

# LANDSCAPE STRATEGY

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PLAN

## ELAINE SOLAR FARM

DATE: SEPTEMBER 2023



**WE ACKNOWLEDGE  
THE WADAWURRUNG  
PEOPLE, WHO HAVE BEEN  
THE CUSTODIANS OF  
THIS LAND FOR MANY  
THOUSANDS OF YEARS;  
AND PAY RESPECT TO  
THEIR ELDERS PAST  
AND PRESENT. WE  
ACKNOWLEDGE THAT  
THE LAND OF WHICH WE  
SPEAK IS THE PLACE OF  
AGE-OLD CEREMONIES,  
CELEBRATIONS,  
INITIATION AND  
RENEWAL; AND THAT  
THE WADAWURRUNG  
PEOPLES' LIVING  
CULTURE CONTINUES TO  
HAVE A UNIQUE ROLE IN  
THE LIFE OF THIS REGION.**

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## INTRODUCTION

Elgin Energy plan to submit a Planning Application for the development of the Elaine Solar Project (the Project) along the Midland Highway, Elaine. The Project is located approximately 12 kilometres (km) northeast of Meredith and approximately 80 km west of Melbourne.

This design report has been prepared by Urbis Pty Ltd (Urbis) to support the amelioration recommendations of a preliminary Landscape Visual Impact Assessment (LVIA) and for inclusion in the Planning Application.

## SITE CONTEXT

The Project is located along the both the eastern and western boundaries of Midland Highway, between Clarendon (north) and Elaine (south).

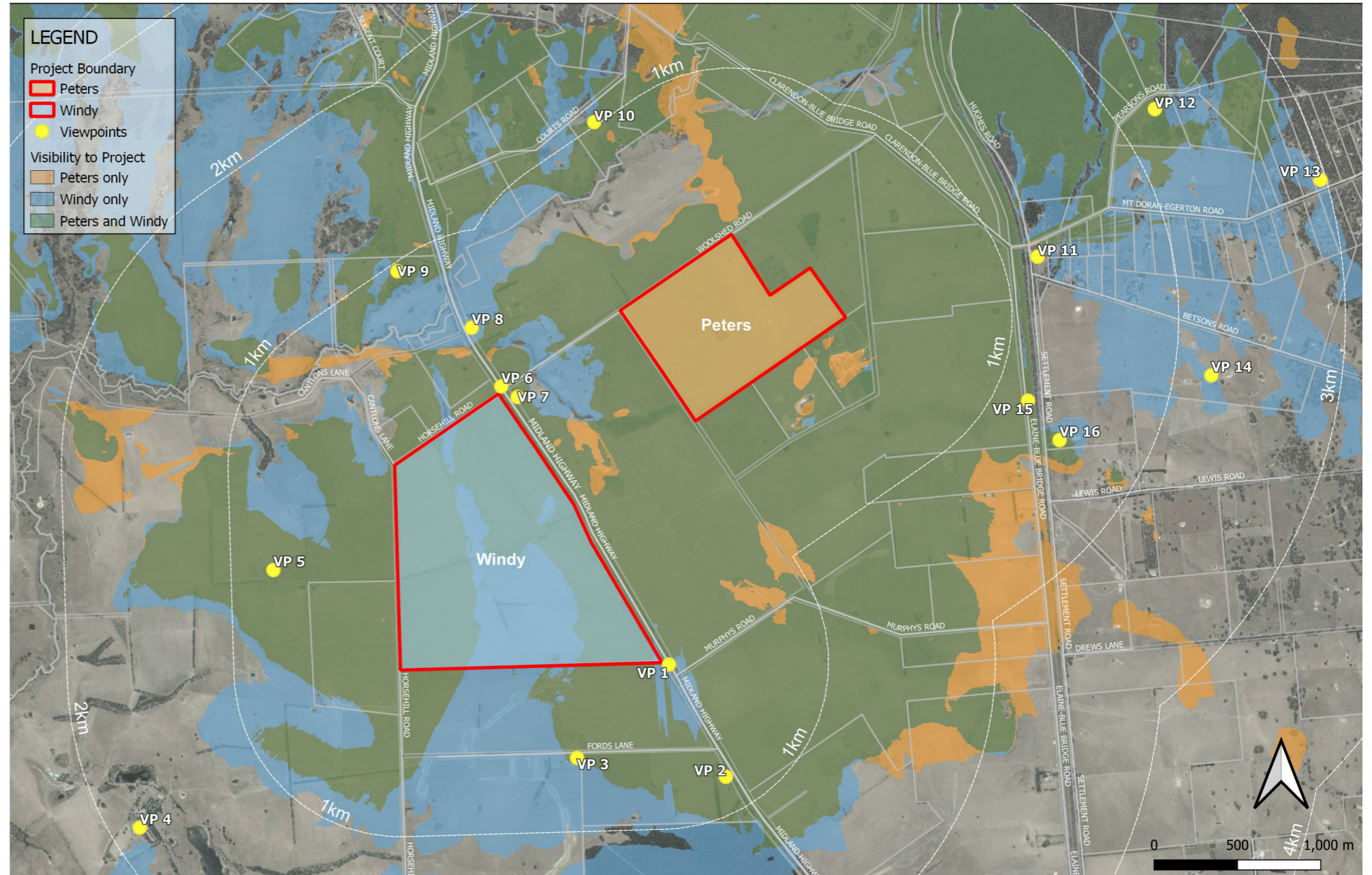
The Project is comprised of two proposed sites (east and west). Both sites are situated adjacent to the Elaine Wind Farm.

The land use of the Project site and surrounding area is mostly agricultural farming.

## DEVELOPMENT PROPOSAL

The Project involves the erection of approximately 256,866 individual solar panels across the two proposed sites, totaling approximately 246 hectares. This will include in the installation of inverters, transformers and the construction of a substation and battery energy storage system (BESS).

An agricultural type stockproof fence will be installed around the boundary of the site, with a 2.3 m high security fence set 5 metres to the inside of it. The 5 m space between the fences will enable the establishment of a buffer planting zone to screen the Project from surrounding sensitive viewpoints.



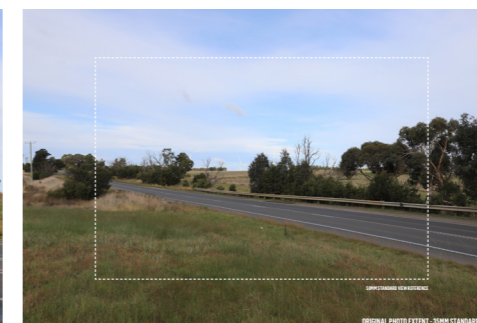
View 1: NW down Midland Highway



View 3: SSW from Midland Highway



View 8: South across Midland Highway



View 15: WNW from Blue-Bridge Rd.



# DESIGN RESPONSE

## METHODOLOGY

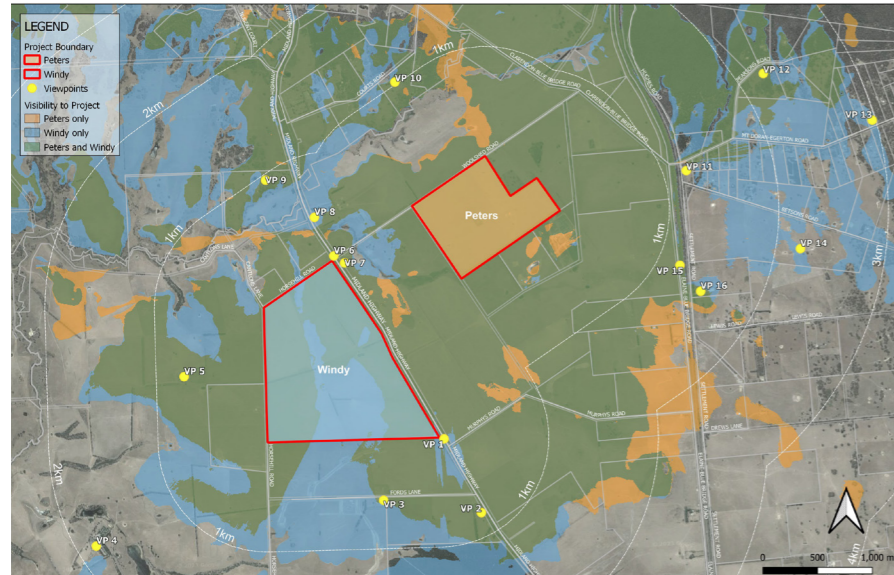
### Screen Planting

The Landscape and Visual Impact Assessment report (LVIA) has identified viewpoints surrounding the Project subject to highest visual impacts. The most effective way to ameliorate views is to establish screen planting around the perimeter of the Project.

The western block of the Project has an exposed boundary to the north, which should be planted with dense screening species to ameliorate views from VP9. The southern and eastern boundaries are mostly well screened by existing vegetation. However, infill planting of these boundaries will mitigate impacts to VP1 and VP6.

The eastern block is typically distant from most sensitive viewpoints, with views filtered by vegetation throughout the landscape. However, low density tall shrub planting should be located around all perimeters.

The low-profile form of the majority of the Project, primarily the solar array, which is approximately 3.2 m in height at full tilt, will ensure that planting will be able to provide screening within a relatively short period of time.



## PLANT ESTABLISHMENT MAINTENANCE

### Maintenance Notes:

#### General

- Maintain a minimum 3 metre height of screening shrubs.
- Maintain 100mm maximum height of grassland within property boundary.
- Planting maintenance period: the planting maintenance period will be 52 weeks and will commence from the date of practical completion of each phase of planting works (hereby specified to be a separable part of the works). It is anticipated that planting works will be undertaken in one phase.
- Planting maintenance program: 2 weeks prior to practical completion, furnish a proposed planting establishment program, and amend it as required. Such proposal should contain details of the types and frequency of maintenance activities involved with the establishment of plants and grassed areas. Comply with the approved program.
- Planting maintenance log book: keep a log book recording when and what maintenance work has been done and what materials, including approved toxic materials, have been used. Log book must be signed off by the client's representative after each maintenance visit. Maintain log book in location nominated by superintendent. Log book to contain a copy of the approved planting establishment program.
- Product warranty: submit the supplier's written statement certifying that plants are true to the required species and type, and are free from diseases, pests and weeds.
- Insurance: the contractor is to ensure suitable insurance cover and / or bank guarantee is in place for the theft and / or damage of all works executed under this contract for the plant maintenance period.

#### Solar Panels

Urbis understand the following:

- Solar panels will be surrounded by existing pasture grass for easy maintenance. Grass to be maintained to maximum 100mm height through grazing or slashing.
- Existing pasture grass to continue underneath solar panels extent.
- Gravel maintenance paths provided for vehicular maintenance circulation.

#### Watering

If the watering regime is intended to be amended the contractor must seek written approval from the superintendent immediately prior to the deferment of watering.

*Watering permits:* the contractor is responsible for obtaining the necessary watering permits required to carry out the watering as specified.

#### Watering Strategy

- Low water demand planting is proposed.
- Passive irrigation is proposed on site.
- Water truck watering to be utilised during establishment/maintenance period.

#### Planting Maintenance

*Protection of works:* provide any fencing or barriers necessary to protect the planting from damage throughout the planting establishment period.

*Recurrent works:* throughout the planting maintenance period, continue to carry out recurrent works of a maintenance nature all to the extent required to ensure that the plants are in the best possible condition at the end of the planting maintenance period. These activities are including but not limited to:

- weeding,
- rubbish removal,
- fertilizing,
- pest and disease control,
- adjusting / replacing stakes and ties
- topping up locally sourced mulch,
- cultivating,
- pruning,
- keeping the site neat and tidy.

*Replacements:* the contractor is responsible for the replacement of failed, damaged or stolen trees, shrubs and groundcovers throughout the planting establishment period.

#### Weeding

*Generally:* regularly remove, by hand, rubbish and weed growth that may occur or recur throughout turfed, planted and mulched areas. Continue eradication throughout the course of the works and during the planting establishment periods.

*Weed eradication:* the contractor must make allowance for a higher level of maintenance during establishment to ensure that weeds are controlled.

*Herbicide use:* re-application of herbicide such as Ronstar or equivalent if required.

#### Compliance

Requirement: plant maintenance shall be deemed complete subject to the following compliance with the criteria:

- repairs to planting media completed,
- ground surfaces are covered with the specified treatment to the specified depths,
- pests, disease, or nutrient deficiencies or toxicities are not evident.

- organic and rock mulched surfaces have been maintained in a weed free and tidy condition and to the specified depth
- vegetation is established and well formed
- plants have healthy root systems that have penetrated into the surrounding, undisturbed ground and not able to be lifted out of its planting hole
- vegetation is not restricting essential sight lines and signage
- collection and removal of litter
- all non-conformance reports and defects notifications have been closed out.
- plant maintenance compliance schedule.

### Pruning

- Generally: tree plantings shall be left to grow in a form consistent with the growth habit of the species.
- Pruning: cut back tree canopies and groundcovers to road verges, and light poles and signs as required achieving clear sight lines when viewed along roadway.

Requirement: pruning to be undertaken by a qualified tree surgeon / arborist

### Completion

- Cleaning: remove temporary protective fences and tree stakes at the end of the planting maintenance period.

### Safety and Security

An integrated approach to safety will improve actual and perceived personal security in pedestrian public domain areas. Signage will be provided across the precinct to assist with wayfinding and navigation through the site.

## VEGETATION RETENTION STRATEGY

- Refer to Ecological Consultants 'Biodiversity Assessment' for detailed fauna and flora reports and species
- Existing vegetation will be retained where possible.
- Dead trees with habitat value will be relocated. Refer to Ecological Consultants report for more information.

## PROPOSED SCREENING TYPOLOGIES

### Type 1 - High Density Tree & Shrub Planting

#### Comprised of:

- Large Trees – Centrally located along 5m buffer in random groups at 10m centres
- Small Trees – Centrally located along 5m buffer in random small groups between the canopy trees. Can be located as close as 3m apart.
- Large Shrubs – roughly located in a meandering line centrally along the 5m buffer at 2m centres.
- Medium Shrubs - roughly located in a meandering line either side of the line of trees and large shrubs at 1.2m centres.

### Type 2 - High Density Shrub Planting

#### Comprised of:

- Large Shrubs – roughly located in a meandering line centrally along the 5m buffer at 2m centres.
- Medium Shrubs - roughly located in a meandering line either side of the large shrubs at 1.2m centres.

### Type 3 - Low Density Tree & Shrub Planting

#### Comprised of:

- Large Trees – Centrally located along 5m buffer in random groups at 10m centres
- Large Shrubs – roughly located in a meandering line centrally along the 5m buffer at 3m centres.
- -Medium Shrubs - roughly located in a meandering line either side of the line of trees and large shrubs at 2m centres.

### Type 4 - Low Density Shrub Planting

#### Comprised of:

- Large Shrubs – roughly located in a meandering line centrally along the 5m buffer at 3m centres.
- Medium Shrubs - roughly located in a meandering line either side of the line of trees and large shrubs at 2m centres.

## PROPOSED PLANT SPECIES

Given the location of the Project, the plant species have been drawn from a number of EVC's and Council plant lists:

- EVC 55- Victorian Volcanic Plains – Plains woodlands or forests
- EVC 132 – Victorian Volcanic Plain – Plains grassland and chenopod shrublands
- EVC 22 – Central Victorian Uplands – Grassy Dry Forests
- EVC 128 – Central Victorian Uplands – Grassy Forest
- EVC 175 - Central Victorian Uplands – Grassy woodland

*Plants of the Buninyong Region, N McCracken (2004)*

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# LANDSCAPE STRATEGY

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# OVERALL PLANTING STRATEGY



## LEGEND

-  **Landscape Buffer Type 1:** High Density Tree & Shrub Planting
-  **Landscape Buffer Type 2:** High Density Shrub Planting
-  **Landscape Buffer Type 3:** Low Density Tree & Shrub Planting
-  **Landscape Buffer Type 4:** Low Density Shrub Planting
-  **Vegetation Groups**  
- to be removed. Refer to Urbis Elaine SF site plan for details
-  **Vegetation Groups**  
- to be retained. Refer to Urbis Elaine SF site plan for details

Refer to Urbis Solar Farm Site Plan for detailed plan and specific location of retained and removed vegetation groups and trees.

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# PLANTING TYPOLOGIES

## BUFFER PLANTING TYPE 1

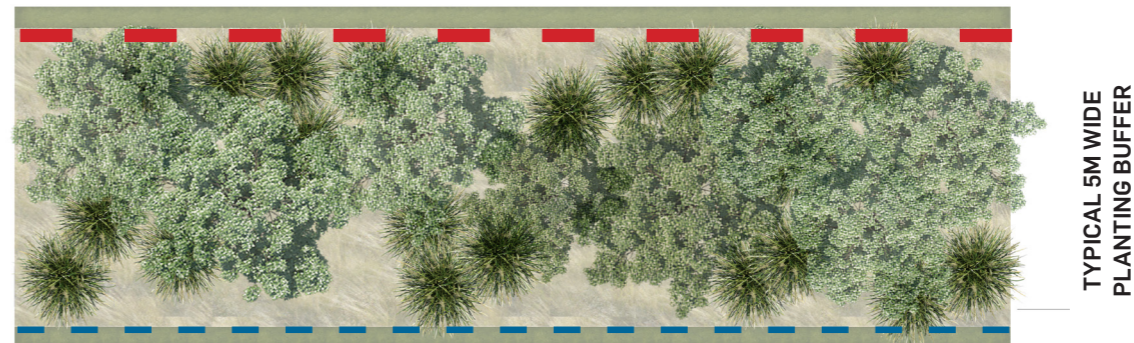
### HIGH DENSITY TREE & SHRUB PLANTING



LARGE TREES			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Red Stringybark	<i>Eucalyptus macrorhyncha</i>	10-35m x 10-20m	Tubestock
Bundy	<i>Eucalyptus goniocalyx s.l</i>	8-20m x 6-15m	Tubestock
Messmate Stringybark	<i>Eucalyptus obliqua</i>	20-90m x 10-35m	Tubestock
Yarra Gum	<i>Eucalyptus yarrensii</i>	10-20m x 5-10m	Tubestock
SMALL TREES			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Silver Wattle	<i>Acacia dealbata</i>	6-30m x 5-10m	Tubestock
Blackwood	<i>Acacia melanoxylon</i>	5-30m x 4-15m	Tubestock
Black Sheoak	<i>Allocasuarina littoralis</i>	5-12m x 2-6m	Tubestock
LARGE SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Hedge Wattle	<i>Acacia paradoxa</i>	2-4m x 2-5m	Tubestock
Golden Wattle	<i>Acacia pycnantha</i>	3-10m 2-5m	Tubestock
Hop Wattle	<i>Acacia stricta</i>	2-5m x 2-4m	Tubestock
Drooping Sheoak	<i>Allacasuarina verticillata</i>	5-8m x 4-6m	Tubestock
Silver Banksia	<i>Banksia marginata</i>	1-3m x 0.5-2m	Tubestock
MEDIUM SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Prickly Moses	<i>Acacia verticillata</i>	2-5m x 3-5m	Tubestock
Sweet Bursaria	<i>Bursaria spinosa</i>	2-6m x 2-3m	Tubestock
Prickly Current Bush	<i>Coprosma quadrifida</i>	2-4m x 1-1.5m	Tubestock
Sticky Hop Bush	<i>Dodonaea viscosa</i>	2-4m x 2-4m	Tubestock
Tree Violet	<i>Melicytus dentatus</i>	2-4m x 1-2.5m	Tubestock
Prickly Tea Tree	<i>Leptospermum continentale</i>	1-4m x 1-2m	Tubestock
Silky Tea Tree	<i>Leptospermum lanigerum</i>	2-6m x 1-3m	Tubestock

## BUFFER PLANTING TYPE 2







### HIGH DENSITY SHRUB PLANTING



LARGE SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Hedge Wattle	<i>Acacia paradoxa</i>	2-4m x 2-5m	Tubestock
Golden Wattle	<i>Acacia pycnantha</i>	3-10m 2-5m	Tubestock
Hop Wattle	<i>Acacia stricta</i>	2-5m x 2-4m	Tubestock
Drooping Sheoak	<i>Allacasuarina verticillata</i>	5-8m x 4-6m	Tubestock
Silver Banksia	<i>Banksia marginata</i>	1-3m x 0.5-2m	Tubestock
MEDIUM SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Prickly Moses	<i>Acacia verticillata</i>	2-5m x 3-5m	Tubestock
Sweet Bursaria	<i>Bursaria spinosa</i>	2-6m x 2-3m	Tubestock
Prickly Current Bush	<i>Coprosma quadrifida</i>	2-4m x 1-1.5m	Tubestock
Sticky Hop Bush	<i>Dodonaea viscosa</i>	2-4m x 2-4m	Tubestock
Tree Violet	<i>Melicytus dentatus</i>	2-4m x 1-2.5m	Tubestock
Prickly Tea Tree	<i>Leptospermum continentale</i>	1-4m x 1-2m	Tubestock
Silky Tea Tree	<i>Leptospermum lanigerum</i>	2-6m x 1-3m	Tubestock

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### LEGEND

-  Trees\*
-  Shrub \ Screen Planting\*
-  Tufting Planting\*
-  Existing Grass
-  Security Mesh Fence
-  Property Boundary Line

\*Plants to be selected from Proposed Planting List

# PLANTING TYPOLOGIES

## BUFFER PLANTING TYPE 3

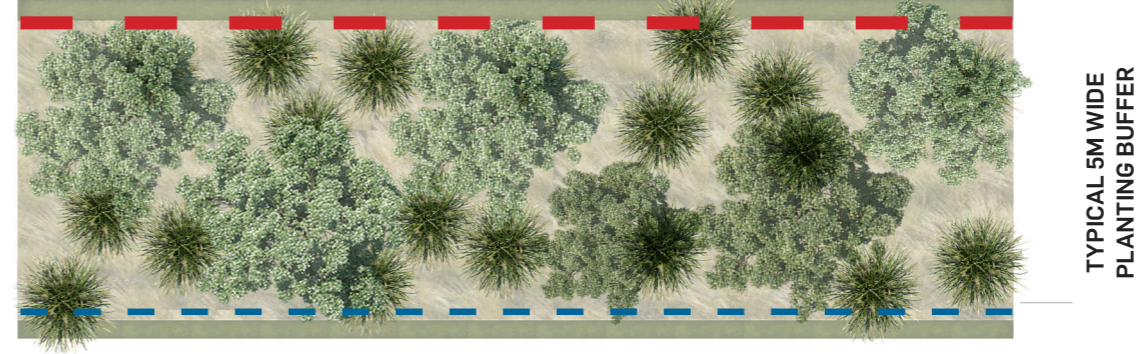
### LOW DENSITY TREE & SHRUB PLANTING



LARGE TREES			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Red Stringybark	<i>Eucalyptus macrorhyncha</i>	10-35m x 10-20m	Tubestock
Bundy	<i>Eucalyptus goniocalyx s.l</i>	8-20m x 6-15m	Tubestock
Messmate Stringybark	<i>Eucalyptus obliqua</i>	20-90m x 10-35m	Tubestock
Yarra Gum	<i>Eucalyptus yarrensii</i>	10-20m x 5-10m	Tubestock
LARGE SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Hedge Wattle	<i>Acacia paradoxa</i>	2-4m x 2-5m	Tubestock
Golden Wattle	<i>Acacia pycnantha</i>	3-10m 2-5m	Tubestock
Hop Wattle	<i>Acacia stricta</i>	2-5m x 2-4m	Tubestock
Drooping Sheoak	<i>Allacasuarina verticillata</i>	5-8m x 4-6m	Tubestock
Silver Banksia	<i>Banksia marginata</i>	1-3m x 0.5-2m	Tubestock
MEDIUM SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Prickly Moses	<i>Acacia verticillata</i>	2-5m x 3-5m	Tubestock
Sweet Bursaria	<i>Bursaria spinosa</i>	2-6m x 2-3m	Tubestock
Prickly Current Bush	<i>Coprosma quadrifida</i>	2-4m x 1-1.5m	Tubestock
Sticky Hop Bush	<i>Dodonaea viscosa</i>	2-4m x 2-4m	Tubestock
Tree Violet	<i>Melicytus dentatus</i>	2-4m x 1-2.5m	Tubestock
Prickly Tea Tree	<i>Leptospermum continentale</i>	1-4m x 1-2m	Tubestock
Silky Tea Tree	<i>Leptospermum lanigerum</i>	2-6m x 1-3m	Tubestock

## BUFFER PLANTING TYPE 4







### LOW DENSITY SHRUB PLANTING



LARGE SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Hedge Wattle	<i>Acacia paradoxa</i>	2-4m x 2-5m	Tubestock
Golden Wattle	<i>Acacia pycnantha</i>	3-10m 2-5m	Tubestock
Hop Wattle	<i>Acacia stricta</i>	2-5m x 2-4m	Tubestock
Drooping Sheoak	<i>Allacasuarina verticillata</i>	5-8m x 4-6m	Tubestock
Silver Banksia	<i>Banksia marginata</i>	1-3m x 0.5-2m	Tubestock
MEDIUM SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Prickly Moses	<i>Acacia verticillata</i>	2-5m x 3-5m	Tubestock
Sweet Bursaria	<i>Bursaria spinosa</i>	2-6m x 2-3m	Tubestock
Prickly Current Bush	<i>Coprosma quadrifida</i>	2-4m x 1-1.5m	Tubestock
Sticky Hop Bush	<i>Dodonaea viscosa</i>	2-4m x 2-4m	Tubestock
Tree Violet	<i>Melicytus dentatus</i>	2-4m x 1-2.5m	Tubestock
Prickly Tea Tree	<i>Leptospermum continentale</i>	1-4m x 1-2m	Tubestock
Silky Tea Tree	<i>Leptospermum lanigerum</i>	2-6m x 1-3m	Tubestock

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### LEGEND

-  Trees\*
-  Shrub \ Screen Planting\*
-  Tufting Planting\*
-  Existing Grass
-  Security Mesh Fence
-  Property Boundary Line

\*Plants to be selected from Proposed Planting List

# PLANTING PALETTE

## TALL SHRUBS



*Acacia stricta*



*Acacia pycnantha*



*Acacia paradoxa*



*Drooping sheoak*



*Banksia marginata*

## MEDIUM SHRUBS



*Leptospermum continentale*



*Acacia verticillata*



*Hymenanthera dentata*



*Bursari spinosa*



*Dodonaea viscosa*



*Coprosma quadrifida*



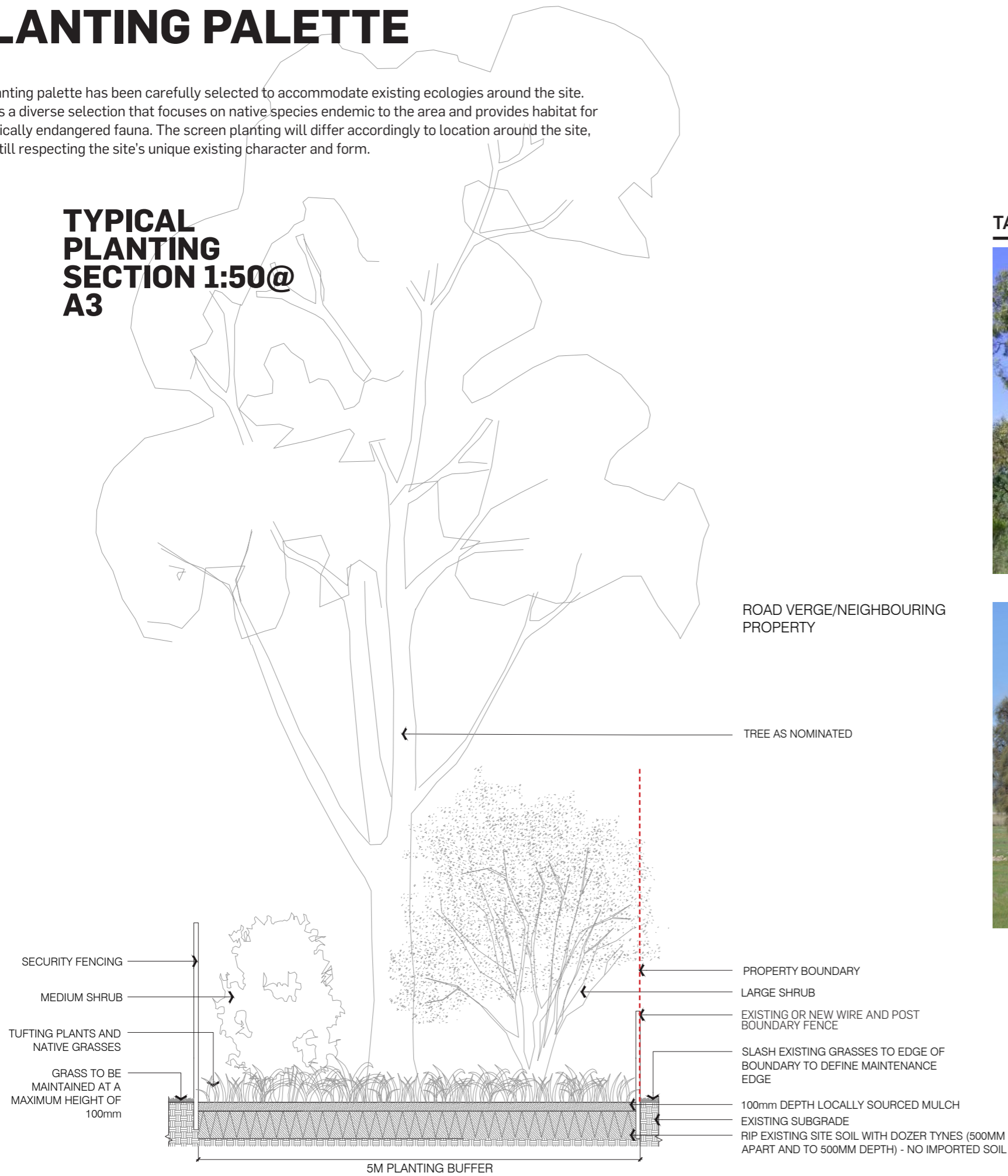
*Leptospermum lanigerum*

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# PLANTING PALETTE

The planting palette has been carefully selected to accommodate existing ecologies around the site. There is a diverse selection that focuses on native species endemic to the area and provides habitat for the critically endangered fauna. The screen planting will differ accordingly to location around the site, while still respecting the site's unique existing character and form.

## TYPICAL PLANTING SECTION 1:50@ A3



## ADVERTISED PLAN

### TALL & SMALL TREES



*Eucalyptus goniocalyx*



*Acacia dealbata*



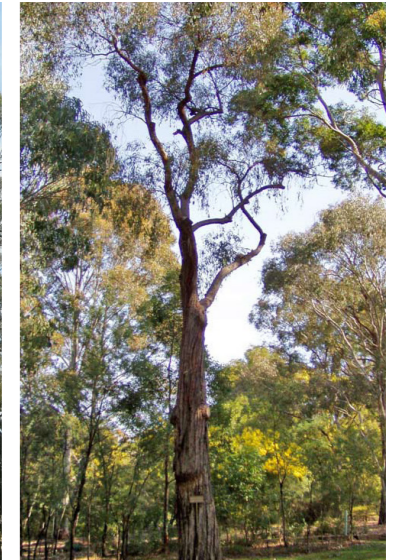
*Eucalyptus yaraensis*



*Allocasuarina verticillata*



*Eucalyptus obliqua*



*Eucalyptus macrorhyncha*

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