



# Goulburn Valley Water Solar Farm – Tatura

# **Application for a planning permit**

27 March 2024

➔ The Power of Commitment

GHD

180 Lonsdale Street Australia ghd.com www.ghd.com

Our ref: 12570414

27 March 2024 Department of Transport and Planning 1 Spring Street Melbourne Vic 3000

**Goulburn Valley Solar Energy Facility** 

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Dear Hannah,

GHD Pty Ltd (GHD) has prepared this planning report on behalf of Goulburn Valley Water (GVW) to support this application for a planning permit to construct a solar farm (the Project) at 730 Dhurringile Road, Tatura.

A planning permit is required to use and develop the land for a renewable energy facility pursuant to the Greater Shepparton Planning Scheme (the Scheme).

This application details the proposal and provides an assessment of the Project against the relevant provisions of the Scheme. Details of the application for a planning permit are set out in the report below and includes the following documentation:

- Appendix A: Landscape and Visual Impact Assessment
- Appendix B: Traffic Impact Assessment
- Appendix C: Ecology Assessment
- Appendix D: Solar Glare Assessment
- Appendix E: Cultural Heritage Due Diligence Assessment

I look forward to receiving a positive response to the Project and please do not hesitate to contact me via the details below if you have any queries.

Regards

Kelly Nelson Senior Planner - Planning and Approvals +61 3 86878064 kelly.nelson@ghd.com



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# ADVERTISED PLAN

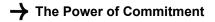
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- Appendix B Traffic Impact Assessment
- Appendix C Ecology Assessment
- Appendix D Solar Glare Assessment
- Appendix E Cultural Heritage Due Diligence Assessment

# 1. Introduction



# 1.1 Purpose of this report

This planning report has been prepared by GHD Pty Ltd (GHD) on behalf of Goulburn Valley Water (GVW) to accompany an application for a planning permit for the development and operation of a proposed solar energy facility (solar farm) at the Tatura Wastewater Management Facility (WMF) Dhurringile Road, Tatura.

This application provides details surrounding the proposed solar farm and an assessment against the relevant provisions of the Greater Shepparton Planning Scheme.

A summary of the application details is provided in Table 1.

Planning details	Response		
Address of land	730 Dhurringile Road, Tatura, 3616		
Parcel details	18\PP3613		
Approximate site coordinates	-36.482066, 145.238756		
Zone	Clause 36.01 Public Use Zone 1 (Service and Utility) (PUZ1)		
Overlays 1	Clause 42.01 Environmental Significance Overlay – Schedule 4 (ESO4) Clause 43.01 Heritage Overlay (HO) Clause 44.03 Floodway Overlay (FO) Indexspitel Wolcand Subjection Invite tion (Averlay) Clause 45.4 2 Supporting Control se Oxbellay 3 (SCO3)		
Planning permit triggers	Clause 58.0514024100080 the state a solar energy facility and construct a building or construct or carry out works and to remove, Clause 122011250181601916011200000000000000000000000000000		
Particular provisions	Clause 52.06 <i>Car Parking</i> Clause 52.17 <i>Native Vegetation</i> Clause 53.13 <i>Renewable Energy Facility</i>		
Referrals	Design Guidelines and Model Requirements for Renewable Energy Facilities 2023, application for renewable energy facility does not require referral to CFA under Section 55 of the Planning and Environment Act 1987 (PE Act). However, applications may be notified to CFA under Section 52 as part of the application process. Clause 42.01 Environmental Significance Overlay -Schedule 4 (ESO4) the application must be referred to the determining referral authority specified in Clause 66.04. Pursuant to Clause 66.04, GVW region water authority is a determining referral authority for an application under the ESO4.		
Applicant details	Goulburn Valley Region Water Authority		
Contact person	Kelly Nelson Senior Urban Planner GHD Level 8, 180 Lonsdale Street Melbourne VIC 3000 Tel: 8687 8064 Kelly.neslon@ghd.com		

Table 1Overview of application

# 2. Project details

This section provides detail around the Project, including the Project background, proposed siting, design, construction and operation details.

# 2.1 Subject site and surrounding environment

The subject site (the Site) is located within the existing Tatura Wastewater Management Facility and is positioned to the south-east corner of the Site which adjoins both Toolamba-Rushworth Road and Dhurringile Road as seen in Figure 1. The land was previously used as a drying pan facility as part of the wastewater treatment plant however has been decommissioned since 2012.

The Site has a long history of disturbance, since being owned by GVW (1964) the Site has been developed for use in the wastewater process before being decommissioned and cultivated and cropped since 2018 for canola and more recently wheat. Due to the farming nature of the Site and generally flat topography, it is largely dominated by non-native species with the native vegetation being restricted to the roadside reserves and a short extent along the southern boundary of the Site. Site access for vehicular traffic will be provided via two proposed crossover access points, both accesses will be located on Toolamba-Rushworth Road.

The Site is located within the Goulburn Valley region in the Shire of Greater Shepparton and is approximately 4.60km from Tatura's activity centre. The surrounding environment is rural in character, with the predominant land use surrounding the Project being used for agricultural purposes, including fruit and vegetable cultivation, dairy farming and food processing industries. Contextually, the Site is situated approximately 150 km north of Melbourne, 90 km north-east of Bendigo and 20 km south-west of Shepparton.

As seen in Table 2, the neares This repitential and the twenting is to the Project Site. The Site is generally filters seen in Figure 2 with existing tree cover located along the boundary that screens the Site from the planning process under the project seen to a planning process under the second secon

Facility	The document must not be used for any Key Sites which may breach any purpose which may breach any	Distance
Education	Dhurringile: Brimeig/School	2.78 km
	Harston Primary School	10.47 km
	Tatura Primary School	5.47 km
Activity Centre	Tatura Activity Centre	4.90 km
Emergency Services	Toolamba Fire Station	9.28 km
	Tatura Fire Station	5.40 km
Transport	Shepparton Airport	21.91 km
Residential Dwellings	Dhurringile Road	300 m

Table 2Context of the Project SReanning and Environment Act 1987.

### 2.1.1 Land tenure

The Tatura Solar Farm will be contained within the parcel of 18/PP3613. The details of land tenure are provided within Table 3 below.

Table 3 Details of land tenure

Property address	730 Dhurringile Road Toolamba West, VIC 3614
Parcel number	18\PP3613
Landowner details	Goulburn Valley Region Water Corporation of 104 – 110 Fryers Street Shepparton VIC 3630
Any easements, encumbrances etc.	None.





Figure 3 Toolamba-Rushworth Road Street View



# 2.2 Project background

As outlined in Figure 4, GVW are seeking to install a sub 5 megawatt (MW) solar energy facility within the GVWowned Tatura Site.

In 2021, GVW pledged their commitment to the United Nations backed 'The Race to Zero' initiative, dedicated to committing to net-zero emission targets by 2050. GVW are contributing to this commitment by attempting to source all electricity from renewable sources by 2025. The construction of the Tatura solar farm facility is essential in ensuring that GVW meets the net-zero emission target and fulfil their pledge to source electricity from renewable energy sources.

### 2.2.1 Background context

The energy sector is rapidly growing and currently contributes to two-thirds of Victoria's emissions. The Victorian government has published several strategic documents to support households and businesses in transitioning to renewable energy sources.

#### Renewable Energy Action Plan (DEECA 2017)

The *Renewable Energy Action Plan 2017* sets out a guideline to ensure affordable, reliable, and renewable energy is delivered across Victoria. Relevant targets established within the Action Plan include:

- Increasing energy generation by 40 per cent by 2025
- Supporting commercial investments that aim to provide Victoria with at least 40MW of battery storage and over 100MWh of capacity.

#### Victoria's Climate Change Strategy (DEECA 2021)

*Victoria's Climate Change Strategy 2021* is a strategic document developed by the Victorian government which seeks to guide Victoria's transition to net-zero emissions by 2050. Key actions outlined within the plan include:

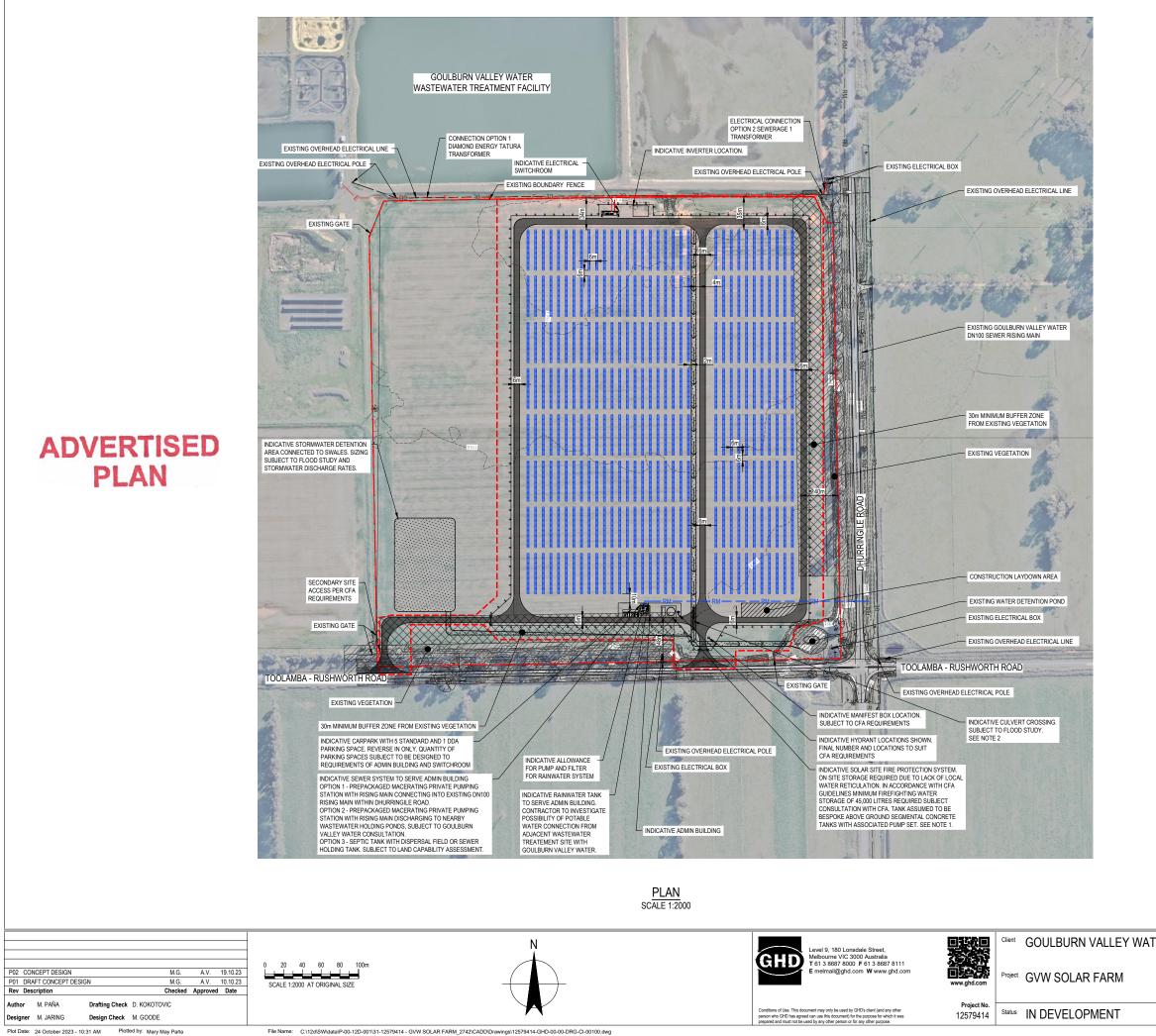
- Supporting the transformation of the electricity system with renewable energy
- Expanding skills and jobs for Victorians
- Supporting next generation energy, including batteries and offshore wind power

#### Solar Energy Facilities Design and Development Guidelines (DELWP 2022)

The Solar Energy Facilities Design and Development Guideline (Department of Environment, Land, Water and Planning, October 2022) is a key resource for this Project as it provides an overview of the policy, legislative, and statutory planning arrangements for solar energy facility projects in Victoria.

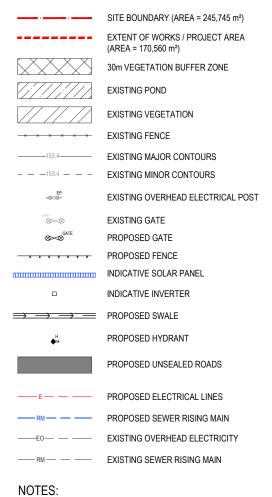
The Guidelines provide a decision guideline for planning permit applications for renewable energy facilities. The Guidelines are intended to assist responsible authorities and stakeholders who provide advice and consider the appropriateness of a solar energy facility in any given location.





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#### LEGEND



- REFERENCE CFA GUIDELINES "DESIGN GUIDELINES AND MODEL REQUIREMENTS - RENEWABLE ENERGY FACILITIES V4.
- 2. CONTRACTOR TO INCLUDE CULVERTS FOR 10% AEP FOR DRAIN CROSSINGS

ER	Drawing TATURA Title SITE LAYOUT PLAN	Size A1
	FIGURE 4	
	Drawing No. 12579414-GHD-00-00-DRG-CI-00100	<sup>Rev</sup> P02

# 2.3 Proposed works

The proposed works involve the installation of a <5MW solar energy facility in the south-east corner of the existing Site.

The Project will include a large scale solar photovoltaic (PV) generation plant, high voltage (HV) infrastructure integration and reticulation systems comprising of the following:

- Fixed tilt or Single Axis Tracking (SAT) system
- Power stations comprising of inverters, transformers, ring main unit, controls, communication systems and AC/DC reticulation
- Control and switch room building
- Integration into the DNSP electrical network including HV cabling (underground), conduits and pits
- Meteorological station
- Internal access roads & pavement
- Site access for vehicular traffic will be provided via two proposed crossover access points as shown in Figure 4.
- Six (6) on-site car parking spaces including one (1) accessible parking space.
- Security fencing at all perimeter boundaries to restrict access.

Figure 4 is a concept plan showing the proposed works within the affected parcel of land.

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# 3. Stakeholder engagement

The engagement process assisted in informing stakeholders of the Project's development and provided an understanding of potential impacts. Stakeholders consulted included the landowners of adjoining properties, Yorta Yorta RAP's and relevant government bodies.

In accordance with the *Solar Energy Facilities Design and Development Guidelines*, government agencies such as The Department of Energy, Environment and Climate Action (DEECA) and The Country Fire Authority (CFA) have been engaged with the planning aspect of this Project. These key stakeholders have collectively provided verbal confidence that the Project and location of the solar panels is appropriate and have soundly considered the applicable planning controls.

Stakeholder	Engagement	Feedback	Date
DEECA CFA	Pre-application meeting	The CFA didn't propose any changes to the works and were generally comfortable with the scope. The DEECA provided confidence that the Project was appropriate.	14.12.2023
DEECA	Ecology Meeting	Discussed the results of the ecology site visit, no changes required by DEECA.	12.01.2024
RAP's	Stakeholder engagement	Project was noted, Yorta Yorta commented that they had entered into a memorandum of understanding with another large-scale solar project in the region.	03.10.2023
Landowners of adjoining properties	Stakeholder engagement	Owners of all adjacent land to the South (1180 Murchison-Tatura Road, Tatura) and West (1000 Toolamba-Rushworth Road, Tatura) of the WMF facility had no concerns with the Project. Owner of land to the East of the Project (765 Dhurringile Road, Toolamba West) did not have concerns about the solar farm technology, site impacts or other similar matters. However, concerns were raised with the potential increase in insurance premiums due to the potential for negligence should a fire start on her property and burn the solar energy facility.	08.02.2024

 Table 4
 Stakeholder engagement summary

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# 4. Environmental and design considerations

### 4.1 Flora and fauna assessment

The findings of the flora and fauna assessment are presented within this section. A copy of the Assessment can be found in Appendix C.

A field assessment of the Project area was undertaken by a GHD ecologist on 14 December 2023.

### 4.1.1 Threatened and protected flora

The Victorian Biodiversity Atlas (VBA) and Protected Matters Search Tool (PMST) searches undertaken by GHD identified 21 threatened flora species previously recorded or predicted to occur within 10 km of the study site. Of the threatened flora species known or predicted to occur within 10 km of the study site, 18 species are listed under the *Flora and Fauna Guarantee Act 1988* (FFG), 13 species are listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC), and 10 additional species are listed on both the FFG and EPBC Acts.

One threatened flora species, *Allocasuarina luehmannii* (Buloke), listed as Critically Endangered under the FFG Act was potentially identified during the field assessment. An assessment of the extent of impacts based on known population and extent data for this species were calculated based on data available in the threatened species assessment documents available on Nature Kit, results are presented in Table 5 and Percent of Area of Occupancy(AoO) in Victoria proposed to be removed has been calculated using the total area impacted (0.082 ha). No mature *A. luehmannii* individuals are to be impacted by the proposed works. Specimens located within the impact area are immature, and likely root suckering from nearby individuals.

It is highly unlikely that these in dividuals will deconsigntificancentrathe ovierable opulations remaining in Victoria given the extent of native vegetation stord and given the extent of native vegetation stord and minimisen relation outlined investion 4.1.4 and 4.1.5 should be followed to reduce impacts where possible. part of a planning process under the

Table 5Planning and Environment Act 1987.Table 5Impacts on FFG threatened species<br/>The document must not be used for any

Species	Estimated AoO <sup>1</sup>	Irpose which may brea Percent of AoO impacted	ach any Number impacted	Reference
Allocasuarina luehmannii	134,606 km <sup>2</sup>	0.0000006%	3	DELWP (2021a)

No other threatened flora species were observed within the study site during the field assessment. Due to the degraded nature of the Site and highly modified surrounding agricultural landscape, it is considered unlikely that other threatened flora species were present and unobserved during the assessment.

### 4.1.2 Native vegetation

The field assessment confirmed presence of several patches of Plains Woodland along the road reserve, with some small patches extending past the property boundary fence into the paddock area. No other patches of native vegetation were recorded in the paddock. In total, 0.082 hectares of native vegetation is expected to be impacted by the proposed works, all comprises EVC 803 Plains Woodland.

According to the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017a) (the Guidelines) all mapped wetlands (i.e., Current wetland layer in DEECA's NVIM Maps) proposed to be impacted are considered as a remnant patch of native vegetation, and consequently, must be included in the extent of native vegetation removal. During the desktop assessment, the Tatura WMF parcel was identified as an artificial wetland under the *Current Wetlands* layer, with an area of approximately 60.5 hectares. As it stands, the area within the study site does not hold water or support any native wetland vegetation, as it is no longer in use as a drainage pond and instead is used for agricultural purposes.

<sup>&</sup>lt;sup>1</sup> AoO = Area of Occupancy



### 4.1.3 Fauna species and habitats

During the field assessment, a total of 12 fauna species, all common native birds, were recorded. No fauna of conservation significance was observed during the field assessment.

The likelihood of threatened and/or migratory species occurring within the study site is considered low due to the absence of suitable habitat and generally degraded quality of habitat across the Site.

The proposed Project would remove 0.082 ha of low-quality fauna habitat (including native and non-native vegetation) from two proposed access route locations along the southern road reserve for access into the Site (see Figure 2). In addition, 16.9 ha of low quality, non-native vegetation will be removed for the solar panel array and associated infrastructure (e.g. internal access roads). It is unlikely that any threatened FFG Act or EPBC Act listed fauna species would rely on or regularly utilise the habitats of the Site. The removal of this habitat is unlikely to comprise a substantial or important portion of habitat for any threatened FFG Act or EPBC Act listed fauna species.

### 4.1.4 Minimisation measures

The following measures should be implemented during the works to avoid and minimise impacts on native vegetation:

- Restrict access tracks to the minimum required for vehicles and machinery needed for the works and
  operation of the solar facility
- Do not park vehicles or machinery on roadside vegetation outside of the allotted impact area
- Avoid impacting FFG Act listed species where possible
- Install No-Go fencing to protect surrounding native vegetation

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### 4.1.6 Legislative impacts

Table 6

Legislative implications and requirements for the Project

Legislation / Policy	Relevance to Project	Outcomes
Federal		
Environment Protection and Biodiversity Conservation Act 1999	No EPBC listed flora or fauna species or communities are present within the study site or the road reserves. It is considered unlikely that EPBC listed flora or fauna occur within the study site or road reserves, owing to past disturbance, low quality of native vegetation and habitat, high weed cover and fragmentation of habitat areas. The current land-use of the Site for cropping greatly reduces its value for native fauna. In the roadsides adjacent to the study site, the habitat value is low, and it is unlikely any threatened flora and fauna would occur within the roadside reserve vegetation. No Ramsar wetlands are expected to be impacted by	It is highly unlikely that there would be significant impacts to EPBC listed flora and fauna a result of this Project. A referral under the EPBC Act is not required for threatened flora and fauna species, migratory species or ecological communities listed under the EPBC Act.
	the proposed works. No species of Migratory fauna are expected to use habitats within the study site frequently or regularly or in important or significant numbers.	

Legislation / Policy	Relevance to Project	Outcomes
State		
Environment Effects (EE) Act 1978	No flora or fauna species listed under the FFG Act were present within the study site that need to be considered under the EE Act.	Based on the current footprint and expected or potential impacts on native vegetation and threatened species, the Project is not considered to require a referral under the EE Act for effects on flora and fauna values. It should be noted that the EE Act also includes social, economic, and environmental criteria, which are not considered in this report.
Planning and Environment Act 1987 (P&E Act)	The <i>Planning and Environment Act</i> is addressed through Clause 52.17 of the Victorian Planning Provisions (VPP), which stipulates that a permit is required for the removal of native vegetation. ESO4 of the Greater City of Shepparton planning scheme stipulates that a permit is required for the removal of native vegetation.	The field assessment indicates there is native vegetation within the road reserves, where large-vehicle access is likely to be required. Due to the proposed works impact on native vegetation a planning permit will be required pursuant to Clause 52.17 and ESO4.
Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017) – the Guidelines.	The location mapping for the study site identifies that the study site is classified as Location 2. The Project would follow the intermediate assessment pathway when being assessed under the Guidelines, if native vegetation is proposed to be removed.	If a planning permit is required, it would be assessed under the <b>intermediate</b> assessment pathway. Offsets would be required and need to be secured from the Greater Shepparton City LGA or the Goulburn Broken CMA.
Flora and Fauna Guarantee Act 1988	No FFG Act-listed flora or fauna species or communities are likely to be present within the study site or adjacent road reserves.	Mitigation measures should be implemented to avoid and minimise the impacts of the Project, including protecting native vegetation not proposed to be impacted and preventing Potentially Threatening Processes, e.g., spread of weeds. It is unlikely that any FFG Act listed fauna species would make regular use of the habitats within the study site.
Wildlife Act 1975	A Management Authorisation under the Act is required when native fauna need to be relocated during works (e.g., if fauna need to be removed from rock piles or trenches that are left open or from hollow-bearing trees or limbs to be removed).	One hollow-bearing tree may be required to be removed. Based on the fauna expected to be present at the Site and the expected construction techniques, a Management Authorisation is likely to be required to assist fauna that may occupy the hollows within the paddock tree.
Catchment and Land Protection Act 1994	One noxious weed listed under the CaLP Act ( <i>Xanthium spinosum</i> ) was observed within the study site. Mitigation measures to prevent the introduction and spread of CaLP Act listed weed species (and any weed species) must be incorporated into the CEMP.	Under this Act, concerted efforts must be taken to avoid spreading or introducing weeds into or out of the study site.

# 4.2 Heritage

### 4.2.1 Aboriginal Cultural Heritage

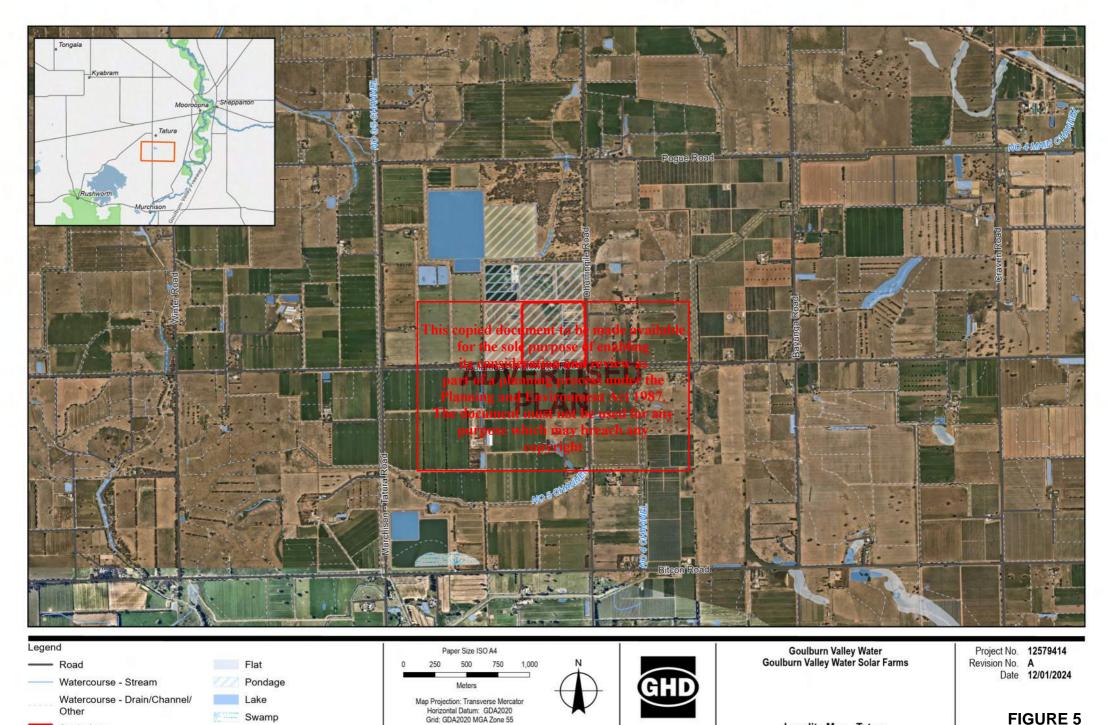
The Site is not within an area of Aboriginal cultural heritage. A heritage study undertaken by GHD consultants in 2023 found that there are no Victorian Aboriginal Heritage Register (VAHR) registered Aboriginal places within the Site. The cultural due diligence assessment conducted by GHD concluded that there are no statutory approvals required for heritage matters under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), *Planning and Environment Act 1987, Aboriginal Heritage Act 2006*, and *Heritage Act 2017*. Further, Table 7 demonstrates there are no legislative heritage requirements applicable to this Project.

 Table 7
 Heritage legislation

Legislation / Policy	Relevance to Project
EPBC Act 1999	No approvals for the proposed works are required under the <i>Environment Protection and Biodiversity Conservation Act</i> 1999 (EPBC Act) for heritage matters. Please note that this does not include approval requirements under the EPBC Act for any other matters of National Environmental Significance.
Aboriginal Heritage Act 2006	The study area is not within an area of cultural heritage sensitivity (CHS) and therefore, a mandatory CHMP is not required.
Heritage Act 2017 and Planning and Environment Act 1987	No approvals for the proposed works are required under the <i>Heritage Act 2017</i> or the <i>Planning and Environment Act 1987</i> . There are no places listed on the Victorian Heritage Inventory, or the Victorian Heritage Register, and there are no Heritage Overlays present within the Project area.

A copy of the Cultural Heritage Due Diligences has been provided at Appendix E.







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Study Area

Swamp

Locality Map - Tatura
Data source: DEECA, Vicmap, 2023, Nearmap imagery accessed 12/01/2024. World Light Gray Reference: Euri, HERE: World Light Gray Carvas Base: Euri, HERE: Garmin, USGS, Nearmap WMS Server... Created by: ekalar

#### Traffic 4.3

The subject site is located on a corner parcel abutting both Dhurringile Road to the east and Toolamba-Rushworth Road to the south. A copy of the Traffic Impact Assessment is provided at Appendix B.

#### 4.3.1 Road Network

The Site is bounded by Dhurringile Road to the east and Toolamba-Rushworth Road to the south. Dhurringile Road has a default speed limit of 100km/hr and is assumed to have low daily traffic volumes estimated to be between 150-200 movements per day in both directions. Toolamba-Rushworth Road has an estimated 100-200 daily traffic movements in both directions with a default speed limit of 100km/hr.

#### Site access and car parking 4.3.2

Site access for vehicular traffic will be provided via two proposed crossover access points. Both accesses will be located on Toolamba-Rushworth Road as shown in Figure 5 It is proposed that a total of six (6) on-site car parking spaces including one (1) accessible parking space. The parking spaces will be located to the south of the Site boundary adjacent to the administration building.

#### 4.3.3Construction period

A detailed understanding of the expected construction traffic levels is not available at this early stage and can reasonably be conditioned on any approval given. However, in GHD's experience, for a 50-60MW solar farm it was estimated that the Site would generate in the order of 330 vehicle movements per day during the peak of the construction period comprising

- 300 light vehicle movements (two-way) for the sole purpose of enabling
- \_
- 30 heavy vehicle movements (tworway) sideration and review as

For a solar farm of the proposed scale; tipise and the solar farm the solar farm traffic, equating to approximately 32 were movements per day during the peak of the construction period. It is anticipated that materials for the Abedownbe tenter to the sent for th purpose which may breach any trucks.

- copyright 30 light vehicle movements per day (two-way)
- 4 heavy vehicle movements (two-way)

#### 434 Operation period

It is expected that traffic movements would be minimal during the operation period. This would be limited to routine maintenance and emergency maintenance only and expected to be in the order of approximately 5 vehicles per week. These movements are not considered to have any impact on the surrounding road network and as such have not been considered for further analysis.

#### 435 Traffic distribution

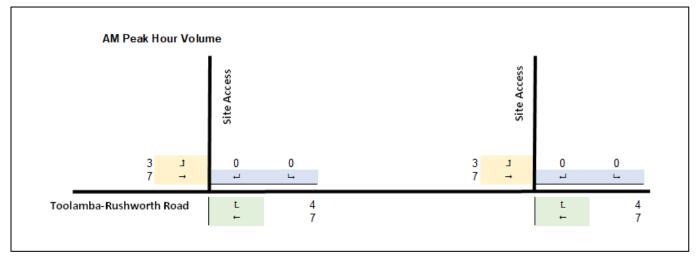
It is anticipated that construction traffic from the Shepparton and Tatura areas would arrive at the Site from the east via Toolamba-Rushworth Road, and motorists from Melbourne or Seymour would arrive at the Site from the west via Toolamba-Rushworth Road. Based on the relative catchments or major towns surrounding the Site, the following distributions are expected:

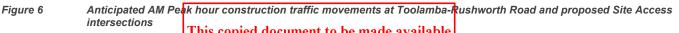
- 60% Toolamba-Rushworth Road (to and from east) (e.g., Shepparton, Tatura, Benalla)
- Toolamba-Rushworth Road (to and from west) (e.g., Melbourne, Seymour) 40%

In addition to above, construction traffic movements at the proposed access points along Toolamba-Rushworth Road have been estimated using the traffic distribution assumption below and illustrated in Figure 6 and Figure 7.



- Conservatively it is assumed that the majority of (around 40% of the daily traffic) the estimated daily traffic would occur during peak times (AM peak and PM peak) with 14 inbound movements during AM peak and 14 outbound movements during PM peak. The remaining 6 movements are anticipated to occur outside peak periods.
- Traffic will be evenly distributed at both two proposed accesses during the construction phase.
- 10% of the daily traffic trips along Toolamba-Rushworth Road will occur during peak hour which equates to 10-15 movements (two-way movements).





PM Peak Hou	ii voiu	part of Plannin The doc	consideration an f a planning pro ng and Environ ument must not pose which may copyrigh	cess under the nent Act 1987. be used for any breach any		Site Access		
0 7	L -	3 1	4 L		3 11	L F	3 1	4
Toolamba-Rushworth R	oad	L	0				L	0

Figure 7 Anticipated PM Peak hour construction traffic movements at Toolamba-Rushworth Road and proposed Site Access intersections

#### 4.3.6 Summary

It is anticipated that proposed development construction will generate in the order of 34 vehicle movements per day and is expected to be distributed across the proposed two access points at Toolamba-Rushworth Road.

These numbers are considered a maximum (or "worst-case") scenario, and on some days, traffic volumes will be considerably lower, typically when deliveries are not expected, and the full complement of construction workers are not required on-site.

Peak hourly traffic estimate indicates that total peak hour movements at each access point will be in order of 7 vehicle movements, which equates to 1 vehicle movements in eight (8) to nine (9) minutes.

This level of traffic is on the low side and can therefore be adequately accommodated within the surrounding road network capacity without causing detrimental impact to the existing traffic network.

# 4.4 Solar Glare Assessment

GHD has conducted a comprehensive glare impact assessment specific to the chosen photovoltaic (PV) solutions. The assessment focused on potential repercussions on aviation operations related to Shepparton Airport, located approximately 15 kilometres aerial distance from the Site. The assessment also analysed the potential effects on adjacent receptors including road users and the local community.

From the results, it is concluded that during the autumn to spring months, when the sun angle is low in the morning and evening, (predominantly during 6:00 am to 8:00 am and 4:45 pm to 6:15 pm), there is potential glare for route receptors located along the Toolamba-Rushworth Road to the south of the PV array.

During summer months in the evening between the hours of 6:30 pm to 8 pm, only glare with a low potential to cause an after-image was predicted for nearby point observers to the east of the array, and for flight path receptors north-east of the array.

Table 8 below summarises the number of flight paths, route receptors and observer point out of the data sample which have been predicted to be impacted by green, yellow and red glare. Green glare has a low potential for after-image, yellow glare creates a potential for after-image and red glare has the potential to cause permanent eye damage (retinal burn).

	Green Glare	Yellow Glare	Red Glare
Flight Paths	1	0	0
Route Receptors	1	1	0
Observer Points	1	0	0

 Table 8
 Summary of receptor and observer points impacted by glare

A total of 15.2 hours of green glare has been predicted amongst the various flight paths, route receptors and observer points. Green glare has a low potential for after-image and poses little to no threat of damage to the observer during the impacted times.

A total of 16.2 hours of yellow glare has been predicted across the one impacted route receptors. Whilst yellow glare typically has the potential to cause after-image, in the scenario where yellow glare has been predicted, the retinal irradiance relative to the subtended source angle is relatively small, and thus is borderline 'green glare' and unlikely to pose any threat or damage to an observer.

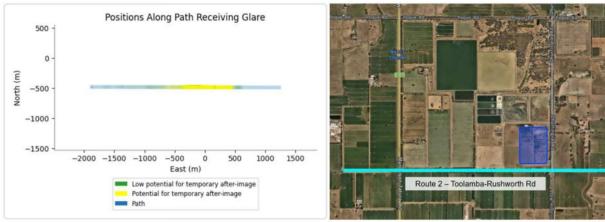
No red glare is predicted within the vicinity and surrounds of the proposed PV system, thus at any position relative to the proposed array there is no threat of permanent retinal damage to an observer.

For the route receptors where yellow glare is predicted GHD recommend the following as mitigation measures:

 As a mitigation plan, consider planting vegetation screening or installing glare screening of sufficient height along the route (Toolamba-Rushworth Rd) where the Solare Glare Hazard Analysis Tool model indicates potential yellow glare impact.







Route 2 – Toolamba-Rushworth Road

Figure 8 Areas impacted by yellow glare

A copy of the Solar Glare Assessment is provided at Appendix D.

# 4.5 Landscape and Visual Impact Assessmentose of enabling

## 4.6 Visual analysis

### 4.6.1 Sensitive visual receptors

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The Site inspection revealed the likely viewshed for the Project would primarily be confined to areas within close proximity to the Project Site, such as road users on Dhurringile Road and Toolamba- Rushworth Road. The presence of the perimeter windrow planting for weather protection would provide some screening of the Project from this direction.

Key views are typically achieved from open setting locations along the roads adjacent to the Project Site. Of note are the following:

- Local filtered views along Dhurringile Road Toolamba- Rushworth Road, Murton Road and Murchison-Tatura Road
- Likely private filtered views from rural residential areas along Dhurringile Road, Toolamba- Rushworth Road Murton Road and Pogue Road
- Filtered views from Goulburn Valley Tree Group community planting reserve
- Static and direct views from the GVW WMF facilities

### 4.6.2 Key visual features

Based on the desktop review and Project Site inspection, the key visual features in the study area were identified as:

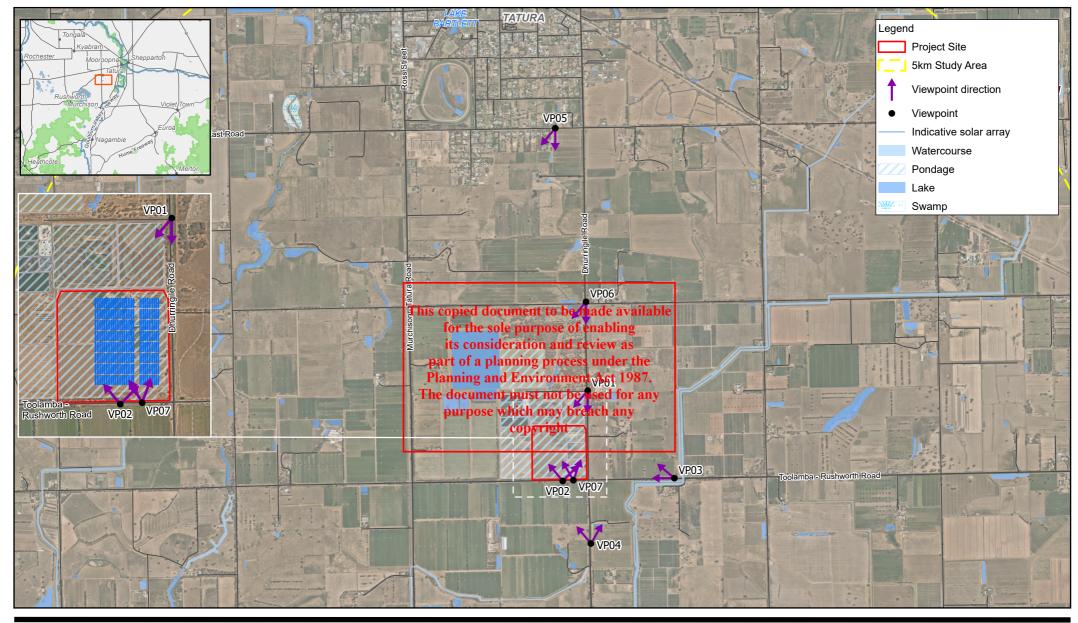
- Farmland adjacent to the Project Site mainly comprises of paddocks in gridded formation, for rearing livestock
  or agricultural cropping, with irrigation channels and low-lying areas visually prominent within the vast
  paddocks. These spaces have a sense of openness with relatively flat topography, allowing for open long
  views from the adjacent roads.
- Extensive open plains and undulating hills containing remanent native grassland and scattered woodland vegetation.
- Scattered large sheds, warehouses, fencing, silos, and storage areas related to agricultural practices are visible within the open farmland.
- The existing GVW Wastewater Management Facilities is partially visible from adjoining roads through the perimeter planning along the Site boundaries.

- Goulburn Valley Tree Group Part of the Victorian Landcare Gateway initiative located north of the Site on Dhurringile Road.
- Tatura township, featuring a number of well-preserved heritage buildings and facilities including the Old Court House, Victory Hall, German Cemetery and Dhurringile Mansion.
- Irrigation channels cut a deep and narrow gully through the landscape.
- Meandering streams with chains of ponds and tributaries are present within the landscape with scattered established canopy trees and grasses.
- The Dhurringile Road, a single carriageway, two-way asphalt road, is a key access route to the township of Tatura from the south.
- Stuart Murray Canal and the Waranga Basin are located approximately five kilometres southwest of the Project Site. Facilities along the Waranga Basin foreshore include picnic and barbeque areas and caravan parks. The Waranga Basin and the surrounding landscape is a family-friendly regional destination that provides bushwalking, birdwatching, horse riding and cycling.

A total of two landscape character areas were identified within the study area: Farmland (LCA1) and Tatura Township (LCA2). The findings indicate that the impact on LCA1 is deemed as Low, associated with the modified agricultural landscapes with a presence of existing infrastructure. Impacts on LCA2 are generally Negligible. Overall, this assessment found there to be no significant landscape character impacts arising from the Project.

Sensitive visual receptors in the study area include road users, residents and outdoor workers. Seven viewpoint locations were chosen for assessment. The assessment found that the visual impacts ranged from **Moderate** to **Negligible.** The most significant impacts where **Moderate-Low** within the vicinity of **VP07** (Toolamba-Rushworth Road) due to the magnitude of change and the proximity to the Project.

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Paper Size ISO A4

Kilometers Map Projection: Transverse Mercator Horizontal Datum: GDA2020 Grid: GDA2020 MGA Zone 55



Goulburn Valley Water Goulburn Valley Water Solar Farms

Viewpoints

Project No. **12597414** Revision No. **B** Date **19/01/2024** 

#### **FIGURE 9**

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Data source: GHD, LVIA, 2023; DEECA, Vicmap, 2023; Nearmap Imagery, 2029 Created by: kgardner

VP01 is located on Dhurringile Road and is facing west.

While glimpses of views may occur during the construction phase due to the presence of construction vehicles and machinery, it is expected that during operation of the solar farm the overall significance of impact of the Project on VP01 would be **Negligible**, as it is anticipated that there would be almost imperceptible change in the view.



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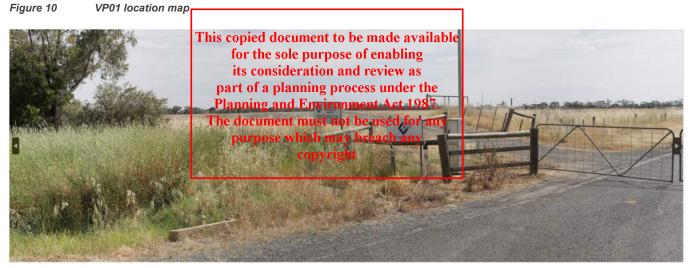


Figure 11 Dhurringile Road existing view



Figure 12 Photomontage showing proposed view from Dhurringile Road



Figure 13 Redlines overlay showing proposed view from Dhurringile Road

VP02 is located on Toolamba-Rushworth Road and is facing north.

While glimpses of views may occur during the construction phase due to the presence of construction vehicles and machinery, it is expected that during operation of the solar farm the overall significance of impact of the Project on VP02 would be **Low**, as it is anticipated that there would be minor alteration or change in the view.



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Figure 14 VP02 location map





Figure 15 Toolamba-Rushworth Road existing view



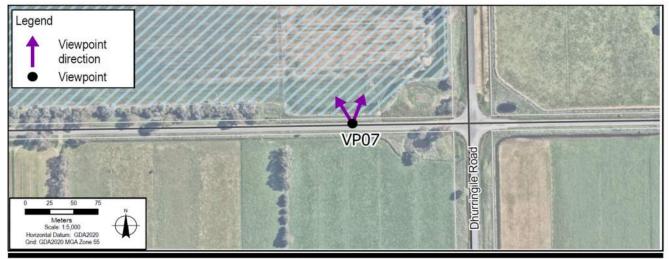
Figure 16 Photomontage showing proposed view from Toolamba-Rushworth Road



Figure 17 Redline overlay showing proposed view from Toolamba -Rushworth Road

VP07 is located on Toolamba-Rushworth Road and is facing north.

During construction machinery, vehicles and the laydown area would be visible from this view, it is expected that during operation the significance of impact is **Moderate-Low**, as the sensitivity to change is low and the magnitude of change **Moderate**.



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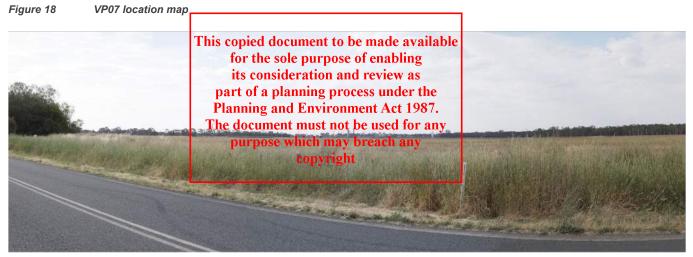


Figure 19 Toolamba-Rushworth Road existing view



Figure 20 Photomontage showing proposed view from Toolamba-Rushworth Road

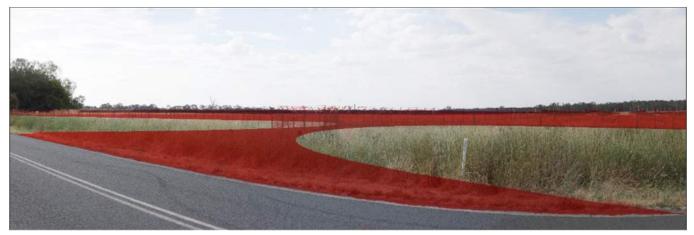


Figure 21 Redline overlay showing proposed view from Toolamba-Rushworth Road

#### 4.6.3 Recommendations and management measures

The following section recommends mitigation measures that respond to potential issues arising within the assessment that have potential to adversely impact on the character of the landscape or views from nearby sensitive visual receptions, The following mitigation recommendations address the most visual elements of the Project as well as referencing any relevant considerations drawn from the legislation and policy review.

General considerations for the detailed design phase include:

- Utilise design strategies to minimise the visual prominence of new components affecting views to and from the Dhurringile Road and Toolamba-Rushworth Road
- Ensure Project design, siting and materiality is of high quality and sympathetic to the existing and contributes positively to the existing landscape character values.

On-site mitigation recommendations

- Retain vegetation
- Perimeter screen planting
- Material selection

Construction activity and storage

- Take all practical measures to ensure construction equipment, stockpiles of stored materials, and other visible elements are located in the construction laydown area near the sensitive receptors.
- Fencing for the compound site is to include hoarding or screening material
- The Site compound will be kept tidy and general tidiness will be maintained at the end of each shift
- All materials and equipment will be stored within the Site compound or within designated work areas.

The recommendations and management measures provided within the LVIA should be considered within the design process to reduce any landscape and visual impacts of the Project.

A copy of the LVIA is provided at Appendix A.

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# 5. Relevant guidelines for renewable energy installations

# 5.1.1 Solar Energy Facilities Design and Development Guidelines (SEFDDG)

The Solar Energy Facilities Design and Development Guideline (Department of Environment, Land, Water and Planning, October 2022) is a key resource for this Project as it provides an overview of the policy, legislative, and statutory planning arrangements for solar energy facility projects in Victoria.

The Guidelines provide a decision guideline for planning permit applications for renewable energy facilities. The Guidelines are intended to assist responsible authorities and stakeholders who provide advice and consider the appropriateness of a solar energy facilities in any given location.

#### 5.1.1.1 Planning components of the SEFDDG

The SEFDDG propose that the following clauses of the Scheme are considered:

- Clause 12.01-1S Protection of biodiversity
- Clause 12.01-2S Native vegetation management
- Clause 13.02-1 Bushfire planning
- Clause 14.01-01S Protection of agricultural land
- Clause 14.02-3S Protection of declared irrigation districts
- Clause 15.03-2S Aboriginal cultural heritage

These Clauses have been analysed in detail in section 6.3 of this report.

#### 5.1.1.2 Best practice for proponents

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This Project has considered the best practice for proponents of the SEFDDG by engaging stakeholders in the planning process. Please see section 4 of this report for a detailed response of stakeholder engagement in this Project.

Please see Table 9 below that demonstrate how the design stage of this Project have been considered.

 Table 9
 Best practice for proponent's documents

Design stage	Documents	Appendix
Landscape screening	Landscape visual impact assessment	Please see Appendix A
Glint and glare management	Glare assessment	Please see Appendix D
Traffic impacts	Traffic assessment	Please see Appendix B

### 5.1.2 Country Fire Authority Design Guidelines and Model Requirements for Renewable Energy Facilities

The Country Fire Authority (CFA) Design Guidelines and Model Requirements for Renewable Energy Installations (CFA Specialist Risk and Fire Safety Unit, August 2023) provides 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.

GVW have consulted with the CFA regarding their requirements for this Project. Please see section 3 of this report for feedback provided by CFA.

An assessment against the Country Fire Authority (CFA) Design Guidelines and Model Requirements for Renewable Energy Facilities 2023 are outlined below:

#### 1. Methodology

The advice provided herein is based on the following research and knowledge:

- · A desktop analysis of the vegetation and topography within and surrounding the subject land
- Site plan layout provided by GHD (dated 22 January 2024)
- Country Fire Authority Design Guidelines and Model Requirements for Renewable Energy Facilities (CFA 2023).

#### 2. Bushfire Threat Assessment

The Site is identified within the Public Use Zone (PUZ) and is in a Bushfire Prone Area (BPA). The Site however is not subject to the Bushfire Management Overlay (BMO). The BMO is defined as land that may be significantly impacted by extreme bushfires under Clause 44.06 of the Victorian Planning Scheme.

The Site and nearby surrounding lands being Farming Zoned land predominately consist of grasslands used for agricultural and grazing practices and represents a lower bushfire hazard vegetation type. Terrain is largely flat to gently undulating topography.

Under the CFA Guidelines the land on which the proposed solar farm development is located is considered to meet the low bushfire risk location attributes contained within Section 6.1.

#### 3. CFA Renewable Energy Fire Design Requirements

The proposed Tatura Solar Farm layout, which includes a Battery Energy Storage System (BESS) has a potential generating capacity of no greater than 5MW and is therefore considered to be required to meet the design guideline and model requirements stipulated for "Micro Solar Farm Facilities" together with other requirements under Section 6.2 of the CFA Guidelines.

The design requirements under Section 6 the CFA Guidelines that warrant addressing are:

- Emergency Vehicle Access (Sections 4 2 pt) rpose of enabling
- Fire Fighting Water Supply (Sectionside 2) and review as
- Landscape Screening and Ort-Ofte Megetation (Gestion 4) &: 4he
- Fire Breaks (Section 4.2.9) anning and Environment Act 1987.
- Design Specific to Facility heybec (Bectibm4.9.6) t be used for any

# Table 10 CFA guidelines assessment purpose which may breach any copyright

Model Criteria (CFA Guidelines 2023)	Concept Design Layout	- Compliance Status
Section 4.2.1 Emergency vehicle access	Two (2) access points are provided for the facility Perimeter and roads within the facility provide access to all infrastructure for emergency services	The CFA guidelines specify a minimum of two access points
Section 4.2.2 Firefighting water supply	A 45,000-litre static water supply has been incorporated into the concept design and is located near the unobstructed primary access point for the Site. Water access points are clearly accessible and unobstructed	The water supply provided, and respective location adheres to the CFA's guidelines
Section 4.2.4 Landscape screening and on-site vegetation	No landscape screening is currently specified in the concept design layout	The Project is not proposing to plant any vegetation under the solar panels and therefore adheres to the CFA's guidelines
Section 4.2.5 Fire breaks	A 30 m fire break has been proposed around the perimeter of the facility from the vegetation screening inside the property boundary.	The proposal exceeds the minimum requirement of a 10m fire break
Section 4.2.6 Design specific to facility type	The solar farms will have a 6m separation between solar panel banks.	The CFA stipulates that a 6m separation is required.



# 6. Planning scheme provisions

The Project is subject to the *Planning and Environment Act 1987 (the P&E Act)* and the *Greater Shepperton Planning Scheme* (the Scheme).

# 6.1 Land use definition

The installation of a solar farm is defined as a 'Solar energy facility' pursuant to Clause 73.03 of the Scheme. *A solar energy facility* is defined as:

Land used to generate electricity from solar energy using ground-mounted photovoltaic and thermal technology, where the primary role is to export power to the electricity network.

It does not include the generation of electricity principally used for an existing use of land.

# 6.2 Responsible authority

Pursuant to Clause 72.01 of the Planning Scheme the Minister for Planning is the Responsible Authority for:

- Energy generation facility with an installed capacity of 1 megawatt or greater
- Utility installation used to:
  - Transmit or distribute electricity
  - Store electricity if the installed capacity is 1 megawatt or greater

The Department of Transport and Planning (DTP) assesses and determines applications for a planning permit on behalf of the Minister for Planning.

# 6.3 Planning policy

This section provides an assessment of the Project against relevant state and local planning policies within the Scheme.

### 6.3.1 Municipal Planning Strategy

The Municipal Planning Strategy (MPS) incorporates the local vision and objectives of Councils policies acting as the local component of the Planning Policy Framework (PPF) within the Greater Shepparton Planning Scheme. Please see Table 11 for an assessment against the MPS.

Table 11 Assessment of Municipal Planning Strategy (MPS)

Policy	Response
Clause 02.01 – Context	The Project is located within the City of Greater Shepparton. The City of Greater Shepparton has a permanent population of around 65,000 people, with land primarily being used for agricultural land uses such as farming.
	Since 2018 the former drying pan has been cultivated and cropped for canola and more recently wheat. However, due to the footprint of the works and the surrounding landscape being agricultural in nature the Project is not expected to result in the loss of agricultural land. Studies have indicated that there will be a minimal increase in traffic on the surrounding roads and limited visual impacts therefore ensuring that the Project is not likely to impact on the farming nature of the region.
Clause 02.02 – Vision	Council seeks to create a thriving economy with excellent lifestyles, innovative agriculture, a diverse community and abundant opportunities.
s copied document to be made available for the sole purpose of enabling its consideration and review as	The Project meets this vision insofar as ensuring the surrounding community has access to a supply of renewable energy, contributing to improving the local economy and increasing the ability of the region to reduce their energy emissions.
part of a planning process under the Planning and Environment Act 1987. The document must not be used for any	nt of Transport and Planning   12570414   Goulburn Valley Water Solar Farm – Tatura

Policy	Response
Clause 02.03-2 - Environmental and landscape values	Council is committed to protecting and enhancing biodiversity values through native vegetation.
	Fieldwork conducted by GHD ecologist confirms that the Site is dominated by non-native species with native vegetation being restricted to the roadside reserve and a short extent along the southern boundary. Based on this, the proposed solar energy facility will not hinder Councils endeavours to protect and enhance biodiversity values through native vegetation.

#### 6.3.2 **Planning Policy Framework**

The provisions and respective objectives of the Planning Policy Framework (PPF) discussed in this section are considered relevant to the proposed works and potential planning approvals.

The PPF seeks to ensure that the objectives of planning in Victoria (as established in Section 4 of the Planning and Environment Act 1987) are fostered through appropriate land use and development planning policies. Please see Table 12.

Table 12 Assessment against the PPF

	Policy	Assessment against the Project
	Clause 12.01-2S – Native vegetation management	The objective of Clause 12.01-2S is to <i>ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.</i> Relevant strategies include:
		<ul> <li>Avoid the removal, destruction or lopping of native vegetation.</li> </ul>
		<ul> <li>Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.</li> </ul>
		<ul> <li>Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native.</li> </ul>
		A Site assessment conducted by GHD ecologists confirmed that native vegetation was restricted to the roadside reserves and a short extent of the study site along the southern boundary. In total, 0.082 hectares of native vegetation is expected to be impacted by the proposed works, all comprises EVC 803 Plains Woodland.
		To avoid and minimise impacts to native vegetation three potential layout options for the solar array were considered by GVW for the Site, and GHD ecologists provided advice on those options relating to minimising the impacts on native vegetation and fauna habitat.
		Offsets are calculated within the native vegetation removal report (NVRR) based on the habitat hectare score recorded at the Site. A total of 0.034 general habitat units (GHU) with a minimum strategic biodiversity value of 0.309 must be secured from the Greater Shepparton City LGA area or the Goulburn Broken CMA.
	Clause 12.05-2S – Landscapes	The objective of 12.05-2S is to protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments.
		The relevant strategies of this Clause relating to visual amenity, character and environment include:
		<ul> <li>Ensure development does not detract from the natural qualities of significant landscape areas</li> </ul>
		<ul> <li>Improve the landscape qualities, open space linkages and environmental performance in significant landscapes and open spaces, including green wedges, conservation areas and non-urban areas</li> </ul>
for th	document to be made available e sole purpose of enabling	Recognise the natural landscape for its aesthetic value and as a fully functioning system
	nsideration and review as	<ul> <li>Ensure important natural features are protected and enhanced</li> </ul>
Planning The docu	a planning process under the and Environment Act 1987. ment must not be used for any ose which may breach any copyright	A Solar Glare Assessment (SGA) and the Landscape and Visual Impact Assessment (LVIA) have been conducted by GHD (see Appendix D and Appendix A, respectively). The SGA concluded that the glare caused by the solar farm has minimal environmental impacts. Further the LVIA concluded that the solar farm has a negligible rating regarding the visual impact on the surrounding landscapes and therefore the Project meets the objectives of this cloure.
	copyright	objectives of this clause.

Policy	Assessment against the Project
Clause 13.02-1S – Bushfire Planning	The objective of bushfire planning is to strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.
	Relevant strategies include:
	<ul> <li>Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures</li> </ul>
	Throughout the planning process, the CFA recommendations have assisted in shaping the standard measures and processes in relation to fire safety, risk and emergency management that should be considered when designing the proposed works.
	The proposed works will see 30 m breaks implemented around the perimeter of the facility from the vegetation screening as well as 6 m separations between solar panel breaks. Further, the location of accessways will ensure appropriate bushfire management protection measures are implemented to contribute to building a resilient and safe community.
Clause 14.01-1S Protection of agricultural land	The objective of Clause 14.01-1S is to protect the state's agricultural base by preserving productive farmland.
	Relevant strategies include: – Identify areas of productive agricultural land, including land for primary production
	and intensive agriculture
	<ul> <li>Consider state, regional and local, issues and characteristics when assessing agricultural quality and productivity</li> </ul>
r	<ul> <li>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</li> </ul>
	production and processing sectors The corner drying nenthes been subivated and cropped since 2018 for canola and more
	recently wheat implementing renewable energy sources is of economic importance and will assist the region and surrounding farms to meet their energy needs. Due to the works occurring within a small area, 17.1 ha, and the surrounding landscape being agricultures in the expected to bentribute to the loss of agricultural land.
Clause 14.02-3S Protection of declared irrigations districts	Planning and Environment Act 1987. The objective of Clause 14,02-3S is to plan and manage for sustainable change within ingator districts declared under Part 68 any Relevant strategies include: Compared to the strategies include:
	<ul> <li>Identify and plan needs of communities to adapt and adjust to strategic land use change within an irrigation district</li> </ul>
	<ul> <li>Ensure non-agricultural land use does not undermine the integrity of irrigation infrastructure and complements existing and future agricultural production</li> </ul>
	The Site has been decommissioned for several years from the previous drying pan land use. The installation of a solar farm is appropriate as it supports the future needs of the community by providing sustainable energy and will only impact minimally surrounding agricultural land uses. Greater Shepparton Council confirmed on the 7 <sup>th</sup> of March 2024 that the Site is not situated in a declared irrigation district. Therefore, it is not expected that the Project will impact on the regions ability to provide land for irrigation.
Clause 15.03-2S – Aboriginal cultural heritage	The objective of Clause 15.03-2S is to ensure the protection and conservation of places of Aboriginal cultural heritage significance.
	The Site is not within an area of Aboriginal cultural heritage. A heritage study undertaken by GHD consultants in 2023 found there are no Victorian Aboriginal Heritage Register (VAHR) registered Aboriginal places within the Site. The cultural due diligence assessment conducted by GHD concluded that there are no statutory approvals required for heritage matters under the <i>Environment Protection and Biodiversity Conservation Act</i> <i>1999, Planning and Environment Act 1987, Aboriginal Heritage Act 2006, and Heritage</i> <i>Act 2017.</i>



Policy	Assessment against the Project
Clause 19.01 – 1S Energy supply	The objective of Clause 19.01 –1s is to facilitate appropriate development of energy supply infrastructure.
	Relevant strategies include:
	<ul> <li>Support the development of energy generation, storage, transmission, and distribution infrastructure to transition to a low-carbon economy</li> </ul>
	- Develop appropriate infrastructure to meet community demand for energy services
	<ul> <li>Ensure energy generation, storage, transmission and distribution infrastructure and projects are resilient to the impacts of climate change</li> </ul>
	<ul> <li>Facilitate the production and distribution of zero emission gases and fuels</li> </ul>
	<ul> <li>Support energy infrastructure projects in locations that minimise land use conflicts and that take advantage of existing resources and infrastructure networks</li> </ul>
	<ul> <li>Facilitate energy infrastructure projects that help diversify local economies and improve sustainability and social outcomes</li> </ul>
	<ul> <li>Facilitate renewable energy generation and storage to meet on-site energy needs</li> </ul>
	The Project aligns with the strategies established in Clause 19.01-S through the prospective solar farm distributing clean energy. All energy generated from the facility will be distributed to the national electricity transmission network.

### 6.4 Planning controls

The following section discusses the planning zones and overlays relevant to the Project.

### 6.4.1 Planning zones

The Project is wholly contained within the Public Use Zone – Schedule 1 (PUZ1).

#### Clause 36.01 – Public Use Zone (PUZ)

The Site is located on land zoned as Public Use Zone – Schedule 1 (PUZ1). The purpose of this zone is:

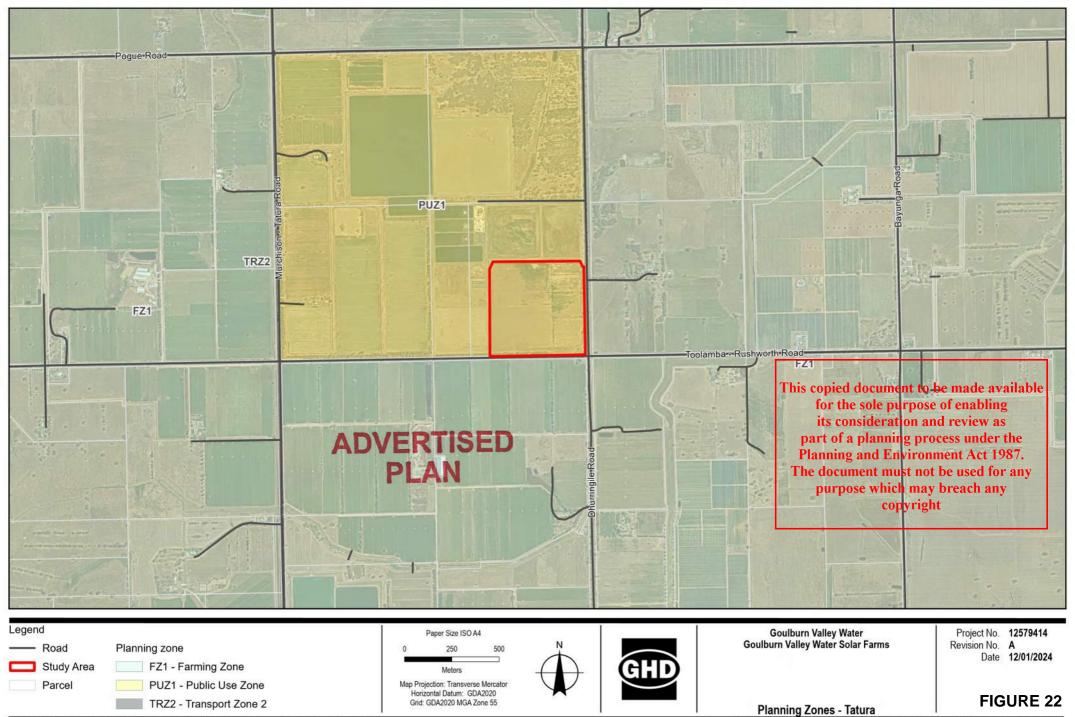
- To implement the Municipal Planning Strategy and the Planning Policy Framework
- To recognise public land use for public utility and community services and facilities
- To provide for associated uses that are consistent with the intent of the public land reservation or purpose

The land use is being carried out by GVW who own the land and is the public land manager.

As the condition for any other use in Clause 36.01-1 is not met by virtue of the Project not meeting the schedule to the zone, the land use is regarded as a section 2 use thus a permit is required to use the land as a solar energy facility and carry out works.

The application requirements and decision guidelines of clause 36.01 are addressed in section 7.1.





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Data source: DEECA, Vicinap, 2023, Nearmap imagery accessed 12/01/2024. World Light Gray Reference: Esn, HERE, World Light Gray Canvas Base: Esn, HERE, Garmin, USGS, Nearmap VMS Server, Created by: ekafa

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#### 6.4.2 Planning overlays

This section identifies the overlays of the subject Site and permit requirements relevant to the Project.

As seen in Figure 23 below, the following overlays apply to the subject Site:

- Clause 42.01 Environmental Significance Overlay, Schedule 4 (ESO4)
- Clause 43.01 Heritage Overlay (HO) \_
- Clause 44.03 Floodway Overlay (FO)
- Clause 44.04 Land Subject to Inundation Overlay (LSIO)
- Clause 45.12 Specific Controls Overlay, Schedule 3 (SCO3)

The Project works are not subject to the Heritage Overlay, Land Subject to Inundation Overlay or Floodway Overlay due to their location on the Site and therefore do not form part of this assessment.

#### Clause 42.01 – Environmental Significance Overlay (ESO)

The purpose of the ESO is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To identify areas where the development of land may be affected by environmental constraints.
- To ensure that development is compatible with identified environmental values.

A permit is required pursuant to the ESO to construct a building or construct or carry out work and to remove, destroy or lop any vegetation, including dead vegetation.

#### Clause 42.01 – Schedule 4 – Environmental Significance Overlay (ESO4)

The Project is subject to the ESO4.

The Statement of Environmental Significance for Schedule 4 of the ESO states:

- The Tatura wastewater treatment complex provides soverage treatment and wastewater disposal for the Tatura urban area including the major food processing industries of Tatura Milk Industries and Unifoods. The complex's operation and expansion, particularly for additional land disposal of secondary treated effluent in lieu of discharge waterways, is critical to the continued economic and environment Act 1987. Shepparton.
- Land within this overlay should not be developed for any purpose that might compromise the complex's continued operation or expansion for sewerage and wastewater treatment and disposal.

Environmental objective to be achieved:

A buffer needs to be maintained around the complex to restrict the intensity of housing development in its proximity and to direct residential development at an urban scale away from the complex.

In accordance with Clause 42.01 the application must be referred to the determining referral authority specified in Clause 66.04. Pursuant to Clause 66.04, GVW region water authority is a determining referral authority for an application under the ESO4. Before deciding on an application under this overlay, DTP must consider any referral comments from GVW.

The application requirements and decision guidelines for Clause 42.01 are addressed in section 0.

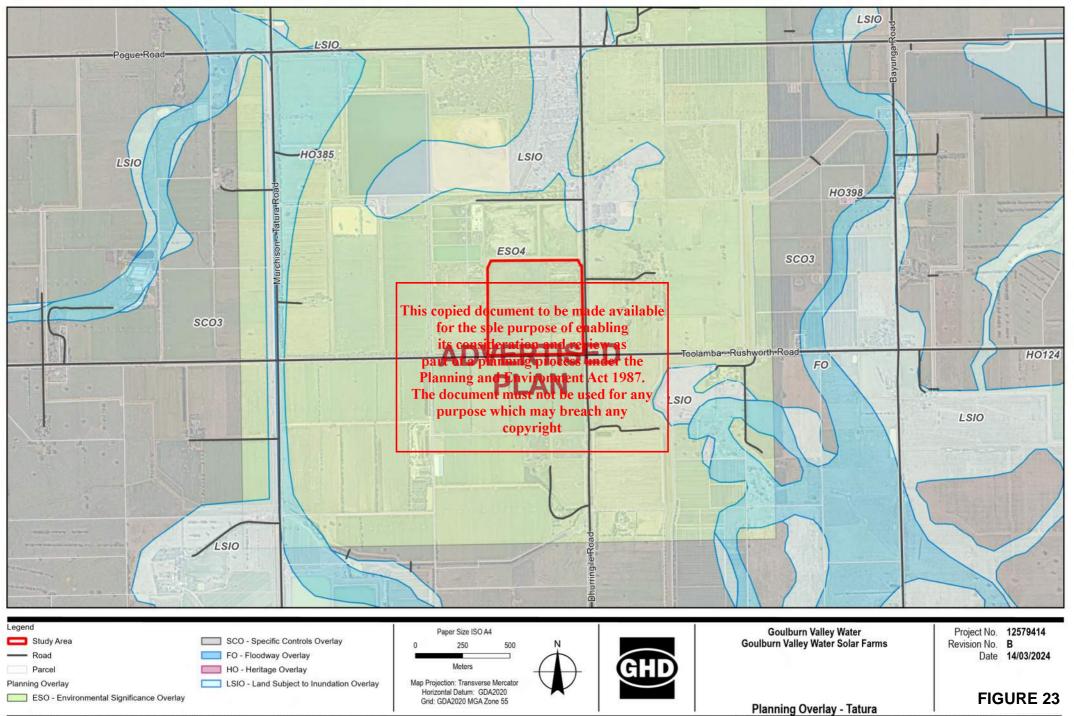
#### Clause 45.12 – Specific Controls Overlay (SCO)

The SCO applicable to the Site is the 'Goulburn-Murray Water: Connections Project and Water Efficiency Project -Incorporated Document'. The incorporated document functions to allow the use and development of land for the purpose of irrigation modernisation works to be undertaken by or on behalf of the Goulburn-Murray Rural Water Corporation. The document applies to the use and development of land undertaken by or on behalf of Goulburn-Murray Water to reduce water losses in the irrigation delivery system through renewal, rationalisation, and decommissioning of irrigation infrastructure.

The purpose of the SCO is:

To apply specific controls designed to achieve a particular land use and development outcome in extraordinary circumstances.

The controls specified in the relevant incorporated document of the SCO3 are not applicable to the installation of a solar farm. Pursuant to the SCO3 and relevant incorporated document, a permit is not required for this Project.



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Data source: DEECA, Vicmap, 2023; Nearmap imagery accessed 14/03/2024 World Light Gray Reference: Esn, HERE, World Light Gray Canvas Base: Esn, HERE, Garmin, USGS; Nearmap WMS Server; . Created by: ekafa

### 6.5 Particular provisions

### 6.5.1 Clause 52.06 – Car Parking

The purpose of Clause 52.06 is:

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

A renewable energy facility is not listed in Clause 52.06-5, Table 1. Pursuant to clause 52.06-6, where a use of land is not specified in Table 1, car parking spaces must be provided to the satisfaction of the responsible authority.

Clause 52.06-8 indicates that to provide for more car parking on the Site a car parking plan must be prepared to the satisfaction of the responsible authority. It is proposed that the works will include the provision for 6 car spaces.

Plans must be provided to the responsible authority under Clause 52.06-8 wherever Clause 52.06 applies, whether or not a permit application is being made under Clause 52.06-3 or any other provision of the planning scheme. Information required under Clause 52.06-8 may be included in other plans submitted with the application.

### 6.5.2 Clause 52.17 – Native Vegetation

Under Clause 52.17-2, a permit is required to remove, destroy or lop native vegetation, including dead native vegetation. Clause 73.01 of the planning scheme defines native vegetation as 'plants that are indigenous to Victoria, including trees, shrubs, herbs, and grasses.

The purpose of Clause 52.17 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):
- 1. Avoid the removal, destruction or lopping of native vegetation
- 2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided
- 3. Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation
- To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation

A site assessment conducted by GHD ecologists confirms that impacts the native vegetation associated with the Project would include the removal of 0.082 hectares of EVC 803 Plains Woodland. Therefore, pursuant to Clause 52.17-2 a permit is required to remove, destroy or lop native vegetation.

### 6.5.3 Clause 53.13 – Renewable energy facility

The Project is subject to Clause 53.13 due to the proposed solar farmland use. The purpose of Clause 53.13 is to:

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



Clause 53.13 requires the Project to adhere to specified application requirements to use the land for a solar farm facility. The specified applications requirements have been responded to in detail in section 7.4 of this report.

### 6.6 General provisions

#### 6.6.1 Clause 66.02-12 Declared irrigation districts

Pursuant to Clause 66.02-12, *An application to use or develop land for a renewable energy facility located within an irrigation district declared under Part 6A of the Water Act 1989* must be referred to the *GBCMA* that acts as the recommending referral authority. Greater Shepparton Council confirmed on the 7 March 2024 that the Site is not situated in a declared irrigation district. Therefore, it is not anticipated that the application should be referred to GBCMA for approval.

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# 7. Planning assessment

An overview of the applicable planning controls and approval requirements for each Project Site is presented in Table 13 below and further outlined in the proceeding sections.

Table 13Planning assessment summary

Planning control	Planning approval	Referral	Permit requirement
Zones			
Clause 36.01 - Public Use Zone – Schedule 1	1	×	Use and development of land for a solar energy facility
Overlays			
Clause 42.01 - Environmental Significance Overlay – Schedule 4	1	There is a referral requirement to GVW und this clause	ler Building and works Vegetation and native vegetation removal
Clause 43.01 – Heritage Overlay	×	×	×
Clause 44.03 Floodway Overlay	×	×	×
Clause 44.04 Land Subject to Inundation Overlay	× ×		×
Clause 45.12 - Special Controls Overlay – Schedule 3	This copied document to be made available for the sole purpose of enabling		×
Particular provisions	its consideration		
Clause 52.06 – Car Parking	part of a planning process under the Planning and Environment Act 1987.		× (To the satisfaction of the RA)
Clause 52.17 – Native Vegetation	The document must not be used for any purpose which may breach any copyright		A permit is required to remove, destroy or lop native vegetation, including dead native vegetation.
Clause 53.13 - Renewable energy facility	~	×	A planning permit is required for the use and development of land for the purpose of a solar energy facility.

### 7.1 Clause 36.01 – Public Use Zone

A response to the application requirements of the PUZ is provided at Table 14.

 Table 14
 PUZ application requirements

Application requirements	Response
An application for a permit by a person other than the relevant public land manager must be accompanied by the written consent of the public land manager, indicating that the public land manager consents generally or conditionally	The application is being made by GVW who own the land and is the public land manager. Therefore, written consent is not required.

Responses to the decision guidelines of the PUZ are provided in Table 15 below.

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#### Table 15 PUZ decision guidelines

Decision guidelines		Response
The Municipal Planning Strategy Framework.	and the Planning Policy	As discussed in sections 6.4 and 6.5 of this application, the Project soundly responds to the PPF and LPPF. The Project adheres to the MPS as the land use being used as a solar farm compliment the vision established by Council regarding increasing sustainability throughout the township. Further, the Project responds well to the PPF by providing clean infrastructure to address the issues that emerge from climate change. Please see sections 6.4 and 6.5 for a detailed assessment against the MPS and PPF.
The comments of any Minister of having responsibility for the care or adjacent land		GVW are the public land manager with the responsibility for the care and management of the land. The location of the Tatura solar farm is appropriately located by being surrounded by large paddocks and is therefore unlikely to interfere with how the surrounding lots are used. Further, key authorities such as the CFA have been involved in pre- application meetings in which they have acknowledged that they support the land use being used for a solar farm facility and adhering to relevant policies.
Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.		The Site is not located near any residential, recreational or education land uses thus the development of a solar farm should not interfere with the function of these land uses. Studies have indicated that there will be a minimal increase in traffic on the surrounding roads and limited visual impacts, indicating that it has been located and designed to complement the farming nature of the radion. The
		complement the farming nature of the region. The Landscape Visual Impact assessment has concluded that
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for the sole purpose make		<b>Chicketing the</b> the development has been located and
its consideration and reigined appropriately.		
	part of a planning pro	ocess under the

# 7.2 Clause 42.0<sup>Planni</sup>End frommental Significance Overlay

There are no application requirements as sociated with the benefitients this clause.

Responses to the decision guidelines of the ESO are provided in Table 16 below.

Table 16 ESO decision guidelines

Decision Guidelines	
The Municipal Planning Strategy and Planning Policy Framework.	The Project responds soundly to the MPS and PPF of the scheme through providing sustainable infrastructure to promote the liveability of residents. A detailed analysis of how the Project responds to the MPS and PPF is provided in sections 6.4 and 6.5 of this report.
The statement of environmental significance and the environmental objective contained in a schedule to this overlay.	The statement of significance contained in schedule 4 of the ESO is analysed in section 0 of this report.
The need to remove, destroy or lop vegetation to create a defendable space to reduce the risk of bushfire to life and property.	CFA have provided commentary regarding the layout of the Project regarding the proposed accessways which creates defendable spaces to reduce the risk of bushfire to life and property. Therefore, the removal of vegetation to create these defendable spaces is deemed appropriate in meeting the decision guidelines of reducing risk to life and property from prospective bushfires.
Any other matters specified in a schedule to this overlay.	Addressed in section 7.2.1

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### 7.2.1 Clause 42.01–Environmental Significance Overlay– Schedule 4

#### **Application requirements**

There are no application requirements associated with this clause.

Responses to the decision guidelines of the ESO4 are provided in Table 17 below.

#### Table 17 ESO4 decision guidelines

Decision guidelines	Response
Be impaired in its normal operation by odour emission from the wastewater treatment complex.	The Projects operation will not be impaired by dour emission from the wastewater treatment complex as the land use being proposed is for a solar farm.
The need to protect the continued operation and expansion of the Shepparton wastewater treatment complex.	The proposed works will assist in providing renewable energy for the Shepparton wastewater treatment complex, ensuring the continued operation and expansion of the Site.

### 7.3 Clause 52.17 – Native Vegetation

A response to the application requirements of Clause 52.17 is set out in Table 18 below.

#### Table 18 Clause 52.17 Native Vegetation application requirements

Application requirements	
part of a planning pro Planning and Environ The document must no	<ul> <li>GHD ecologists provided advice on options relating to minimising the impacts on native vegetation and fauna habitat. These included altering access routes to utilise existing dates and avoid higher-quality fauna habitat.</li> <li>Changing the routes of internal roads to avoid a large dead the addew take, and repositioning the solar array within the office trailed impacting native vegetation along the southern many externs will be incorporated into the CEMP and implemented during the works to avoid and minimise impacts on native vegetation:</li> <li>Restrict access tracks to the minimum required for vehicles and machinery needed for the works and operation of the solar facility.</li> <li>Do not park vehicles or machinery on roadside vegetation outside of the allotted impact area.</li> <li>Avoid impacting FFG Act listed species where possible.</li> <li>Install No-Go fencing to protect surrounding native vegetation.</li> </ul>

Responses to the decision guidelines of Clause 52.17 are provided in Table 19 below.

#### Table 19 Clause 52.17 Native Vegetation decision guidelines

Decision guideline	Response
If a permit is required to remove, destroy or lop native vegetation, the biodiversity impacts from the removal, destruction or lopping of native vegetation must be offset, in accordance with the Guidelines. The conditions on the permit for the removal, destruction or lopping of native vegetation must specify the offset requirement and the	Due to the proposed impacts to native vegetation as a result of the works, offsets will need to be secured that meet specific criteria as outlined in the native vegetation removal report (NVRR). The NVR report states that the following general habitat unit offsets are required for the Project. A total of 0.034 general habitat units (GHU) with a minimum strategic biodiversity value of 0.309 must be secured from the Greater Shepparton City LGA area or the Goulburn Broken CMA. No species-specific offsets are required based on the NVR report.
timing to secure the offset.	The Project responds soundly to the decision guidelines of Clause 52.17. This report has demonstrated that the impacts native vegetation due to works and land use associated with a solar farm facility is minimal.

# 7.4 Clause 53.13 Renewable energy facility

Clause 53.13 – Renewable energy facility, requires that an application to use and develop land for the purpose of a solar energy facility must be accompanied by the following information, as appropriate (shown in Table 20)

Table 20 Clause 53.13 Renewable energy facility application requirements

Application requirements	Response
<ul> <li>A site and context analysis, including:</li> <li>A site plan, photographs or other techniques to accurately describe the site and the surrounding area.</li> <li>A location plan showing the full site area, local electricity grid, access roads to the site and direction and distance to nearby accommodation, hospital or education centre.</li> </ul>	Figure 1 and Figure 2 of this report responds to the application requirement of demonstrating the context of the Site and design response. These figures display the accessways of the Site, relevant zones, and overlays in proximity to the Site and where the prospective solar panels will be located on the site. Further, section 2 of this report provides a description of the Site regarding its physical characteristics and proximity to nearby townships, education facilities and emergency services thus adhering to the application requirements of this clause.
A design response, including:	Please see for detailed development plans.
<ul> <li>Detailed plans of the proposed development including, the layout and height of the facility and associated building and works, materials, reflectivity, colour, lighting, landscaping, the electricity distribution starting point (where the electricity will enter the distribution system), access roads and parking areas.</li> <li>Accurate visual simulations illustrating the development in the context of the surrounding area and from key public view points.</li> <li>The extent of vegetation removal and a rehabilitation plan for the site</li> </ul>	Please see Appendix A for the Landscape and Visual Impact Assessment, it illustrates the development in context of the surrounding area and roadsides. Please refer to Appendix C for the Ecological Assessment responding to the extent of vegetation removal and rehabilitation plan.
its consideration a	nd review as
<ul> <li>Written report and assessment, including t of a planning process to provide the proposor and responds to the site analysis the document must not and responds to the site analysis the document must not and responds to the proposal, including the document must not including the document must not process to be utilised, materials to be stored and the copyrige treatment of waste.</li> <li>Whether a Development Licence, Operating Licence, Permit or Registration is required from the Environment Protection Authority.</li> <li>The potential amenity impacts such as noise, glint, light spill, emissions to air, land or water, vibration, smell and electromagnetic interference.</li> <li>The effect of traffic to be generated on roads.</li> <li>the impact upon Aboriginal or non-Aboriginal cultural heritage.</li> <li>the impact of the proposal on any species listed under the Flora and Fauna Guarantee Act 1988 or Environment Protection and Biodiversity Conservation Act 1999.</li> <li>A statement of why the site is suitable for a renewable energy facility including, a calculation of the greenhouse benefits.</li> <li>An environmental management plan including, a construction management plan, any rehabilitation and monitoring.</li> </ul>	Registration is not required from the Environment Protection Authority t be used for any The potential amening impacts including poise, glipt and light

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Responses to the decision guidelines of Clause 53.13 are provided in Table 21 below.

Table 21 Clause 53.13 Renewable energy facility decision guidelines

Decision guidelines	Response
The Municipal Planning Strategy and the Planning Policy Framework	A detailed analysis of how the Project responds to the MPS and PPF is provided in sections 6.4 and 6.5 of this report.
The effect of the proposal on the surrounding area in terms of noise, glint, light spill, vibration, smell and electromagnetic interference.	A solar glare assessment conducted by GHD consultants concluded that during the autumn to spring months, when the sun angle is low in the morning and evening, (predominantly during 6:00 am to 8:00 am and 4:45 pm to 6:15 pm), there is potential glare for route receptors located along the road south of the PV array. During summer months in the evening between the hours of 6:30 pm to 8 pm, only glare with a low potential to cause an after-image was predicted for nearby point observers to the east of the array, and for flight path receptors north-east of the array.
The impact of the proposal on significant views, including visual corridors and sightlines.	The Landscape and Visual Impact Assessment determined that the visual impacts ranged from Moderate to Negligible. The most significant impacts where Moderate-Low within the vicinity of VP07 (Toolamba-Rushworth Road) due to the magnitude of change and the proximity to the Project.
The impact of the proposal on strategically important agricultural land.	The former drying pan has been cultivated and cropped since 2018 for canola and more recently wheat. Implementing renewable energy sources is of economic importance and will assist the region and surrounding farms to meet their energy needs. Due to the works occurring within a small area, 17.1 ha, and the surrounding landscape being agricultural in nature it is only expected to contribute to a minimal (if any) loss of agricultural land.
The impact of the proposal on the protection of declared irrigation districts.	Greater Shepparton Council confirmed on the 7 March 2024 that the Site is not situated in a declared irrigation district.
The impact of the proposal on the natural environment and natural systems.	Fieldwork conducted by GHD ecologist confirms that the Site is dominated by non-native species with native vegetation being restricted to the roadside reserve and a short extent along the southern boundary. In total, 0.082 hectares of native vegetation is expected to be impacted by the proposed works. Based on this, the proposed solar energy facility is unlikely to impact on the natural environment of the Site.
The impact of the proposal on the road network.	Analysis by GHD traffic engineers has determined that the Project will have minimal impact on roads. It is estimated that the construction traffic would be around 34 vehicle movements per day during the peak of the construction period. It is expected that traffic movements would be minimal during the operation period. This would be limited to routine maintenance and emergency maintenance only and expected to be in the order of approximately 5 vehicles per week.
Solar Energy Facilities Design and Development Guideline (SEFDDG) (Department of	This Project has considered clauses that the SEFDDG addressed as important, these are outlined in section 6.3 of the report.
Environment, Land, Water and Planning, October 2022).	This Project has considered the best practice for proponents of the SEFDDG by engaging stakeholders in the planning process. Please see section 4 of this report for a detailed response of stakeholder
This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any	<ul> <li>engagement in this Project.</li> <li>Considerable consideration has gone into the design of the solar facility in line with the SEFDDG. Refer to Appendix A, Appendix B and Appendix D for the LVIA, Traffic Impact Assessment and Solar Glare Assessment respectively.</li> <li>No impact is expected on Aboriginal or non-Aboriginal cultural heritage as discussed in section 5.2 of this report. The Site is not in a Heritage</li> </ul>
purpose which may breach any copyright	Overlay or a location of Aboriginal cultural heritage significance. Based on this, the proposed solar energy facility is expected to be in line with the Solar Energy Facilities Design and Development Guidelines.



# 8. Conclusion

This application for a planning permit has been prepared by GHD on behalf of GVW for the use and development of land for a solar energy facility.

Planning approval is required for the use and development pursuant to:

- Clause 36.01, PUZ1, for the use and building and works.
- Clause 42.01, ESO4, for building and works.
- Clause 52.17 to remove, destroy or lop any native vegetation.
- Clause 53.13 to use land for a renewable energy facility.

On balance this application supports the recommendations established in the Solar Energy Facilities Design and Development Guidelines and is considered consistent with the Greater Shepparton Planning Scheme as follows:

- The Project seeks to revitalise the land which is has been decommissioned for several years. A solar energy
  facility will support the national electricity transmission network by receiving all power that is generated by the
  solar facilities on the GVW owned Site.
- The Project will support the Greater Shepparton Councils vision of supporting clean energy infrastructure to improve sustainable outcomes within their municipality.
- The Projects design and use have been guided by several technical investigations and impact assessments in consultations with key stakeholders including the CFA, DEECA and Indigenous communities.
- The solar glare and landscape visual impacts are minimal and are unlikely to have any detrimental impact on adjoining properties or the landscape.
- The proposal will not impact significant vegetation. Fieldwork conducted by GHD ecologist confirms that the Site is dominated by non-native species with native vegetation being restricted to the roadside reserve and a short extent along the southern boundary. In total, 0.082 hectares of native vegetation is expected to be impacted by the proposed works. Based on this, the proposed solar energy facility will not hinder Councils endeavours to protect and enhance biodiversity values through native vegetation.
- Analysis by GHD traffic engineers has determined the Project will have minimal impact on the abutting roads.
   It is estimated that the construction traffic would be around 34 vehicle movements per day during the peak of the construction period. It is expected that traffic movements would be minimal during the operation period.

Overall, we consider the use of land and works associated with the solar energy facility to be consistent with the relevant provisions of the Greater Shepparton Planning Scheme. The Project represents an appropriate and consistent development outcome in the context of the Site and its surroundings.

We respectfully request that timely approval is granted for this application for a planning permit.

