



# **Burrundulla Mini Sustainable Energy Park**

Vegetation Management Plan



July 2022

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## ABBREVIATIONS

Term	Meaning
BMSEP	Burrundulla Mini Sustainable Energy Park
CEMP	Construction Environmental Management Plan
TPZ	Tree Protection Zone

# 1. Introduction

IT Power (Australia) Pty Ltd (“ITP”) is the proponent of the Burrundulla Mini Sustainable Energy Park (BMSEP) and will undertake the Engineering, Procurement and Construction of the solar farm. A contractor will be engaged to undertake the construction of the solar farm on behalf of ITP. This will include the engagement of a landscape contractor to construct, establish and maintain the landscape works.

This Vegetation Management Plan has been developed to ensure the objectives of the landscape concept plan are achieved during construction and operation of the project. This Vegetation Management Plan (VMP) should be read in conjunction with the **Landscape Concept Plan** provided in **Appendix A**.

## 1.1. Site description

The site is located in Burrundulla, southeast of Mudgee. The site is largely cleared and is currently used for grazing. There is a row of mature trees along part of the western site boundary and some scattered trees across the site. There is a large dam to the centre north of the site.

## 1.2. Project description

This project is a 10-megawatt solar farm at Lot 6, DP 1069441 on the Castlereagh Highway, Burrundulla (DA0288/2019).

The layout of the key elements of the project are shown on the **General Arrangement Plan**, included in **Appendix A**. The project will include solar panel arrays (up to 2.757 metres tall), solar farm fencing and access tracks shown in the Fencing Details, Gate Details and Nextracker Array Details, also included in **Appendix A**.

The project includes set backs and landscaped areas as shown in the Landscape Concept Plan, included in **Appendix B**. The plantings include a mix of shrubs and small trees in the native screen planting areas, and large trees in pasture grasses, scattered through the centre of the site, and around the perimeter of the site, including across mounded areas.

## 2. Purpose and objectives

### 2.1. Purpose

This Vegetation Management Plan describes the landscaping and other treatments that will be put in place to reduce the visibility of the BMSEP solar farm from surrounding private property and public spaces, and to contribute to the amenity and habitat values of the area.

### 2.2. Objectives

The key objectives of this Management Plan are:

- Ensure appropriate planning, controls and procedures are implemented during construction to facilitate the preparation and installation of the landscape areas
- Ensure the landscaping requirements are sustainable through the operational life of the project
- To ensure the objectives for screening are met.

### 2.3. Project roles and responsibilities

The following table explains the roles and responsibilities of each project stakeholder(s).

TABLE 4-1 PROJECT ROLES AND RESPONSIBILITIES

Role	Responsibility
ITP Project Manager	<ul style="list-style-type: none"> <li>• Lead the implementation of this Plan</li> <li>• Demonstrate proactive support for environmental requirements, including ensuring sufficient resourcing for the Health, Safety and Environment (HSE), Engineering and Construction Teams</li> <li>• Decision-making authority relating to environmental performance of the construction program</li> <li>• Ensure all relevant Management Plans are approved and in place and ITP meets its statutory obligations</li> <li>• Ensure works are undertaken in accordance with this Plan including works undertaken by contractors</li> <li>• Ensure that Project-specific environmental inductions are undertaken by all project employees and subcontractors prior to commencement of works</li> <li>• Ensure that subcontractors to be engaged on the project have been assessed and provided with all necessary information regarding environmental requirements required complete their works</li> <li>• Orders STOP WORK for any significant environmental incident, Investigate and report where required</li> <li>• Ensure that project personnel understand their accountabilities and responsibilities under this Plan</li> <li>• Ensure relevant training is provided to all project staff prior to commencing individual activities</li> <li>• Coordinate milestone approvals with Mid-Western Regional Council and the landscape contractor.</li> </ul>

Role	Responsibility
Site Manager	<ul style="list-style-type: none"> <li>• Implement all procedures and processes identified in this Plan</li> <li>• Ensure all personnel undertaking works on site understand their obligations</li> <li>• Undertake weekly Environmental Inspections of works activities in line with the CEMP</li> <li>• Ensure monitoring and maintenance is undertaken as per Section 6 of this Plan</li> <li>• Liaise with stakeholders, including regulatory agencies, the community</li> <li>• Maintain all documentation required by this Plan</li> <li>• Monitor adherence to the environmental management practices required by the CEMP</li> <li>• Conduct investigations of any incident or complaint that occurs and implement appropriate corrective actions</li> <li>• Be available for any regulatory inspection or visits of the site as required.</li> </ul>
Site HSE	<ul style="list-style-type: none"> <li>• Perform the role of Site Environmental Compliance Advisor</li> <li>• Inspect of work areas to determine type of work required materials, labour and equipment to be used</li> <li>• Ensure workers and subcontractors working on site are compliant with this Plan and the CEMP</li> <li>• Ensure environmental compliance, client and stakeholder satisfaction while carrying out any work</li> <li>• Orders STOP WORK for any serious environmental breaches and reports environmental incidents</li> <li>• Be available for regulatory inspections and audits of the site as required</li> <li>• Conduct regular (at least weekly) environmental inspections of the site and keep records of the inspections</li> <li>• Deliver environmental training as required by the CEMP through toolbox and project induction</li> <li>• Undertake reporting required in Section 6.</li> </ul>
Contractors and all personnel	<ul style="list-style-type: none"> <li>• Perform all activities in a manner which to ensure unapproved environmental harm is avoided</li> <li>• Comply with the responsibilities assigned under relevant legislation</li> <li>• Adhere to the Environmental rules and regulations</li> <li>• Participate in the identification and elimination of defects and impacts</li> <li>• Actively participate in inductions, toolbox talks, consultation and environmental training programs</li> <li>• Assist in investigation of accidents/incidents as required</li> <li>• Report all environmental incidents and hazards.</li> </ul>

## 3. Landscape plan

### 3.1. Landscape types

The following three landscape types are proposed at the BMSEP site (refer to Appendix A **Landscape Plan**). These are:

- Landscape type 1 - Native screen planting
- Landscape type 2 – Mounding with scattered trees in pasture
- Landscape type 3 - Scattered trees in pasture

The details of these landscape types are described in the following section.

#### 3.1.1. Landscape Type 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 Native screen planting areas will be arranged in offset rows to achieve canopy overlap and a dense 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 (2-3 years). 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.

TABLE 5-1 PROPOSED PLANT LIST – LANDSCAPE TYPE 1: NATIVE SCREEN PLANTING

Trees	Mature height
<i>Acacia filicifolia</i> , Fernleaf wattle	3-14m
<i>Acacia implexa</i> , Black wattle	5-12m
<i>Allocasuarina verticalla</i> , Drooping she-oak	3-7m
<i>Callistemon salignus</i> , Willow bottlebrush	3-10m
<i>Callistemon viminalis</i> , Weeping bottlebrush	6-9m
<i>Eucalyptus albens</i> , White box	25m
<i>Eucalypt dealbata</i> , Tumble-down red gum	15m
Native shrubs	
<i>Acacia decora</i> , Western silver wattle	2-4m
<i>Acacia difformis</i> , Drooping wattle	1-6m
<i>Acacia hakeoides</i> , Hakea wattle	1-6m
<i>Acacia spectabilis</i> , Mudgee wattle	1-4m
<i>Callistemon citrinus</i> , Crimson bottlebrush	1-3m
<i>Dodonea viscosa</i> 'angustifolia', Sticky hop bush	1-5m
<i>Dodonea viscosa</i> 'cuneata' Wedge-leaf hop bush	1-3m
<i>Melicytus dentatus</i> , Tree violet/Gruggly bush	1-3m

### 3.1.2. Landscape Type 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 in with the character of the surrounding undulating landform. These areas would be sown with pasture grasses suitable for grazing.

Scattered individual trees will be located across the mounds. 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 and provide tree canopy cover and habitat.

Trees would be set out in an informal layout, with individual and groups of trees. All trees are 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.

TABLE 5-2 PROPOSED PLANT LIST – LANDSCAPE TYPE 2: MOUNDING WITH SCATTERED TREES IN PASTURE

Screening trees	Mature height
<i>Angophora floribunda</i> , Rough barked apple	30m
<i>Eucalyptus albens</i> , White box	25m
<i>Eucalyptus blakelyi</i> , Blakelys red gum	20m
<i>Eucalyptus bridgesiana</i> , Apple box	20m
<i>Eucalyptus microcarpa</i> , Western grey box	25m
<i>Eucalyptus melliodora</i> , Yellow box	30m

### 3.1.1. Landscape Type 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 trees will provide some filtering of views where the solar farm can be seen from elevated areas and provide tree canopy cover and habitat.

Trees would be set out in an informal layout, with individual and groups of trees. All trees are 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.



TABLE 5-3 PROPOSED PLANT LIST – LANDSCAPE TYPE 3: SCATTERED TREES IN PASTURE

Screening trees	Mature height
<i>Angophora floribunda</i> , Rough barked apple	30m
<i>Eucalyptus albens</i> , White box	25m
<i>Eucalyptus blakelyi</i> , Blakelys red gum	20m
<i>Eucalyptus bridgesiana</i> , Apple box	20m
<i>Eucalyptus microcarpa</i> , Western grey box	25m
<i>Eucalyptus melliodora</i> , Yellow box	30m

### 3.1.2. Groundcover – Pasture grasses

Remaining areas of the solar farm site will be stabilised with a continuous coverage of pasture grasses.

## 4. Implementation plan

### 4.1. Plant material

All plant stock is to be minimum 50 x 50 x 120mm tube stock. All plants are to be healthy and well formed with no rootbound stock. Plant stock is to be free from weeds.

Plants are to be ordered from a reputable nursery well in advance to ensure availability of the selected plant species. Any requests for substitution of species due to stock availability issues are to be approved by the Landscape Architect to ensure the aims of the Landscape Type are achieved.

### 4.2. Timing

Ideally, ripping would be undertaken in late Summer / Autumn while the ground is dry. Tube stock would be planted in late Winter / early Spring to take advantage of moist ground conditions and increasing sunlight. If project timelines require that planting occur outside of this time, increased effort in both initial planting and ongoing watering to ensure plant growth and improve retention rates may be required.

The project would have an **establishment period** of a minimum of 3 months (13 weeks) and a **monitoring period** of a minimum of 21 months (to include two full growing seasons) following completion of the establishment period. This would be followed by ongoing maintenance for the life of the project as required.

The timing of key establishment period, monitoring period and ongoing maintenance activities would be as identified in Section 7 of this Management Plan.

### 4.3. Weed hygiene and removal

All relevant construction personnel will receive induction training in procedures for personal weed-control hygiene practices, such as removing seeds and mud from clothing and footwear.

Weed control procedures will be in line with the requirements stipulated by the Biosecurity Act, and recommendations made by the local control authority (Local Land Services NSW) and the Noxious and Environmental Weed Handbook (DPI, 2011), which contains details as to the management of specific noxious weeds. Weed hygiene procedures will be documented within the CEMP.

Weed control is essential to achieve high survival rates and rapid plant establishment. The monitoring and treatment of weeds should be undertaken monthly or as required to ensure weeds are controlled.

All vehicles and machinery should be weed free when entering the site.

Any existing weed infestations are to be treated with an appropriate herbicide or pesticide (as required for the intended purpose) subject to the specific requirements of the relevant local government authority.

### 4.4. Pest management

The landscape treatments on this site have been designed to minimise the potential to attract feral animals and pests. All vegetated areas will be maintained to deter feral animals and any pests managed in accordance with the requirements of this Plan.

### 4.5. Planting set-out

All plants to be set out in accordance with the plant set-out matrix shown in the Landscape Concept Plan or in an informal layout. A total of about 1800 plants would be installed on the project. This would include 1,440 plants in the Landscape Type 1 – Native screen planting, and 350 individual trees located within the Landscape Type 2 (Mounding with scattered trees in pasture) and Landscape Type 3 (Scattered trees in pasture) areas.

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

Shrubs will be set back a minimum of one metre from the property boundary or fence. Trees will be set back a minimum of 2 metres from the property boundary or fence and a minimum of 10 metres from any solar panel array. Larger trees would be set back by a minimum of 20 metres from the solar farm fence to minimise overshadowing of the panel array area.

### 4.6. Ground preparation

Soil testing will be undertaken prior to construction to gain an understating of soil amelioration requirements. All testing is to be undertaken by a suitably qualified expert in accordance with relevant Australian Standards at a NATA accredited laboratory.

Where ripping is to be undertaken, rip tree planting line with tractor mounted tines to a depth of 500mm and cultivated to a depth of 150mm. Ripping to follow contours. No ripping to occur within creek corridors.

For individual planting, manually clear area to be excavated together with a perimeter area 0.5 m wide. Individual planting holes are to be dug one and a half times the depth and twice the width of the pot and the pot planted so that the base of the plant is level with the surrounding ground and backfilled with ameliorated site soil with a shallow basin around each plant to retain water.

All planting areas to have 75mm depth of well composted forest blend/straw mulch. Mulch shall be free from weeds, deleterious material, including rocks, plastic and any material toxic to plant growth. Mulch shall comply with the requirements of AS 4454-2012: Composts, soil conditioners and mulches.

If required, imported organic topsoil must be a weed free 'organic type' soil mix that conforms to AS 4419 and suitable for the culture of plant material in landscape areas.

One Agriform tablet (or equivalent) is to be installed per plant as per manufacturer's specification. Ensure tablet is not in direct contact with root ball.

#### 4.7. Plant protection

Installation of tree guard sleeves and stakes, suitable to protect plants from grazing stock, for each tree and shrub to be installed as per manufacturer's specification.

#### 4.8. Existing trees

All care must be taken to protect existing trees that are to be retained upon the site, and on adjoining property, that are intended to be retained.

A TPZ shall be constructed for all existing trees to be retained within the development in accordance with Australian Standards - AS 4970-2009 Protection of Trees on Development Sites.

Construction of TPZs shall be completed and inspected by Council prior to the commencement of any site works. TPZ fences shall remain in place until the end of construction.

If damage of any sort should occur to any protected trees and vegetation within the development, contact shall be made with Council's Supervisor of Tree Planning and Management to determine what remedial action should be taken. Throughout the construction period regular inspections of protected trees shall be carried out to ensure trees retained are of good health and vigour.

Construction of Tree Protection Zone's shall be completed and inspected by Council's Supervisor of Tree Planning and Management, prior to the commencement of any site works. TPZ fences shall remain in place until the end of construction.

Throughout the construction period regular inspections of protected trees shall be carried out to ensure trees retained are of good health and vigour.

Any felled limbs with hollows and bush rock encountered during construction should be scattered sparsely within the native revegetation on areas to provide habitat for ground dwelling fauna. Woody debris should not be stacked.

## 4.9. Watering

Watering will be undertaken during the establishment period in sufficient quantities and with sufficient regularity to ensure establishment of seedlings; and deep rooting is encouraged and maintained.

Watering should also be undertaken at appropriate times to respond to local climatic conditions, weather patterns, and the requirements of the vegetation types with a view to achieving a self-sustaining landscape.

Soil moisture tests should be undertaken and used to determine the frequency of watering and amount of water required.

Should remedial works be required watering rates will be assessed for suitability.

## 5. Establishment, monitoring and maintenance

### 5.1. Establishment period

Once a discrete landscape area is determined to be complete, that is it has been constructed in accordance with the landscape revegetation drawings and approved by ITP and Council as required, the establishment period will begin.

During the establishment period:

- Watering must be applied in sufficient quantities and with sufficient regularity to ensure:
  - establishment of seedlings; and
  - deep rooting is encouraged and maintained
- Planting treatments shall be fertilised at 6 weeks and then as required, to ensure plant health and to achieve the criteria set out in sub-conditions below
- Restricted, prohibited and invasive weed species shall be managed in accordance with the Biosecurity Act 2015 and all other weeds are managed as required
- Pests shall be managed to ensure no detrimental effect on the planting areas, development site and adjoining property
- Thirty days before the completion of the establishment period, mulched treatments shall be topped up with mulch to achieve the originally specified depths.

The end of the establishment period to be identified as the later of:

- 13 weeks, and
- the date on which vegetation is established, showing evidence of growth with healthy root systems.

Any defects or issues identified in a report to ITP or Council that require rectification must be addressed within one month of the date of issue of the report.

#### 5.1.1. Establishment period reporting

At the completion of the establishment period a report will be submitted to Council detailing progress of the landscaping and any defects, weed issues or planting failures.

Establishment will not be complete unless the following is achieved:

- The landscape area is free from weeds
- Planting densities are as per the landscape documents
- Planting is showing signs of growth and healthy root systems and have achieved overall growth rates reasonably expected during the establishment period
- Site is free of all litter, rubbish and debris, dead or dying stock; and
- All issues identified in a report to ITP or Council have been addressed.

## 5.2. Monitoring period

The monitoring period commences at the end of the establishment period and ends 24 months from the planting of each area of landscaping.

During the monitoring period:

- Watering should be undertaken at appropriate times to respond to local climatic conditions, weather patterns, and the requirements of the vegetation types with a view to achieving a self-sustaining landscape
- Restricted, prohibited and invasive weed species shall be managed in accordance with the Biosecurity Act 2015 and all other weeds are managed as required
- Tree guard sleeves, stakes and ties to be removed at an appropriate time having regard to planting maturity; and
- Pests shall be managed to ensure no detrimental effect on the planting areas, development site and adjoining property.

Any defects or issues identified in a report to Council (during the monitoring period) that require rectification must be addressed within one month of the date of issue of the report.

### 5.2.1. Monitoring period reporting

The monitoring period will not be complete unless the following is achieved:

- The landscape area is free from weeds
- Vegetation is well formed and showing signs of healthy growth
- Sufficient screening is achieved (to Council approval) in the areas identified for Landscape Type 1 Native screen planting
- Site is free of all litter, rubbish and debris, dead or dying stock; and
- All issues identified in a report to ITP or Council have been addressed.

## 5.3. Remedial work

If more than 50% of the total plantings fail in any discrete area during the establishment or monitoring Period, failed or damaged plantings shall be repaired or re-planted as required by ITP or Mid-Western Council and the establishment period (minimum 3 months) is to restart.

Prior to re-planting, the failed treatment will be investigated to determine its cause(s). Adjustments should be made to remedy the issue such as species selection, soil amelioration, or watering rates. If the cause(s) apply to the whole of the plantings, the whole of the plantings are to be replaced and the establishment period (minimum 3 months) is to restart.

## 5.4. Ongoing maintenance

The ongoing maintenance responsibility will begin at the end of the Monitoring Period and will continue for the life of the project.

During the ongoing maintenance period:

- Restricted, prohibited and invasive weed species shall be managed in accordance with the Biosecurity Act 2015 and all other weeds are managed as required
- Pests shall be managed to ensure no detrimental effect on the planting areas, development site and adjoining property; and
- Failed planting areas will be replaced where the failure results in the opening up of a view to the project that results in an adverse visual impact.

Any issues identified in a report to Council (during the ongoing maintenance period) that require rectification must be addressed within three months of the date of issue of the report, or in the case of planting, would be undertaken during the next feasible planting season.

### 5.4.1. Maintenance period reporting

During the maintenance period an annual report will be prepared that identifies:

- Any weed outbreaks and the approach to managing any weed outbreak, and
- Sufficient screening is achieved (to Council approval) in the areas identified for Landscape Type 1 Native screen planting and any measures proposed to remediate any failed areas.

## 5.5. Timing

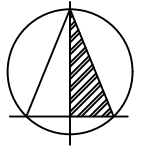
The timing of key establishment and monitoring period activities will be as outlined in the following table, unless otherwise agreed with Council.

TABLE 6-1 TIMING OF ESTABLISHMENT AND MONITORING ACTIVITY– LANDSCAPE TYPE 3: NATIVE SCREEN PLANTING

<b>Establishment Period</b>	
<b>Activities</b>	<b>Timing</b>
Progress inspection	Monthly
Management of weeds	Monthly
Replacement planting as required	Monthly
Infill planting where success rates have not been met	Monthly
Rubbish and litter collection and removal	Monthly
Watering as required	As required
<b>Monitoring Period</b>	
<b>Activities</b>	<b>Timing</b>
Progress inspection	Monthly
Inspection Report issued	Quarterly
Removal of tree guards and stakes	As required
Management of weeds	Monthly / As required
Replacement planting as required	Quarterly / As required
Rubbish and litter collection and removal	Monthly / As required
Watering as required	As required
<b>Ongoing maintenance</b>	
<b>Activities</b>	<b>Timing</b>
Inspection	Annually
Inspection report issued	Annually
Management of all weeds	Annually / As required
Replacement planting if required	Annually (during the planting season)



# Appendix A: General Arrangement Plan



### SITE INFORMATION

LOT / DP	6/1069441
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 MUDGEES
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

## 1 GENERAL ARRANGEMENT PLAN

SCALE: 1:5000

## DEVELOPMENT APPLICATION

NO.	STAGE	DATE	NOTES	PARTNERS	DRAWN	MJB	DRAWING	GENERAL ARRANGEMENT PLAN
1	ISSUED FOR DA APPROVAL	13/06/2019	1. SYSTEM INFORMATION IS THE SAME FOR SYSTEM A AND SYSTEM B. 2. NEW VEGETATION AREAS ARE INDICATIVE, REFER TO LANDSCAPE CONCEPT PLAN		CHECKED	NL	PROJECT BURRUNDULLA MINI SUSTAINABLE ENERGY PARK CLIENT ITP DEVELOPMENT ADDRESS 3B SYDNEY ROAD BURRUNDULLA, NSW 2850 DRAWING NO. MUD3C-G-2100	SCALE AS NOTED
2	UPDATED EMERGENCY EXIT	11/10/2019			SHEET SIZE A3			
3	UPDATED FOR DA RESUBMISSION	30/09/2020			ORIG. DATE 13/1/21			
4	DEVELOPMENT APPLICATION	17/12/2021			REV. DATE 30/6/22			
5	DEVELOPMENT APPLICATION	30/06/2022			REV. NO. 5			
6	----	----						

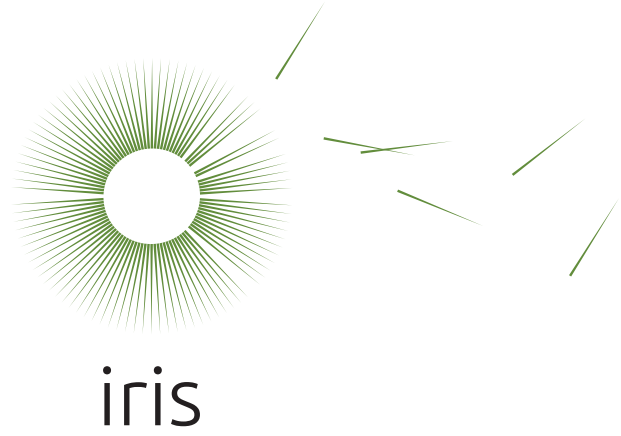


**RENEWABLES**

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# Appendix B: Landscape Plan



# **Burrundulla Mini Sustainable Energy Park**

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

Landscape Concept



July 2022



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).

**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 receivers (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.



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



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

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

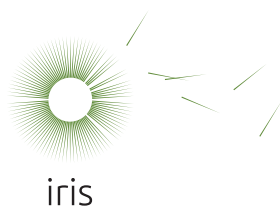
1. Native screen planting (10 metres wide)
2. Mounding with scattered trees in pasture
3. Scattered trees in pasture

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.



**Burrundulla Mini Sustainable Energy Park**

Landscape Concept - IT Power (Australia) Pty Ltd



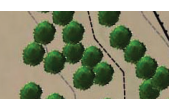


**FIGURE 1: EXISTING CONDITIONS & LANDSCAPE STRATEGY**

Date: July 2022  
Job Number: 2021-223

Drawn: SR  
Issue: Rev2



**Key:**

-  1. Native screen planting (10 metres wide)
-  2. Mounding (max. 1:5 slope to 3 metres tall) with scattered trees in pasture
-  3. Scattered trees in pasture
-  Existing trees to be retained
-  Existing trees to be removed

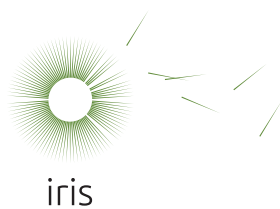
# Burrundulla Mini Sustainable Energy Park

Landscape Concept - IT Power (Australia) Pty Ltd

**FIGURE 2: LANDSCAPE PLAN**

Date: 1 July 2022  
Job Number: 2021-223

Drawn: SR  
Issue: Rev3



## 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

Mature height

#### Native trees

<i>Acacia falciformis</i> , Broad-leaved hickory*	2-10m
<i>Acacia implexa</i> , Black wattle*	5-12m
<i>Allocasuarina verticilla</i> , Drooping she-oak*	3-7m
<i>Callistemon salignus</i> , Willow bottlebrush*	3-10m
<i>Callistemon viminalis</i> , Weeping bottlebrush+	6-9m
<i>Eucalyptus albens</i> , White box*	25m
<i>Eucalypt dealbata</i> , Tumble-down red gum*	15m

#### Native shrubs

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

Source:

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

+ from Australian Plants Society, Central West Group, Native plants for Mudgee Gardens

- Pioneer species, fast growing, relatively short lived (up to 12 years)

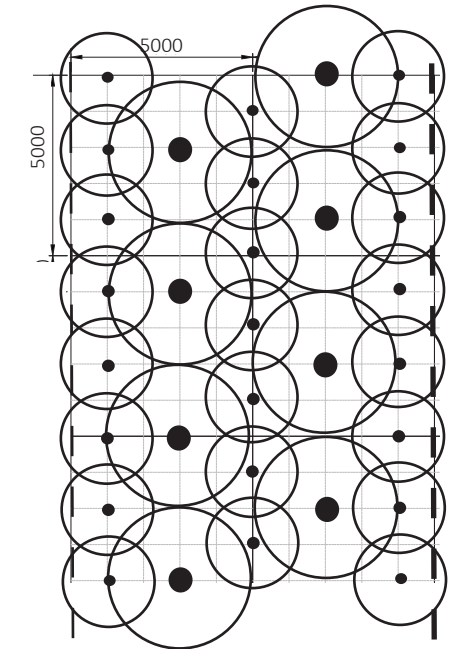
### Plant set-out matrix

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

#### Specification notes

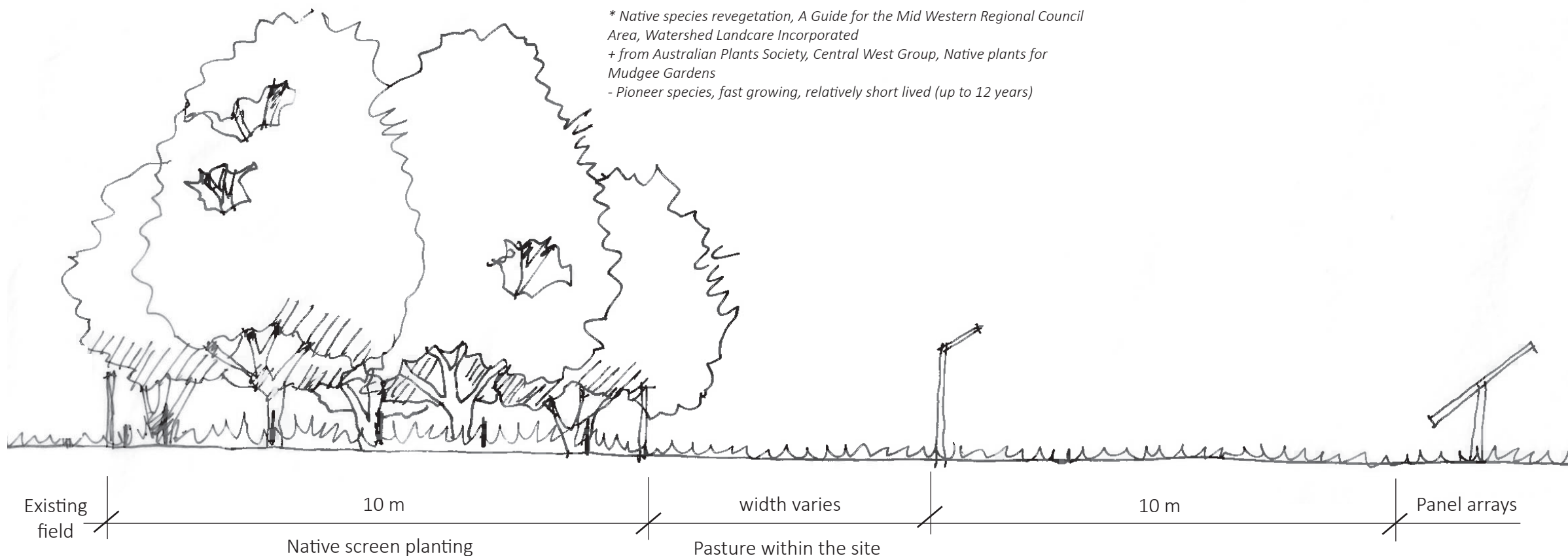
- Five offset rows of trees and shrubs as per the set out matrix.
- Ripped lines to a depth of 500mm and cultivated to a depth of 150mm. Ripping to follow the contours
- 3 month (13 week) establishment followed by a 21 month monitoring period (total 24 months). Ongoing maintenance would be managed by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

### 10 metre wide screening matrix

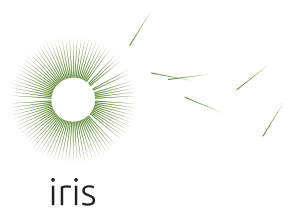


#### KEY

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



A - A Indicative cross section, Native screen planting



# Burrundulla Mini Sustainable Energy Park

Landscape Concept - IT Power (Australia) Pty Ltd

FIGURE 3: NATIVE SCREEN PLANTING

Date: July 2022  
Job Number: 2021-223

Drawn: SR  
Issue: Rev3

### 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

Mature

#### Large native trees

<i>Angophora floribunda</i> , Rough barked apple*	30m
<i>Eucalyptus albens</i> , White box*	25m
<i>Eucalyptus blakelyi</i> , Blakelys red gum*	20m
<i>Eucalyptus bridgesiana</i> , Apple box*	20m
<i>Eucalyptus microcarpa</i> , Western grey box*	25m
<i>Eucalyptus melliodora</i> , 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 set out 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

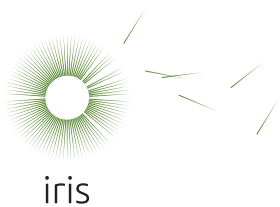
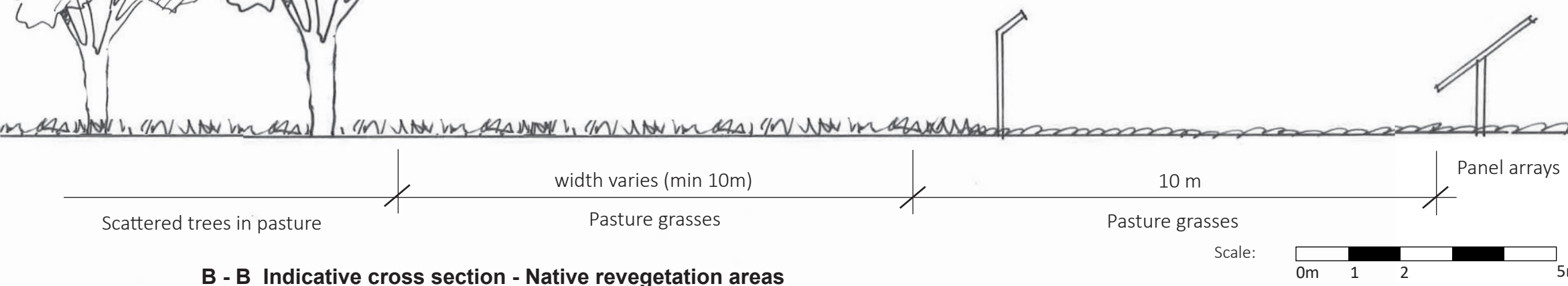
- Individual planting holes to be excavated, backfilled with ameliorated site soil and mulch to be applied across disturbed area.
- 3 month (13 week) establishment followed by a 21 month monitoring period (total 24 months). Ongoing maintenance would be managed by the operator for the life of the project.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



*Eucalyptus melliodora*, Yellow box



*Eucalyptus albens*, White box



## Burrundulla Mini Sustainable Energy Park

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**FIGURE 4: SCATTERED TREES IN PASTURE**

Date: June 2022  
Job Number: 2021-223

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Issue: Rev3



## 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	Mature height
<b>Large native trees</b>	
<i>Angophora floribunda</i> , Rough barked apple*	30m
<i>Eucalyptus albens</i> , White box*	25m
<i>Eucalyptus blakelyi</i> , Blakelys red gum*	20m
<i>Eucalyptus bridgesiana</i> , Apple box*	20m
<i>Eucalyptus microcarpa</i> , Western grey box*	25m
<i>Eucalyptus melliodora</i> , Yellow box*	30m

Source:

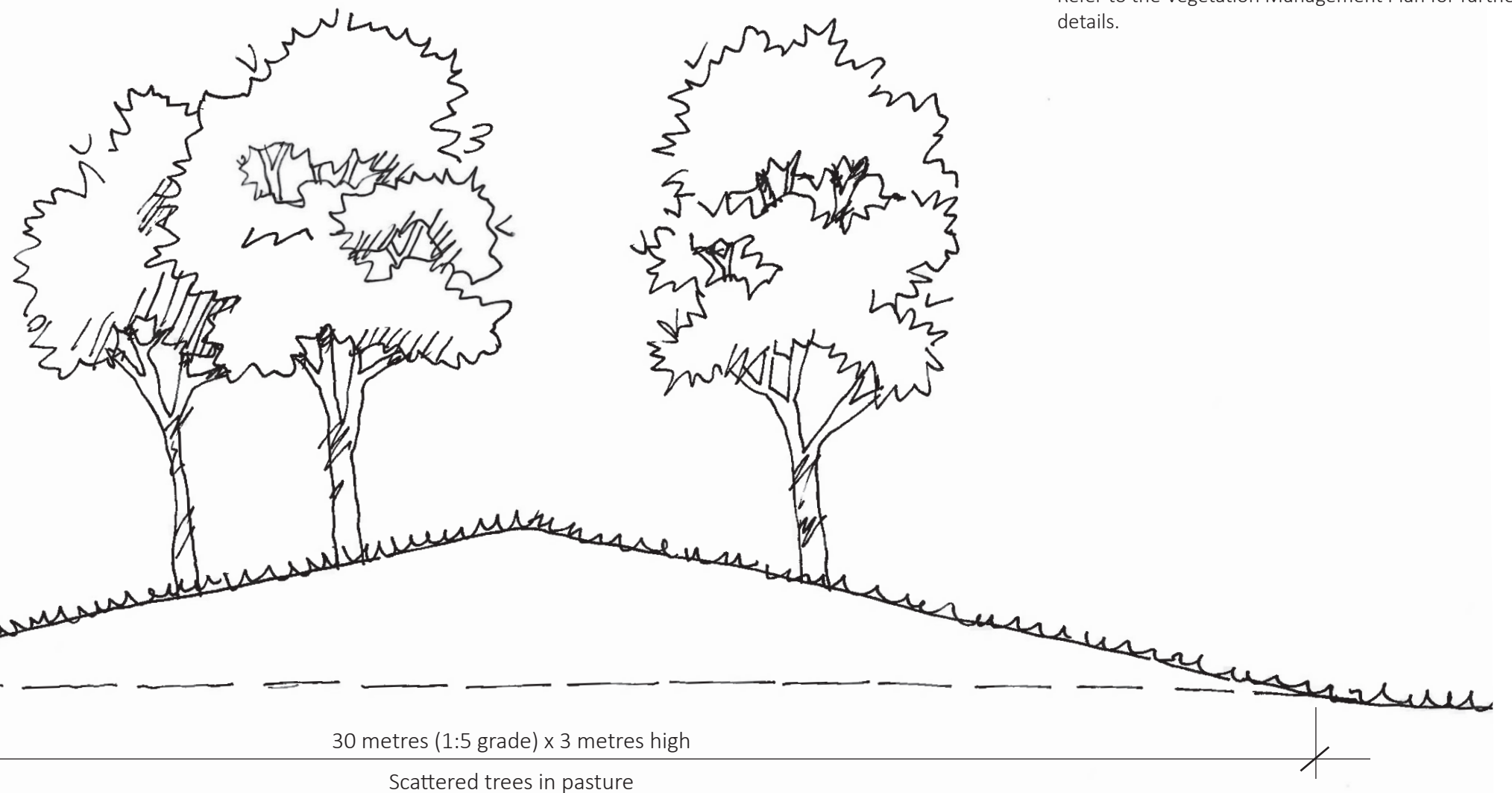
\* Native species revegetation, A Guide for the Mid Western Regional Council Area, Watershed Landcare Incorporated

### 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

- 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 until trees would not be impacted by grazing livestock.
- Refer to the Vegetation Management Plan for further details.



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

Scale: 0m 1 2 5m



# Burrundulla Mini Sustainable Energy Park

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FIGURE 5: SCATTERED TREES IN PASTURE AREAS

Date: July 2022

Job Number: 2021-223

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Issue: Rev1