

# Yover Place, Narrandera John Arnold

Document control	COR HE CLONES
Project name	23 Drover Place, Narrandera
Project number	J2206
Prepared/reviewed by	Nick Hall/John Arnold
Status	Final
Version number	1-01
Date	23 February 2023

This report has been prepared in accordance with the brief provided by the client and has relied upon the information collected at the time and under the conditions specified in the report. All findings, conclusions or recommendations contained in the report are based on the aforementioned circumstances. The report is for the use of the client and no responsibility will be taken for its use by other parties. The client may, at its discretion, use the report to inform regulators and the public.

© Reproduction of this report for educational or other non-commercial purposes is authorised without prior written permission from Arnold Planning provided the source is fully acknowledged. Reproduction of this report for resale or other commercial purposes is prohibited without Arnold Planning's prior written permission.

# **Table of contents**

1	Introd	uction	1
	1.1	Overview	1
	1.2	The site and surrounding area	1
	1.3	Site ownership	4
	1.4	History of the site	4
2	The p	roposed development	5
	2.1	Overview	5
	2.2	Solar energy system	5
	2.3	Built elements	11
	2.4	Construction	11
		2.4.1 Site preparation and earthworks	12
		2.4.2 Temporary construction facilities	12
		2.4.3 Materials and resources	13
		2.4.4 Construction waste	13
		2.4.5 Construction traffic, access and parking	14
	2.5	Construction personnel and work hours	15
	2.6	Operations	15
	2.7	Parking	15
	2.8	2.4.1 Site preparation and earthworks 2.4.2 Temporary construction facilities 2.4.3 Materials and resources 2.4.4 Construction waste 2.4.5 Construction traffic, access and parking Construction personnel and work hours Operations Parking Services Stormwater and drainage Decommissioning ing framework	15
	2.9	Stormwater and drainage	16
	2.10	Decommissioning	16
3	Plann	ing framework	17
	3.1	Environmental Planning and Assessment Act 1979	17
	3.2	Environmental planning instruments	18
		3.2.1 State Environmental Planning Policy (Biodiversity and Conservation) 2021	18
		3.2.2 State Environmental Planning Policy (Transport and Infrastructure) 2021	18
		3.2.3 State Environmental Planning Policy (Resilience and Hazards) 2021	19
		i Hazardous and offensive development	19
		ii Remediation of land	20
	3.3	Riverina Murray Regional Plan 2041	20
	3.4	Narrandera Local Environmental Plan 2013	20
	3.5	Narrandera Development Control Plan 2013	24

	3.6	Local Strategic Planning Statement 2020 – Narrandera Shire Council	26
4	Assess	sment	27
	4.1	Traffic, access and parking	27
	4.2	Noise	27
	4.3	Bushfire	28
	4.4	Visual	29
	4.5	Other environmental aspects	31
	4.6	Social and economic	33
	4.7	Suitability of the site for development	33
	4.8	The public interest	33
5	Conclu	usion	34
Figu	ires		
Figu	re 1.1	Aerial plan of the site and surrounding area (Source: Six Maps)	2
Figu	re 2.1	Site plan (Source: Azelio)	5
Figu	re 2.2	Plans of the proposed solar panels (Source: Longi)	6
Figu	Figure 2.3 Sections of the proposed tracking system rows (Source: Deger)		7
Figu	re 2.4	Conceptual structure of the electrical energy storage system (Source: Azelio)	8
Figu	re 2.5	TES. PODs cluster layout plan (Source: Azelio)	9
Figu	re 2.6	TES. PODs cluster 3D rendering (Source: Azelio)	9
Figu	re 2.7	TES. PODs cluster north elevation (Source: Azelio)	10
Figu	re 2.8	TES. PODs cluster south elevation (Source: Azelio)	10
Figu	re 2.9	Energy flow scenarios to be achieved by EMS control logic (Source: Azelio)	10
Figu	re 3.1	NLEP 2013 site zoning (Source: NSW Planning Portal Maps)	21
T-1-1	l	SUB	
Tabl	e 2.1	Required power plant generation system summary (Source Azelio)	7
	e 2.2	Estimated machinery and equipment	12
	e 2.3	Expected construction traffic generation	14
	e 3.1	Assessment against NLEP 2013	21
	e 3.1	Assessment against NDCP 2013	23
	e 4.1	Construction hours	23 27
	e 4.1	Other environmental aspects	30
ıaul	<del>∪</del> 4.∠	Other environmental aspects	30

### **Photographs**

Photograph 1.1	Photograph of the site looking north-west	3
Photograph 1.2	Photograph of the site looking north-east	3
Photograph 4.1	Approximate location of the proposed solar farm – looking west from Mcgilvray Road	28
Photograph 4.2	Approximate location of the proposed solar farm – looking north from Driscoll Road	29
Photograph 4.3	Approximate location of the proposed solar farm – looking north-east from Paterson Place	29



# 1 Introduction

### 1.1 Overview

Solar Switch Renewables (the applicant) seeks development consent from Narrandera Shire Council (Council) for the construction of a solar farm (the proposed development) at 23 Drover Place, Narrandera, NSW (the site).

This statement of environmental effects (SEE) accompanies a development application (DA) submitted to Narrandera Shire Council seeking consent for the proposed development under Part 4 of the NSW *Environmental Planning and Assessment Act* 1979 (EP&A Act). It provides details of the proposed development and includes an assessment against the relevant provisions of the EP&A Act and other relevant planning policies and controls.

This SEE demonstrates that the proposed development is consistent with the relevant planning framework and will not have adverse environmental or community impacts. It will provide economic and social benefits, is in the public interest and the site is suitable for the proposed development. For these reasons, the DA should be approved.

The following information accompanies the DA:

- Site Survey Plan, prepared by PHL Surveyors, dated 19 August 2022;
- Proposed Site Plans, prepared by the applicant, dated 15 February 2023.
- Proposed Plans of Solar Panels, prepared by Deger, dated 2 November 2022;
- Cost estimate report, dated 16 February 2023
- Narrandera Shire Council owners consent form, dated 25 January 2023
- Statement of Environmental Effects, prepared by Arnold Planning, dated 23 February 2023;
- Bushfire Assessment Report, prepared by SET Consultants, dated 16 February 2023; and
- Erosion and Sediment Control Plan, prepared by SET Consultants, dated 3 February 2013.

### 1.2 The site and surrounding area

The site address is 23 Drovers Way, Narrandera, NSW, 2700 and is legally described as Lot 67 DP 1288793.

Narrandera is a town located in the Riverina region of southern NSW. The town lies on the junction of the Newell and Sturt highways, adjacent to the Murrumbidgee River.

The site is located to the north east of Narrandera town centre near the Newell and Sturt Highways (approximately 1 km and 4 km respectively). It comprises approximately 27 ha and lies within the larger 60 ha Red Hill Industrial Estate. Part of the estate has already been subdivided with several businesses already operating from there including Bio Ag, Downer, Hutchins Bros Engineering, Landmark, McGilvray Skin & Hide Dealers, Milbrae Quarries and Patersons Transport.

Figure 1.1 below shows the site and surrounding area.

The site

Figure 1.1 Aerial plan of the site and surrounding area (Source: Six Maps)

The estate land has been subdivided further into the northern portion of the site to create a series of additional lots. This includes the site that is the subject of this application which is irregular in shape and is located near the intersection of Driscoll Road and Mcgilvrays Road.

Topographically, the site has a steady downslope in a southerly direction with stormwater naturally seeping in this direction. As shown in Photograph 1.1 and Photograph 1.2 below, the site has been subject to previous clearing and comprises mainly grassland vegetation. There are two watercourses in the western part of the site.

A high-pressure dangerous goods (HP DG) pipeline and associated easement runs through the site in a roughly horizontal direction to the east-west which is operated by APA Group.

The site is bounded to the north, east and west by areas of varying levels of vegetation cover whilst the area to the immediate south is characterised by industrial uses within the Red Hill estate. There are no residential areas in the immediate vicinity of the site, with the close residences being in Kiesling Drive, Pirani Place and Boundary Road, off Racecourse Road, approximately 1.5 km to the south-west of the site.

Photograph 1.1 Photograph of the site looking north-west





### 1.3 Site ownership

The site is currently owned by Council. A completed and signed landowner's consent form has been provided and accompanies the DA.

### 1.4 History of the site

The area of the site where the solar farm is proposed to be constructed and operated has been cleared of vegetation.

The land is vacant and except for the HP DP gas pipeline has had no previous uses. As such, it is understood that there are no development applications that pertain to the site.



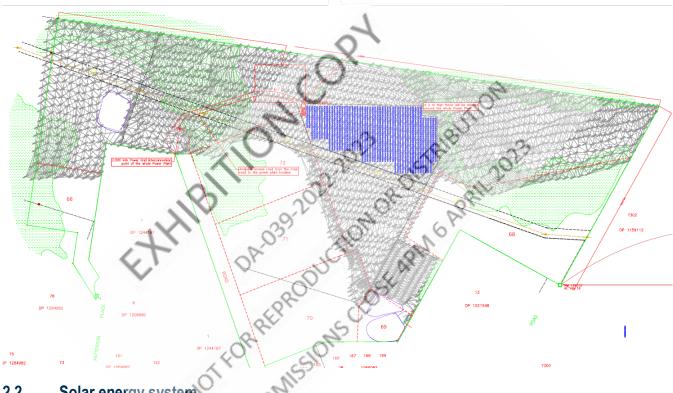
# 2 The proposed development

### 2.1 Overview

The DA seeks consent for the construction and operation of a solar farm on the site that will generate renewable energy for the national grid. It has been designed and will be constructed and operated by the applicant. Once constructed, it will operate 24 hours a day, seven days a week, 365 days a year, for a period of approximately 30 years.

An excerpt of the proposed site plan is provided in Figure 2.1 below and in the plans accompanying the DA.

Figure 2.1 Site plan (Source: Azelio)



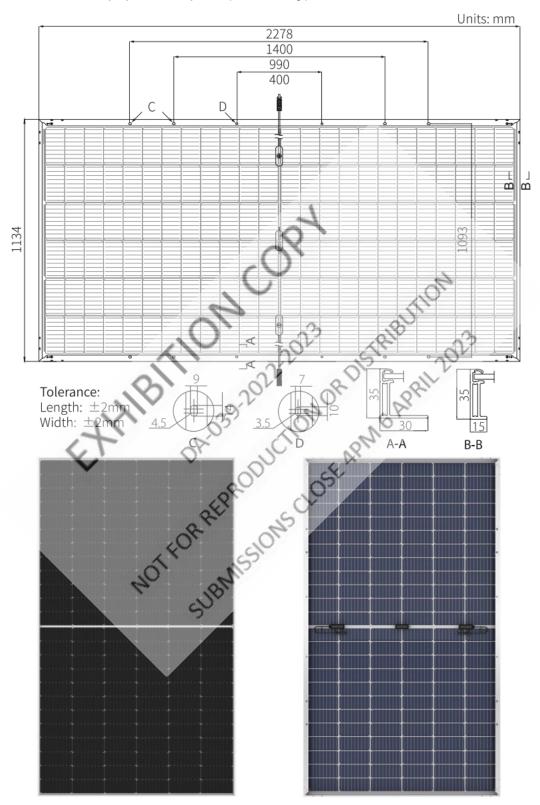
# 2.2 Solar energy system

The solar farm will convert sunlight into energy using a ground mounted single axis bifacial power plant, comprising 4,541 Photovoltaic (PV) modules (239 strings x 19 in series) that will generate 2,475k watt peak (Wp), together with a single 2,200 kilowatt alternating current (kWac) inverter and 825 kilowatt hours (kWh) of storage.

The solar farm will convert sunlight into direct current using Longi Solar LR5-72 HBD 545W PV panels. The panel surface comprises 35 mm high transmission, anti-reflection coated tempered glass and silver anodized aluminium alloy frame. These panels will be mounted on a horizontal single axis tracking system.

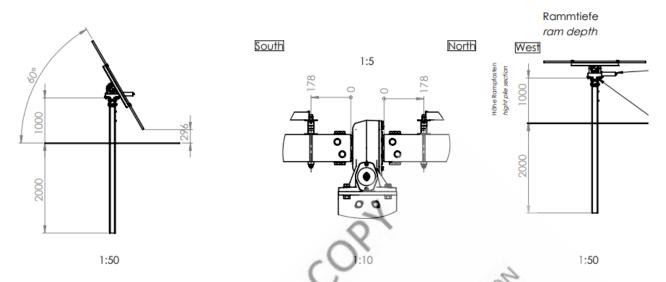
The panels have a dimension of 2.28 m x 1.13 m x 35 mm placed in one portrait row layout on tracking system rows of various lengths with 2 m embedded piles as shown in Figure 2.2.

Figure 2.2 Plans of the proposed solar panels (Source: Longi)



The panels will be 1.3 m in height when horizontal and 2.3 m in height at full 60 degree tilt with a ground clearance of 0.3 m (refer Figure 2.3 below).

Figure 2.3 Sections of the proposed tracking system rows (Source: Deger)



The proposed array comprises several PV panel rows running north to south across the site with a total area (including row spacing) of 31,035m<sup>2</sup>. In total, 4,541 panels will be installed with a total panel surface area of 11,607 m<sup>2</sup>.

To compliment the power plant there will be an 825 kWh thermal energy storage system (TES.POD) and associated components that will be sited next to the solar array.

The power generation components of the power plant are summarised in Table 2.1 below.

Table 2.1 Required power plant generation system summary (Source: Azelio)

Components / power generation	0, 000	Baseline generation system
Solar PV technology	REPRE	Monocrystalline Bi-Facial on Horizontal Single Axis Tracking
Solar PV power plant size	OR GIO	2,475 MWp
TES.POD nominal power capacity	GN15	65 kW (5 units)
TES.POD nominal power capacity	37	825 kWh
Grid connection capacity		2,000 kVA
Total renewable energy delivered to the grid		4,595 MWh/year

The proposed long duration electrical energy storage system is used for shifting the electrical energy produced during the day by Solar PV into use at night, allowing to increase the yearly renewable energy penetration. The system is modular and thus scalable for different energy and power capacity requirements by combining an adequate number of TES.PODs.

Figure 2.4 shows the conceptual structure of the energy storage system.

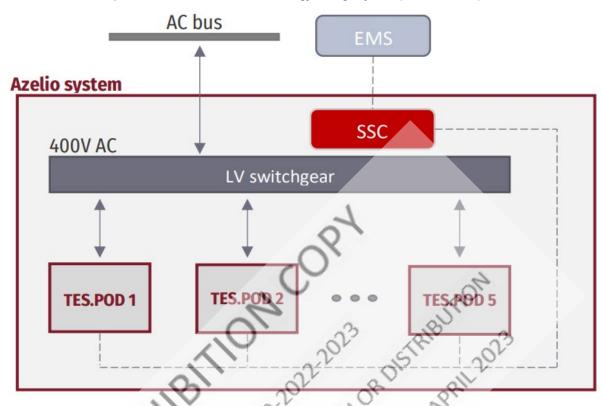


Figure 2.4 Conceptual structure of the electrical energy storage system (Source: Azelio)

TES.PODs gives access to low-cost renewable electricity during the night. Load shifting allows for system optimisation and enhanced operation for existing and planned PV installation. They act as a form of battery by providing electricity on demand at hours when the sun is not shining or when direct energy production from solar PV is sufficient-enabling renewable energy power for all hours of the day.

Australian Standard AS 5139:2019: Electrical installations - Safety of battery systems for use with power conversion equipment requirements applies installation and safety requirements for Battery Energy Storage Systems, where the battery system is installed in a location, such as a dedicated enclosure or room, and is connected with power conversion equipment.

In this case, a total of 5 TES.PODs will be required for the power plant. These will be collectively arranged in a cluster protected by a car port type structure (22.46 m long, 6.966 m wide and 5.059 m high) as shown in Figures 2.5 to 2.8.

The entire TES.POD cluster area (32.46 m long and 26.966 m wide) will be fenced (see Figures 2.5 to 2.8)

Outside of the TES.POD cluster area will be technical housing (10 m long and 8 m wide) (see Figures 2.5 to 2.7).

Figure 2.5 TES. PODs cluster layout plan (Source: Azelio)

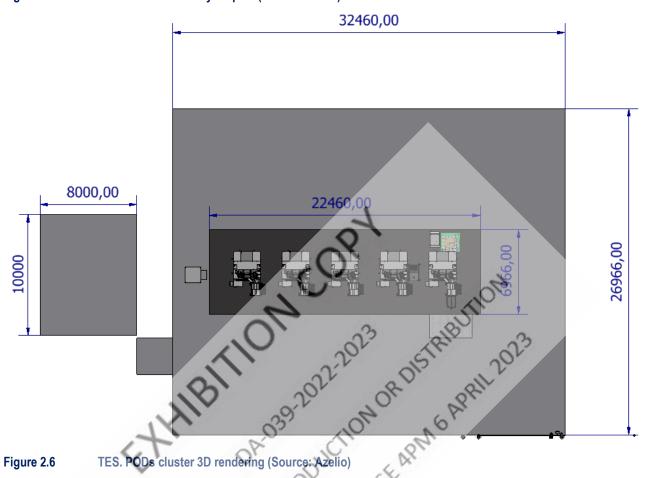


Figure 2.6

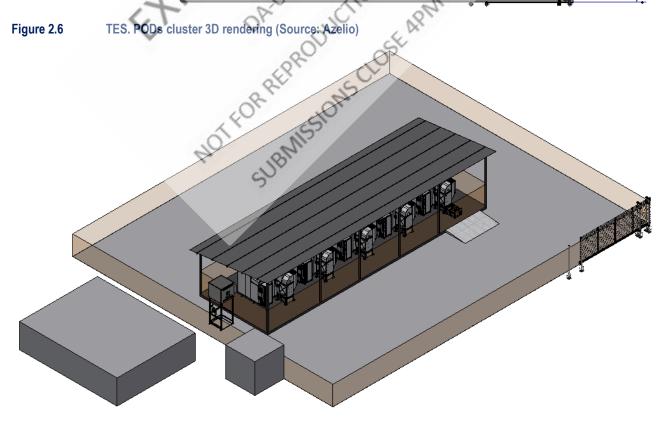


Figure 2.7 TES. PODs cluster north elevation (Source: Azelio)

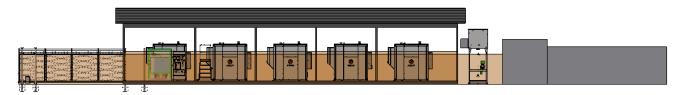
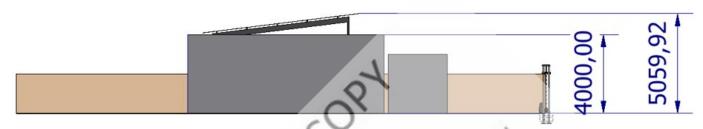
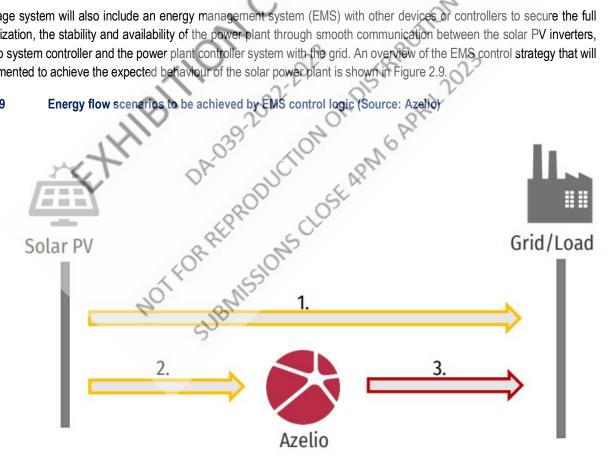


Figure 2.8 TES. PODs cluster south elevation (Source: Azelio)



The storage system will also include an energy management system (EMS) with other devices or controllers to secure the full synchronization, the stability and availability of the power plant through smooth communication between the solar PV inverters, the Azelio system controller and the power plant controller system with the grid. An overview of the EMS control strategy that will be implemented to achieve the expected behaviour of the solar power plant is shown in Figure 2.9.

Energy flow scenarios to be achieved by EMS control logic (Source: Azelio) Figure 2.9





### 2.3 Built elements

As shown on the plans submitted with the DA, the proposed development will consist of the following built elements:

- 4,541 PV panels;
- one inverter station (2780 mm x 2318 mm x 1588 mm);
- energy storage system cluster containing TES.PODs;
- weather protection steel roof structure;
- technical housing;
- all weather access track;
- construction and parking area;
- security fencing and signage;
- underground high voltage (HV) cables; and
- associated circuitry and supporting infrastructure

### 2.4 Construction

There will be a 10-month installation/construction timeframe, comprising

- three months for the installation of the solar PV plant
- four months for the installation of the storage system; and
- three months for construction.

The main construction activities for the solar PV plant include:

- site preparation and clearing preparing the land for construction, including grading, excavation for cable laying, and clearing the area of obstacles. Construction of temporary facilities (fencing, construction of the internal track system);
- foundation / Piling works: piling of HEA and IPE profiles, installation of central beam and module rails;
- module installation: mounting of solar panels onto the module rails using mounting materials (clamps, nuts, bolts);
- electrical work: installing electrical infrastructure, including inverters, transformers, and switchgear to convert the Direct Current power generated by the panels into Alternative Current power;
- grid connection: connecting the plant to the electrical grid, including installing power transmission lines and substations;
- testing and commissioning: testing the plant's components and systems to ensure they are working properly and commissioning the plant once it is operational; and
- removal of temporary construction facilities and rehabilitation of disturbed areas.

The main construction activities for the TES.POD units include:

- topsoil removal and concrete foundation pouring;
- cluster power and control equipment installation;
- cluster Auxiliaries installation;
- cluster integration and connection to PV array;
- lifting TES.PODs on site;
- aluminium filling; and
- installation of steel weather protection roof structure.

### 2.4.1 Site preparation and earthworks

Due to the cleared and level nature of the development site, minimal earthworks will be required to construct the solar farm. Civil works will be limited to construction of internal roads and trenching for underground infrastructure.

Ground disturbance associated with the proposed development will be minimal and limited to:

- the installation of the steel posts to support the solar panels up to approximately 2 m deep, cable trenches up to approximately 0.65 m deep;
- construction of internal access tracks and access points and associated drainage;
- ground preparation for the energy storage system and inverter, including excavation to approximately 0.5 m deep; and
- the installation of a 2 m high perimeter security fencing, lighting and CCTV

### 2.4.2 Temporary construction facilities

Temporary facilities established at the site during the construction phase will include

- material laydown areas;
- construction site office, generator and skip bins with wind shield and lid;
- car and parking area for construction workers
- staff office;
- staff amenities;
- a construction compound (approximately 8 m by 4 m); and
- fencing/lighting/CCTV around the perimeter.

The construction compound will include hard stand comprising compacted stone / gravel to provide a clean, firm, level, and free draining surface suitable for cabins and heavy traffic. Temporary staff amenities will be provided for construction workers in the form of portable toilets.

Overall, the temporary construction facilities will accommodate the proposed maximum number of workers simultaneously at the site at the peak of the construction period.

### 2.4.3 Materials and resources

Construction materials will be sourced locally wherever possible. Gravel will be imported to surface the access road and parking/laydown area. Sand may be required for the bedding of underground cables, depending on ground conditions. Concrete will be required to install the battery.

Water will be required during construction, mostly for dust suppression, but also for cleaning, concreting and temporary on-site amenities.

Additional water will be required for fire-fighting purposes in a prefabricated non-combustible storage tank (neutral colour) or in hydrants, in accordance with the NSW Rural Fire Service's (RFS) *Planning for Bush Fire Protection 2019* (PBP 2019) (as considered further in Section 4.3).

Indicative machinery/plant types and numbers, that will potentially be in use at any one time across the site during construction, are provided in Table 2.2.

Table 2.2 Estimated machinery and equipment

Plant description	Estimated number of items
Delivery trucks	023 TRIBL 5 23
Pile driving rig	a Dis all 270
Crane / Telehandler	THO! CAPIT
30t excavator	The APM
Bobcat tracked	05/2
Dump truck	5
Water truck	1
Scraper for topsoil stripping	1
Grader (access track construction)	1
Smooth drum roller (access track construction)	1

### 2.4.4 Construction waste

The management of waste during the construction phase will be undertaken in accordance with the objectives of the NSW Waste Avoidance and Resource Recovery Act 2001.

Construction wastes will include:

- packaging materials;
- excess building materials, scrap metal and cabling material;

- excavation of topsoils; and
- bio wastes facilities, hired from portable toilet providers.

Waste produced during construction will be disposed of at an appropriately licensed waste facility.

In accordance with the NSW Protection of the Environment Operations Act 1997 (POEO Act) and associated waste classification guidelines, most waste will be classified as building and demolition waste within the class general solid waste (non-putrescibles). Experience suggests that with other existing solar farms, approximately 80 % of site waste is recyclable.

Ancillary facilities in the site compound will produce sanitary wastes classified as general solid waste (putrescibles) in accordance with the POEO Act. Toilet hire and maintenance services will be employed to remove sanitary wastes on a regular basis.

### 2.4.5 Construction traffic, access and parking

As general solic.
To remove sanitary

Place with a site access and internal.
Trucks to turn and a parking area for construite proposed development is detailed in Table 2.3. Construction traffic and access will be provided via Paterson Place with a site access and internal access road being provided to the construction compound. This will include an area for trucks to turn and a parking area for construction workers to park.

The expected construction traffic generated by the proposed development is detailed in Table 2.3.

Table 2.3 Expected construction traffic generated

Phase	Description of vehicles	Expected vehicle movements
Establishment	4 trucks and trailers to deliver materials (with 2 persons per vehicle)	8 vehicle trips per day
	4 light vehicles	8 light vehicle trips per day
Construction	2 articulated trucks to deliver equipment	4 vehicle trips per day
	10 light vehicles for 20 construction workers	20 vehicle trips per day
Commissioning	5 light vehicles with 2 persons per vehicle	10 vehicle trips per day

# 2.5 Construction personnel and work hours

At the peak construction period, the solar farm is expected to require approximately 20 workers. Construction activities will be undertaken during standard construction hours (7.00 am to 6.00 pm Monday to Friday and 8.00 am to 1.00 pm on Saturdays).

Construction activities will be restricted to the hours indicated above. Any unanticipated construction required outside of these hours will only be undertaken with prior approval from relevant authorities.

It is anticipated that most workers will be locals, or if non-local, will use existing accommodation within the local area.

# 2.6 Operations

The Solar PV array will operate 365 days during sunlight hours while the TES.POD cluster will operate 13 to 15 hours during night time hours, 365 days per year.

Once the solar farm is commissioned, it will continuously operate autonomously. The power plant and storage system will need to be serviced by personnel every six months and more often if the need arises.

During scheduled maintenance works, up to five personnel may be required.

### 2.7 Parking

The total parking requirement for site operations is as follows:

- five spaces for light vehicles, including cars; and
- one space for unloading and turning of heavy vehicles.

The location of the proposed parking is shown in the plan excerpt in Figure 2.1 above and in the plans accompanying the DA.

### 2.8 Services

The site is serviced by potable and low-cost raw recycled water and high flow natural gas. The proposed development will utilise water only.

The applicant will provide temporary amenities including water closets (WC's) (porterloos or something similar) on site for use by construction workers, one of which will be retained for use by operational worker(s).

The proposed development will also be connected to currently available electricity services. The applicant will seek connection approval and upgrade to 2 megavolt amperes (MVA). This will allow the energy generated by the solar farm to be provided to the national grid.

The land has suitable access via Paterson Place. Connection to the road network will be subject to a separate approval from Council.

### 2.9 Stormwater and drainage

Stormwater drainage freely flows across the site in a generally southerly direction due to existing topography. The nature of the proposed development is such that no additional stormwater will be generated and therefore no additional drainage infrastructure is required.

As detailed in Section 4.5 (Table 4.2), an Erosion and Sediment Control Plan has been prepared to minimise and manage potential related impacts during construction and will be submitted with the DA.

### 2.10 Decommissioning

Most components of the proposed development (including panels and storage system) have a 30-year design life expectancy. At this stage, the intention is to maintain/upgrade the facility over its life, as components wear out and new technology becomes available. Accordingly, the facility is likely to remain functional and operating into the foreseeable future.

However, should the facility's useful life end for any number of commercial or practical reasons, the site can easily be remediated and reverted to its existing use or another use allowable under the planning provisions of the time.

The non-invasive mounting system makes decommissioning and removal of all panels and componentry a relatively simple process and will allow for the full remediation of the site

The TES.POD storage clusters use non-toxic recycled aluminium, and the units are 99% recyclable.

NOT FOR CUBINISH

# 3 Planning framework

### 3.1 Environmental Planning and Assessment Act 1979

Section 4.15 (1) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) provides the following matters for consideration by a consent authority in determining a development application:

- a) the provisions of:
  - i) any environmental planning instrument, and
  - ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred definitely or has not been approved), and
  - any development control plan, and
    any planning agreement that has been entered into under section 7.4, or any draft planning agreement that
    a developer has offered to enter into under section 7.4, and
  - iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),
  - v) (Repealed),

that apply to the land to which the development application relates,

- b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,
- c) the suitability of the site for the development.
- d) any submissions made in accordance with this Act or the regulations,
- e) the public interest.

Section 4.15(1)(a) matters are addressed in this chapter

Matters 4.15(1)(b), (c) and (e) are addressed in Chapter 4.

Matter 4.15(1)(d) will be addressed by Council who will consider any relevant submissions received during the public exhibition of the DA.

The following approvals identified in Section 4.46 of the EP&A Act will be required and, therefore, the proposed development constitutes integrated development:

- Section 138 consent under *The Roads Act 1993*; and
- Section 100B authorisation under The Rural Fires Act 1997.

### 3.2 Environmental planning instruments

### 3.2.1 State Environmental Planning Policy (Biodiversity and Conservation) 2021

The NSW State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP) aims to protect the biodiversity values of trees and vegetation and encourage the conservation and management of areas of natural vegetation that provide habitat for koalas.

Pursuant to Schedule 2 of the Biodiversity and Conservation SEPP, the Narrandera Shire local government area is listed within the Far West Riverina Koala Management Area and as such all development must assessed in consideration of it impact on koalas and/or their habitat.

Section 4.9 of the Biodiversity and Conservation SEPP sets out development control provisions for koala habitats, including the requirement for a koala plan of management that applies to the land. In this instance, the site is clear of any recognised koala habitat, and it is therefore considered not be to be core koala habitat or potential core koala habitat. As such, a koala plan of management is not considered warranted.

Overall, the proposed development will only result in minor vegetation clearing to allow for access tracks and turning/parking areas. The site has largely been cleared in the past and comprises mainly grassland (refer Photograph 2.1 and Photograph 2.2). Therefore, there are not expected to be any impacts to native vegetation.

### 3.2.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

The NSW State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across the State.

Section 2.36(9) of the Transport and Infrastructure SEPP states that development for the purpose of a solar energy system may be carried out by any person with consent on any land.

Section 2.48(1) of the Transport and Infrastructure SEPP applies to development comprising or involving the following:

- (a) the penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,
- (b) development carried out—
  - (i) within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or
  - (ii) immediately adjacent to an electricity substation, or
  - (iii) within 5m of an exposed overhead electricity power line.
- (c) development involving or requiring the placement of power lines underground, unless an agreement with respect to the placement underground of power lines is in force between the electricity supply authority and the council for the land concerned.

If this section applies, the consent authority for the development must:

(a) Give written notice to the electricity supplier for the area in which the development is to be carried out, inviting comments about potential safety risks, and

(b) Take into consideration any response to the notice that is received within 21 days after the notice is given.

The proposed development necessitates Council to refer the development application to Essential Energy due to its reliance on and contribution to the national grid. The applicant will seek a grid connection approval and upgrade to 2MVA.

Under section 2.77 of the Transport and Infrastructure SEPP, when a development is proposed on land in a pipeline corridor, Council must consider risks to and from the pipeline and consult with the relevant pipeline operator. APA Group operates the high-pressure dangerous goods pipeline that runs through the site and will be consulted as part of Council's assessment of the DA. In addition, the applicant has started to engage with APA Group engineers to obtain the required consent.

Schedule 3 of the Transport and Infrastructure SEPP identifies certain development, referred to as 'traffic generating development', to be referred to Transport for NSW (TfNSW) for concurrence. The referral thresholds for 'Industry' development are:

20,000 m2 in site area or (if the site area is less than the gross floor area) gross floor area (site with access to a road (generally)).

5,000 m2 in site area or (if the site area is less than the gross floor area) gross floor area (with access to classified road or to road that connects to classified road (if access within 90m of connection, measured along alignment of connecting road).

As the total site area comprises approximately 27 ha, the proposed development meets the referral threshold for Industry development and is therefore defined as traffic generating development pursuant to the Transport and Infrastructure SEPP. Concurrence from TfNSW is therefore required.

### 3.2.3 State Environmental Planning Policy (Resilience and Hazards) 2021

The NSW State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) deals with potentially hazardous and offensive development and remediation of land. Each element is set out in turn below.

### i Hazardous and offensive development

Chapter 3 of the Resilience and Hazards SEPP relates to hazardous and offensive development. The aims of this chapter are:

- (a) to amend the definitions of hazardous and offensive industries where used in environmental planning instruments, and
- (b) to render ineffective a provision of any environmental planning instrument that prohibits development for the purpose of a storage facility on the ground that the facility is hazardous or offensive if it is not a hazardous or offensive storage establishment as defined in this Policy, and
- (c) to require development consent for hazardous or offensive development proposed to be carried out in the Western Division, and
- (d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account, and
- (e) to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact, and
- (f) to require the advertising of applications to carry out any such development.

There will be no storage or processing of any waste on site. There will be no storage of any dangerous goods or hazardous substances falling within the classification of the *Australian Code for Transportation of Dangerous Goods by Road and Rail* (Dangerous Goods Code) and, therefore, the proposed development cannot be considered as a hazardous or offensive industry.

The operation of the battery storage container will comply with *Australian Standard AS 5139:2019: Electrical installations - Safety of battery*.

For these reasons the proposed development is not considered to be a potentially hazardous or offensive development.

### ii Remediation of land

Chapter 4 of the NSW State Environmental Planning Policy (Resilience and Hazards) 2021 provides a State-wide approach to the remediation of contaminated land.

Section 4.6 of the SEPP requires contamination and remediation to be considered by a consent authority in the determination of a DA and identifies certain land that requires contamination investigation.

A search of the NSW EPA's 'List of NSW contaminated sites notified to the EPA' and 'POEO Public Register' has been undertaken which revealed no contaminated sites listed on or in the vicinity of the site. There have been no prior uses on the site and therefore the potential for contamination is unlikely. Some limited excavation will take place during construction, however, given the low potential for any contamination on the site, further contamination investigation is not considered warranted.

At the end of its life (or prior to this due to unforeseen reasons), the non-invasive mounting system makes decommissioning and removal of all panels and componentry a relatively simple process and will allow for the full remediation of the site. It can then be reverted back to agriculture or converted to another use, as allowable under the planning provisions of the time.

### 3.3 Riverina Murray Regional Plan 2041

The NSW Government's *Riverina Murray Regional Plan 2041* (the Regional Plan) provides a vision for land uses within the Riverina Murray region for a 20 year period from 2021 to 2041.

Objective 13 of the Regional Plan is to support the transition to net zero by 2050 by replacing the State's coal powered electricity generation and building the infrastructure needed to connect new renewable energy sources.

The Riverina Murray's climate, resources and strategic connections to utility infrastructure place it in a strong position to contribute to and capitalise on the net zero target and electricity infrastructure plans, noting that in recent years, large-scale solar farms account for more than 50% of major projects.

The establishment and operation of a new renewable energy development meets this objective of the Regional Plan.

### 3.4 Narrandera Local Environmental Plan 2013

The Narrandera Local Environmental Plan 2013 (NLEP 2013) makes local environmental planning provisions for land in Narrandera and is the principal environmental planning instrument (EPI) that relates to the development of the site.

Solar farms are defined under the NLEP as being electricity generating works and includes a building or place used for the purpose of:

- (g) making or generating electricity, or
- (h) electricity storage.

As shown in Figure 3.1 below, the site is zoned IN1 (General Industrial) pursuant to NLEP 2013.

Under the Land Use Tables in the NLEP for the IN1 Zone, electricity generating works are prohibited development.

However, under section 2.36(9) of the Transport and Infrastructure SEPP, development for the purpose of a solar energy system may be carried out by any person with consent on any land, thereby making it a permissible use on this land.

The objectives of the IN1 zone in NLEP 2013 are:

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.

The proposed solar farm is a type of development that is envisaged in the IN1 zone. It will generate employment opportunities during the construction and operation phase and will not have a detrimentally effect on other land uses once it becomes operational. The proposed development is therefore consistent with the objectives of the IM1 zone.



An assessment of the proposed development against other relevant provisions of NLEP 2013 is provided in Table 3.1 below.

Table 3.1 Assessment against NLEP 2013

ALL 11	1		
Objective	Provision	Comment	Compliance
Part 6 Additional local provision	s		
Clause 6.1 Earthworks			
(1) The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.	<ul> <li>(3) Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters— <ul> <li>(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,</li> <li>(b) the effect of the development on the likely future use or redevelopment of the land, the quality of the fill or the soil to be excavated, or both,</li> <li>(c) the effect of the development on the existing and likely amenity of adjoining properties,</li> <li>(d) the source of any fill material and the destination of any excavated material,</li> <li>(e) the likelihood of disturbing relics,</li> <li>(f) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,</li> <li>(g) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.</li> </ul> </li> </ul>	Some limited earthworks are required to facilitate the development of the solar farm and associated access. However, the relatively minimal ground disturbance to be carried out will not disrupt or detrimentally effect existing drainage patterns and soil stability nor the quality of the fill or the soil to be excavated. There is a low likelihood of disturbing relics, and the site is not in close proximity to any waterway, drinking water catchment or environmentally sensitive area. An Erosion and Sediment Control Plan has been submitted as part of the DA and will be implemented.	Yes
Clause 6.3 Stormwater Managen	nent LON CONTRACTOR		
(1) The objective of this clause is to minimise the impacts of urban stormwater on land to which this clause applies and on adjoining properties, native bushland and receiving waters.	<ul> <li>(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development—</li> <li>(a) is designed to maximise the use of water permeable surfaces on the land having regard to the soil characteristics affecting on-site infiltration of water, and</li> <li>(b) includes, if practicable, on-site stormwater retention for use as an alternative supply to mains water, groundwater or river water, and</li> <li>(c) avoids any significant adverse impacts of stormwater runoff on adjoining properties, native bushland and receiving waters, or if that impact cannot be reasonably</li> </ul>	The proposed development will not alter how water flows across the site and infiltrates into the land. As such, there will be no significant adverse impacts from stormwater runoff on adjoining properties, native bushland and receiving waters.	Yes

Objective	Provision	Comment	Compliance
	avoided, minimises and mitigates the impact.		
Clause 6.4 Terrestrial biodiversity	y		
<ul> <li>(1) The objective of this clause is to maintain terrestrial biodiversity by—</li> <li>(a) protecting native fauna and flora, and</li> <li>(b) protecting ecological processes necessary for their continued existence, and</li> <li>(c) encouraging the conservation and recovery of native fauna and flora and their habitats.</li> </ul>	(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider  (a) whether the development is likely to have—  (i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and  (ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and  (iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and  (iv) any adverse impact on the habitat elements providing connectivity on the land, and  (b) Any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.  (4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—  (a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or  (b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, and will be managed to minimise that impact, or  (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.	Part of the site is included within land identified as 'Terrestrial Biodiversity' on the Terrestrial Biodiversity Map. However, the proposed development has been designed and sited to avoid this area.  Overall, the proposed development will only result in minor vegetation clearing to allow for access tracks and turning/parking areas. The site has largely been cleared in the past and comprises mainly grassland (refer Photograph 2.1 and Rhotograph 2.2). Therefore, there are not expected to be any impacts to native vegetation.	Yes
Clause 6.13 Essential Services			_
No stated objective	Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been	There is potable and low-cost raw recycled water available on site. Electricity will be supplied by Essential Energy and porterloos will be provided to dispose of sewage. The site will continue to drain naturally and will be accessed by	Yes

Objective	Provision	Comment	Compliance
	made to make them available when required—	a suitably designed access subject to approval by the relevant road authority.	
	<ul> <li>(a) the supply of water,</li> <li>(b) the supply of electricity,</li> <li>(c) the disposal and management of sewage,</li> <li>(d) stormwater drainage or on-site conservation,</li> </ul>		
	(e) suitable vehicular access.		

# 3.5 Narrandera Development Control Plan 2013

The Narrandera Development Control Plan 2013 (NDCP 2013) provides guidance for new development within the Narrandera Local Government Area (LGA) to achieve the aims and objectives of NLEP 2021.

An assessment of the proposed development against the relevant controls of NDCP 2013 is provided in Table 3.2 below.

Table 3.2 Assessment against NDCP 2013

Table 3.2	Assessment against NDCP 2013		
Relevant control	Aim	Comment	Compliance
Part C Controls th	at apply to all development	15Th 2023	<u>'</u>
Chapter 5 Control	s that apply to all development	OR DRIL	
5.1 On-site effluent disposal for land without reticulated sewer	To ensure that the design of on-site sewage and wastewater management systems do not have a detrimental effect public health, the environment or community amenity.	Temporary portable toilets will be provided on site. These will be emptied regularly and serviced by a licensed operator.	Yes
5.2 Off-street parking – Business centre and other land uses	Car parking is to be designed in accordance with Transport for NSW guidelines and Australian Standards and the number spaces to be provided are set out in NDCP 2013.	Whilst there are no specific parking rates for solar farms, the proposed development includes parking for both construction and operations that is large enough to accommodate the construction workforce (20) and the future operational workforce (5) which will mainly be required for routine maintenance.	N/A
Part D Rural, Resi	dential, Business and Industrial Controls		
Chapter 9 Industr	al development controls		
9.1.3 Red Hill industrial area	The Red Hill industrial area was established by Narrandera Shire Council in the early 2000's, and the land was rezoned for industrial purposes via Amendment No.2 to the Narrandera LEP 1991 in May 1997. The intent of the Red Hill area is to provide for land extensive uses, including large employment generating uses and those requiring separation from the township, and for local businesses. The land does not have reticulated sewer.	The Red Hill industrial area is well established and zoned for industrial purposes. The proposed development will diversify existing land uses and generate employment during the construction phase in an area separate to the built-up area of Narrandera. The land does not have reticulated sewerage so it will rely on an	Yes

Table 3.2 Assessment against NDCP 2013

Table 3.2	Assessment against NDCP 2013		
Relevant control	Aim	Comment	Compliance
		on-site effluent disposal system during construction and operations.	
9.3 Building design	The objective of industrial building design is to be utilitarian and functional, but with a suitable brick/stone office and/or showroom area to the primary street frontage, promoting a consistent and attractive street frontage.	There are no industrial buildings proposed.	N/A
9.4 Building construction	The main objective of building construction (in this DCP) is to ensure provisions for the safety of persons in the event of fire, the suppression of fire and the prevention of spread of fire.	There are no industrial buildings proposed.	N/A
9.5 Building setbacks	The objective of building setbacks is to provide parking and landscaping at the front of the site and to ensure that the bulk and scale of new development reasonably protects the amenity of neighbouring properties and maintains appropriate neighbourhood character.	There are no industrial buildings proposed.	N/A
	The objective of parking and loading controls is to ensure that the industrial street is not used for loading/unloading and unnecessary car movements.	See comment on clause 5.2.	N/A
	The objective of the servicing controls is to ensure that the development is able to adequately dispose of its own waste.	See comment on clause 5.1.	N/A
9.8 Soil and water management	The objective of soil and water management is to ensure that soil erosion during construction and operation is minimised. The Red Hill and Pine Hill industrial soils have a weak sandy/loam character which is highly erodible.	As detailed further in Section 4.5 (Table 4.2), an Erosion and Sediment Control Plan has been prepared and includes measures to ensure that soil erosion is minimised.	Yes
9.9 Landscaping	The objective of landscaping is to soften the appearance of hardstand areas and building bulk.	There will no hardstand areas and building bulk and therefore no landscaping is proposed.	N/A
9.10 Air and noise pollution	The objective of air and noise amenity controls is to prevent pollution from adversely affecting industrial areas and urban areas generally.	As detailed further in Chapter 4, noise and air quality impacts will be negligible subject to the recommended management measures being implemented.	Yes
9.11 Outdoor storage	The objective of outdoor storage controls is to ensure that storage does not become dangerous and/or unsightly.	Areas of outdoor storage of equipment and machinery will not be sited so as not to be visible from public roads	Yes

### Table 3.2 **Assessment against NDCP 2013**

Relevant control	Aim	Comment	Compliance
9.12 Security lighting and fencing	The objective of the fencing and lighting controls is to provide site security without unduly affecting the amenity of the area.	A security fence is proposed around the site which will be in keeping with the general character and appearance of the surrounding industrial area and will not detract from the amenity of the area.	Yes

### Part E Planning for natural hazards

### Chapter 11 Bushfire prone land

A Bushfire Assessment has been prepared in accordance with this Chapter of NDCP 2013 and accompanies the DA

### Local Strategic Planning Statement 2020 - Narrandera Shire Council 3.6

The Narrandera Shire Council Local Strategic Planning Statement 2020 (LSPS 20020) sets the framework for Narrandera Shire's economic, social and environmental land use needs over the next 20 years. It outlines planning priorities setting out what is needed where they are to be located and when they will be delivered in the short, medium and long term.

ay will allow Intable locations.

Ar access to generate renew Priority 6 of LSPS 2020 states that since the shift to renewable energy will allow Narrandera to produce such energy from within the shire, Council will support renewable energy production in suitable locations.

Lying within an existing industrial area with sufficient solar access to generate renewable energy, the site of the proposed solar farm is in a suitable location.

### 4 Assessment

In accordance with Section 4.15(1) of the EP&A Act, this chapter provides analysis and assessment regarding the potential impacts of the proposed development, including potential environmental impacts on both the natural and built environments, and potential social and economic impacts in the locality. The suitability of the site and the whether the proposed development is in in the public interest have also been considered.

### 4.1 Traffic, access and parking

Access to the site will be available by an all-weather access from end of the northern end Paterson Place, which connects to Driscoll and Mcgilvrays Roads.

Most traffic movements associated with the development will occur during the construction of the solar farm (approximate 10-month period) with the delivery of panels and prefabricated structural supports. An access track and material laydown and parking area is proposed to ensure that there is appropriate access, turning and parking for all vehicles accessing the site.

Peak hour construction traffic has been calculated with a predicted peak of 50 vehicle trips per day consisting of 25 light and heavy vehicles. The surrounding road network has sufficient capacity to cater to the projected construction traffic with capacity to spare for future development within Red Hill industrial estate which has been specifically zoned for these purposes.

Once the solar farm has been commissioned, it will operate autonomously with five personnel required to travel to and from the site for scheduled maintenance. Access and parking will be retailed on site to accommodate all vehicles required to access the site during operations.

Overall, the construction and operational traffic that will be generated by the proposed development is considered negligible in the context of existing industrial uses currently operating within the Red Hill industrial and relying on the surrounding road network and no external improvements are considered necessary to facilitate the proposed development..

### 4.2 Noise

The proposed development will require construction activities which have the potential to generate noise. The operation of the facility is not expected to generate any discernible noise above existing background noise levels.

The NSW EPA's *Draft Construction Noise Guideline 2020* (DCNG 2020) sets out measures to assess and minimise construction noise impacts. The main steps articulated by the guidelines, as considered in the following sections, are:

- identify sensitive land uses that may be impacted;
- identify the hours for the proposed construction activities;
- identify the noise impacts; and
- select and apply practices to minimise the noise impacts.

Sensitive land uses include residences, classrooms, hospitals and commercial premises, research facilities and entertainment spaces.

As described in Section 1.2, the site is located within an existing industrial area which has been specifically zoned for this purpose. The closest residential properties in Kiesling Drive, Pirani Place and Boundary Road, off Racecourse Road, are located approximately 1.5 km to the south-west of the site. There are no hospitals or other facilities which are defined as sensitive receivers near the site.

Construction hours will be restricted to those recommended in the DCNG as set out in Table 4.1 below:

Table 4.1 Construction hours

Days of the Week	Construction Hours	
Monday to Friday	07:00 to 18:00	
Saturdays	08:00 to 13:00	
Sundays and public holidays	No work without prior written approval from Council	

The characteristics of the noise associated with construction are low level in terms of potential annoyance and related to general construction activities such as the use of power tools and the reversing alarms of trucks. Potential construction noise impacts will be limited, given the restriction on construction hours. Notwithstanding, the following standard construction noise management and mitigation measures will be implemented to reduce potential impacts on all surrounding receivers:

- plant will be operated in a conservative manner (no over-revving) and shutdown when not in use;
- the quietest suitable machinery will be available for each activity;
- noisy plant/machinery will not be operated simultaneously, and noise impacts will be minimised where practicable;
- broadband reverse alarms will be utilised in lieu of the traditional high frequency type reverse alarm;
- toolbox meetings, training and education will be provided to drivers and contractors visiting the site during construction, so
  they are aware of the location of noise sensitive receivers and to be cognisant of any noise generating activities; and
- signage will be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and offsite.

Solar farms of the scale proposed produce minimal noise emissions during operation and are unlikely to result in unacceptable off-site or on-site noise impacts. A low volume, humming noise can be produced by inverter station which is only likely to be audible close to the equipment. In addition, as solar panels produce power only when the sun is shining, inverters will be completely silent at night when background noise levels are lowest.

Some background noise will be generated from the energy storage units during energy dispatch during the night, but this is highly unlikely to result in sleep disturbance and awakenings given the site's location within an industrial area and distance from nearby sensitive receivers.

Accordingly, with the noise measures proposed, and given that the closest sensitive receiver is approximately 1.5 km from the site, there are not expected to be any significant adverse noise impacts from the construction or operation of the proposed development.

### 4.3 Bushfire

A bushfire assessment for the proposed development has been prepared in accordance with *Planning for Bushfire Protection*, 2019 (PBP 2019) and will accompany the DA.

The assessment includes an analysis of the potential hazard persisting and affecting the subject site and the standards and bushfire mitigation measures that should be introduced at the solar farm to address the objectives of the PBP 2019. The following

management measures have been derived from the provisions (performance criteria and acceptable solutions) as outlined within PBP 2019 and will be undertaken for the proposed development:

- asset protection zones a minimum distance of 10 m from structures and infrastructure will be provided as an inner protection area);
- construction standards essential equipment will be designed and housed in a manner likely to prevent ignition;
- services a suitable water supply for firefighting purposes; and
- access suitable access to be provided to the site to allow for firefighter access to the solar farm, suppress solar farm infrastructure and fire travelling towards any assets.

With the implementation of these measures, it is considered that the potential risk from bushfire to the proposed development will be appropriately managed.

### **Visual** 4.4

The main public viewpoints into the site are from Mcgilvray Road (east), Driscoll Road (south) and Paterson Place (west). Only occasional glimpses into the site are visible from these roads, as shown in the photographs below.

Photograph 4.1 Approximate location of the proposed solar farm - looking west from Mcgilvray Road



Photograph 4.2 Approximate location of the proposed solar farm – looking north from Driscoll Road





The proposed solar array will comprise several PV panel rows running north to south of the site, totalling 4,541 panels with a total panel surface area of 11,6.06 m<sup>2</sup>.

The panels themselves have a dimension of  $2.278 \text{ m} \times 1.134 \text{ m} \times 35 \text{ mm}$  placed in 1 portrait row layout on tracking system rows of various lengths with 2m embedded piles, The panels being at 1.3 m height when horizontal and at full 60 degree tilt the panels will reach 2.3 m high and have a ground clearance of 0.3 m. This is consistent with the intent of proposed development for the wider IN1 Industrial Zone, which includes aims to provide a wide range of industrial and warehouse land uses and minimise any adverse effect of industry on other land uses.

Once constructed, the solar farm will essentially comprise a series of PV panels with associated infrastructure being an inverter and energy storage system. It will appear as being industrial in nature and will be in keeping with the general character and appearance of the surrounding industrial area.

The proposed development is unlikely to be very visible from public vantage points given the buffer land and existing development that exists within Red Hill industrial area. The panels themselves are constructed from anti-reflection coated tempered glass so are unlikely to generate glare if viewed from longer distances.

Overall, it is not considered that the proposed development will result in significant adverse visual impacts.

### 4.5 Other environmental aspects

An assessment of the environmental aspects as a consequence of the proposed development (other than those addressed in the preceding sections) is provided in Table 4.2. This method of assessment is commensurate with the low levels of projected impacts arising from the proposed development on each of these aspects.

Table 4.2 Other environmental aspects

Environmental aspect	Assessment	Management measures
Air quality	During construction, some limited earthworks and excavation will be required to install the various components of the solar farm before it becomes operational. This has the potential to generate dust emissions.	Standard management and mitigation measures (eg progressive excavation of topsoils, dust suppression with water, tying dust generating down waste material loads in trucks) will be implemented and adhered to during the construction phase.  Once operational, the solar farm will not generate any emissions.
Stormwater, soil and erosion control	Stormwater freely flows across the site in a generally southerly direction. No changes to the existing landform are proposed so drainage patterns and overland runoff will remain generally the same.  The nature of the solar farm development is such that no additional stormwater or drainage infrastructure is required.  Water flows across the site and how it infiltrates into the land will be unaffected. No permeable surfaces will be introduced due to the proposed development. As such, there will be no significant adverse impacts from stormwater runoff on	The proposed development is to be carried out in accordance with an Erosion and Sediment Control Plan based on applicable standards, including to:  • install all sediment and erosion control measures shall prior to works commencing;  • inspect and maintain all erosion and sediment control structures after each rainfall event;  • maintain all soil and erosion controls devices;  • topsoil and seed exposed surfaces;  • minimise areas of disturbance;

Environmental aspect	Assessment	Management measures
	adjoining properties, native bushland and receiving waters.	<ul> <li>sediment fences crossing the works to be reinstated;</li> <li>maintain weekly records of sediment and erosion inspections; and</li> <li>install temporary sediment barriers to inlet pits until surrounding areas are paved/turfed.</li> </ul>
Biodiversity	The proposed development will only result in minor vegetation clearing to allow for access tracks and turning/parking areas. The site has largely been cleared in the past and comprises mainly grassland (refer Photograph 2.1 and Photograph 2.2).  There will be no removal of trees or significant vegetation and therefore, there are not expected to be any impacts to native vegetation or significant adverse impacts to biodiversity values generally on the site.	No controls required.
Heritage	The site does not contain any listed European heritage items under Schedule 5 of NLEP 2021, nor is it located within a heritage conservation area. No other heritage items are in proximity to the site.  A search of the Aboriginal Heritage Information System (AHIMS) determined that there are no records or artifacts recorded within 200m of the investigation area.	In the event that any heritage items are discovered during construction, all works will cease, and the necessary action will be taken in accordance with relevant NSW heritage legislation.
Hazards and risks	Potential hazards and risks from the proposed development include:  contamination of the site from the battery storage;  impact on the development from bushfires; and  the presence of a high-pressure pipeline crossing the site.	Potential contamination of the site from batter storage will be avoided by compliance with the Australian Standard AS 5139:2019: Electrical installations - Safety of battery systems for use with power conversion equipment.  The applicant will implement the management and mitigation measures recommended within the submitted Bushfire Assessment (see Section 4.3).  The HP DG gas pipeline operator, APA Group, will be consulted during the assessment of the DA and any requirements relating to the use of the HP DG gas pipeline will be adhered to.
Waste	Solar farms have the potential to create significant waste streams, not the least being solar panels and framework packaging during construction and decommissioning of the site.	Recycling of waste materials will be maximised as much as possible.  Waste materials generated during construction and decommissioning (predominantly being solar panels and framework packaging) will be collected and stored in two onsite waste containers.

Environmental aspect	Assessment	Management measures
		These containers will be collected and disposed of by a licensed waste contractor.

### 4.6 Social and economic

The proposed establishment of a solar farm on the site is anticipated to have an ongoing positive social and economic impact on the local area and the broader community as it:

- is consistent with the regulatory and business development framework, including state government legislation, the Riverina Murray Regional Plan 2041 and the Local Strategic Planning Statement 2020;
- will improve intergenerational equity, by assisting in the transition towards cleaner energy generation in the future to assist in the transition towards cleaner energy generation;
- supports Commonwealth and NSW climate change commitments, including the Renewable Energy Target, by reducing greenhouse gas emissions;
- will assist the local economy by generating construction jobs and business turnover; and
- will be a benefit contributing to the overall community sustainability of the Narrandera community.

### 4.7 Suitability of the site for development

The site is suitable for the proposed development for the following reasons:

- the site is zoned to allow for the use of the site as a solar farm;
- the site has relatively flat topography, limited trees and vegetation and has access to high-capacity transmission lines
- the site is currently vacant and can accommodate the proposed development with minimal alterations and works;
- the site is adequately serviced to cater for the proposed development;
- the site is approximately 1.5 km from the nearest residential properties; and
- the site is within an existing industrial area with good connectivity to the local road network.

### 4.8 The public interest

The proposed development is in the public interest for the following reasons:

- it is consistent with the relevant provisions of NLEP 2021 and NDCP 2013;
- it will generate green, renewable energy;
- it will utilise a currently vacant site;
- it will provide socio-economic benefits in terms of employment opportunities; and
- there will be no significant adverse environmental or amenity impacts.

EXHIBITION COPY

NOT FOR REPRODUCTION OR DISTRIBUTION

ROTEOR REPRODUCTION OR DISTRIBUTION OR DISTRIBUTION

ROTEOR REPRODUCTION OR DISTRIBUTION OR DIS

# EXHIBITION COPY NOTEOR REPRODUCTION OR DISTRIBUTION SUBMISSIONS CLOSE ARM 6 APRIL 2023

- info@arnoldplanning.com.au
- arnoldplanning.com.au
- +61 448 221 270
- +61 2 4023 5945

ARNOLD