



**NGH**



# LANDSCAPING PLAN

## Suntop Solar Farm

May 2020

Project Number: 19-775



## DOCUMENT VERIFICATION

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## ACRONYMS AND ABBREVIATIONS

AC	alternating current
APZ	asset protection zone
ASL	Above sea level
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
Biosecurity Act	<i>Biosecurity Act 2015 (NSW)</i>
CEMP	Construction environmental management plan
CoC	Conditions of Consent
Cwth	Commonwealth
Council	Dubbo Regional Council
DP&I	(NSW) Department of Planning and Infrastructure (now DPIE)
DPIE	(NSW) Department of Planning, Industry and Environment
EEC	Endangered ecological community – as defined under relevant law applying to the proposal
EIS	Environmental Impact Statement
EMS	Environmental Management System
EPBC Act	(Cwth) <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EP&A Act	(NSW) <i>Environmental Planning and Assessment Act 1979</i>
ha	hectares
km	kilometres
LGA	Local Government Area
LP	Landscape Plan
m	Metres
MW	megawatt
NSW	New South Wales

OEH	(NSW) Office of Environment and Heritage, formerly Department of Environment, Climate Change and Water
PCT	Plant Community Type
PV	photovoltaic
SoCs	Statements of Commitment
sp/spp	Species/multiple species
SSD	State Significant Development
SSF	Suntop Solar Farm
The Project	Suntop Solar Farm
VP	Viewpoint

# **1. INTRODUCTION**

## **1.1. BACKGROUND**

Suntop Solar Farm Pty Ltd (the proponent) received planning approval on 4 December 2018 for the construction, operation and decommissioning of a 189 megawatt (MW) alternating current (AC) photovoltaic (PV) solar farm, located around 10 km west of Wellington within the Dubbo Regional Council Local Government Area (LGA). Suntop Solar Farm ('the Project') is a State Significant Development (SSD 8696) and represents an important contribution to renewable energy generation in New South Wales.

This Landscape Plan (LP) has been prepared to address the requirements of the mitigation and management measures listed in the *Suntop Solar Farm Environmental Impact Statement* (EIS) (pitt & sherry 2018), Statements of Commitment (SoCs) listed in the Suntop Solar Farm Response to Submissions (pitt and sherry July 2018 Report) and the Conditions of Consent (CoC) from the New South Wales, Minister for Planning. Additionally, it considers legislation, policies and guidelines applicable to traffic management. This plan was approved by DPIE on the 24 of April 2020 (Appendix D.3).

## **1.2. THE PROJECT**

The scope of works under the contract includes all works necessary to design, construct, test, commission, energise, decommission, and train staff in the operation of a 189 MW AC solar farm.

The scope of works consists of but is not limited to:

- Around 4400,000 solar panels up to 2.0 metres (m) in height, mounted on a single axis tracking system
- Small operations and maintenance building with associated car parking
- Upgrade of existing access within the site and from Suntop Road.
- Internal access tracks.
- 110 inverter units, standing up to 2.9 m above ground surface.
- Electrical substation midway along the western boundary of the site.
- Underground electrical cable reticulation.
- Security fencing and CCTV.
- Native vegetation planting for visual screening.
- Laydown area and security fencing.
- 132 kV transmission cables connecting the onsite substation to the TransGrid transmission line.

During construction, the development site will be accessed from a temporary access point in the north east corner of the development off Suntop Road. Suntop Road and its intersection with Renshaw McGirr Way will be upgraded to the satisfaction of the relevant roads authority prior to construction.

The construction period of the solar farm will last approximately 12 months from the commencement of site establishment work. Construction hours will be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1pm. Night works are not anticipated to occur.

## **1.3. ENVIRONMENTAL MANAGEMENT STRATEGIC FRAMEWORK**

The LP is part of the environmental management framework for the Project, as described in the overall Environmental Management System (EMS).

Used together, the EMS, LP and other sub-plans, TCPs, procedures and EWMS form management guides that clearly identify required environmental management actions for reference by Suntop Solar Farm Infrastructure personnel and contractors.

The review and document control processes for this plan are described in the EMS.



## **2. PURPOSE AND OBJECTIVES**

### **2.1. PURPOSE**

The purpose of this report is to ensure that landscaping is planned, established and maintained to mitigate the visual impact for nearby receivers and road users of the operational solar farm infrastructure.

### **2.2. OBJECTIVES AND SCOPE**

Specifically, the LP aims to:

- Ensure appropriate planning, controls and procedures are implemented during construction to facilitate the preparation and completion of landscape areas.
- Ensure appropriate planning, controls and procedures are implemented during operation to facilitate maintenance of landscaped areas.
- Ensure appropriate measures are implemented to address the CoC.
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements.

### **2.3. TARGETS**

The following targets have been established for the management of the visual amenity impacts during construction and operation of the Project:

- Ensure full compliance with the relevant legislative requirements, including conditions of approval.
- Adjacent landowners are consulted and their concerns addressed during the preparation of the Landscaping Plan.
- Effective screening of solar farm infrastructure is achieved within 3 years of commencement of construction.

## 3. ENVIRONMENTAL REQUIREMENTS

### 3.1. RELEVANT LEGISLATION AND GUIDELINES

#### 3.1.1. Legislation

Legislation relevant to landscaping management includes:

- *NSW Biosecurity Act 2015* (BS Act).
- *NSW Pesticides Regulation 2017*.
- *NSW Biodiversity Conservation Act 2016* (BC Act).

Relevant provisions of the legislation are explained in the register of legal requirements in the EMS.

#### 3.1.2. Guidelines and Standards

The main guidelines, specifications and policy documents relevant to this Plan include:

- *AS 4419-2003 Soils for landscaping and garden use*.
- *AS 2303:2015 Tree stock for landscape use*.

#### 3.1.3. Conditions of Consent (CoC)

Conditions 9, 10 and 11 of Schedule 3 of the CoC detail the requirements of the LP (Table 3-1).

Table 3-1 Conditions of Consent relevant to landscaping.

Conditions of Consent	Reference/where addressed
<b>Vegetation Buffer</b>	
9. The Applicant must establish and maintain a mature vegetation buffer (landscape screening) at the locations outlined in the figure in Appendix 1, to the satisfaction of the Secretary. This vegetation buffer must: <ul style="list-style-type: none"> <li>(a) be planted prior to the commencement of operations;</li> <li>(b) consist of species that facilitate the best possible outcome in terms of visual screening;</li> <li>(c) be effective at screening views of solar panels and ancillary infrastructure on site from residence R1 and R6 within 3 years of commencing construction; and</li> <li>(d) be properly maintained with appropriate weed management.</li> </ul>	Section 0, Appendix C
<b>Landscaping Plan</b>	
10. Prior to the commencement of construction, the Applicant must prepare a detailed Landscaping Plan for the development in consultation with Council and surrounding landowners, to the satisfaction of the Secretary. This plan must include: <ul style="list-style-type: none"> <li>(a) a description of measures that would be implemented to ensure that the vegetated buffer achieves the objectives of conditions 9 (a) – (d) of this consent;</li> <li>(b) include a program to monitor and report on the effectiveness of these measures; and</li> <li>(c) include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions.</li> </ul>	Section 0, Appendix C, Appendix D

Conditions of Consent	Reference/where addressed
Following the Secretary's approval, the Applicant must implement the landscaping plan.	
<b>Land Management</b>	
11. Following any construction or upgrading on the site, the Applicant must: <ul style="list-style-type: none"> <li>(a) restore the ground cover of the site as soon as practicable;</li> <li>(b) Maintain the ground cover with appropriate perennial species; and</li> <li>(c) Manage weeds within this ground cover.</li> </ul>	Section 0, Appendix C

### 3.1.4. Project Commitments

Table 3-2 Relevant Project commitments revised in the Response to Submissions.

Ref.	Commitment	Doc location
<b>B9</b>	Enhancement of buffer zones around the perimeter of the site to include additional planting of replacement trees for those lost due to the clearing of the paddocks	Section 0 Appendix C
<b>V3</b>	Implement Concept Landscape Plan, which includes visual screening from the <b>EIS</b> in <b>Appendix C (provided in Appendix B)</b> .	Commitment updated with Modification 1. All planting is now located on the subject land.
<b>L3</b>	Implement the <i>Concept</i> Landscape Plan from the <b>EIS</b> in <b>Appendix C (provided in Appendix B)</b>	Commitment updated with Modification 1. All planting is now located on the subject land.
<b>L4</b>	All pesticides will be used in accordance with the <i>Pesticides Act 1999</i> , such that only registered pesticides are used based on label instructions that are designed to minimise impacts on surrounding land	Appendix C
<b>V10</b>	Monitor performance of screen planting areas six-monthly for first three years then annually. Replant as necessary if plants die, and supplement planting with alternative species if plants are not adapting to the Site.	Section 7 Appendix C

## 4. CONSULTATION

### 4.1. LANDOWNER CONSULTATION

Post approval consultation regarding this Landscaping Plan for the Project occurred with nine adjacent landowners in January 2020 (Appendix D). Where provided their comments have been addressed in this plan.

Post approval consultation for the Suntop Solar Farm Landscaping Plan occurred with nine landowners adjacent to the Farm. The nine landowners are identified as 1, 2, 3, 4, 5, 6, 7, 8, and 9 (Appendix A). The consultation occurred between the 14-17 January 2019 with a visit to each dwelling by Bouygues representatives HSE Coordinator Dennis Hinton and Supervisor Phil Ward. During the site visit desired landscaping outcomes were discussed with the landowners. Landowners were provided with a copy of the Suntop Solar Farm Landscaping Plan. Landowners were also provided with a letter summarising the Landscaping Plan and requesting endorsement or comment on the Plan (Table 4-1). Landowners were asked to respond within seven days of the letter. Landowner comments and

Table 4-1 Landowner comment summary

Landowner	Landowner Comment	Response and cross reference
1	Home unoccupied but owned by landowner #3	See landowner 3
2	Supports landscaping plan. Moving homes in 12 months-time	Supported
3	Supports landscaping plan	Supported
4	Wanted Native water Bush ( <i>Grevillea nematophylla</i> ) from the area included in the landscaping mix.	Water Bush added to the landscaping shrub mix.
5	Landowner 4 advised that residence 5 is unoccupied except for some holidays. Site visit revealed empty house.	N/A
6	Home visited four times, TV on, but no response from occupant if there.	N/A
7	Home unoccupied, landowner 4 advised that residence 7 is unoccupied.	N/A
8		
9	Home unoccupied, adjacent landowner advised that house not occupied.	N/A

## 4.2. COUNCIL CONSULTATION

Post approval consultation regarding this Landscaping Plan for the Project occurred with Dubbo Regional Council on 24 February 2020. Council were sent a copy of the draft plan and a covering letter (Appendix D) requesting comment. Their comments (Appendix D) have been addressed in this plan and are summarised below (Table 4-2).

Table 4-2 Council comment Summary

Council Comment	Response
<p>Council require a more detailed to scale landscape plan, identifying new plantings and any proposed vegetation removal, within the corridor in relation to; existing services, road pavements, entry points to Suntop Solar Farm and surrounding property boundaries.</p> <p>Consideration should be given to, if not already, maintaining a safe clearance zone in accordance with Austroads.</p>	<p>Screening vegetation would be planted in accordance with the Landscaping Plan approved as part of Modification 1 (refer Appendix C), wholly within the proposal Subject Land.</p> <p>No new plantings are proposed within the Council road corridor or surrounding properties.</p> <p>Minor clearing will be required for the intersection design (Refer Appendix X). Intersections have been designed in accordance with the appropriate Austroads standards.</p>

## **5. EXISTING ENVIRONMENT**

### **5.1. GENERAL ENVIRONMENT**

#### **5.1.1. Soils**

The topography of the Project site ranges from an elevation 370m to 420m above sea level (ASL). The site generally falls to the west but is divide by an incised gully. The site includes the following topographic features:

- An unnamed tributary of Barneys Creek occurs drains water from the north and east of the site in an east to west direction.
- A second unnamed tributary of Barneys occurs drains water from the south of the site in an east to west direction.

One soil landscape occurs within the Project site: Arthurville ('ar') of the Dubbo 1:250 000 sheet map. This red-brown earths soil landscape has the following limitations:

- Surface soils structurally degraded.
- High erosion hazard under cultivation and low surface cover.
- Low to moderate fertility.
- Moderate acidification.
- Moderate to high waterholding capacity.
- Several localised areas of salinisation.

Soil surveys were undertaken to assess the broad land capability and soil constraints across the site. The following general observations were made:

- The site soils can be characterized as red brown earths and some smaller areas of yellow podzolic.
- Soils on site display a moderate amount of shrink / swell in response to moisture.
- The site presents a moderate to high hazard for rill and gully erosion.
- Sheet erosion may be exacerbated by surface sealing when left unvegetated, this can lead to reduced infiltration and increased runoff.
- Wind erosion may be experienced when soils are left bare or fallow between cultivation cycles.
- No indicators for salinity.

The laboratory results found the soils ph to be slight acid to neutral (5.36 to 6.8). The soils were also found to be non-saline and non-sodic with low nitrogen and sulfur. Phosphorus levels varied across the site due to a history of using fertilisers.

No specific remediation treatment is considered to be required for the planting of vegetation screening. However, soil amelioration via the application of lime and gypsum would improve the soil pH and sodium levels.

#### **5.1.2. Vegetation**

The site is dominated by cleared areas that are primarily used for cropping and grazing, which provide very little in terms of native fauna habitat. Following subdivision, the solar farm would occupy 472 hectares out of 517 hectares (equivalent to approximately 92%).

Mature native trees occur along the western boundary of the site. A few remnant trees are scattered within the paddocks over exotic ground covers. Several linear tree plantings occur along parcel boundaries within the Site and provide marginal fauna habitat, but limited flora conservation value due to the presence of exotic groundcovers.

The proponent has ensured the retention of:

- The majority of native trees and plantings
- The majority of threatened communities listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and/or the *Biodiversity Conservation Act 2016* (BC Act).

One Plant Community Type (PCT) was identified within the development site, White Box - White Cypress Pine - Western Grey Box shrub/grass/forb woodland in the NSW South Western Slopes Bioregion (PCT 267). This PCT is listed as Threatened Ecological Communities and occur in varying condition states across the site.

### **5.1.3. Weeds**

Three introduced flora species are considered to be High Threat Exotic weeds by OEH, Khaki Weed, Bathurst Burr and Saffron Thistle. No weeds listed as Priority Weeds for the Dubbo Regional LGA under the NSW *Biosecurity Act 2015* were identified by the survey. Similarly, no weeds listed as Weeds of National Significance by the Australian Weeds Committee of the Commonwealth Government were identified within the development site.

## **5.2. VISUAL IMPACT ASSESSMENT**

A VIA was prepared as part of the EIS for the Project and updated for the Modification 1. The findings of the VIA included:

- One private viewpoint with a high impact, (VP6).
- Two private viewpoints with a moderate to high impact (VP1 and VP4).
- Two private viewpoints (VP5 and VP7) and one public viewpoint (VP Suntop Road) with moderate impact.

Mitigation to soften views of infrastructure on the solar farm site was recommended. The resulting recommendations in the EIS were that:

- Planting within the VP6 property along all three boundaries with the Site. Planting to include trees and shrubs to create a dense screen.
- Planting within the VP1 property within the vicinity of the western boundary of the Site. Planting would comprise a variety of trees so as to not create a tree line that removes views of the wider landscape and to mitigate the key impact which is the leading row of panels.
- Planting to continue along the western boundary to screen the location of the substation.
- Planting along the northern boundary of the Site (Suntop Road) to screen views from the public viewpoint (VP Suntop Road) as well as private viewpoints along Suntop Road. Planting is proposed to occur within the road reserve (to be discussed with Dubbo Council)
- Planting within the Site along the eastern boundary for approximately 200m

The visual impact assessment was reconsidered as part of Modification 1. The plantings for landscape screening were extended on the western boundary to reduce the visual impact of the substation. In addition, all plantings for landscape screening have now been relocated to be wholly located on the solar farm site (Appendix A).

## **6. LANDSCAPE MANAGEMENT PROTOCOLS**

### **6.1. PERIMETER PLANTINGS**

Sections of perimeter plantings would be established along the development site boundary. The main aim is to minimise views of infrastructure for sensitive receivers expected to experience a medium visual impact.

One to two rows of sparse (up to 5 m width in total), native plantings, in keeping with the local native vegetation community, would be established. This will include one section along the entire northern boundary, a section along the north western boundary and a section along the north eastern boundary (Appendix A).

The planting specification provided in Appendix C details:

- A strategy to obtain an effective screen within 3 years.
- Locations for planting.
- Species selection.
- Planting establishment and monitoring requirements.
- Roles and responsibilities.

Shrubs are estimated to grow to 5 m in diameter and would be approximately 3 m apart once grown to break up views of infrastructure at eye level. Trees will be planted 5 m from adjacent shrubs and are estimated to develop a crown of 10 m. Plantings will be staggered and comprise mixed species to look more natural.

### **6.2. OTHER VISUAL AMENITY MITIGATION WORKS**

Other actions which will be implemented to minimise views of infrastructure are included in Table 6-1.



Table 6-1 Landscape management protocols.

Stage of Project	Objective	Management protocol	Resources	Responsibility
Design	Minimise the off-site visual impacts of the development including potential for glare from the reflection of panels.	<ul style="list-style-type: none"> <li>• Group ancillary structures where possible to minimise sprawl.</li> <li>• Use underground rather than overhead power lines where feasible.</li> <li>• Co-locate powerlines where feasible.</li> <li>• Where overhead poles are required, match existing pole design as much as possible.</li> <li>• Use non-reflective materials as much as possible. Pole mounts will be non-reflective.</li> <li>• Security fencing posts and wire would be non-reflective; green or black rather than grey would reduce the industrial character of the fence. During construction, dust would be controlled in response to visual cues.</li> <li>• For built structures, use eucalypt green, beige or muted brown material colours.</li> <li>• Do not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.</li> </ul>	Final design plans, to be presented to DPIE	Bouygues Construction
Design	Minimise the off-site lighting effects of the development.	<ul style="list-style-type: none"> <li>• Ensure that all external lighting associated with the development: <ul style="list-style-type: none"> <li>○ Is installed as low intensity lighting (except where required for safety or emergency purposes).</li> <li>○ Does not shine above the horizontal.</li> <li>○ Complies with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version.</li> </ul> </li> </ul>	Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting	Bouygues Construction
Design	Allow room for vegetation screen in detailed design	<ul style="list-style-type: none"> <li>• Areas will be designated for the landscape screening as set out in Appendix A <i>General Layout of the Development</i> of this plan. This includes: <ul style="list-style-type: none"> <li>○ No planting within the road reserve.</li> </ul> </li> </ul>	<i>Appendix A General Layout of the Development</i> of this LP	Bouygues Construction

Stage of Project	Objective	Management protocol	Resources	Responsibility
		<ul style="list-style-type: none"> <li>○ At least 5 m corridor dedicated to screening, between the property boundary and the perimeter fencing.</li> </ul>		
Construction	Establish vegetation screening on the solar farm site, to minimise views to motorists and residential receivers	<ul style="list-style-type: none"> <li>• Planting will be undertaken as set out in Appendix C <i>Planting Specification</i> of this LP. Including: <ul style="list-style-type: none"> <li>○ A strategy to obtain and effective screen within 3 years.</li> <li>○ Locations for planting</li> <li>○ Species selection</li> <li>○ Planting establishment and monitoring requirements including water crystals and fertiliser (specific to native plants) would be used unless long stem tube stock are used.</li> </ul> </li> </ul>	<i>Appendix C Planting Specification</i> of this LP	Bouygues Construction
Construction and Operation	Protect plants	<ul style="list-style-type: none"> <li>• The landscaping area will be protected during construction as set out in Appendix C <i>Planting Specification</i> of this LP, including: <ul style="list-style-type: none"> <li>○ Watering</li> <li>○ Tree guards</li> <li>○ Replacement of plants to maintain 90% success rate for plantings.</li> </ul> </li> </ul>	<i>Appendix C Planting Specification</i> of this LP.	Bouygues Construction
Operation	Monitor the planting	<ul style="list-style-type: none"> <li>• The plantings will be monitored and maintained for the life of the Project. Monitoring requirements for the Project are included in Appendix C.</li> </ul>	<i>Appendix C Planting Specification</i> of this LP.	Bouygues Construction

## 7. COMPLIANCE MANAGEMENT

### 7.1. ROLES AND RESPONSIBILITIES

The Project Team's organisational structure and overall roles and responsibilities are outlined in the EMS. Specific responsibilities for the implementation of environmental controls will be detailed in the CEMP.

Below is a flow chart outlining the overall hierarchy of teams responsible for the construction of the Project.

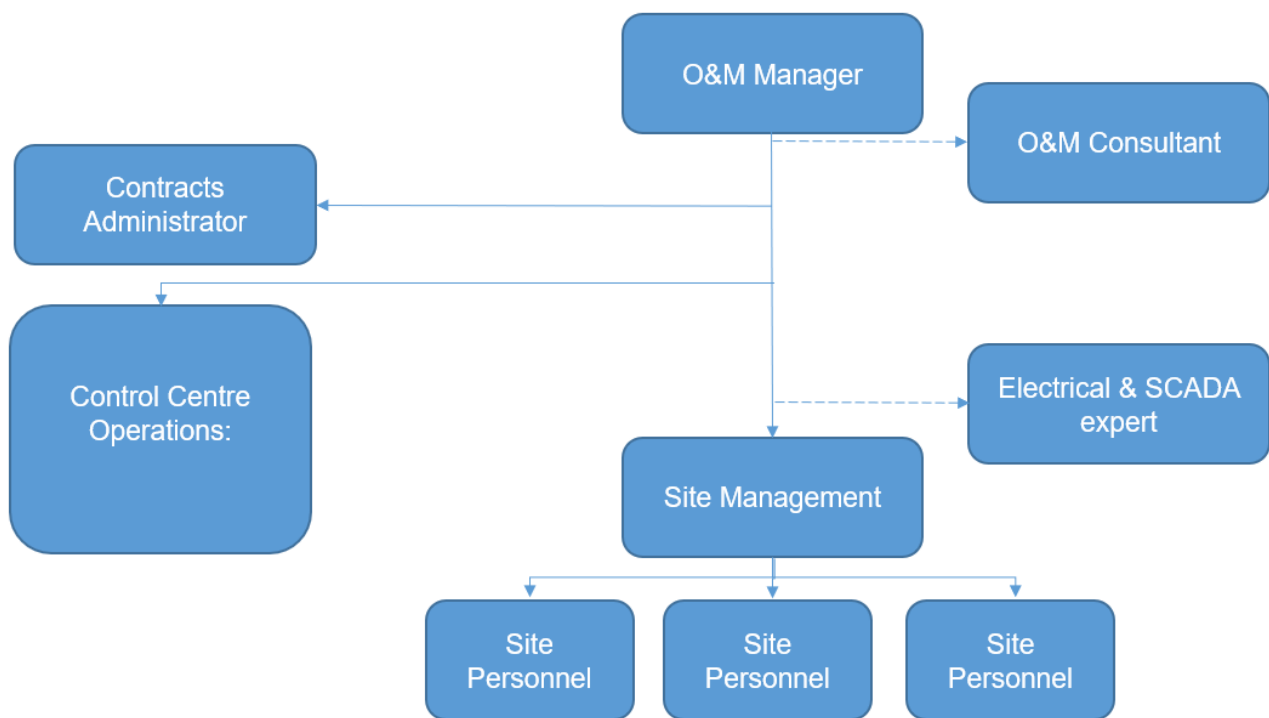


Figure 7-1 Canadian Solar, Operations and Maintenance (O&M) organisational chart.

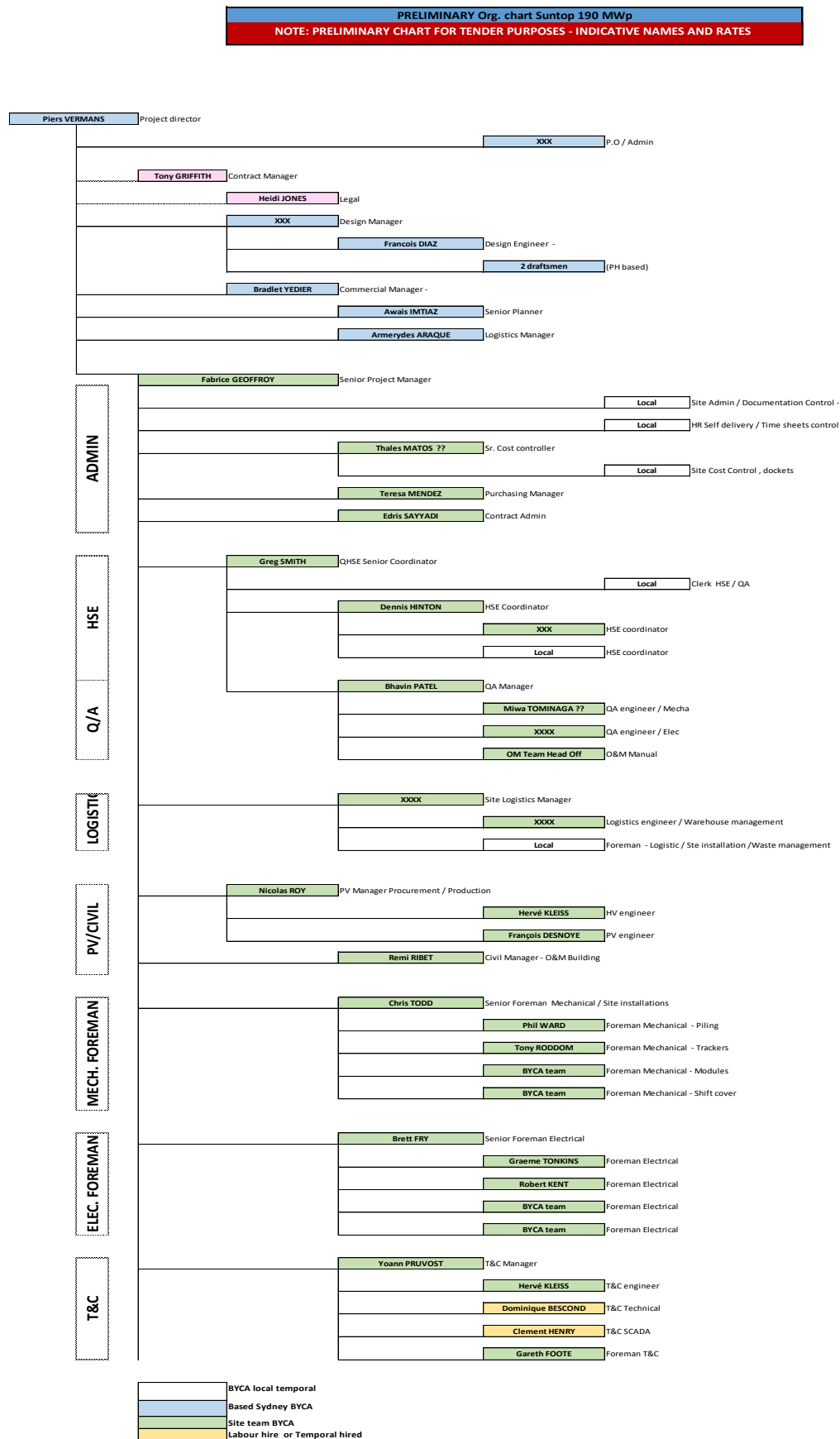


Figure 7-2 Bouygues Construction Australia organisational chart.

Table 7-1 Construction team roles and responsibilities.

Role	Responsibility	Authority
<b>Bouygues Construction Project Manager</b>	<ul style="list-style-type: none"> <li>• Ensure resources are made available to enable works to comply with EMS and other environmental management requirements.</li> <li>• Ensure that all procedures are followed adequately.</li> <li>• Ensure appropriate approvals and licences are held.</li> <li>• Ensure all staff and contractors are aware of environmental compliance requirements and environmental controls.</li> <li>• Ensure resources are allocated for the implementation of the LP</li> <li>• Ensure the objectives and monitoring activities of the LP are implemented</li> <li>• Review and approving internal and external reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Order Stop-work for an activity that may cause material or environmental harm.</li> <li>• Release of environmental hold points, if required.</li> </ul>
<b>Bouygues Construction Quality, Health Safety and Environment Coordinator</b>	<ul style="list-style-type: none"> <li>• Maintaining all environmental management documents.</li> <li>• Identifying where environmental measures are not meeting the targets and where improvements can be achieved.</li> <li>• Monitoring and reporting environmental compliance.</li> <li>• Identify and resourcing the necessary materials and equipment to implement the LP</li> <li>• Ensure materials being used for the LP are environmentally friendly and safe</li> <li>• Oversee and managing the implementation of the LP</li> <li>• Conduct monitoring in accordance with the schedule outlined in the LP</li> <li>• Prepare regular monitoring reports for internal and external reporting</li> <li>• Review and update the LP as required, based on monitoring results and requirements stipulated by DPIE</li> <li>• Prepare and maintain a record of all reports and monitoring activities</li> <li>• Ensure the Construction Site Manager is notified of any changes to the LP</li> <li>• Liaise with the Construction Site Manager to ensure any variations to the scope or timing of the work that may impact on the implementation of the LP are discussed, and be point of contact for all landscaping issues</li> </ul>	<ul style="list-style-type: none"> <li>• Recommend Stop-work for an activity that may cause material or environmental harm.</li> <li>• Release of environmental hold points, if required.</li> </ul>
<b>Bouygues Construction Site Manager</b>	<ul style="list-style-type: none"> <li>• Responsible for the implementation of environmental management plans.</li> <li>• Responsible for the induction of staff and contractors.</li> <li>• Responsible for all aspects of the worksite including the coordination and management of all staff and contractors.</li> <li>• Undertake routine environmental site inspection.</li> <li>• Maintaining environmental records.</li> <li>• Receiving plant, materials and chemicals and ensuring all items are appropriately stored.</li> </ul>	<ul style="list-style-type: none"> <li>• Order Stop-work if any items in the CEMP are in danger of breach.</li> <li>• Approve and accept waste disposal methods requested by staff or contractors.</li> <li>• Approve minor changes to environmental sub-plans, including Erosion and Sediment Control Plans (ESCP).</li> </ul>

	<ul style="list-style-type: none"> <li>Responsible for addressing corrective actions arising from Environmental Inspections.</li> </ul>	
<b>Canadian Solar staff:</b> <ul style="list-style-type: none"> <li><b>Project Manager/Site Superintendent</b></li> <li><b>Technical Team</b></li> </ul>	<ul style="list-style-type: none"> <li>Ensure contractors are working in accordance with the requirements of the EMS, as required under the EPC contract.</li> <li>Undertake site visits during construction to monitor compliance with EMS requirements.</li> <li>Report and raise any issues that arise that may have an environmental impact.</li> <li>Report and raise the discovery of any artefacts, Aboriginal relics or places and cease work until the matter has been addressed.</li> </ul>	<ul style="list-style-type: none"> <li>Report any issues that may have the potential to cause material or environmental harm.</li> <li>Report any incidents or near-misses that may impact on the environment or breach conditions set-out in this EMS.</li> </ul>

Specific to this plan,

- The *Perimeter planting* establishment is set out in Appendix C.4.1 and C.4.2. with reference to persons and timing it includes:
  - Planting would be undertaken by an experienced landscape contractor
  - Planting would be undertaken as soon as practical in the construction process, as it will take time for the plants to establish and become effective as a screen.
  - Planting would occur in autumn *following sufficient rainfall*. While planting in autumn is generally the best time, there would be no use planting this autumn (2020), given dry conditions, unless irrigation will be installed or weekly hand watering is undertaken...
- The *Perimeter planting* monitoring program in Appendix C.4.5 sets out persons responsible for these actions and the timing required for each action. It extends from the first 12 months of planting through to decommissioning. It includes roles for the EPC Contractor and Operator, dependant on the stage of the project.

## 7.2. TRAINING

All employees, contractors and utility staff working on Site will undergo Site induction training. Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in landscape management. Targeted training would address the requirements of the environmental control measures (Section 0).

## 7.3. MONITORING AND INSPECTION

Monitoring requirements for perimeter plantings are detailed in Appendix C.4 of this document.

## 7.4. WEATHER MONITORING

Weather monitoring requirements for perimeter plantings is detailed in Appendix C.4 of this document.

## 7.5. INCIDENT MANAGEMENT

All incidents will be managed in accordance with the incident response procedures contained in the EMS.

## 7.6. AUDITING

Audit requirements are detailed in the EMS.

## **7.7. REPORTING**

Reporting requirements and responsibilities are outlined in the EMS. Specific to this plan, monitoring requirements for perimeter plantings are detailed in Appendix C.4 of this document.

In summary, they will include:

- **Establishment (first 12 months after planting)** – Monthly monitoring; Report on success of watering, weeding, mortalities, supplementary. Report annually.
- **Two years post planting** – Quarterly monitoring; Report on success of watering, weeding, mortalities, supplementary. Report annually.
- **Three years post construction** – Annually monitoring; Report on success of watering, weeding, mortalities, supplementary. Report annually.
- **Six years post construction to decommissioning** – Annually monitoring; Report on success of watering, weeding, mortalities, supplementary. Nil reporting.

Annual reporting will be a summary of planting performance and any steps toward amelioration taken.

## **8. REVIEW AND IMPROVEMENT**

### **8.1. CONTINUOUS IMPROVEMENT**

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets to identify opportunities for improvement.

### **8.2. LP UPDATE AND AMENEDMENT**

This LP will need to be revised whenever the construction program, scope of work, or work methods change, whenever the work methods and control structures are found to be ineffective, or if directed by the Principal. This will occur as needed and in accordance with the process outlined in the EMS.

A copy of the updated LP and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure identified in the EMS.

### **8.3. DOCUMENT CONTROLS**

Document control procedures are outlined in the EMS.



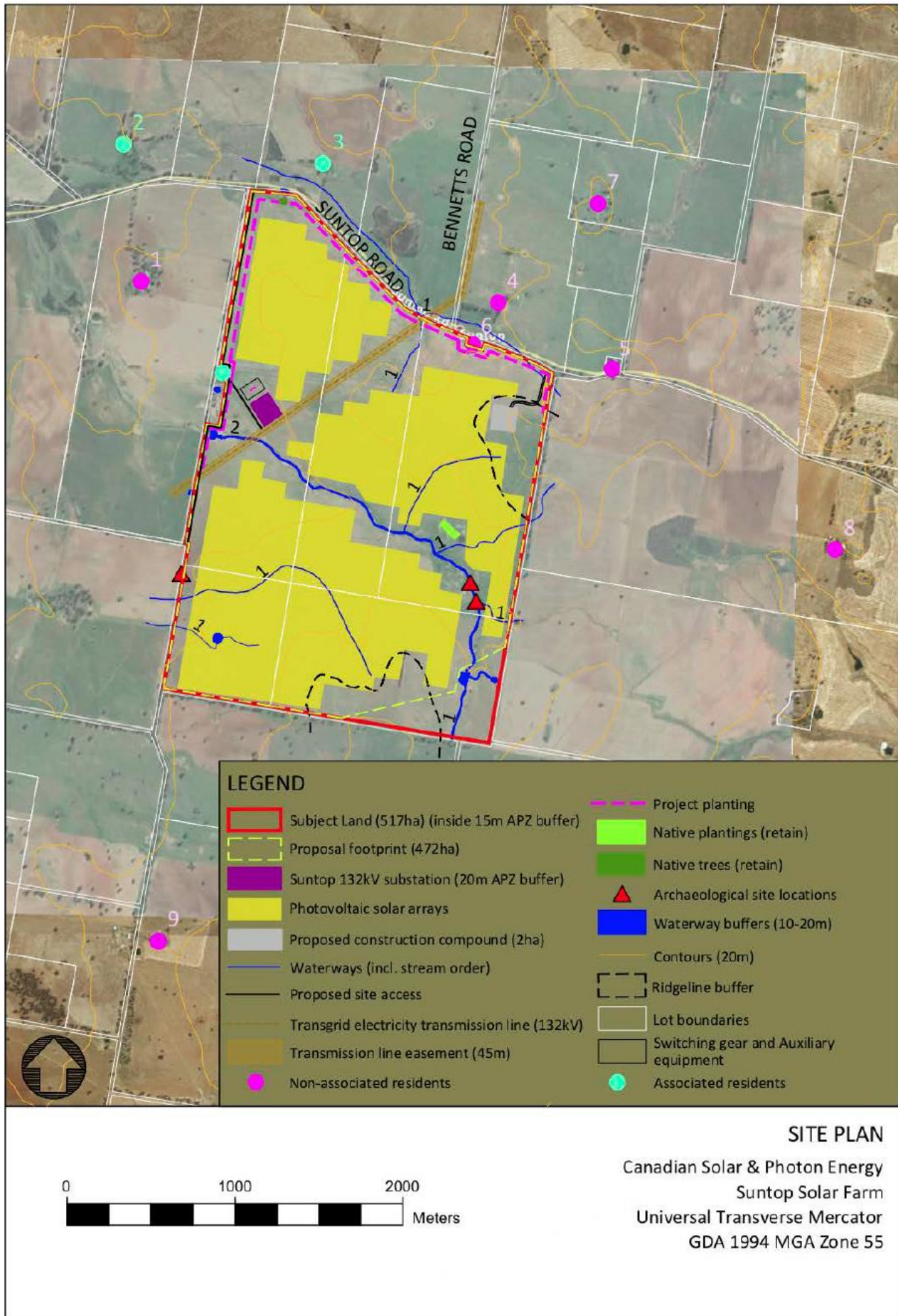
## **9. REFERENCES**

Murphy, BW and Lawrie, JW (1998) 'Athurville', *Soil Landscapes of the Dubbo 1:250 000 Sheet*.

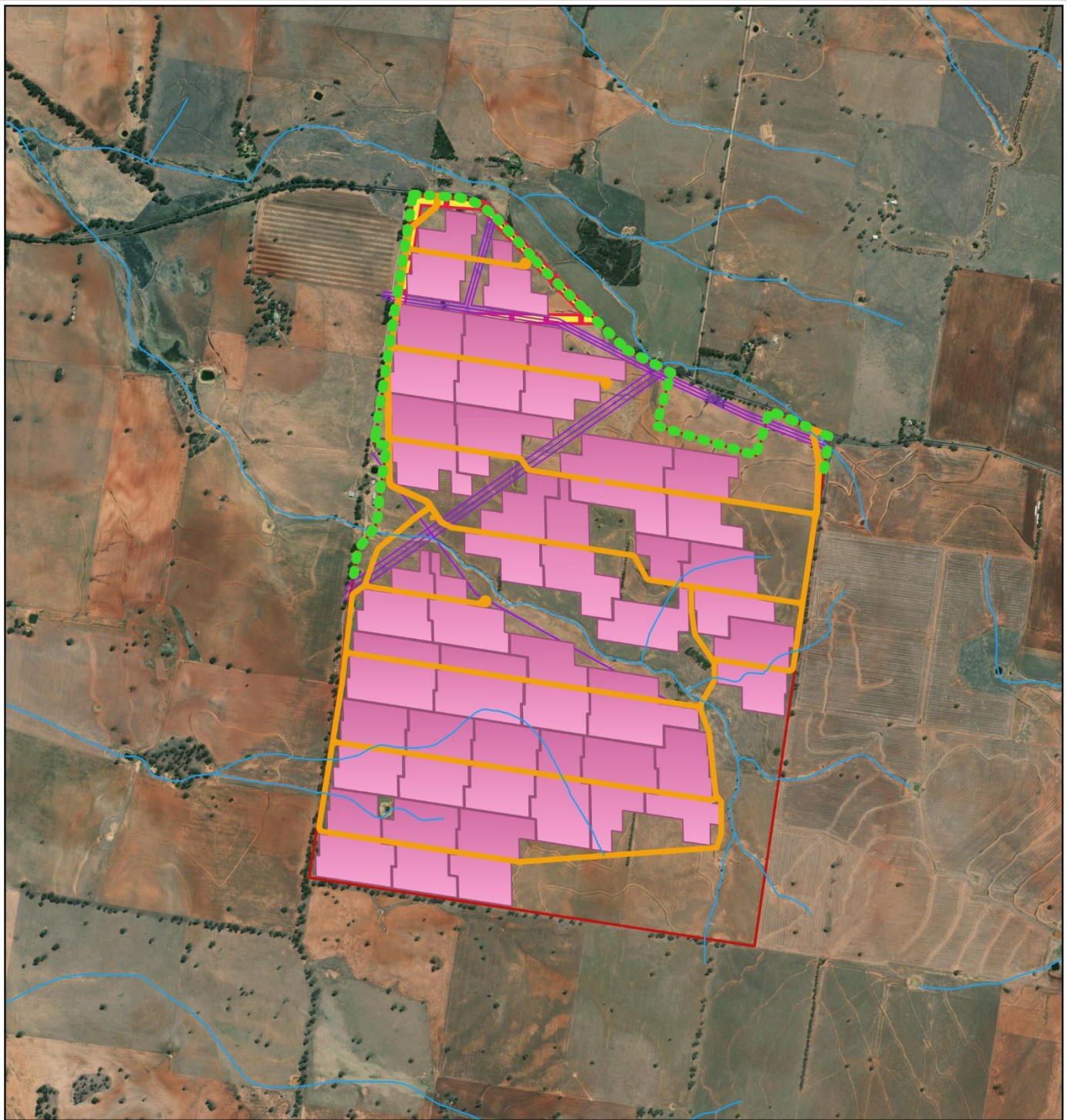
Pitt and Sherry (2018). *Suntop Solar Farm Environmental Impact Statement*.

Pitt and Sherry (2018). *Suntop Solar Farm Response to Submissions*.

## **APPENDIX A – GENERAL LAYOUT OF DEVELOPMENT**







Suntop Solar Farm  
Vegetation Screening

Legend

- |                          |                  |
|--------------------------|------------------|
| ●●● Screening Vegetation | — Easement       |
| — Watercourse            | ▭ Security Fence |
| — Internal Roads         | ▭ Solar Array    |

0 0.2 0.4 0.6 0.8 km



Data Attribution  
© NGH 2020  
© Bouygues Construction  
© Six Maps 2020  
© DFS1 2020



Ref: 19-775 Suntop Solar Farm  
Author: B. Poulton  
Date created: 6 March 2020  
Datum: EPSG:28356 GDA94 / MGA zone 55



NGH

## APPENDIX B - EIS CONCEPT LANDSCAPE PLAN

### 9.3 Landscape Plan

One of the mitigation measures is screen planting. A Concept Landscape Plan has been provided at **FIGURE 9-1** which identifies strategic locations for screen planting within the Site to reduce visual impacts. General issues regarding planting at solar farms are discussed in the side bar "Vegetation Screening" and "Shading cast by vegetation".

#### Vegetation Screening

Vegetation, typically trees, may screen views fully or partially, especially close to the viewpoint\*. But in many cases, vegetation is not tall enough to screen views of large-scale infrastructure. Such infrastructure extends over a wide area of land, and, particularly if viewpoints are elevated, vegetation is not sufficient to block or even reduce views. However, in some instances, where elevation is favourable, it would be possible to plant trees of adequate height and density, within a wide planting area, to minimise or even eliminate some views.

\* United States Department of the Interior. 2013. *Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands*. Bureau of Land Management.

#### Shading cast by vegetation

Solar farms require maximum exposure to sunlight to generate energy. Screen planting close to the northern, eastern and western sides of a solar farm could shade the panels closest to the planting area during part of the day. The shadow cast in summer would be minimal, however, longer during winter months.

Proposed landscape screening also needs to consider the implications of any bushfire restrictions which could affect the suitability of different types of plant species, screening locations and planting densities.

The Concept Landscape Plan has been developed in consultation with affected property owners. Following further discussions with landowners and Dubbo Council, a Detailed Landscape Plan would be prepared.

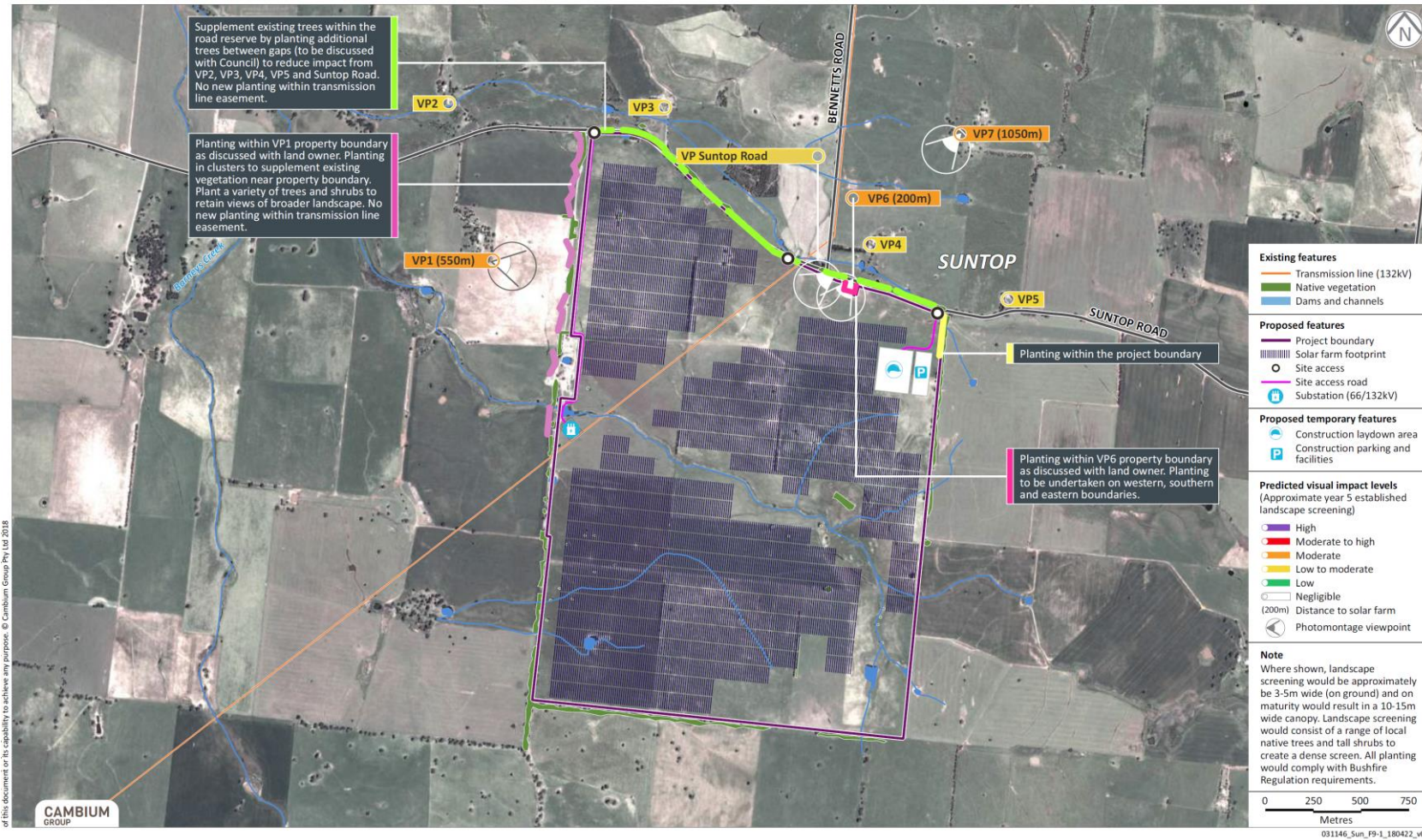
The key features of the Concept Landscape Plan are:

- Planting within the VP6 property along all three boundaries with the Site. Planting to include trees and shrubs to create a dense screen
- Planting within the VP1 property within the vicinity of the western boundary of the Site. Planting would comprise a variety of trees so as to not create a tree line that removes views of the wider landscape and to mitigate the key impact which is the leading row of panels
- Planting to continue along the western boundary to screen the location of the substation
- Planting along the northern boundary of the Site (Suntop Road) to screen views from the public viewpoint (VP Suntop Road) as well as private viewpoints along Suntop Road. Planting is proposed to occur within the road reserve (to be discussed with Dubbo Council)
- Planting within the Site along the eastern boundary for approximately 200m
- All planting would comply with Bushfire Regulation requirements
- In general, planting areas would be approximately 3-5m wide (on ground) and consist of a range of local native trees and tall shrubs to create a dense screen
- Where space and regulation requirements permit, a wider planting area (10m) is recommended within the Site along the northern boundary to allow for increased planting rates and greater potential for denser screen planting.



Concept landscape plan

SUNTOP SOLAR FARM - VISUAL IMPACT ASSESSMENT



# APPENDIX C PERIMETER PLANTING SPECIFICATION

## C.1 PLANTING STRATEGY

In all cases, the aim of the plant screening is to break up the views of infrastructure and not eliminate them. Relatively sparse plantings, rather than a formal 'hedge' effect, is considered more appropriate to the existing environment. These will provide a more natural structure to the vegetation; akin to small remnants.

In order to achieve effective screening within 3 years, this Strategy relies on:

- Planting would be completed by an experienced landscape contractor.
- Planting as soon as possible in the autumn.
- Use of quality seasoned tube stock / long stem tube stock.
- Maintenance (watering and protection from grazing, weed control, mulching) during establishment.
- Inclusion of 'pioneer species'. The species list includes pioneer species that grow rapidly and will be replaced by slower growing longer lived species over time

In order to avoid adverse impacts on the adjacent road corridor, plantings will:

- Avoid species with large habits, where falling limbs or trunks may provide a hazard.
- Where large species are used, this will be located further back from the road reserve.
- Where planting is undertaken near access ways, location and species will be selected to ensure sight lines are not impeded.

### C1.1 Groundcover

Following any construction or upgrading works on site resulting in exposed soils, groundcover will be restored as soon as practicable with appropriate perennial species. Groundcover will be maintained and monitored for success of revegetation and presence of weed in accordance with the monitoring schedule identified in Appendix C4.3 below.

## C.2 PLANTING AREAS

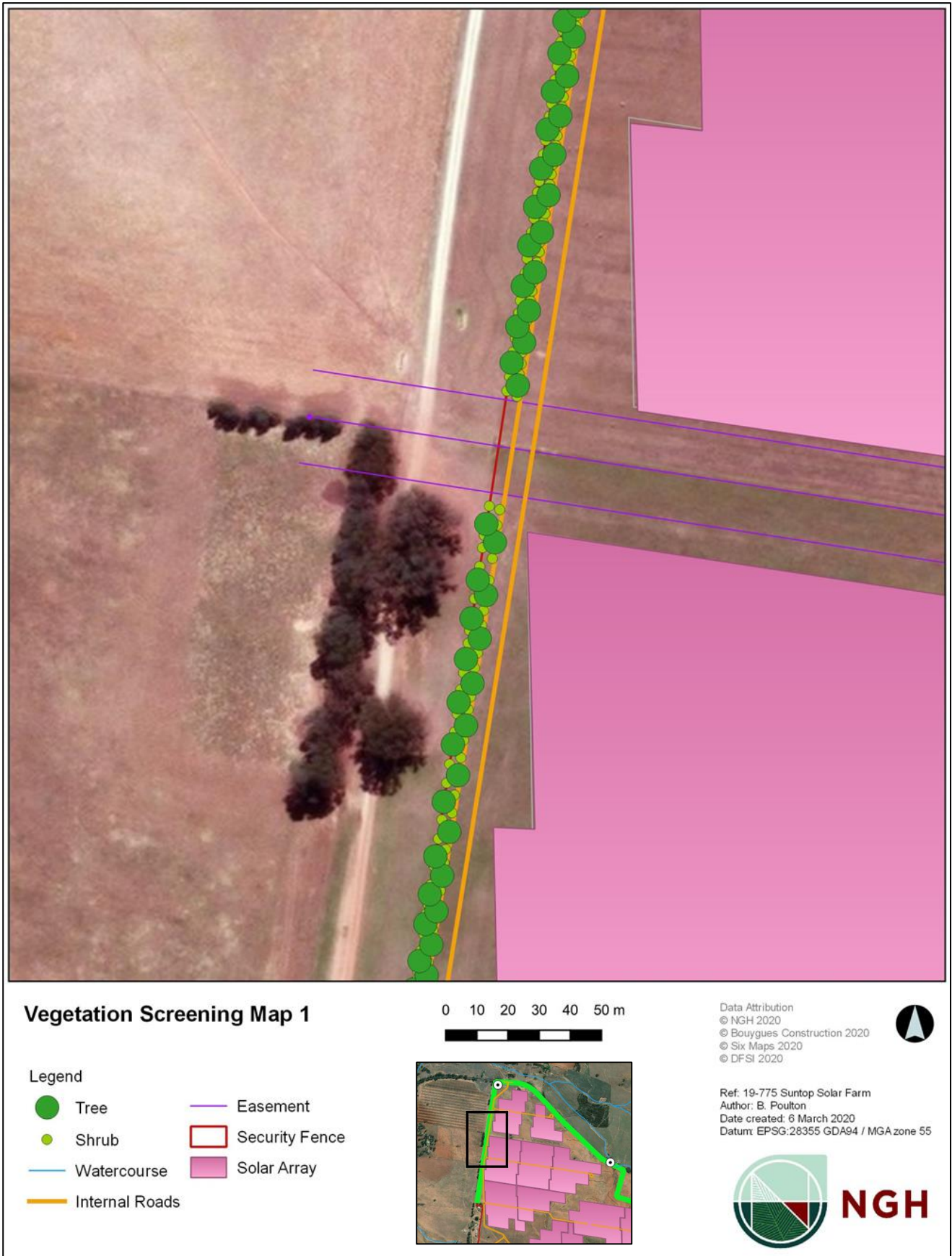
Screen planting will be undertaken as shown in Appendix A.

Plantings will:

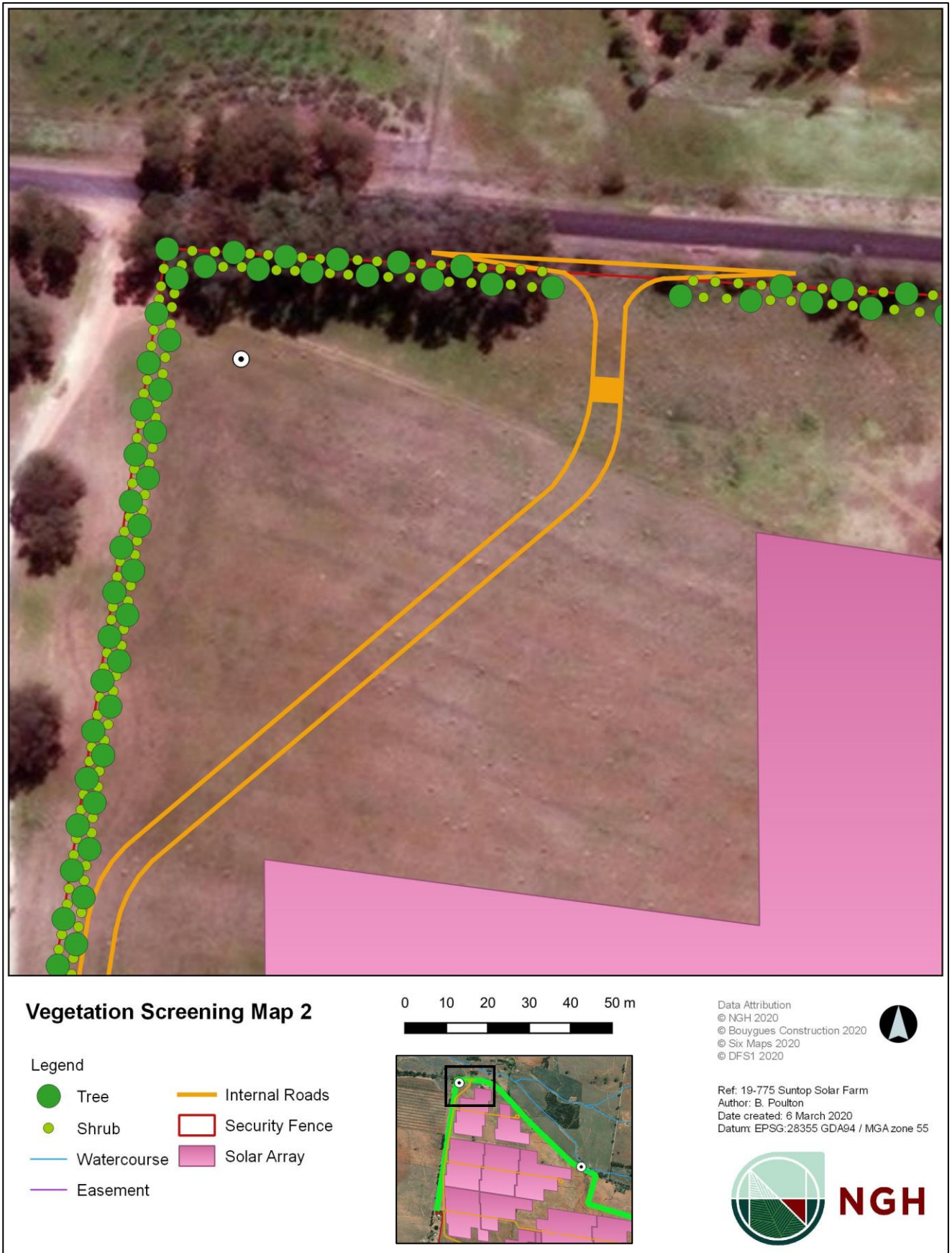
- Be located in 1 or 2 rows, 5 m in total width with the back and front row staggered.
- Include shrubs spaced 3 m apart.
- Include trees spaced 5m from adjacent shrubs.
- Be located on the solar farm site, not within the road reserve or on adjacent private land.
- Be located adjacent to perimeter fencing, allowing sufficient space for plants to mature and the fence to be maintained.
- Be staggered, mixed and offset to produce a mixed planting.
- Be located at least 10m away from panels to create an asset protection zone (APZ).

Vegetation screening plantings along the perimeter of the development site are shown in Vegetation Screening Maps 1 to 6 below.









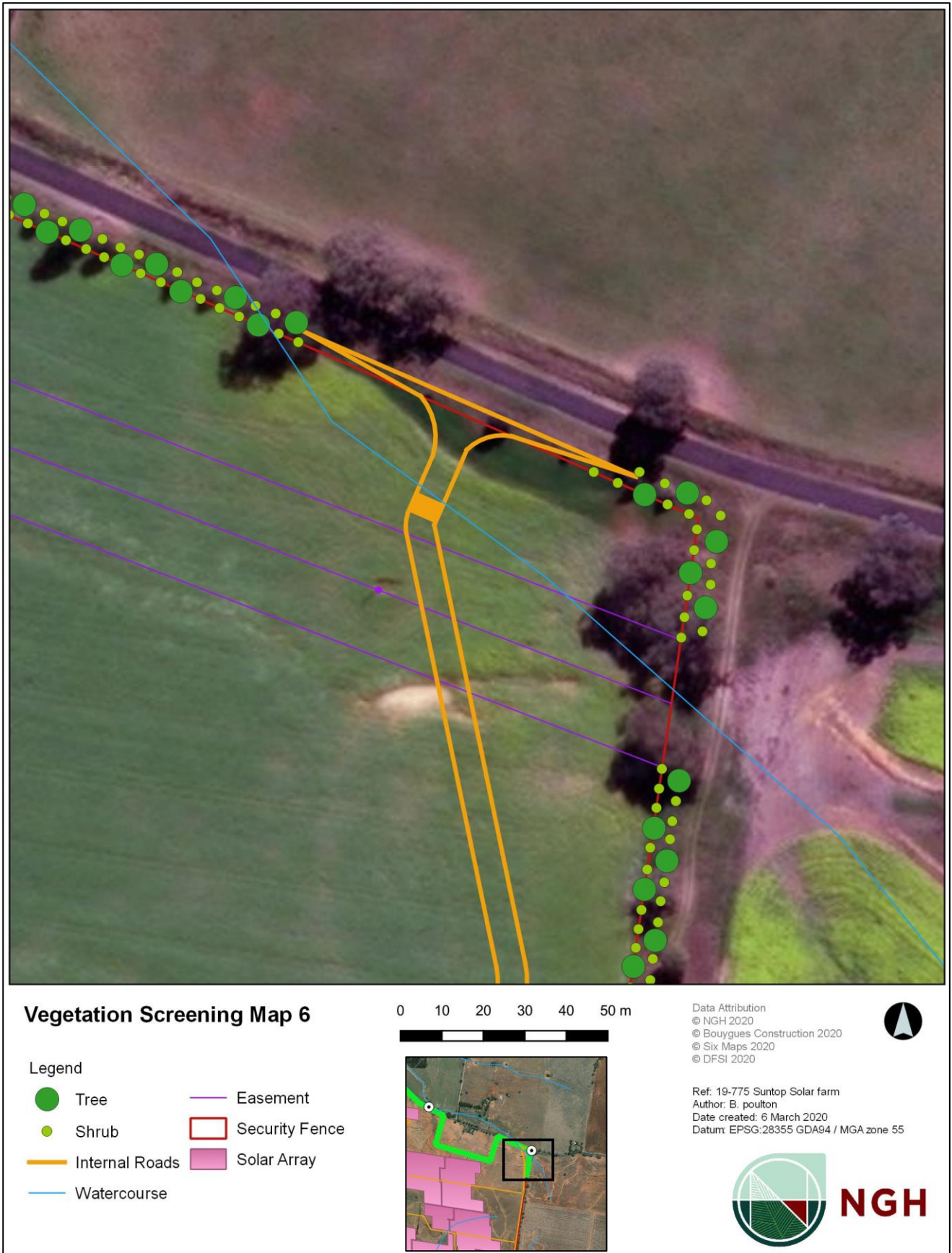












## C.3 PLANT SELECTION AND PLANT NUMBERS

Plantings will:

- Be native species known to be associated with either PCT 267; *White Box - White Cypress Pine - Western Grey Box shrub/grass/forb woodland in the NSW South Western Slopes Bioregion*.
- Be either tall shrubs or small trees and will therefore be most effective screening views for motorists and residences.
- Be mixed and offset to produce a heterogeneous mix of plantings.
- Minimise the use of large spreading trees that may impact road user safety through falling limbs or impeding sight lines.
- Provide a successional planting strategy whereby:
  - Fast growing pioneer species are planted in the first row (closest the road)
  - Slower growing species are planted in the second row
  - Pioneer species are replaced by the slower growing species either as they senesce or as the slower growing species become effective in screening infrastructure
  - Plantings won't be more than 25m apart
  - Shrubs, such as wattles would be planted in between larger trees to create a natural look to the screen.
  - Long stem tube stock would be sourced from locally collected endemic seed where feasible (using a local nursery).
- 10% of the species will be from larger pots, where available.

### Species list and appropriate abundance guidance

Species	Approximate abundance (%)
<b>Tree species</b>	
<i>Eucalyptus albens</i> White Box	5
<i>Callitris glaucophylla</i> White Cypress Pine	5
<i>Eucalyptus microcarpa</i> Western Grey Box	5
<i>Eucalyptus melliodora</i> Yellow Box	5
<b>Shrub species</b>	
<i>Acacia implexa</i> Lightwood or Hickory Wattle	15

Species	Approximate abundance (%)
<i>Acacia decora</i> Silver Wattle	15
<i>Dodonaea viscosa subsp.</i> Hop Bush	15
<i>Eremophila longifolia</i> Dogwood, Berrigan Emubush	15
<i>Cassinia aculeata</i> Dolly Bush	10
<i>Grevillea nematophylla</i> Water Bush, Silver-leaved Water tree	10

### Plant numbers

Based on the Appendix A locations of planting, the following plant numbers will be required.

Species	Approximate number of plants *			
	Area 1 – north eastern boundary	Area 2 – northern boundary	Area 3 – north eastern boundary	Total
<i>Eucalyptus albens</i> White Box	58	74	9	141
<i>Callitris glaucophylla</i> White Cypress Pine	58	74	9	141
<i>Eucalyptus microcarpa</i> Western Grey Box	58	74	9	141
<i>Eucalyptus melliodora</i> Yellow Box	58	74	9	141
<i>Acacia implexa</i> Lightwood or Hickory Wattle	174	222	28	424
<i>Acacia decora</i> Silver Wattle	174	222	28	424

Species	Approximate number of plants *			
	Area 1 – north eastern boundary	Area 2 – northern boundary	Area 3 – north eastern boundary	Total
<i>Dodonaea viscosa</i> subsp. Hop Bush	174	222	28	424
<i>Eremophila longifolia</i> Dogwood, Berrigan Emubush	174	222	28	424
<i>Cassinia aculeata</i> Dolly Bush	116	148	18	282
<i>Grevillea nematophylla</i> Water Bush,	116	148	18	282
<b>Total</b>	<b>1,160</b>	<b>1,480</b>	<b>184</b>	<b>2,824</b>

\* Plant numbers are based on a three metre spacing providing additional plants for any losses or gaps.

## C.4 PLANITNG METHODS

### C4.1 Establishment

- Planting will be undertaken by an experienced landscape contractor.
- Planting will be undertaken as soon as practical in the construction process, as it will take time for the plants to establish and become effective as a screen.
- Tube stock should be sourced as early as possible, refer to C.4.2 below.
- Deep rip planting lines will occur to a depth of 300mm-400mm in summer.
- Hardened tube stock will be planted into ripped planting beds then fertilised and mulched.
- Weed control will be undertaken in the sites proposed for each planting 3 to 6 months prior to planting:
  - If mechanical, manually clear an area 1m buffer from the planting to minimise encroachment during establishment.
  - For more intensive infestations of weeds, the use of selective herbicides may be warranted to prevent seed set and promote weed control. The advice of an ecologist and agronomist will be sought to advise on the control of weed infestations. 10% non-native groundcover is the target requiring corrective action.
  - Monitoring of weed infestations will occur as part of the routine environmental inspections to determine effectiveness of management controls. The presence of any weeds and the necessary management actions will be noted on the Environmental Inspection Checklist.
  - Pesticide application will only be administered by authorised personnel wit ChemCert accreditation – AQF 3 in accordance with SafeWork requirements.



- Pesticides will only be applied in accordance label instructions for that product.
- A Pesticide Application Record will be completed, and public notifications made in accordance with relevant legislation, where pesticides are to be used in areas that could be accessed by members of the public.
- Only pesticides registered for use near water may be used near any waterways.
- Water spear / high pressure hose is recommended to drill hole for planting if long stem tube stock is used. These provide deep and soaking watering for establishment. Holes will not be substantially deeper than the tube stock used or else a cavity may result beneath the planting.
- Water crystals and fertiliser (specific to native plants) would be used unless long stem tube stock are used.
- Tree guards will be used to protect plants (creating a microclimate to reduce water loss and making follow up maintenance easier).

## **C4.2 Planting timing and need for irrigation**

Planting would occur in autumn following sufficient rainfall (>50mm in a 30 day period). If insufficient soil moisture exists pre-watering will occur prior to planting. Planting in autumn is generally the best time of year because evaporation rates are low. Given the drought conditions for the past three years top soil and sub soil moisture conditions may be very poor on site. If late summer/autumn rainfall is less than average irrigation will be installed or weekly hand watering used to raise soil moisture levels to support plant establishment. Dry conditions may continue next autumn so meeting the consent condition of 'effective screening in 3 years' may require irrigation or use of larger plants.

There would be safety benefits for ongoing maintenance if irrigation was installed, limiting worker access from the road corridor to the plantings. Irrigation will also improve the success of the plantings, reducing replacement of mortalities.

Where irrigation is used, temporary polypipe, moveable water tanks and moveable pumps would be used to irrigate the plantings during establishment. This will allow more frequent lower intensity watering and have safety benefits for access, when compared to hand watering. No additional water sources or quantities are required.

## **C4.3 Planting monitoring and maintenance**

- Weed monitoring will be quarterly and where possible as part of regular environmental inspections.
- Weed control will occur around plantings prior to weeds flowering to ensure plantings are not outcompeted or weed seed set occurs:
  - If mechanical, manually clear an area 1m buffer from the planting to minimise encroachment during establishment.
  - For more intensive infestations of weeds (in accordance with the project's Biodiversity Management Plan), the use of selective herbicides may be warranted to prevent seed set and promote weed control. The advice of an ecologist and agronomist will be sought to advise on the control of weed infestations. 10% non-native groundcover is the target requiring corrective action.
  - Monitoring of weed infestations will occur as part of the routine environmental inspections to determine effectiveness of management controls. The presence of any weeds and the necessary management actions will be noted on the Environmental Inspection Checklist.
  - Pesticide application will only be administered by authorised personnel with ChemCert accreditation – AQF 3 in accordance with SafeWork requirements.
  - Pesticides will only be applied in accordance label instructions for that product.

- A Pesticide Application Record will be completed and public notifications made in accordance with relevant legislation, where pesticides are to be used in areas that could be accessed by members of the public.
- Only pesticides registered for use near water may be used near any waterways.
- Replace tree guards as required, and remove once plants have outgrown them.
- Replace dead plants to achieve an overall 90% success rate for the life of the Project. Replacement of trees will occur during winter.

## C4.4 Criteria for success and intervention

Table 9-1 and Table 9-2 below outline criteria for the success of plantings and of weed management measures respectively, as well as triggers if criteria are not being met, when intervention should be taken and appropriate intervention methods.

Table 9-1 Criteria for success of plantings and intervention measures

Criteria	Trigger for intervention	Intervention
Plantings grow in accordance with the species' natural growth speed and formation	Slow or deformed growth	Ensure plants are receiving adequate watering. Increase or decrease watering levels as required for best outcome. Verify soil condition and quality is suitable for plant growth and water retention.
Plantings are free of disease	Parasites or moulds identified on or around the plantings	Treat parasites or fungus in accordance with best practice methods. Monitor the infestation daily until resolved.
Mortality rate is less than 10% and no gaps greater than 5m.	Mortalities greater than 10% of plantings or gaps greater than 5m	Replace individuals to ensure the screen is well established.
Roots are not exposed	Root damage on greater than 10% of plantings	Ensure area is adequately fenced off from livestock. If root damage is a result of pests, review pest management measures and implementation. Amend or increase measures as required.
After 5 years, plantings will screen the development from views for the neighbour located nearest the Project site, at Whispering Pines Lane	Development visible from the identified viewpoint	If plantings appear healthy, continue monitoring frequency for year 5, or increase if required, to ensure continued growth and health of plantings. If plantings unsuccessful, determine cause and address accordingly to ensure successful growth and screening.

Table 9-2 Criteria for success of weed management and intervention measures

Criteria	Trigger for intervention	Intervention
No priority weeds identified on site	Priority weeds identified on site	Control priority weed species as soon as possible in accordance with recommended control methods and timing. Review weed management measures and implementation. Amend Weed Management Plan as required to reduce likelihood of future occurrences.
New invasive weeds detected on site are controlled.	Invasive weeds detected on site	Eliminate invasive weed species as soon as possible in accordance with recommended control methods and timing. Increase targeted weed control measures as required.
No weeds within 1.5m of the plantings.	Weeds identified within 1.5m of the plantings.	Implement weed control measures as per the BMP soon as possible.

## C4.5 Works schedule

This schedule of work guides the timing and outcomes of landscaping work. This table will be modified based on alterations to Project phases and climatic conditions.

Project Phase	Landscaping Work	Preferred Season	Performance Target	Measure and Monitor	Variation
<b>Preconstruction</b>	Source / order tube stock	As soon as possible, noting the planting timing predicted	Sufficient numbers ordered	Check in to ensure order is on track	-
<b>Construction</b>	Weed control (herbicide) and mulch	End of summer	1m buffer around planting sites targeted	Grass cover dead by autumn	Second control session if required
<b>Construction</b>	Plant tube stock	Autumn after rainfall	Sufficient numbers planted	Climatic conditions, area covered, watering, ensure the plant location and spacing are aligned with the planting schedule above.	Install irrigation or hand water
<b>Construction</b>	Maintain plantings (watering, follow up weed control)	Fortnightly for first 8 months, then reduced as required	Plants alive	Mortality and soil moisture	Reduce watering if heavy rain fall or irrigated
<b>Construction and life of Project</b>	Replace dead plants	As required (note as substantial lead time is required, order surplus quantities)	90% success	Mortality and soil moisture	-

## C4.6 Planting monitoring program

Monitor	Establishment (first 12 months after planting)			Two years post planting			Three years' post construction			Six years post construction to decommissioning		
	Timing	Action	Responsibility	Timing	Action	Responsibility	Timing	Action	Responsibility	Timing	Action	Responsibility
Watering	Weekly	Regular hand weekly watering where <30mm of rain has occurred in that month, unless irrigated	Bouygues Construction – landscape / maintenance contractor	Weekly	Water when rainfall less than 10mm/month unless irrigated	Operator – – landscape / maintenance contractor	Monthly	Water when rainfall less than 10mm/month	Operator – – landscape / maintenance contractor	Monthly	Water when rainfall less than 10mm/month	Operator – – landscape / maintenance contractor
	Weekly	For sections with temporary irrigation, check all drippers operational and water once per week	Bouygues Construction – landscape / maintenance contractor	Monthly	For sections with temporary irrigation, check all drippers operational and water once per month	Operator – – landscape / maintenance contractor	Monthly	For sections with temporary irrigation, check all drippers operational and water once per month	Operator – – landscape / maintenance contractor	Remove drippers once established.		
Weeds	Monthly	Spot spray or manually remove weeds within 1.5 m of planting	Bouygues Construction – landscape / maintenance contractor	Monthly	Spot spray or manually remove weeds within 1.5 m of planting	Operator – – – landscape / maintenance contractor	Quarterly	Spot spray or manually remove weeds within 1.5 m of planting	Operator – – landscape / maintenance contractor	Every six months	Spot spray or manually remove weeds within 1.5 m of planting	Operator – – landscape / maintenance contractor

Monitor	Establishment (first 12 months after planting)			Two years post planting			Three years' post construction			Six years post construction to decommissioning		
	Timing	Action	Responsibility	Timing	Action	Responsibility	Timing	Action	Responsibility	Timing	Action	Responsibility
Mortality	Monthly	Supplementary planting to occur in areas where plantings have died (not to occur during summer) to achieve a 90% success rate.	Bouygues Construction – landscape / maintenance contractor	Quarterly	Supplementary planting to occur in areas where plantings have failed to effectively screen views (not in summer)	Operator – – landscape / maintenance contractor	Annually in summer	Supplementary planting to occur in areas where plantings have failed to effectively screen views (not to occur during summer)	Operator – – landscape / maintenance contractor	Annually in summer	Supplementary planting to occur in areas where plantings have failed to effectively screen views (not to occur during summer)	Operator – – landscape / maintenance contractor
Reporting	Monthly	Report on success of watering, weeding, mortalities, supplementary.  Suggest changes as required	Bouygues Construction – landscape / maintenance contractor	Quarterly	Report on success of watering, weeding, mortalities, supplementary.  Suggest changes as required	Operator – – landscape / maintenance contractor	Annually	Report on success of watering, weeding, mortalities, supplementary.  Suggest changes as required	Operator – – landscape / maintenance contractor	Annually	Report on success of watering, weeding, mortalities, supplementary.  Suggest changes as required	Operator – – landscape / maintenance contractor

## **APPENDIX D CONSULTATION RECORDS**

### **D.1 DUBBO REGIONAL COUNCIL**

General Manager  
Dubbo Regional Council  
PO Box 81  
Dubbo NSW 2830

**RE: Suntop Solar Farm Landscaping Plan**

## Introduction

Bouygues Construction Australia (BCA) will commence construction of the Suntop Solar Farm (SSF) in the first half of 2020. As part of the SSF construction BCA will provide landscaping along the northern and part of the western site boundary (Appendix 1). BCA invite Council to comment on the project landscaping. This letter provides a summary of the key aspects of the Landscaping Plan.

The NSW Department of Planning, Industry and Environment (DPIE) provided a modified approval for the project on the 11<sup>th</sup> October 2019. The conditions of approval relevant to landscaping include:

### **Vegetation Buffer**

9. *The Applicant must establish and maintain a mature vegetation buffer (landscape screening) at the locations outlined in the figure in Appendix 1, to the satisfaction of the Secretary. This vegetation buffer must:* (a) *be planted prior to the commencement of operations;*
- (b) consist of species that facilitate the best possible outcome in terms of visual screening;*
- (c) be effective at screening views of solar panels and ancillary infrastructure on site from residence R1 and R6 within 3 years of commencing construction; and*
- (d) be properly maintained with appropriate weed management.*

### **Landscaping Plan**

10. *Prior to the commencement of construction, the Applicant must prepare a detailed Landscaping Plan for the development in consultation with Council and surrounding landowners, to the satisfaction of the Secretary. This plan must include:*
- (a) a description of measures that would be implemented to ensure that the vegetated buffer achieves the objectives of condition 9 (a) – (c) of schedule 3 of this consent;*
- (b) include a program to monitor and report on the effectiveness of these measures; and*
- (c) include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions.*

*Following the Secretary's approval, the Applicant must implement the Landscaping Plan.*

### **LAND MANAGEMENT**



11. Following any construction or upgrading on the site, the Applicant must:

- (a) restore the ground cover of the site as soon as practicable;
- (b) maintain the ground cover with appropriate perennial species; and
- (c) manage weeds within this ground cover.

The Landscaping Plan will be prepared to meet the requirements of condition 10 above. The Landscaping Plan will also address the requirements of condition 9 and 11 above.

## Landscaping Planting

The Landscaping Plan will describe the plantings along the northern and western (part) boundaries of the site (broken pink line, Appendix 1). The plantings will aim to provide an effective visual screen for adjoining landowners R1 and R6 within 3 years of commencing construction. To achieve this outcome a range of native trees and shrubs will be planted along three rows. In general, the shrub plantings will make up the majority of the plants selected with overstory species dispersed through the planting.

The biodiversity assessment for the solar farm described the likely original plant community type (PCT) for the farm in 2018. The PCT description was based on OEH mapping and site inspections. The original dominant vegetation was described as PCT 267; *White Box - White Cypress Pine - Western Grey Box shrub/grass/forb woodland in the NSW South Western Slopes Bioregion*.

Based on the PCT 267 a number of species have been selected for planting (Table 1).

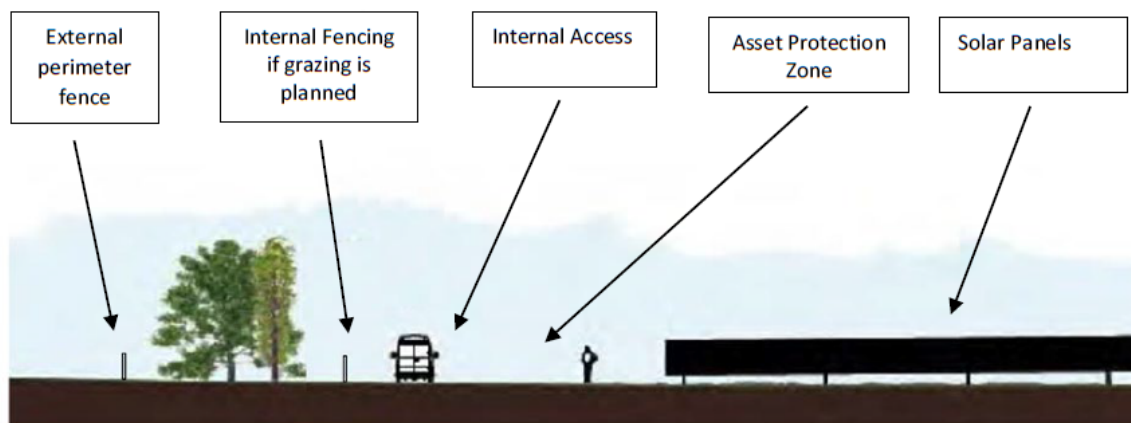
No.	Scientific Name	Common Name	Percentage
<b>Tree Species</b>			
1	<i>Eucalyptus albens</i>	White Box	5
2	<i>Callitris glaucophylla</i>	White Cypress Pine	5
3	<i>Eucalyptus microcarpa</i>	Western Grey Box	5
4	<i>Eucalyptus melliodora</i>	Yellow Box	5
<b>Shrub Species</b>			
A	<i>Acacia implexa</i>	Lightwood or Hickory Wattle	15
B	<i>Acacia decora</i>	Silver Wattle	15
C	<i>Dodonaea viscosa</i> subsp	Hop Bush	15
D	<i>Eremophila longifolia</i>	Dogwood, Berrigan Emubush	15
E	<i>Cassinia aculeata</i>	Dolly Bush	10
F	<i>Grevillea floribunda</i>	Seven Dwarfs Grevillea	10

**Table 1:** Species for the tree planting

The planting for the SSF will incorporate a number of actions, including:

- An asset protection zone (APZ) of 10 m will be created between the planting and panels.
- Weed control in the planning areas for t 3 -6 months prior to planting.
- Deep rip planting lines to a depth of 300mm-400mm in summer.

- Hardened tube stock will be planted into ripped planting beds then fertilised and mulched.
- Planting in autumn after rainfall (>50mm rainfall in a 30-day period).
- Pre-watering if < 50mm rain in the month prior to planting.
- Shrubs/Trees in each row spaced at 3/5 m dependent on the species.
- Plantings will be staggered, mixed and offset to produce a mixed planting.
- The planting will generally be 5-10 metres deep.



Following planting the fencing, weeds, rainfall, shrubs and trees would be monitored on a monthly basis. Where required fencing would be repaired as soon as any breaches are identified. Weeds would be controlled on a seasonal basis prior to flowering or setting seed. Rainfall would be monitored to provide information to schedule irrigation. Trees and shrubs would be monitored for growth rates and survival. Any losses would be replaced in the following winter.

BCA plan to provide an effective landscaping screen for the SSF. You can have input into that process by completing the form below, or by emailing NGH using: [michial.s@nghconsulting.com.au](mailto:michial.s@nghconsulting.com.au) or calling NGH's Mike Sutherland on 0269231532. We request feed back within seven days.

Kind Regards



Michial Sutherland

Manager Riverina and Western NSW

NGH

## SSF Landscaping Plan Feedback Form

Place a tick in the box(s) below as desired

I support the approach described above.

☐

I do not support the approach described above.

☐

Comment (please add a comment)

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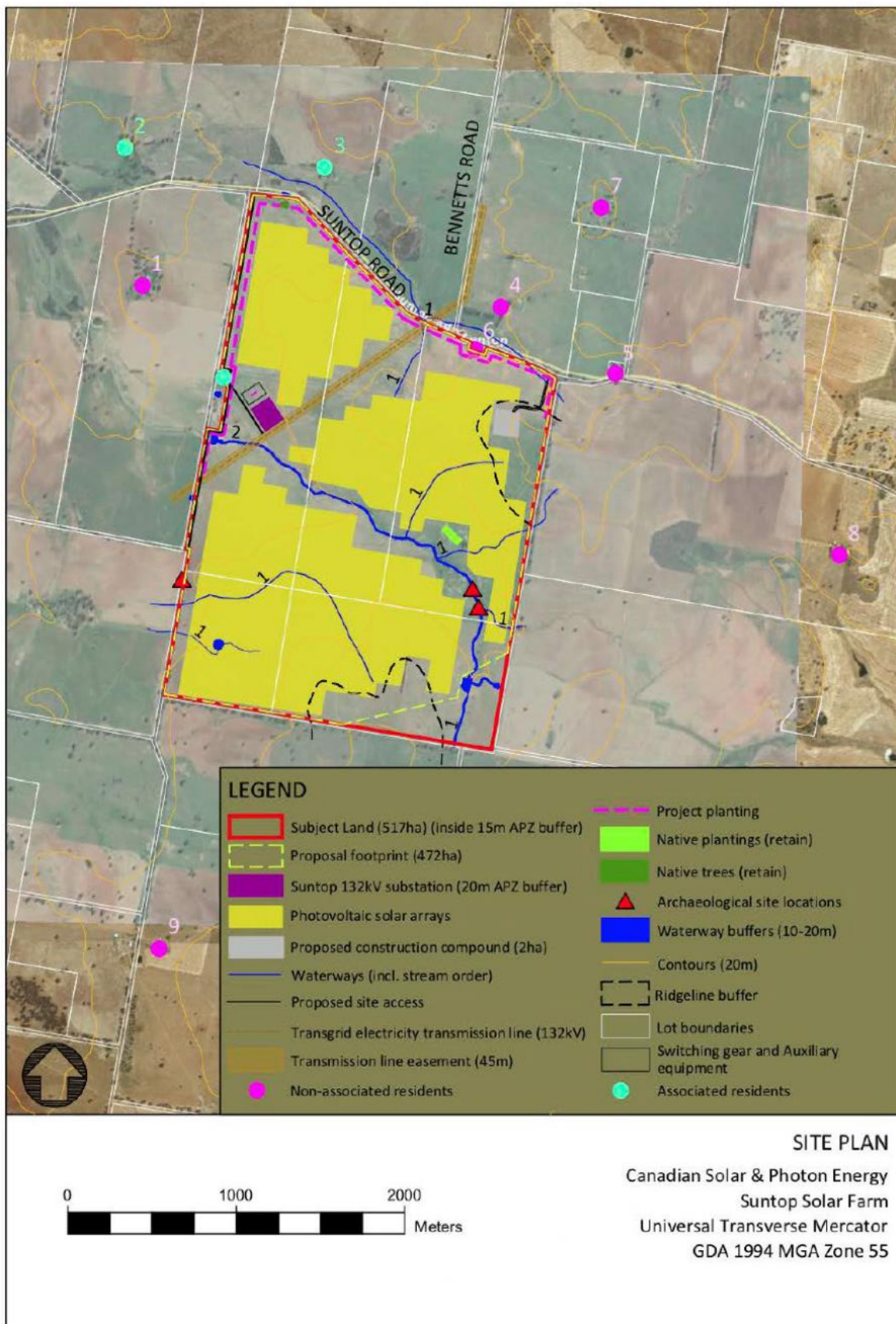
Comments where reasonable and feasible will be addressed in the Landscaping Plan for the SSF.

Name:

Address:

Email:

**Appendix 1 General Layout of SSF**





Good Morning Fabrice,

I have reviewed the attached concept Landscape Plan and provide the following comments;

Council require a more detailed to scale landscape plan, identifying new plantings and any proposed vegetation removal, within the corridor in relation to; existing services, road pavements, entry points to Suntop Solar Farm and surrounding property boundaries.

Consideration should be given to, if not already, maintaining a safe clearance zone in accordance with Austroad.

Regards

**Benjamin Pilon**  
Acting Manager Recreation & Open Space  
Dubbo Regional Council  
P 02 6801 4704  
E [Benjamin.Pilon@dubbo.nsw.gov.au](mailto:Benjamin.Pilon@dubbo.nsw.gov.au)



<http://dubbo.nsw.gov.au>

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## **D.2 RESIDENTIAL CONSULTATION**

Dear Adjoining Land Owner

**RE: Suntop Solar Farm Landscaping Plan**

## Introduction

Bouygues Construction Australia (BCA) will commence construction of the Suntop Solar Farm (SSF) in the first half of 2020. As part of the SSF construction BCA will provide landscaping along the northern and part of the western site boundary (Appendix 1). BCA invite you to comment on the project landscaping. This letter provides a summary of the key aspects of the Landscaping Plan.

The NSW Department of Planning, Industry and Environment (DPIE) provided a modified approval for the project on the 11<sup>th</sup> October 2019. The conditions of approval relevant to landscaping include:

### **Vegetation Buffer**

9. *The Applicant must establish and maintain a mature vegetation buffer (landscape screening) at the locations outlined in the figure in Appendix 1, to the satisfaction of the Secretary. This vegetation buffer must:* (a) *be planted prior to the commencement of operations;*
- (b) consist of species that facilitate the best possible outcome in terms of visual screening;*
- (c) be effective at screening views of solar panels and ancillary infrastructure on site from residence R1 and R6 within 3 years of commencing construction; and*
- (d) be properly maintained with appropriate weed management.*

### **Landscaping Plan**

10. *Prior to the commencement of construction, the Applicant must prepare a detailed Landscaping Plan for the development in consultation with Council and surrounding landowners, to the satisfaction of the Secretary. This plan must include:*
- (a) a description of measures that would be implemented to ensure that the vegetated buffer achieves the objectives of condition 9 (a) – (c) of schedule 3 of this consent;*
- (b) include a program to monitor and report on the effectiveness of these measures; and*
- (c) include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions.*

*Following the Secretary's approval, the Applicant must implement the Landscaping Plan.*

### **LAND MANAGEMENT**

11. *Following any construction or upgrading on the site, the Applicant must:*
- (a) restore the ground cover of the site as soon as practicable;*

- (b) maintain the ground cover with appropriate perennial species; and
- (c) manage weeds within this ground cover.

The Landscaping Plan will be prepared to meet the requirements of condition 10 above. The Landscaping Plan will also address the requirements of condition 9 and 11 above.

## Landscaping Planting

The Landscaping Plan will describe the plantings along the northern and western (part) boundaries of the site (broken pink line, Appendix 1). The plantings will aim to provide an effective visual screen for adjoining landowners R1 and R6 within 3 years of commencing construction. To achieve this outcome a range of native trees and shrubs will be planted along three rows. In general, the shrub plantings will make up the majority of the plants selected with overstory species dispersed through the planting.

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Based on the PCT 267 a number of species have been selected for planting (Table 1).

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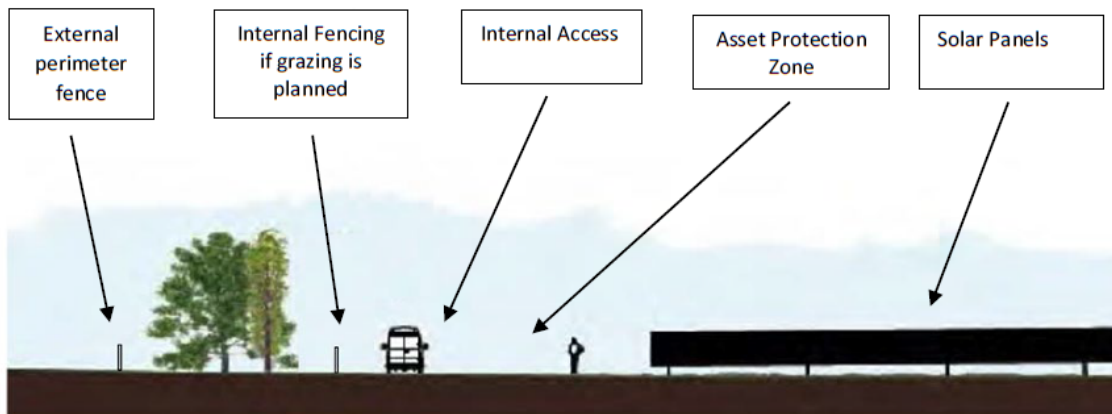
**Table 1:** Species for the tree planting

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- Deep rip planting lines to a depth of 300mm-400mm in summer.
- Hardened tube stock will be planted into ripped planting beds then fertilised and mulched.
- Planting in autumn after rainfall (>50mm rainfall in a 30-day period).
- Pre-watering if < 50mm rain in the month prior to planting.



- Shrubs/Trees in each row spaced at 3/5 m dependent on the species.
- Plantings will be staggered, mixed and offset to produce a mixed planting.
- The planting will generally be 5-10 metres deep.



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BCA plan to provide an effective landscaping screen for the SSF. You can have input into that process by completing the form below, or by emailing NGH using: [michial.s@nghconsulting.com.au](mailto:michial.s@nghconsulting.com.au) or calling NGH's Mike Sutherland on 0269231532. We request feed back within seven days.

Kind Regards

A handwritten signature in black ink, appearing to read 'M. Sutherland'.

Michial Sutherland

Manager Riverina and Western NSW

NGH

## SSF Landscaping Plan Feedback Form

Place a tick in the box(s) below as desired

I support the approach described above.

☐

I do not support the approach described above.

☐

Comment (please add a comment)

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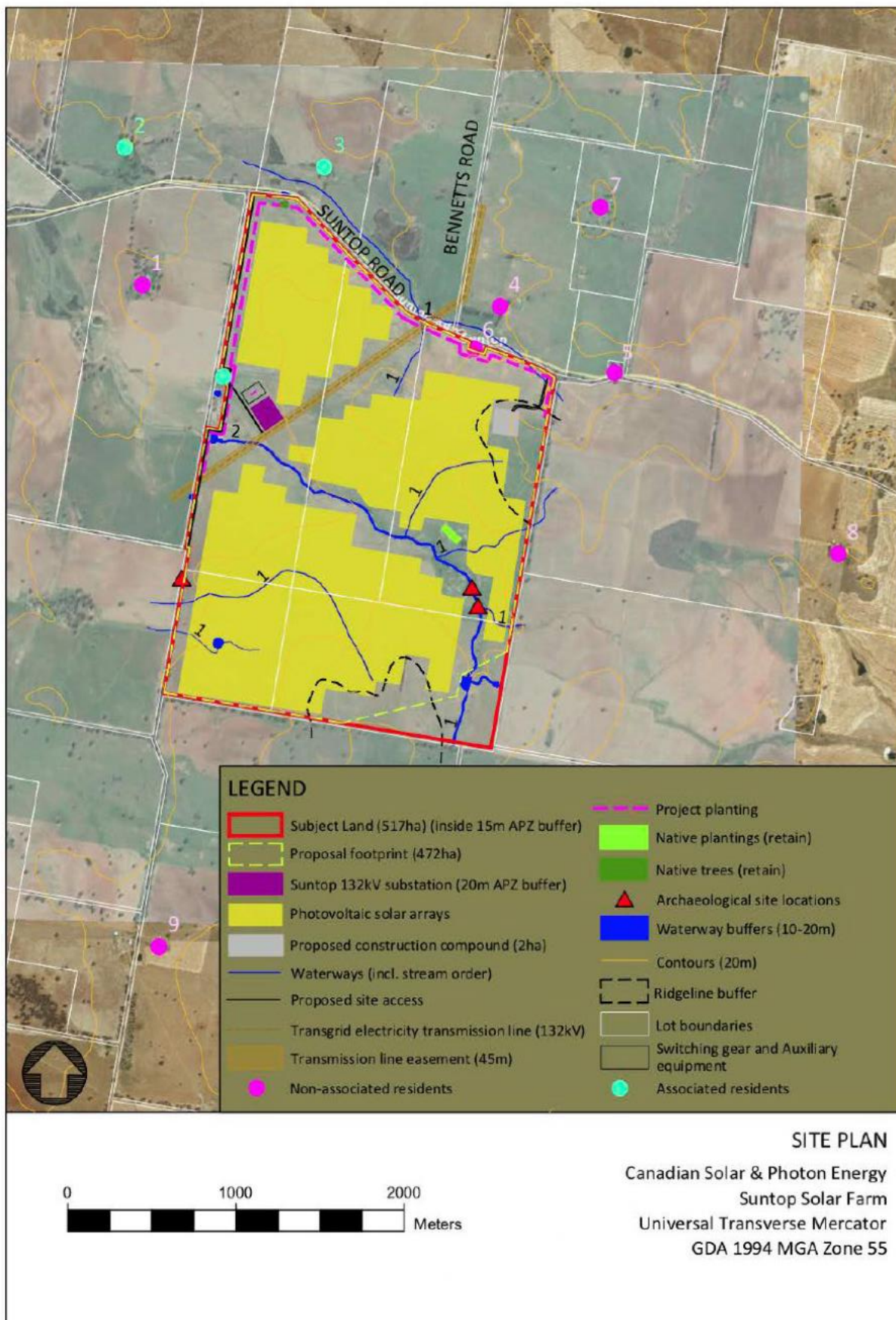
Comments where reasonable and feasible will be incorporated in the Landscaping Plan for the SSF.


Name:

Address:

Email:

**Appendix 1 General Layout of SSF**



 Shared Innovation

SUNTOP Solar farm  
ADJOINING LANDHOLDER

SSF Landscaping Plan Feedback Form

Place a tick in the box(s) below as desired

I support the approach described above. ☒

I do not support the approach described above. ☐

Comment (please add a comment)

\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Comments where reasonable and feasible will be incorporated in the Landscaping Plan for the SSF.

Name: James O'Brien

Address: 790 Suntop Road

Email:

Page 4

R0 13/01/2020 Uncontrolled when printed  
Commercial in Confidence Page 4 of 5

Feedback form for the Occupant of Residence 3





Shared innovation

SUNTOP Solar farm  
ADJOINING LANDHOLDER

## SSF Landscaping Plan Feedback Form

Place a tick in the box(s) below as desired

I support the approach described above.

☐

I do not support the approach described above.

☐

Comment (please add a comment)

Hello, I would like to see the (I believe) remnant vegetation of a native water bush that is present at the corner of Suntop and Bennetts Rd included in the mix of shrub species proposed. I would be happier if this species was included. bit of conservation as well.

Comments where reasonable and feasible will be incorporated in the Landscaping Plan for the SSF.

14/1/2020

Name: Robert Beasley

Address: 12 Bennetts Rd  
Suntop NSW 2820 Tel-0429 024 159

Email: rj-beasley@bigpond.com

*ROB*

Page 4

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Page 4 of 5

Feedback form for the Occupant of Residence 4



Shared Innovation

SUNTOP Solar farm  
ADJOINING LANDHOLDER

### SSF Landscaping Plan Feedback Form

Place a tick in the box(s) below as desired

I support the approach described above.

☒

I do not support the approach described above.

☐

Comment (please add a comment)

Soon to move in 12 months.

Comments where reasonable and feasible will be incorporated in the Landscaping Plan for the SSF.

Name: Dennis Johns

Address: Rockview  
Wellington.

2820

Email:

Page 4

Feedback form for the Occupant of Residence 2



## D.3 DPIE LP APPROVAL LETTERS



**Planning,  
Industry &  
Environment**

**Planning and Assessments**

**Energy Assessments**

Contact: Natasha Homsey

Phone: (02) 8275 1264

Email: [natasha.homsey@planning.nsw.gov.au](mailto:natasha.homsey@planning.nsw.gov.au)

Chelsea Milles  
Project Development Manager  
Canadian Solar (Australia) Pty Ltd

Via email: [chelsea.milles@canadiansolar.com](mailto:chelsea.milles@canadiansolar.com)

24/04/2020

Dear Ms Milles

**Suntop Solar Farm (SSD 8696)**  
**Traffic Management Plan**

I refer to the Traffic Management Plan, which was submitted in accordance with Condition 8 of Schedule 3 of the Development Consent for the Suntop Solar Farm (SSD 8696).

The Department has carefully reviewed the document and is satisfied that it meets the requirements of this condition.

Accordingly, the Planning Secretary has approved the Traffic Management Plan (Revision 6, 22 April 2020). Please ensure that the approved plan is placed on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Natasha Homsey on the above details.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'Nicole Brewer', with a horizontal line extending to the right.

Nicole Brewer  
Director  
Energy Assessments

As nominee of the Planning Secretary