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		DWG No 9-238	JOB № 9-238	SHEET 3 OF 3	SHEETS

BURRUNDULLA MINI SUSTAINABLE ENERGY PARK

DEVELOPMENT APPLICATION

ADDRESS: 3B SYDNEY ROAD BURRUNDULLA NSW 2850



DEVELOPED BY:



info@itpau.com.au

+61 (0) 2 6257 3511 Level 1, 19-23 Moore St Turner, ACT 261 itpau.com.au

IT Power (Australia) Pty Ltd | ABN 42 107 351 673 | Part of The ITPEnergised Group

Sheet List Table					
Sheet Number	Sheet Title				
G-0100	TITLE				
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E-4300	INVERTER STATION DETAILS				



	2 LOCATION PLAN	-		$\left(\begin{array}{c}3\\-\end{array}\right)$	SITE PLAN SCALE: 1:10000				
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NO.	STAGE	DATE	NOTES	PARTNERS		DRAWN MJB	DRAWING	LOCATION PLAN	
1	ISSUED FOR DA APPROVAL	13/06/2019			l itn N	APPROVED AN	1		
2	DEVELOPMENT APPLICATION	16/12/2021				DO NOT SCALE.	PROJECT	BURRUNDULLA MINI SUSTAINABLE ENERGY PAR	SCALE AS NOTED
3						ALL MEASUREMENTS IN MM UNLESS OTHERWISE STATED.	CLIENT	ITP DEVELOPMENT	SHEET SIZE A3
4					RENEWABLES	THIS DOCUMENT MAY ONLY BE USED BY CLIENTS OF ITP OR THOSE WHO HAVE RECEIVED EXPRESS	ADDRESS		ORIG. DATE 7/1/21
5					P: +61 2 6257 3511 PO BOX 6217	PERMISSION FROM ITP. THE USE OF THIS DRAWING SHALL NOT EXTEND		BORRONDOLLA, NSW 2030	REV. DATE 21/12/21
6			1		info@itp.com.au O'CONNOR, ACT 2602 www.itpau.com.au AUSTRALIA	BEYOND THE PURPOSE FOR WHICH IT WAS ORIGINALLY PREPARED.	DRAWING NO	MUD3C-G-0400	REV NO. 2

G:\Work\21145 - 5MW MUD3C Mudgee 3C\Project\4 System design\4.01 CAD\DWG\G-0400 LOCATION PLAN.dwg, PLOTTED BY MATTHEW BARRETT AT 30/6/2022 3:51 PM





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NO.	STAGE	DATE	NOTES	PARTNERS		DRAWN MJB	DRAWING	GENERAL ARRANGEMENT PLAN		
1	ISSUED FOR DA APPROVAL	13/06/2019	 SYSTEM INFORMATION IS THE SAME FOR SYSTEM A AND SYSTEM B. NEW VEGETATION AREAS ARE INDICATIVE, REFER TO LANDSCAPE CONCEPT PLAN 		itn N					
2	UPDATED EMERGENCY EXIT	11/10/2019				DO NOT SCALE.	PROJECT	BURRUNDULLA MINI SUSTAINABLE ENERGY PAR	SCALE	AS NOTED
3	UPDATED FOR DA RESUBMISSION	30/09/2020				ALL MEASUREMENTS IN MM UNLESS OTHERWISE STATED.	CLIENT	ITP DEVELOPMENT	SHEET SIZE	A3
4	DEVELOPMENT APPLICATION	17/12/2021			RENEWABLES	THIS DOCUMENT MAY ONLY BE USED BY CLIENTS OF ITP OR THOSE	ADDRESS	3B SYDNEY ROAD BURRUNDULLA, NSW 2850	ORIG. DATE	
5	DEVELOPMENT APPLICATION	30/06/2022			P: +61 2 6257 3511 PO BOX 6217	WHO HAVE RECEIVED EXPRESS PERMISSION FROM ITP. THE USE OF THIS DRAWING SHALL NOT EXTEND		BURRUNDULLA, NSW 2650	REV. DATE	30/6/22
6					info@itp.com.au O'CONNOR, ACT 2602 www.itpau.com.au AUSTRALIA	BEYOND THE PURPOSE FOR WHICH IT WAS ORIGINALLY PREPARED.	DRAWING N	• MUD3C-G-2100	REV NO.	5

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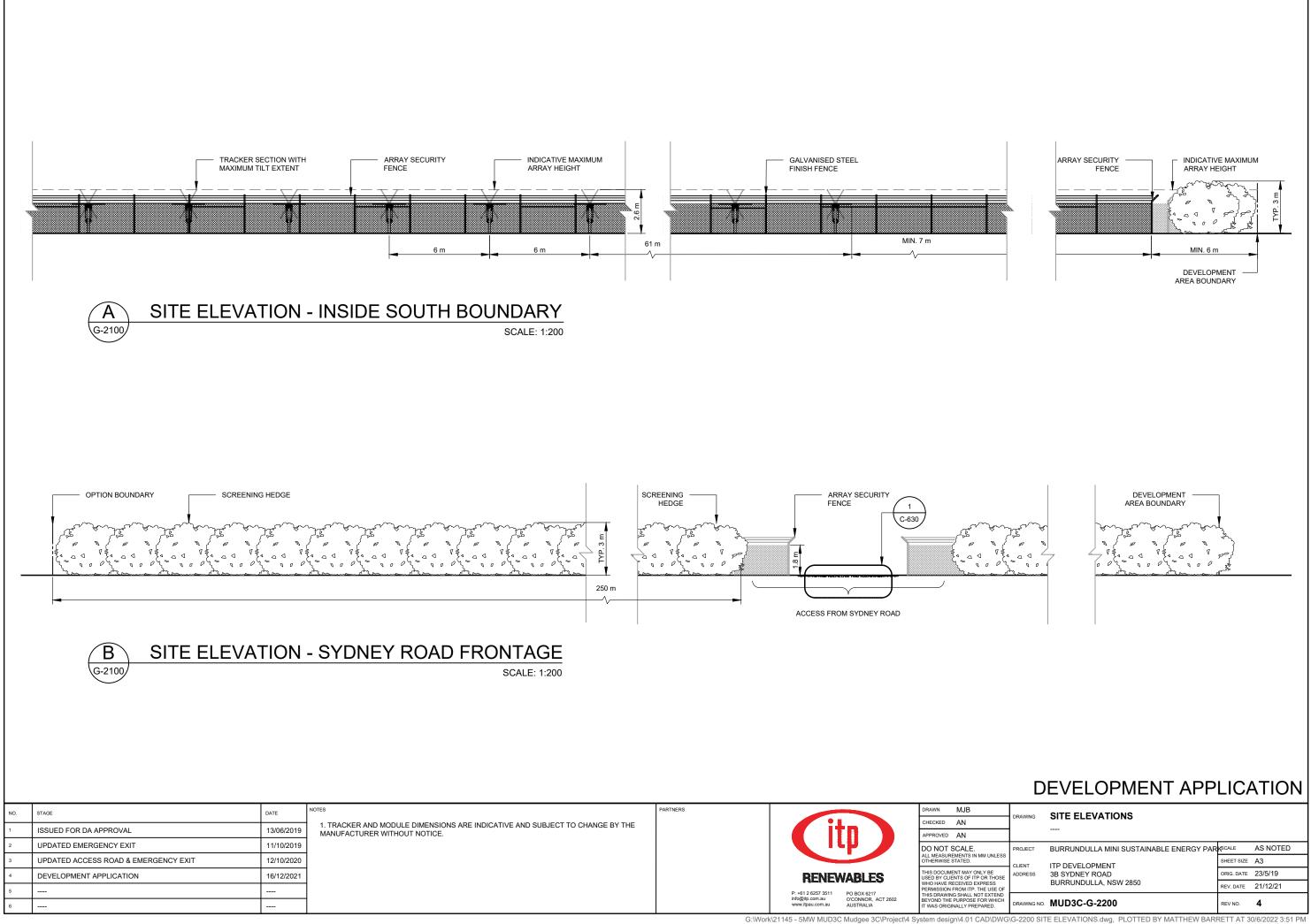
SITE INFORMATION

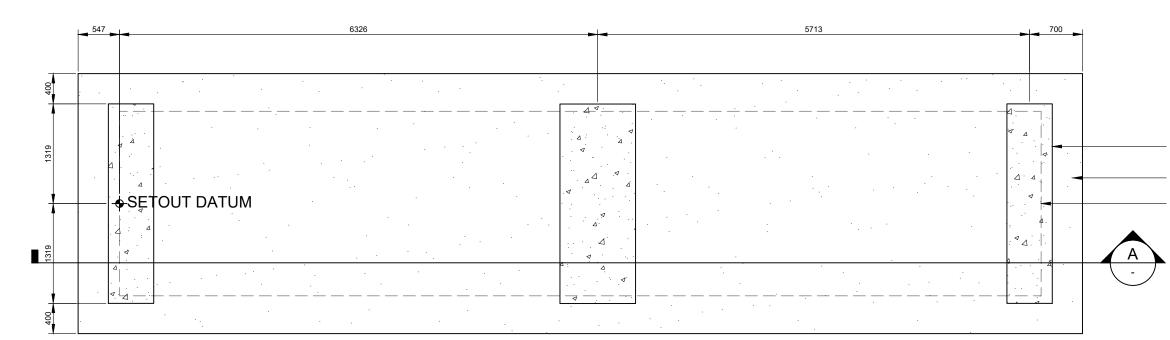
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ADDRESS	3B SYDNEY ROAD, BURRUNDULLA, NSW 2850
LGA	MID-WESTERN REGIONAL COUNCIL
LAT / LONG	-32.6337 / 149.625628
LOT AREA	67.4 ha
FENCED AREA	26.0 ha (A: 14.7 ha, B: 11.3 ha)
DNSP	ESSENTIAL ENERGY

PROJECT INFORMATION

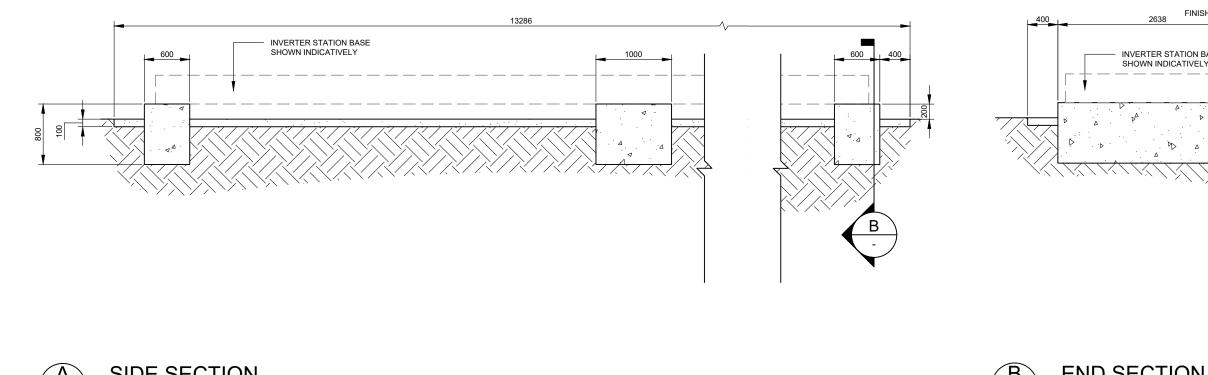
AC CAPACITY	5.0 MW
INVERTERS	2 x 3.0 MW AC
TRACKER SPACING (N-S)	MIN. 1 m
ARRAY PITCH	6.25 m
CONNECTION VOLTAGE	22 kV
CONNECTION FEEDER	ESSENTIAL ENERGY MUD62
CONNECTION SUBSTATION	ESSENTIAL ENERGY MUDGEE
SECURITY FENCE SETBACK	MIN. 10 m FROM OPTION BOUNDARY
ARRAY SETBACK	MIN. 10 m FROM SECURITY FENCE
ACCESS PATH WIDTH	6.0 m & 4.0 m

DEVELOPMENT APPLICATION









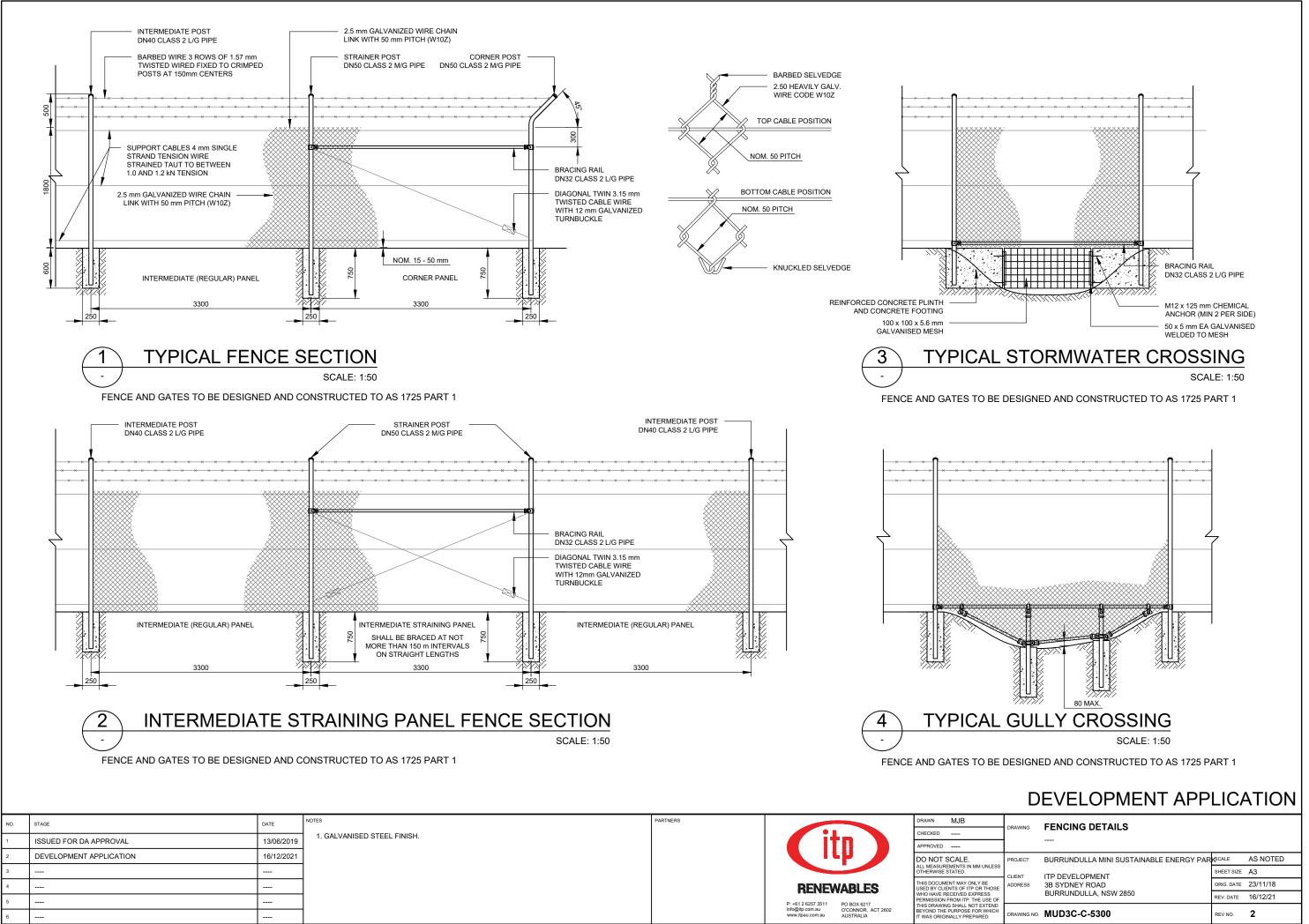
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NO.	STAGE	DATE	NOTES	PARTNERS		DRAWN MJB	DRAWING	INVERTER FOOTING DETAILS	
1	ISSUED FOR DA APPROVAL	13/06/2019			l itn N	APPROVED	1		
2	DEVELOPMENT APPLICATION	16/12/2021				DO NOT SCALE. ALL MEASUREMENTS IN MM UNLESS	PROJECT	BURRUNDULLA MINI SUSTAINABLE ENERGY PAR	SCALE AS NOTED
3						OTHERWISE STATED.	CLIENT	ITP DEVELOPMENT	SHEET SIZE A3
4					RENEWABLES	THIS DOCUMENT MAY ONLY BE USED BY CLIENTS OF ITP OR THOSE WHO HAVE RECEIVED EXPRESS	ADDRESS	3B SYDNEY ROAD BURRUNDULLA, NSW 2850	ORIG. DATE 27/11/18
5					P: +61 2 6257 3511 PO BOX 6217	PERMISSION FROM ITP. THE USE OF THIS DRAWING SHALL NOT EXTEND	L	BURRUNDULLA, NSW 2050	REV. DATE 15/12/21
6					info@itp.com.au O'CONNOR, ACT 2602 www.itpau.com.au AUSTRALIA	BEYOND THE PURPOSE FOR WHICH IT WAS ORIGINALLY PREPARED.	DRAWING N	• MUD3C-C-4300	REV NO. 1
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FINISHED GRADE 2638 INVERTER STATION BASE SHOWN INDICATIVELY

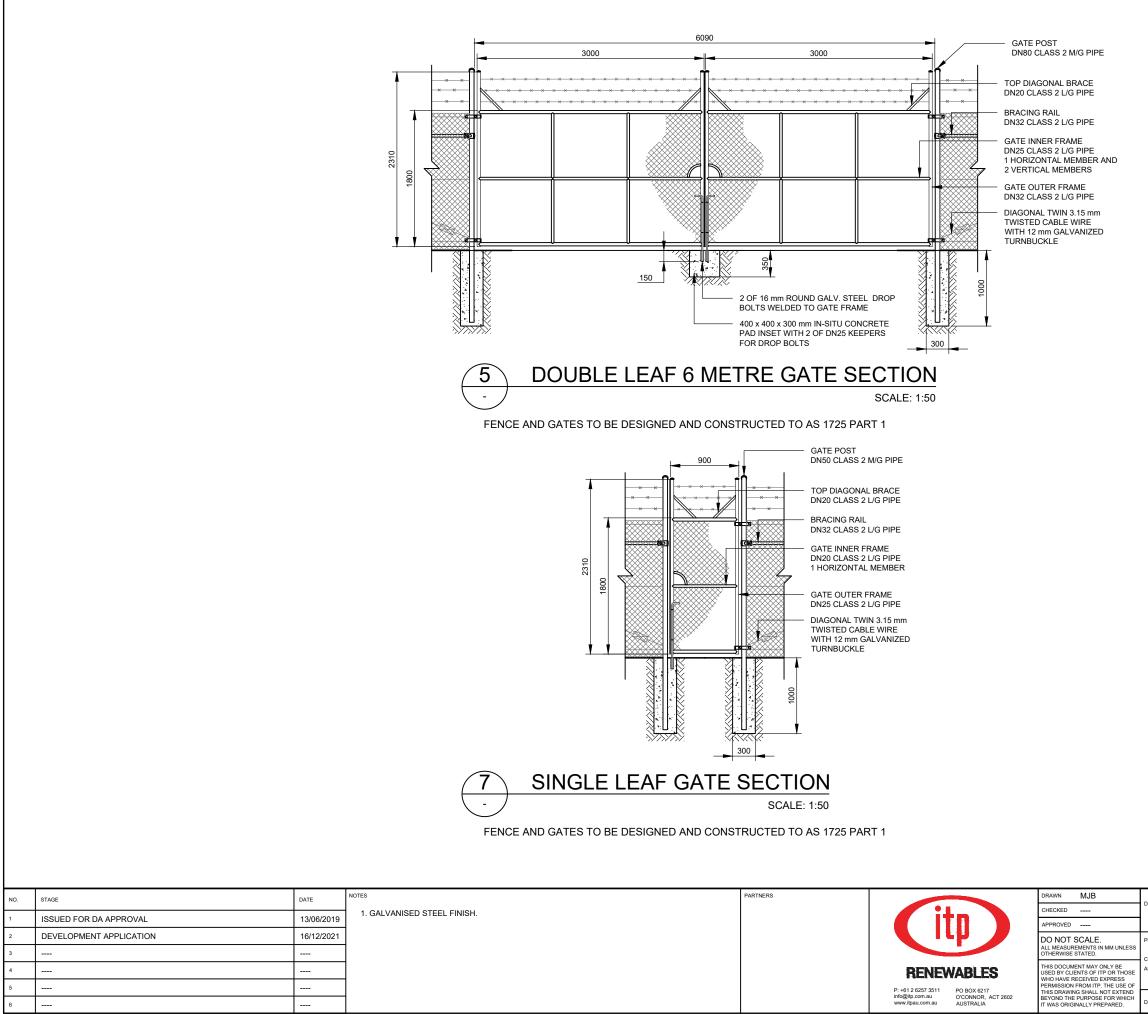
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GRAVEL NOM. 20 mm DIAMETER INVERTER STATION BASE SHOWN INDICATIVELY

CONCRETE FOOTINGS



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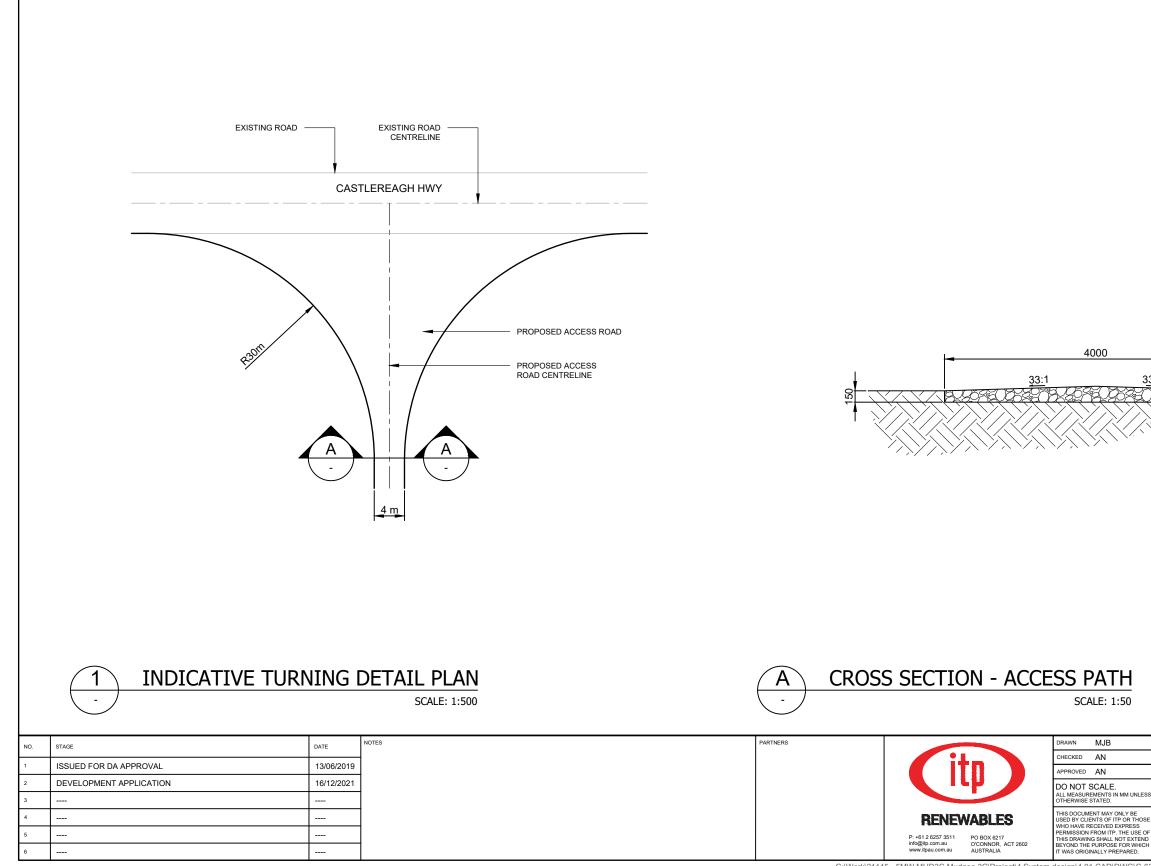
DEVELOPMENT APPLICATION

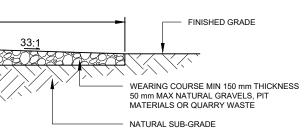
GATE DETAILS

AWING

PROJECT	BURRUNDULLA MINI SUSTAINABLE ENERGY PAR	(SCALE	AS NOTED
CLIENT	ITP DEVELOPMENT	SHEET SIZE	A3
ADDRESS	3B SYDNEY ROAD	ORIG. DATE	23/11/18
	BURRUNDULLA, NSW 2850	REV. DATE	16/12/21
DRAWING NO.	MUD3C-C-5301	REV NO.	2

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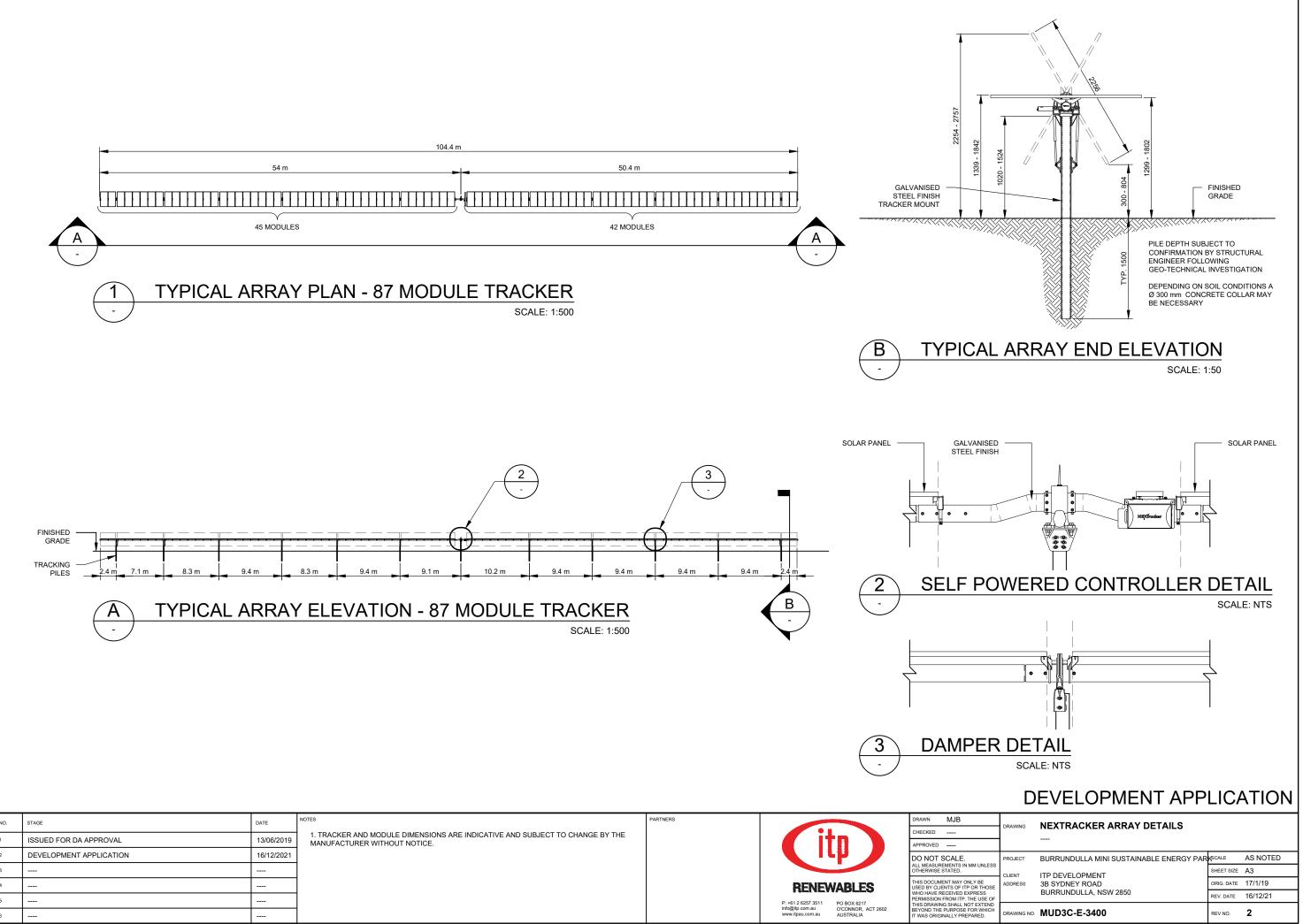




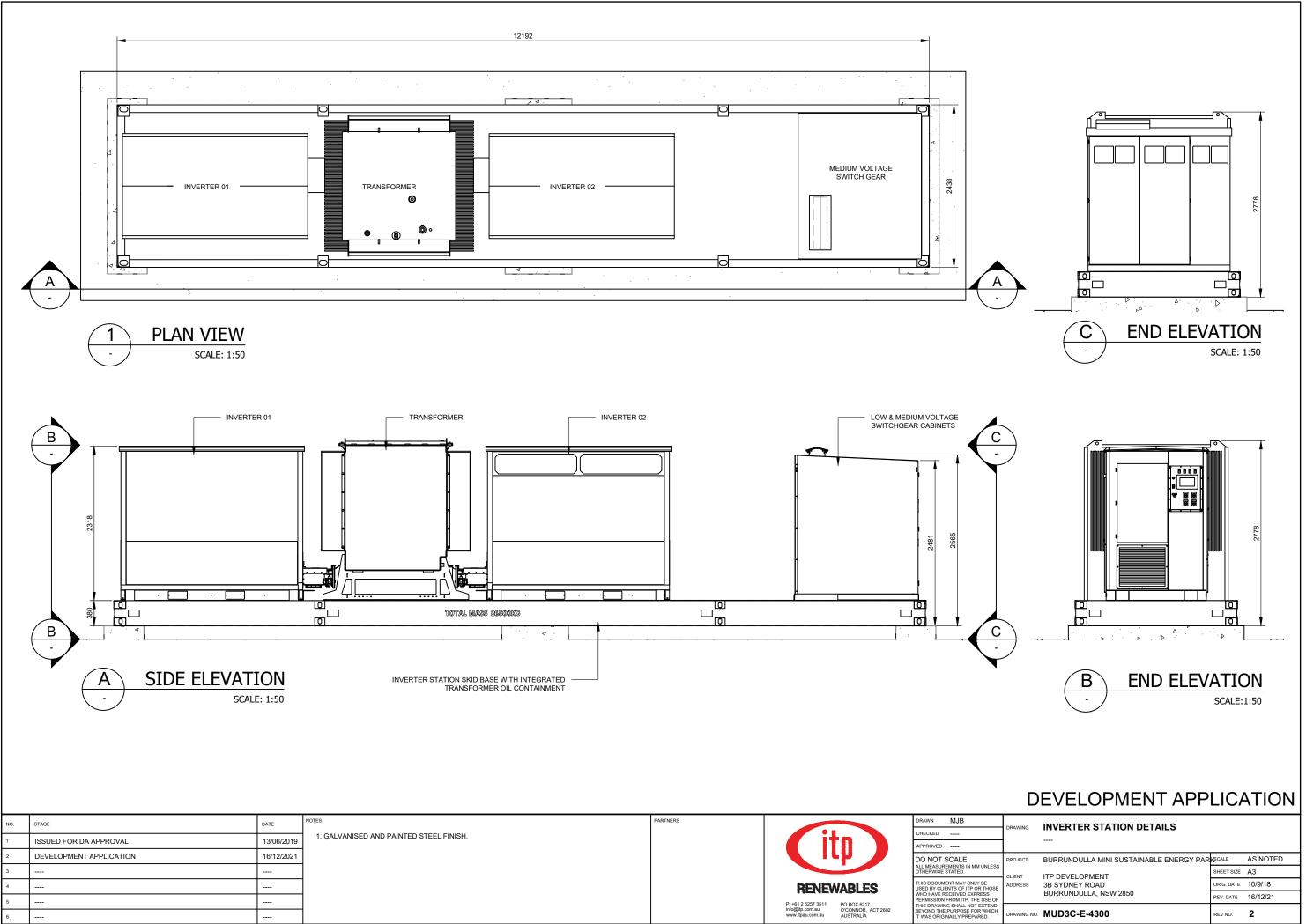
DEVELOPMENT APPLICATION

DRAWING	ACCESS PATH DETAILS							
PROJECT	BURRUNDULLA MINI SUSTAINABLE ENERGY PAR	K SCALE	AS NOTED					
CLIENT	ITP DEVELOPMENT	SHEET SIZE	A3					
ADDRESS	3B SYDNEY ROAD	ORIG. DATE	5/9/18					
	BURRUNDULLA, NSW 2850	REV. DATE	20/12/21					
DRAWING NO.	MUD3C-C-6300	REV NO.	2					

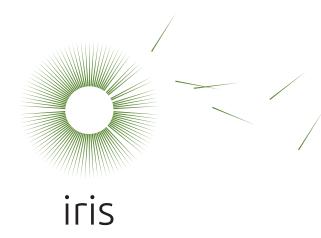
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Burrundulla Mini Sustainable Energy Park

3B Sydney Road, Burrundulla, IT Power (Australia) Pty Ltd

Landscape Concept

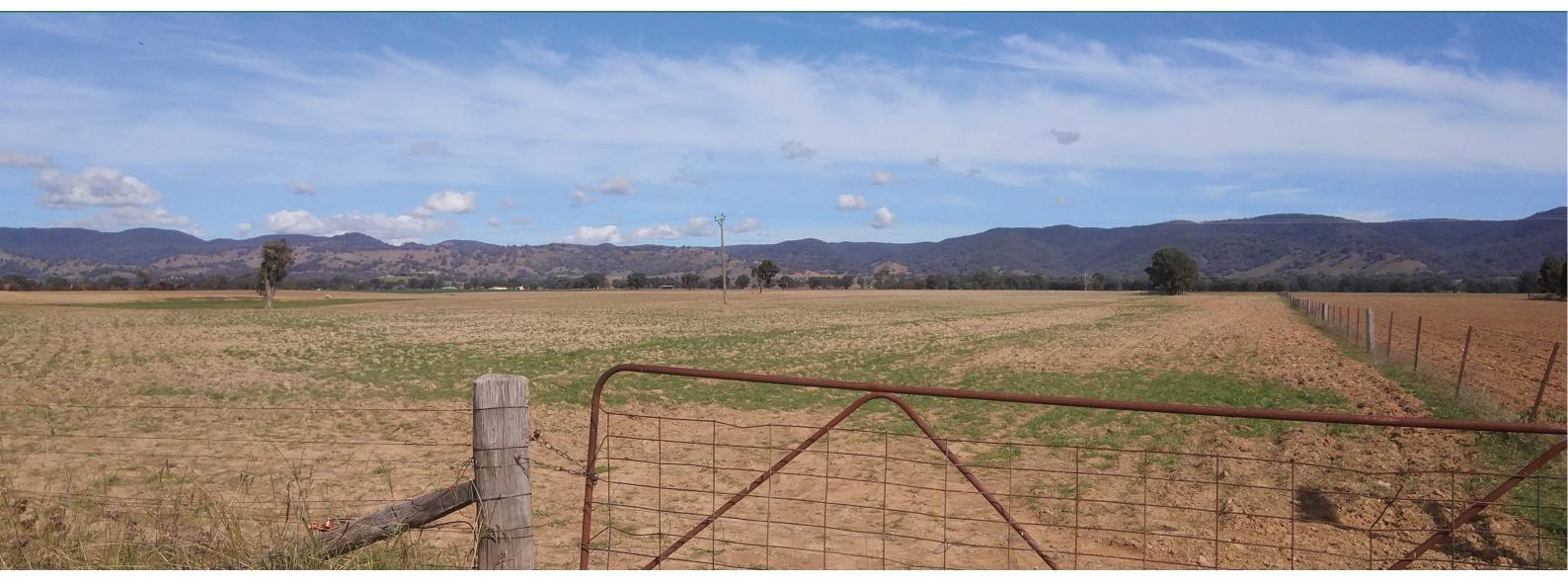




Image 1 - Existing trees along the western boundary of the site

EXISTING CONDITIONS:

The site includes a few scattered trees but is otherwise cleared and has historically been used for grazing and cropping. There is a single row of mature trees along part of the western boundary of the site (image 1).

There is also some native vegetation on the adjoining site to the south which is forming a visual screen (image 2). There are ornamental trees and gardens along the surrounding driveways and around the residential dwellings (image 3).





Image 3 - Callistemon sp. forming a dense hedge on neighbouring property

Image 2 - Native screen planting on adjacent property, viewed from the site



Burrundulla Mini Sustainable Energy Park

Landscape Concept - IT Power (Australia) Pty Ltd

LANDSCAPE STRATEGY:

A landscape concept plan has been developed based on consideration of the potential visibility of the site. The objectives of this landscape plan are to:

- Reduce the visibility of the site from adjacent sensitive recievers (including neighbouring residences and views from the Castlereagh Highway)
- Improve the character of the landscape through the restoration of native vegetation
- Provide habitat and increase local biodiversity through the use of local plant species.

The landscape plan identifies three landscape treatments for the site. These are:

- 1. Native screen planting (10 metres wide)
- 2. Mounding with scattered trees in pasture
- 3. Scattered trees in pasture

These landscape treatments are shown on the landscape plan on Figure 2.

To ensure the suitability of planting for the local conditions, the plant species proposed for these landscape treatments have been selected from the:

- Native Species Revegetation, A Guide for the Mid Western Regional Council Area, Watershed Landcare Incorporated (in association with the Australian Government National Landcare Program)
- Native Plants for Mudgee Gardens, Australian • Plant Society, Central West Group, 2010
- Planting your patch, A guide to revegetation on *your property,* State of New South Wales Local Land Services. 2016.

Further consultation with Council Officers and local land care groups would be undertaken during detail design.

FIGURE 1: EXISTING CONDITIONS & LANDSCAPE STRATEGY

Key:



1. Native screen planting (10 metres wide)



Mounding (max. 1:5 slope to 3 metres tall) with scattered trees in pasture

Scattered trees in pasture



Existing trees to be retained



Existing trees to be removed





Burrundulla Mini Sustainable Energy Park

Landscape Concept - IT Power (Australia) Pty Ltd

FIGURE 2: LANDSCAPE PLAN

Date: 1 July 2022 Job Number: 2021-223

1. NATIVE SCREEN PLANTING

A mix of native trees and shrubs with a dense and compact habit have been selected to provide a maximum screening effect.

The following plant list includes a number of 'pioneer species' which should establish quickly and form an effective visual screen in the short term. While some of these species are relatively short lived (7-12 years), they will disperse seed and new plants will regenerate so that a self-sustaining vegetation screen is maintained in the long term.

Plant list:

Species name, Common name

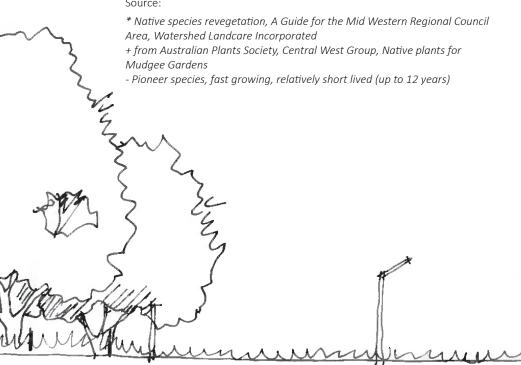
Native trees

Acacia falciformis, Broad-leaved hickory* Acacia implexa, Black wattle* Allocasuarina verticalla, Drooping she-oak* *Callistemon salignus, Willow bottlebrush** Callistemon viminalis, Weeping bottlebrush+ Eucalyptus albens, White box* Eucalypt dealbata, Tumble-down red gum*

Native shrubs

Acacia decora, Western silver wattle*-2-4m Acacia difformis, Drooping wattle* 1-6m Acacia hakeoides, Hakea wattle* 1-6m Acacia spectabilis, Mudgee wattle*-1-4m Callistemon citrinus, Crimson bottlebrush*+ 1-3m Dodonaea viscosa 'angustifolia', Sticky hop bush* 1-5m Dodonea viscosa 'cuneata' Wedge-leaf hop bush* 1-3m *Melicytus dentatus, Tree violet/Gruggly bush** 1-3m

Source:



width varies

Pasture within the site

Plant set-out matrix

Mature height

2-10m

5-12m

3-7m

3-10m

6-9m

25m

15m

Trees and shrubs will be staggered to maximise the screening effect.

Specification notes

10 m

Scale:

0m

1

- Five offset rows of trees and shrubs as per the set out matrix.
- Ripped lines to a depth of 500mm and cultivated to a depth of 150mm. Ripping to follow the contours
- 3 month (13 week) establishment followed by a 21 month monitoring period (total 24 months). Ongoing maintenance would be managed by the operator for the life of the project.
- Refer to the Vegetation Management Plan for further details.



10 m

Native screen planting



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5m

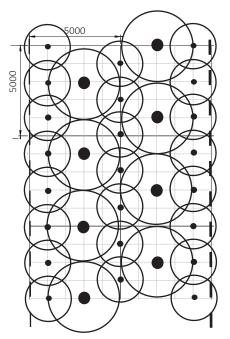
Panel arrays

iris

Existing

field

10 metre wide screening matrix



KEY

- Small trees
- Shrubs
- Solar farm security fence
- Site boundary fence

FIGURE 3: NATIVE SCREEN PLANTING

3. SCATTERED TREES IN PASTURE

Areas within the solar farm fence will be sown with pasture grasses to allow for grazing of the property during operation.

Groups and scattered individual trees will be located through the centre of the site within the pasture grass. These trees will be local native species with a single trunk and open canopy. These will provide some filtering of views where the solar farm can be seen from elevated areas, provide tree canopy cover and habitat.

Plant list:

Species name, Common name height

Large native trees

Angophora floribunda, Rough barked apple* 30m *Eucalyptus albens, White box** 25m Eualyptus blakelyi, Blakelys red qum* 20m *Eucalyptus bridgesiana, Apple box** 20m Eucalyptus microcarpa, Western grey box* 25m Eucalyptus melliodora, Yellow box* 30m

Source:

* Native species revegetation, A Guide for the Mid Western Regional Council Area, Watershed Landcare Incorporated

Plant set-out

Trees would be setout in an informal layout, with individual and groups of trees . All trees to be set back a minimum of 10 metres and larger trees by 20 metres from the solar farm fence to minimise overshadowing of the panel array area.

Specification notes

Mature

- Individual planting holes to be excavated, backfilled with ameliorated site soil and mulch to be applied across disturbed area.
- 3 month (13 week) establishment followed by a 21 month monitoring period (total 24 months). Ongoing maintenance would be managed by the operator for the life of the project.
- Refer to the Vegetation Management Plan for further details.

massion, in un massion	N. m. ogs Mar 1, (m/ Now mogs) (m Now mog	LA KANADO MARTINA	~	200	
	width varies (min 10m)	10 m			Panel
Scattered trees in pasture	Pasture grasses	Pasture grasses			
B - B Indicative cros	s section - Native revegetation areas	Scale:	0m	1	2



Burrundulla Mini Sustainable Energy Park

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Date: June 2022 Job Number: 2021-223



Eucalyptus mellidora, Yellow box





Eucalyptus albens, White box

arrays

FIGURE 4: SCATTERED TREES IN PASTURE

2. MOUNDING WITH SCATTERED TREES IN PASTURE

Mounds would be located to provide an immediate screening effect in views from the Castlereagh Highway and residences within 500 metres of the panel arrays. The mounding would be gently sloping (to a maximum gradient of 1:5) to fit within the character of the surrounding undulating landform. Mounding has been located on higher ground, where possible, to maximise their effectiveness. These areas would be sown with pasture grasses and suitable for grazing during operation.

Scattered individual trees will be located across the mounds to improve the amenity of views from surrounding areas. These trees will be local native species with a single trunk and open canopy. These trees will provide some filtering of views where the solar farm can be seen from elevated areas, provide tree canopy cover and habitat.

Plant list:

Species name, Common name

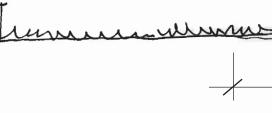
Large native trees

Angophora floribunda, Rough barked apple*	30m
Eucalyptus albens, White box*	25m
Eualyptus blakelyi, Blakelys red gum*	20m
Eucalyptus bridgesiana, Apple box*	20m
Eucalyptus microcarpa, Western grey box*	25m
Eucalyptus melliodora, Yellow box*	30m

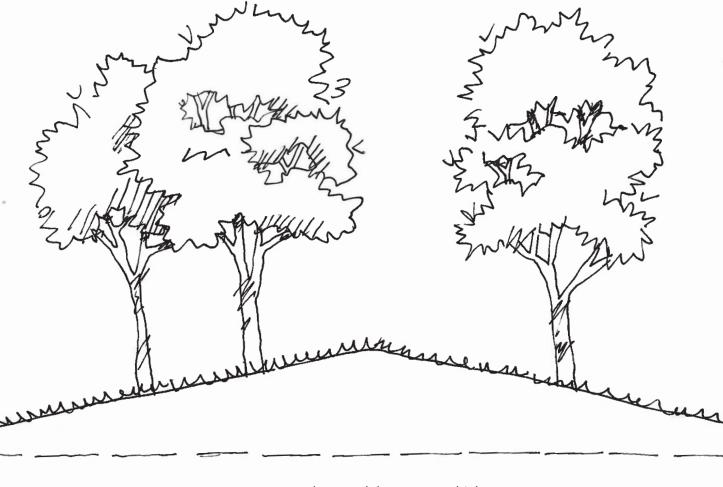
Source:

* Native species revegetation, A Guide for the Mid Western Regional Council Area, Watershed Landcare Incorporated

Plant set-out



Trees would be setout in an informal layout, with individual and groups of trees . All trees to be set back a minimum of 10 metres and larger trees by 20 metres from the solar farm fence to minimise overshadowing of the panel array area.



30 metres (1:5 grade) x 3 metres high

Scattered trees in pasture

C - C Indicative cross section, mounding with scattered trees in pasture areas



Burrundulla Mini Sustainable Energy Park

Landscape Concept - IT Power (Australia) Pty Ltd

Mature height

Specification notes

- Individual planting holes to be excavated, backfilled with ameliorated site soil and mulch to be applied across disturbed area.
- 3 month (13 week) establishment followed by a 21 month monitoring period (total 24 months). Ongoing maintenance would be managed by the operator for the life of the project.
- Temporary fences and / or tree guard sleeves and stakes to be installed and maintained untill trees would not be impacted by grazing livestock.
- Refer to the Vegetation Management Plan for further • details.

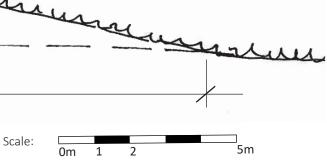
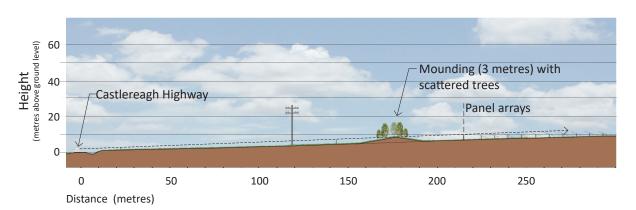
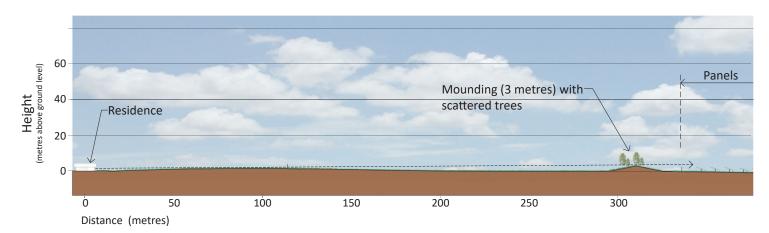


FIGURE 5: SCATTERED TREES IN PASTURE AREAS

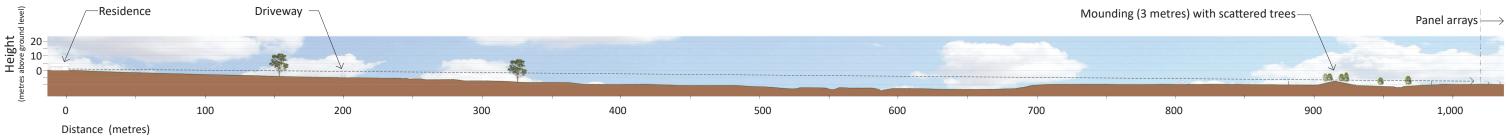


D - D Long section showing screening effect of mounding on views from the Castlereagh Highway



E - E Long section showing screening effect of mounding on view from dwelling at 312 Castlereagh Highway





F - F Long section showing screening effect of mounding on views from short term holiday let at 433 Castlereagh Highway



Burrundulla Mini Sustainable Energy Park

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Date: July 2022 Job Number: 2021-223

FIGURE 6: LONG SECTIONS