter the natural processes occurring on land
 - whether the removal, lopping or destroying of any vegetation can be avoided or minimised through alternative design arrangements

- proximity to natural and man-made water courses and the establishment of appropriate setbacks from these to maintain habitat and natural processes
 - impacts on landscape values associated with nearby public land described in a schedule to the National Parks Act 1975 or with Ramsar wetlands
 - how bushfire and flood management measures will be dealt with to the satisfaction of the relevant referral authorities.
5. The impact of a proposal on the local road network.
- whether access to and from the site meets requirements established by the relevant road management authority
 - the impact of traffic movements to and from the site with the road network operating normally
 - the impact of traffic movements causing wear and tear on the road network.

5.6.1. Design Guidelines and Model Requirements: Renewable Energy Facilities (CFA Guidelines) (March 2022)

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

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

There are certain access requirements some of which include:

1. Adequate access to and within the facility would assist CFA in responding to and managing fires on-site. To enable access for fire vehicles, CFA requires that the following provisions be considered:
2. 3.1.1 A four (4) metre perimeter road should be constructed within the ten (10) metre perimeter fire break.
3. 3.1.2 Roads are to be of all-weather construction and capable of accommodating a vehicle of 15 tonnes.
4. 3.1.3 Constructed roads should be a minimum of four (4) metres in trafficable width with a four (4) metre vertical clearance for the width of the formed road surface.

Specific guidelines for solar energy facilities include:

1. 6.1.1 Solar facilities are to have a 6m separation between solar panel banks/rows.
2. 6.2.1 Solar farm operators must provide specifications for safe operating conditions for temperature and the safety issues related to electricity generation, including isolation and shut-down procedures if solar panels are involved in fire. This information must be provided within the content of the emergency information book.
3. 6.3.1 Solar arrays are to have grass vegetation maintained to 100mm under the array installation or mineral earth or non-combustible mulch such as stone.
4. 6.3.2 Where practicable, solar energy installations can be sited on grazed paddocks. In this case, vegetation is to be managed as per the requirements of this guideline, or as informed through a risk management process.

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

Fuel Management include *“Solar energy facilities must have grass maintained to no more than 100mm under solar panels during the Fire Danger Period. Operators of solar energy facilities on grazed paddocks must ensure that if additional measures to maintain grass to this level are required, they are implemented prior to, and for the duration of the Fire Danger Period”.*

In relation to batteries, the document states that *“Facilities with battery energy storage systems must be designed with an ultimate goal of fire prevention”* and *“battery energy storage systems must be separated from adjacent infrastructure, such as solar panel banks.”*

Separation must be to at least the distance where the radiant heat flux (output) from the battery energy storage system container/enclosure fully involved in fire does not create the potential for ignition of the adjacent infrastructure.

There are model requirements for the design of the facility including a battery. These include a 10m fire break around the battery itself. There are requirements for onsite water supply and fire hydrants to be installed on site associated with a battery.

The CFA recommends that facility operators prepare an Emergency Management Plan, a Risk Management and a Fire Management Plan.

5.6.2. Loddon Mallee North Regional Growth Plan

The Loddon Mallee North Regional Growth Plan provides a regional context for planning decisions.

Various Future Directions are provided to guide growth. Relevant Future Directions from within the plan include:

- Support and develop emerging and potential growth sectors such as tourism, renewable energy, resource recovery and other green industries
- Encourage and facilitate development in renewable energy, other new energy opportunities and in carbon sequestration activities
- Facilitate ongoing agricultural productivity and investment in high value agriculture

5.7. Legislation

5.7.1. Planning and Environment Act 1987 (Vic)

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

- The Planning and Environment Act 1987 objectives are:
 - to provide for the fair, orderly, economic and sustainable use, and development of land
 - to provide for the protection of natural and man-made resources and the maintenance of ecological processes and genetic diversity
 - to secure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria
 - 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
 - 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
 - to facilitate development in accordance with the objectives set out in paragraphs (a), (b), (c), (d) and (e)
 - to balance the present and future interests of all Victorians.

5.7.2. Environment Protection Act 2018 (Vic)

The *Environment Protection Act 2017* and the *Environment Protection Amendment Act 2018* (which replaced the *Environment Protection Act 1970* on 1 July 2021) establish the legislative framework for protecting the environment in Victoria from pollution and waste. The project is being developed under the provisions of the new *Environment Protection Amendment Act 2018*.

In contrast to the *Environment Protection Act 1970*, which focused on managing pollution and waste impacts after they occurred, the new *Environment Protection Amendment Act 2018* seeks to prevent these impacts

from occurring. At the centre of this act is the ‘general environmental duty’, which requires any person in Victoria (businesses, industry and the community) engaging in an activity that may risk harming human health and the environment from pollution and waste to minimise those risks, so far as reasonably practicable (see info box). This can be achieved by implementing appropriate controls that are proportionate to the risk (i.e., the greater the risk of potential harm, the greater the management expectation).

5.7.3. Environment Protection and Biodiversity Conservation Act 1999 (Aus)

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

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

5.7.4. Flora and Fauna Guarantee Act 1988 (Vic)

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

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

5.7.5. Climate Change Act 2017 (Vic)

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

Section 20 states:

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

5.7.6. Renewable Energy Target (RET) Legislation

Australia has a large scale generation target of 33,000 GWh by 2020 which equates to 23.5% of the country’s energy generation from renewable sources in 2020. The Clean Energy Regulator oversees the

operation of the RET scheme in accordance with the RET legislation. The RET includes legislated annual targets which will require significant investment in new renewable energy generation capacity in coming years.

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

5.7.7. Aboriginal Heritage Act 2006 (Vic)

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

A CHMP has been prepared and approved for the project and is included at Appendix I.

6. Planning assessment

The section provides an assessment against the relevant sections of the Campaspe Planning Scheme.

Clause 53.13 Renewable Energy Facility provides a key overarching policy for framing discussion, with the Solar Farm Guidelines as a reference document under this clause also providing further direction for issues typically relevant to solar energy facility applications. Matters are addressed thematically.

6.1. Design response and suitability of the site

The proposal has been designed to reflect the site context and as a result of discussions with neighbours as outlined throughout this report. The key strengths of the subject site are:

- Direct proximity to the electricity grid for connection to the national electricity market.
- Whilst located in part on irrigated agricultural land, a parcel has been excluded at the recommendation of the water authority.
- Limited sensitive receivers near to the site.
- Direct access to major road for construction, operations and maintenance.
- Close proximity to population centres for efficient electricity consumption.

The design responds to the site by:

- Designing around remnant native vegetation that is scattered throughout the site and avoiding and minimising removal where possible.
- Incorporating landscape screening around the perimeter of the facility to mitigate visual impacts on the surrounding area and on sensitive receivers.
- Having regard to the CFA Guidelines for renewable energy facilities, including the provision of a 10m fire break around the perimeter of the facility and providing for suitable buffers around the proposed battery.

The proposed solar energy facility on the agricultural land would implement a range of techniques to reduce soil degradation and improve water quality in the catchment by:

- Maintaining soil permeability
- Avoiding fertilisers or herbicides
- Avoid bringing 'alien' soil to the site
- Monitoring activities across the year.

6.2. Amenity

6.2.1. Noise

Noise impacts have been assessed by Renzo Tonin and Associates in the accompanying Acoustic Report at Appendix B.

The Acoustic Report assesses the proposed facility against the relevant standards and guidelines as directed by the Solar Farm Guideline including:

- EPA Victoria's Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues (EPA Pub 1826.4, superseding EPA's Noise from Industry in Regional Victoria Publication 1411 (NIRV)).
- EPA Victoria's Civil construction, building and demolition guide (EPA Pub 1834, superseding EPA Victoria's Environmental Guidelines for Major Construction Sites. (EPA Pub 480)).

The report assessed all noise sources from the proposal including:

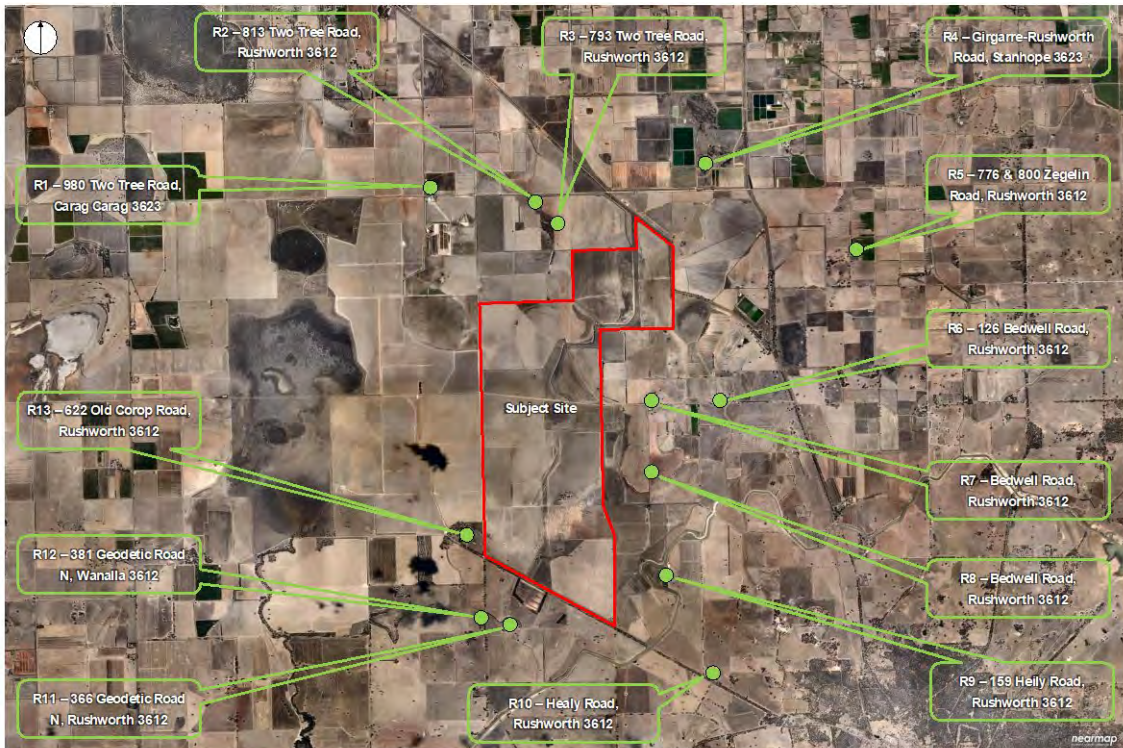
- Solar panel tracker motors
- Solar inverters
- Battery energy storage system containers with inverters
- Substation/switching stations including switch gears and ancillary equipment.

The nearest noise sensitive receivers were identified as being 300, 600 and 735 metres from the proposal. The location of receivers is shown in the excerpt map from the Acoustic Report below.

RENZO TONIN & ASSOCIATES

26 JULY 2022

Figure 1: Overview of the site and dwellings assessed



CONSULTATION/QUALITY
MANAGEMENT/ACCESS/REPORT (19)

4

CONSULTATION/QUALITY
MANAGEMENT/ACCESS/REPORT

Figure 6-1 Sensitive receivers map excerpt from Acoustic Report by Renzo Tonin and Associates

Operation

As outlined within the Solar Farm Guideline, a facility should keep its noise impacts at or below the levels in EPA Victoria's Noise from industry in regional Victoria guideline. EPA Publication 1826 is the relevant guideline as of 1 July 2021.

Under EPA Publication 1826 the applicable noise limit is 36 dB(A) at night, with compliance with this limit necessarily resulting in compliance with the day time noise limit. Predicted noise at all nearby sensitive receivers complies with the limit, with the highest predicted noise levels being 35 dB(A) at dwellings at 366 Geodetic Road (dwelling reference R11 in the Acoustic Report).

Construction

The relevant EPA guideline for major construction sites is EPA Publication 1834 'Civil construction, building and demolition guide'. EPA Publication 1834 includes objectives and guidelines to minimise construction impacts to an acceptable level in relation to noise. This includes guidance on working hour schedules for construction, building and demolition noise. The Acoustic Report provides several recommendations for construction management and working hours to manage construction impacts to an acceptable level.

A Construction Management Plan and an Operational Management Plan would be developed as part of the conditions of approval and would include the relevant hours to manage impacts to an acceptable level in accordance with relevant EPA publications and the recommendations of the Acoustic Report. The proposed plans would be overseen by a local contractor and managed by the project's operations and maintenance team. It is expected that suitable permit conditions would ensure a land management plan is prepared and implemented to the satisfaction of the responsible authority.

Assessment

Overall, the Acoustic Report concludes that the proposal is 'very low risk' with respect to operation and construction noise and vibration. Nearest residential interfaces are at least 300 metres from the proposal and would not be unreasonably impacted by operation or construction noise. The proposal complies with the relevant policies under the planning scheme including those at Clause 13.05-1S, Clause 53.13-3, and the requirements of the Solar Farm Guideline.

It is noted that in addition to the proposal not having any undue impact on surrounding amenity, the surrounding area would continue to be farmed which would continue to contribute to seasonal machinery noises and dust.

6.2.2. Electromagnetic Interference

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

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

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

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

“Due to their low profiles, solar PV systems typically represent little risk of interfering with radar transmissions. In addition, solar panels do not emit electromagnetic waves over distances that could interfere with radar signal transmissions, and any electrical facilities that do carry concentrated current are buried beneath the ground and away from any signal transmission.”

We understand batteries themselves do not emit electromagnetic fields (EMFs) however EMF emissions are comparable to the substation upon charge/discharge of the BESS (5-10m setback before source radiation is indistinguishable from background radiation).

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

6.2.3. Aviation, glint and glare

Glint and glare impacts are assessed in the Glint and Glare Assessment report prepared by Moir Landscape Architects which is attached at Appendix C.

The assessment used the Solar Glare Hazard Analysis Tool (SGHAT) to evaluate glare resulting from the proposal at different receptors based on proximity, orientation and specifications of the PV modules. This tool is recognised by the Australian Civil Aviation Safety Authority (CASA).

Glare is categorised into Green Glare (low potential for temporary after image), Yellow Glare (potential for temporary after image) and Red Glare (retinal burn, no expected for solar panels).

It is noted that the results of the analysis do not consider weather conditions, separation between PV modules or surrounding vegetation, and therefore constitute a conservative assessment of impacts.

For the purposes of the assessment sensitive receptors within the 2 kilometres of the site were identified. 21 residential dwellings were identified within 2 kilometres.

Local roads were also assessed for glint and glare impacts, with 12 route receptors chosen based on their location within 2 kilometres of the project boundary.

Of the 21 residential dwelling receptors, seven are predicted to experience 'Yellow' or potential for temporary after image glare from the project. Two of these receptors are recommended to be provided with additional vegetation to mitigate impacts. All other receptors would be shielded by existing vegetation, or are sheds and do not require mitigation.

Of the 12 route receptors, five are predicted to experience 'Yellow' or potential for temporary after image glare from the project. Heily Road and Bedwell Road are the two routes impacted by potential glare, with these roads being local minor roads with occasional traffic. These impacts may be mitigated by screen plantings along the edge of the project as discussed within the glint and glare report.

With the mitigation measures as described above and within the Glint and Glare Assessment, and noting that existing vegetation would limit impacts further, the project would have a low and acceptable level of impact on surrounding private and public viewpoints in terms of glint and glare. The project would not unreasonably impact local amenity and would be compatible with context of the area in accordance with Clause 13.07-1S Land use compatibility. The balance of policies under the scheme that seek to promote provision of renewable energy while minimising amenity impacts are supported.

There are no known aviation facilities within 30 kilometres of the subject site. No private airstrips or flight paths were identified within 2 kilometres of the site and there would be no significant impact on aviation.

6.2.4. Visual and landscape impacts

Photomontages for the proposed facility are provided at Appendix K.

Visual impacts have the potential to detract from an area via landscape-scale impacts due an overconcentration of built form, from private and public viewpoints.

Photomontages have been prepared to demonstrate modelled impacts of the facility as built, from representative viewpoints.

Viewpoints were chosen based on an analysis of the views subject to greatest visual impacts from construction of the project.

Figure 6-2 shows the locations from where the photomontages have been taken. Photomontages for the proposed facility are provided at Appendix K.

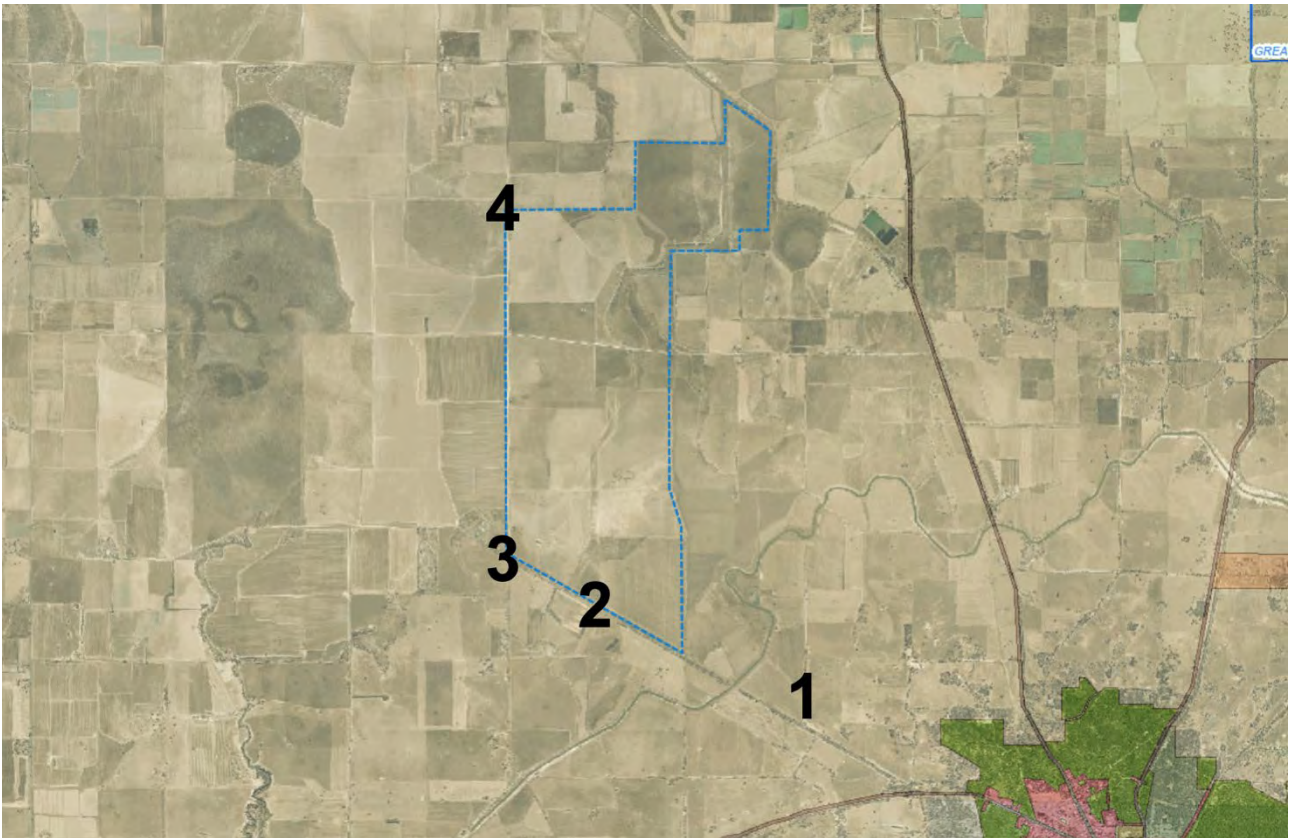


Figure 6-2 Viewpoints for photomontages

The proposal would not have an unreasonable visual impact on the landscape for the following reasons:

- The broader landscape is not identified in policy as a significant landscape that would require unique protection
- The proposal is of a form and scale of similar solar facilities across Victoria within similar contexts, where residential dwellings are sparsely dispersed and road within the immediate area are not heavily utilised
- The solar energy facility is predominantly comprised of low scale structures, with other site facilities including substation and BESS covering a relatively small site area
- There would not be any significant cumulative impacts with no other solar facilities built or approved within the immediate vicinity
- Visual impacts would be partially screened by existing vegetation and substantially reduced by proposed vegetation plantings along the boundaries of the site

The solar panel structures would be low in height and key viewpoints would have extensive vegetation planted as a visual screen around the perimeter of the facility which is expected to be required as a permit condition.

The proposed design derives from and responds to the site analysis as follows:

- the location of solar panels is to be located a generous distance from adjoining dwellings;
- the proposed landscaping would screen the solar farm from the adjoining dwellings and the views from key roads;
- the solar panels would be set back in excess of 30m from roads which combined with extensive landscape screening would limit their visual impact on the rural landscape.

Proposed landscaping

A vegetation planting buffer is proposed around the entire perimeter of the facility as shown on the proposed plans at Appendix A, with the exception of minor areas including mapped wetlands which would remain undisturbed by any proposed works included any vegetation screening. Landscape screening along Old Corop Rd would integrate into the existing native vegetation along this boundary.

The vegetation planting buffer locations have been developed in accordance with the need to provide visual screening to adjacent properties (particularly those containing residential dwellings) and road reserves.

Each section of planting is discussed as follows and visually detailed in the project drawings.

Figure 6-3 below presents the planting concept for and new plantings or revegetation. The landscaping would have four rows of planted vegetation as per the below image followed by perimeter fencing which would enclose the entire solar farm site. This would be on the inside of the landscape screening. A Landscape Plan with a detailed planting and management regime can be provided as a condition of the sought permit. A cross section of indicative vegetation planting layout is provided at Appendix A (CSE Boundary Setback plan).

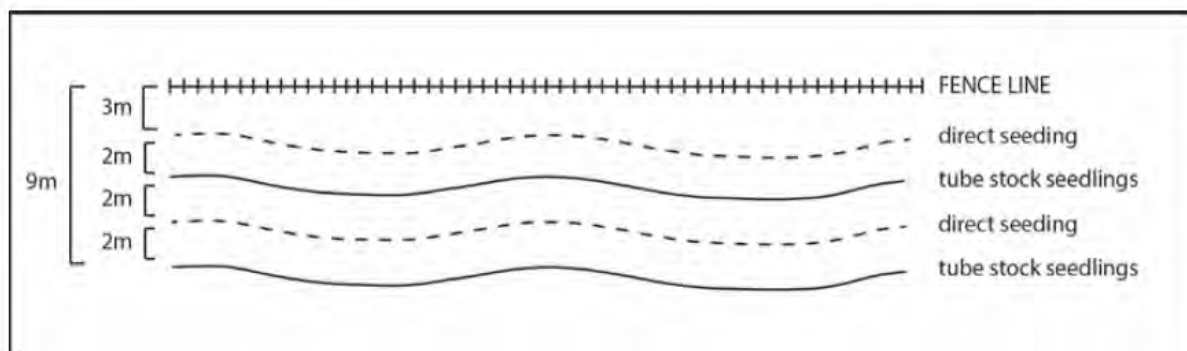


Figure 6-3 Indicative vegetation planting layout

To calculate the number of species required the following assumptions have been made:

- A three metre offset along the fence line to allow for fence maintenance and bushfire control
- Four rows of revegetation two metres apart, consisting of alternate rows of planted seedlings and direct seeding
- Rows to be slightly wavy and not straight
- To achieve the appropriate EVC benchmark density of the species to allow for mortality a rate of 120% of the benchmark has been used.
- To gain a greater visual screening affect certain species to be determined should be planted at higher densities.
- The requirements would be to achieve 120% of the benchmark EVC for each which are to be made up through a mixture of planting seedlings and direct seeding.

Maintenance activities may include the following:

- Checks of tree guards to ensure that they are correctly in place and/or undamaged. Tree guards should be removed when plants are well established and a stage where the viability of the plant would not be compromised by pest and animal activity
- If necessary, young plants should be watered if it becomes very dry
- Checks for weed competition, however the need for weed spraying would be minimised as far as practicable with pre-planting site preparation
- Checks for evidence of browsing by wildlife such as rabbits, foxes and kangaroos. Additional measures to prevent browsing should be employed, such as fencing, to ensure that wildlife cannot access seedlings
- Any dead, diseased or damaged plants must be replaced within twelve months.

The visual impact of the facility is likely to be acceptable within the context of the site and broader landscape and would satisfy the intent of the planning scheme with reference to minimising visual impacts while facilitating the development of renewable energy facilities in appropriate locations. There are no specific policies which identify the subject site as being within a significant landscape that warrants unique protection, and it is a rural location with low density of population. There would be minimal impact on visual amenity. The proposal would not conflict with Clause 12.05-2S and would not have an unreasonable impact on the landscape in accordance with Clause 53.12 and the DELWP Guidelines.

6.3. Agricultural impact

An Agricultural Assessment Report has been prepared by Meridian Agriculture and is included at Appendix D.

The report confirms that the proposal would cover an area that was partially irrigated in the past, with soils on site being characteristic of the area and are not considered of very high value. The site is identified as suitable for broad acre cropping and grazing, with grazing being low-moderately productive. Irrigation ceased approximately 20 years ago, and no infrastructure is available to deliver water to the land.

The following conclusions of the agricultural assessment demonstrate that the proposal would not have an unreasonable impact on agricultural productivity:

- The installation of the solar farm would have no effect on the ability of surrounding property owners to continue farming, nor would it impact on the agricultural sector in the wider region.
- There would be no long term detrimental impact on productivity of the site upon decommissioning.
- Removal of cropping activities on the land, under current production, would result in loss of less than 0.0003% of Victoria's predicted production for 2021-22.
- Continued grazing may continue between solar panels.

The proposal would have no significant impact on the agricultural capability of the property or surrounding properties, supporting policies that seek to protect valuable agricultural land including those at Clause 14.01-1 Protection of agricultural land, Clause 14.01-2S Sustainable agricultural land use, Clause 14.01-2R Agricultural productivity – Loddon Mallee North, Clause 21.05-1 Agriculture, Clause 22.01 Agriculture and Clause 22.04 Non-agricultural uses in the Farming Zone policy.

There would be no significant impact on declared irrigation districts with the decommissioning of the site and the unsuitability of the site for irrigation, in accordance with Clause 14.02-3S Protection of declared irrigation districts and Clause 14.02-3S Protection of declared irrigation districts.

6.4. Protecting environmental values

6.4.1. Ecology

Ecological values have been assessed across the following reports which are provided at Appendix E:

- Flora and fauna assessment, prepared by Greenedge Environmental.
- Additional fauna information, prepared by Greenedge Environmental.
- Roadside vegetation assessment, prepared by NGH.

The proposal avoids all native vegetation removal on the site.

All trees that are proposed to be retained on site would be provided with tree protection zones in accordance with AS4970-2009 Protection of Trees on development sites. This would be incorporated into environmental management standards that govern the construction of the development.

The proposal accords with the intent of the scheme at Clauses 12.01-1S Protection of biodiversity and Clause 12.01-2S Native vegetation management. All native vegetation removal is avoided, supporting the intent of Clause 52.17 and minimising impacts to any fauna habitat.

All recommendations of the Flora and fauna assessment have been followed by avoiding all native vegetation identified on site, including mapped wetlands. Mitigation measures outlined within the Roadside vegetation assessment would be followed as relevant to further protect ecological values.

6.5. Natural Hazard Management

Bushfire

A Risk Management Plan and Fire Safety Study has been prepared by Fire Risk Consultants and is included at Appendix F. The study provides an assessment of the facility against the relevant provisions of the scheme in relation to bushfire risk as outlined within the Solar Farm Guidelines, including an assessment against the CFA Guidelines.

The site is not within a Bushfire Management Overlay and is not designated as a unique fire risk in planning policy. The site is wholly within a designated Bushfire Prone Area which is similar to much of the state of Victoria.

The proposal accords with the relevant sections of the scheme, in particular, Clause 13.02-1S (Bushfire planning) in relation to managing fire risks. The CFA Guidelines have also been considered and applied to the design, with a full assessment against these guidelines provided at Section 4 Table 3 of the Risk Management Plan and Fire Safety Study.

A summary of the key design elements which are proposed to comply with the CFA Guidelines are:

- A 10m fire break would be maintained around the entire facility including a 4m wide perimeter road, plus a 10 break around BESS and related infrastructure, allowing emergency access.
- A minimum 6m separation between panel banks is provided.
- At least 2 access points would be provided.
- Grass no longer than 100m would be maintained beneath the panels.

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

6.5.1. Flooding

A Hydrologic Report has been prepared by Fifteen50 and is included in Appendix G. Two addendums to this report are also provided (also prepared by Fifteen50).

The subject site is affected by two different flooding related planning overlays, the Floodway Overlay and the Land Subject to Inundation Overlay, indicating the subject site is subject to flooding hazards. The FO and LSIO seek to limit impacts of development on overland flows and flooding generally on the environment and on water quality.

The Fifteen50 report notes the following:

- The site for the proposed development has a number of constraints that would need to be incorporated into the design/layout of new infrastructure.
- This existing infrastructure combined with natural gradient, provides confidence that any short-term (peak) flow rainfall events would not create permanent water features on the property. Rather, excess water would naturally drain off after the peak has passed.
- The southern property (Lot 35) can be configured to maintain water flow paths without impacting the movement of flood water.
- New solar farm infrastructure on the northern property would not displace (assumed panels only) floodwater due to the following:

- The area that is assigned to the major flow path of floodwater (Woolwash depression) would not be developed.
- The areas currently utilised for farming (existing land use) have drainage via pumps – therefore flood water would accumulate at these low points but the area under flood water would not flow.
- The area of new solar panel posts would not materially change the total storage volume of floodwater.

The risk is therefore on the developer to accept infrastructure may be surrounded by floodwater and would be difficult to access during flooding events.

2. The Hydrologic Report responds to relevant flood management parameters and demonstrates that the proposal would not encumber the natural flood function and can be managed by suitable permit conditions to ensure relevant assets such as the inverter stations, facilities building, and elements of the switchyard are located above flood and inundation levels.

The following management measures were recommended:

- Design site layout to maintain existing flow path of the main Woolwash depression. Site investigations indicate that this floodway is well delineated for normal runoff [non-flood] conditions. The floodway is also around 90m wide and so the siting of any pedestals within this zone would not create a material change to flow.
- Maintain water storage areas clear of assets – There are a number of low-lying areas within the property boundary (outside of the main depression) that should be protected as drainage sumps. These are primarily on the northern property adjacent to the floodway, with the ability to pond water to depths of one metre or more, once inundated in flood conditions.
- Site access roads are to incorporate culverts / structures to allow lateral movement of water. The main site access issues would be on the northern property which is divided into a number of parcels when flooding occurs.
- Buildings / facilities to be located on the southern portion of the development property.

The proposal has sought pre application comment from the floodplain authority Goulburn Broken CMA which has provided suitable parameters to guide the proposal. It is expected Goulburn Broken CMA would provide further formal response through the course of the planning application as a statutory referral authority.

The proposal would not impede or redirect floodwaters in accordance with Clause 13.03. It is submitted that the proposal is appropriate and can accommodate the floodway function of the land subject and is in accordance with the purpose of the FO and LSIO and Clauses 44.03 and 44.04 respectively.

6.6. Traffic and Transport

A Traffic Impact Assessment report has been prepared by O'Brien Traffic and is included at Appendix H. The report provides a detailed assessment of the impact of the proposal on traffic and the road network.

The main conclusions of the report in relation to construction are:

- The existing local road network would typically be able to accommodate the traffic volume and vehicle types associated with the construction phase.
- A peak maximum of up to 334 daily trips would be generated during the first 3 months of the construction phase.
- It is anticipated that during the first 3 months of construction, the daily traffic volumes would temporarily exceed the indicative traffic volumes along Old Corop Road, with a lesser impact on Geodetic Road North and Bedwell Road. However, given the temporary nature of these traffic volumes, it is not considered reasonable to permanently upgrade these roads as there is no guarantee the roads would be damaged during the temporary construction phase. It is also noted that if any damage was to occur to the road/s, this would be repaired by the applicant as they would require the road to be in good working condition to complete the construction of the site.

- All access points would be designed to accommodate the required vehicle types.
3. The main conclusions of the report in relation to operation are:
- During the operation phase of the project, it is anticipated that there would be no more than 12 staff on-site in any one day, resulting in a maximum of 24 daily trips generated by the development, accessed via Old Corop Road. This is well within the capability of the local road network to accommodate.

Several recommendations are provided by O'Brien Traffic, which all may be suitably accommodated by the proposal via permit condition or appropriate Traffic Management Plan:

- As a condition of any Permit issued for the site, a pre- and post-construction inspection should be conducted with Council to ensure the road is returned to its original condition pre- construction to the satisfaction of Council. The applicant would be responsible for any costs associated with repairs to the road/s
- As a condition of any Permit issued for the site, the applicant is to maintain the road/s to the satisfaction of Council during the construction phase.
- it is recommended that "Truck (Crossing or Entering)" warning signs (W5-22B) on Bendigo-Murchison Road are installed on each approach to the Old Corop Road intersection.

Further detailed assessment against traffic impacts is provided throughout the Traffic Impact Assessment Report.

The traffic and transport impacts of the operation and construction of the proposal would be comfortably accommodated by the existing road network and would not cause any unreasonable impacts to road infrastructure or to road safety, in accordance with Clause 18.02-3S Road System, Clause 21.06-4 Transport and the DELWP Solar Guidelines at Clause 53.13 Renewable Energy Facility.

Car Parking

The proposal would provide ample areas for on-site parking through the 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 would be accommodated on-site within a vehicle parking area located adjacent to the main site facilities in the south of the site where ample area exists for car parking. It is expected that staff would be present on the site regularly for maintenance and operational activities, as is typically the case with utility scale solar facilities.

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

6.7. Heritage

A Cultural Heritage Management Plan (CHMP) has been prepared and approved for the project and is included at Appendix I. The plan was prepared by Biosis in consultation with the Taungurung Clans Aboriginal Corporate who are the Registered Aboriginal Party for the area.

Construction of the project would be in accordance with the approved CHMP which ensures that the relevant cultural heritage considerations have been addressed in the layout and in proposed earthworks. In following this process the proposal would accord with Clause 15.03-2S and ensure the protection and conservation of Aboriginal cultural heritage places.

6.8. Cumulative and other impacts

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

6.8.1. Heat island effect

As outlined within the DELWP Guidelines, where a solar energy facility is proposed adjacent to existing horticultural or cropping activities, a minimum 30m separation distance is appropriate measured from the property boundary to any part of the physical structure of the facility. The facility would be set back in excess of 30m from neighbouring property boundaries in accordance with the DELWP Guidelines. There would not be any material impact on neighbouring properties from heat island effect, in accordance with Clause 53.13.

6.8.2. Air quality and climate, light spill, emissions to air, vibration

There is limited potential for amenity impacts related to noise, glint, light spill, emissions to air, land or water, vibration, smell and electromagnetic interference. Glint or glare is not generated from solar farms as photovoltaic panels do not reflect sunlight but absorb it and that reflectivity for solar panels are less than for steel or glass and would not be a concern. In this instance the panels would include high-transmission glass which features a unique anti-reflective coating that directs more light on the solar cells, resulting in a higher energy yield. Installed inverters would have minimal light spill, are static so would not cause vibration and do not cause air emissions.

6.8.3. Signage

Proposed business identification would not exceed 3sqm and would be a negligible addition to the site and surrounds. The proposal would accord with the intent of Clause 52.05 to minimise visual impacts from excessive signage.

7. Environmental management

7.1. Environmental management framework

The environmental risks associated with the proposed Corop Solar Farm would be managed by implementing a proposal-specific suite of mitigation measures.

All commitments and mitigation measures would be managed through the implementation of a Project Environmental Management Strategy (EMS). The EMS would comprise a Construction Environmental Management Plan (CEMP), an Operation Environmental Management Plan (OEMP) and a Decommissioning Environmental Management Plan (DEMP). These plans would be prepared sequentially, prior to each stage of works by the contractor (CEMP, DEMP) and proponent (OEMP).

The EMS would include performance indicators, timeframes, implementation and reporting responsibilities, communications protocols, a monitoring program, auditing and review arrangements, emergency responses, induction and training and complaint/dispute resolution procedures. The monitoring and auditing program would clearly identify any residual impacts after mitigation. Adaptive management would be used to ensure improvements are consolidated in updated EMPs.

8. Conclusion

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

The balance of policies strongly supports the solar energy facility at the proposed location. The agricultural capabilities of the site would not be significantly impacted by the proposal. Ecological impacts are minimal and acceptable.

Bushfire risk would be managed to an acceptably low level in accordance with CFA Guidelines.

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

There would be no significant impact on aircraft safety.

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

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

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