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LANDSCAPE STRATEGY

MORTLAKE ENERGY HUB

APRIL 2024



WE ACKNOWLEDGE THE GUNDITJMARA, GIRAI WURRUNG AND DJAB WURRUNG 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 THEIR LIVING CULTURE CONTINUES TO HAVE A UNIQUE ROLE IN THE LIFE OF THIS REGION.

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INTRODUCTION

Bright Night plan to submit a Planning Application for the development of the Mortlake Energy Hub Solar Project (the Project) along the Hamilton Highway, Mortlake. The Project is located approximately 45 kilometres (km) northeast of Warnambool and approximately 135 km west of Geelong.

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 western boundary of Hamilton Highway, north of Connewarren Lane.

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

DEVELOPMENT PROPOSAL

The Project involves the erection of approximately 795,333 individual solar panels across the amalgamated proposed sites, totaling approximately 240 hectares of panel surface area. This will include in the installation of inverters, transformers and the construction of a substation and battery energy storate 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: SE from Hardys Lane



View 2: W from Hamilton Highway



View 3: NW from Boonerah Estate Road



View 4: SSW from Residence



View 5: SW from Residence



View 6: NE from Residence



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 northern block of the Project bounding Hamilton Highway should be planted with dense tree and shrub screening species to ameliorate views from VP5. The southern block of the project adjoining Thulborns Lane should similarly be planted with dense tree and shrub screening species to ameliorate views from VP6.

Lower density tall shrub planting should be located around all perimeters adjoining Hamilton Highway and similarly sensitive viewpoints as outlined in the Overall Planting Strategy (pg. 8).

The low-profile form of the majority of the Project, primarily the solar array, which is approximately 2.6 m in height at full tilt, will ensure that shrub planting in all remaining vegetated buffers will be able to provide robust screening within a relatively short period of time.



Vegetation buffers as per Overall Landscape Strategy (pg. 8)

images for context only

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. All entries are to be initialled by person 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:

- 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:

- Small 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.

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 125 – Victorian Volcanic Plains – Grassy Woodlands

'Indigenous Plants & Environmental Weeds of the Moyne Shire'
Moyne Shire Council Environmental Sustainability Guide 2012






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LANDSCAPE STRATEGY

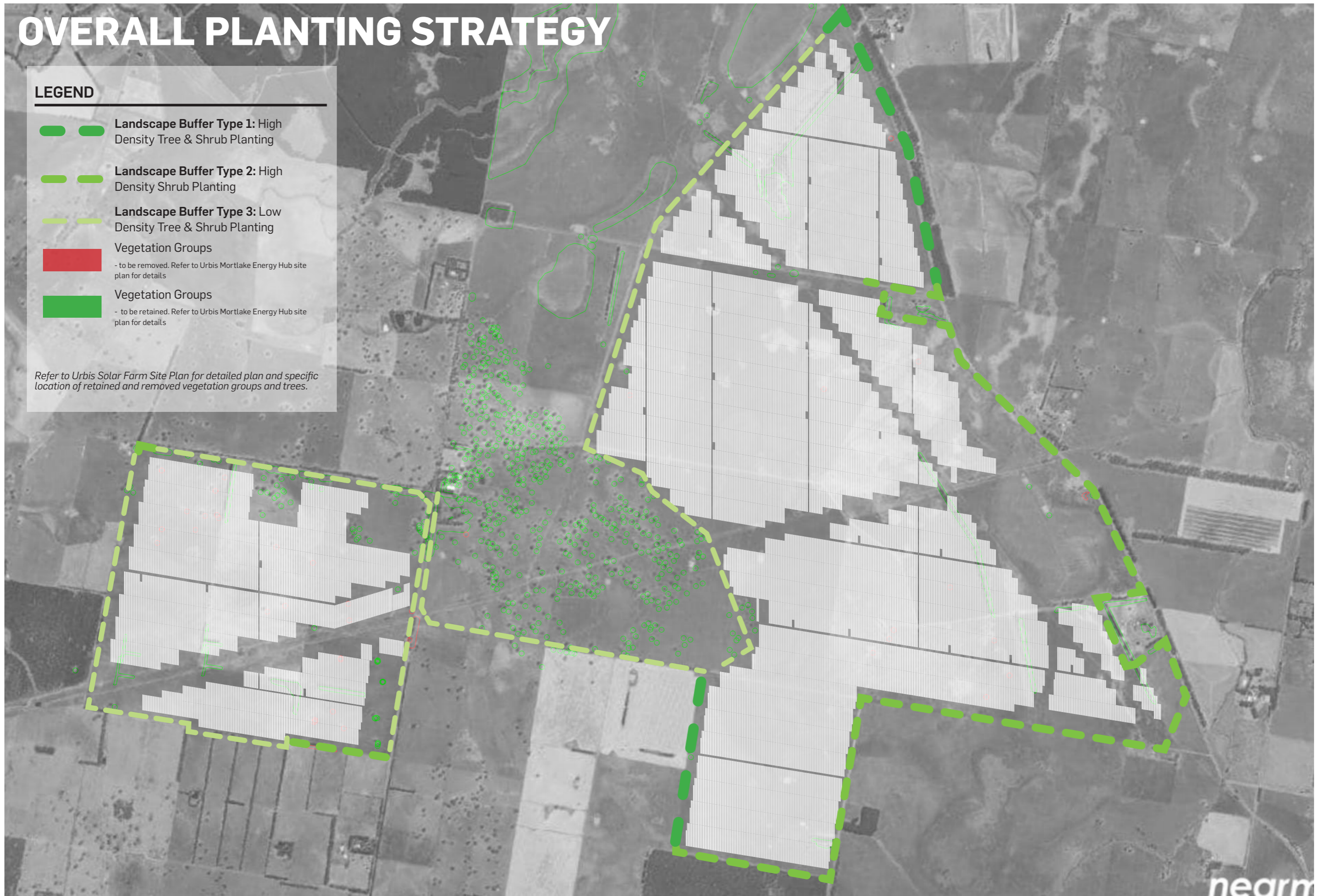
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OVERALL PLANTING STRATEGY

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
-  **Vegetation Groups**
- to be removed. Refer to Urbis Mortlake Energy Hub site plan for details
-  **Vegetation Groups**
- to be retained. Refer to Urbis Mortlake Energy Hub 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.



PLANTING TYPOLOGIES

BUFFER PLANTING TYPE 1

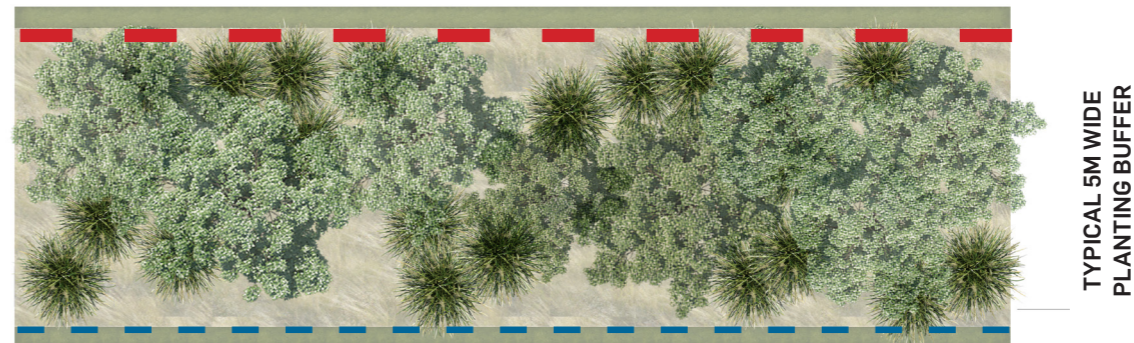
HIGH DENSITY TREE & SHRUB PLANTING



SMALL TREES			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Black Wattle	<i>Acacia mearnsii</i>	8-25m x 6-10m	Tubestock
Blackwood	<i>Acacia melanoxylon</i>	5-30m x 4-15m	Tubestock
LARGE SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Golden Wattle	<i>Acacia pycnantha</i>	3-10m 2-5m	Tubestock
Hop Wattle	<i>Acacia stricta</i>	2-5m x 2-4m	Tubestock
Prickly Tea-tree	<i>Leptospermum continentale</i>	1-4m x 1-2m	Tubestock
Woolly Tea-tree	<i>Leptospermum lanigerum</i>	2-6m x 1-3m	Tubestock
MEDIUM SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Austral Indigo	<i>Indigofera australis</i>	1-2m x 1-2m	Tubestock
Smooth Parrot-pea	<i>Dillwynia glaberrima</i>	1-2m x 1-2m	Tubestock



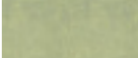


BUFFER PLANTING TYPE 2

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
MEDIUM SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Austral Indigo	<i>Indigofera australis</i>	1-2m x 1-2m	Tubestock
Smooth Parrot-pea	<i>Dillwynia glaberrima</i>	1-2m x 1-2m	Tubestock
SMALL SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Pultenaea stricta	<i>Rigid Bush-pea</i>	1m x 0.5-1m	Tubestock
Hop Goodenia	<i>Goodenia ovata</i>	1m x 1m	Tubestock

LEGEND

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

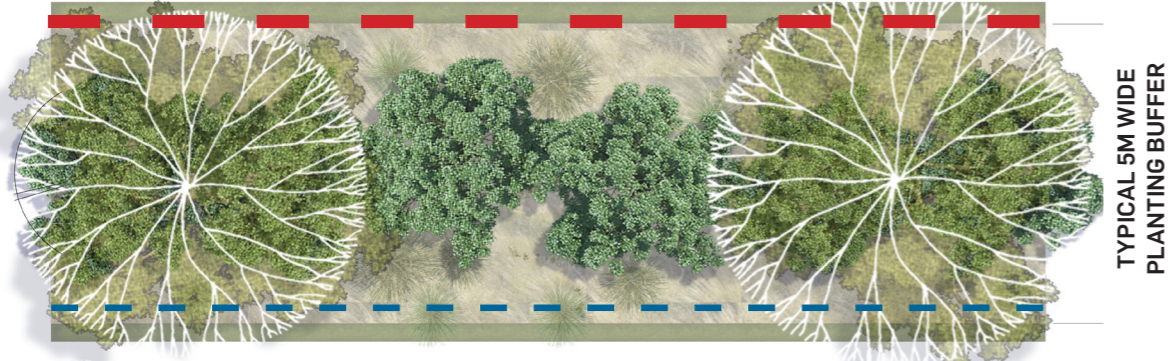
*Plants to be selected from Proposed Planting List

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PLANTING TYPOLOGIES

BUFFER PLANTING TYPE 3







LOW DENSITY TREE & SHRUB PLANTING



SMALL TREES			
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
LARGE SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Prickly Tea-tree	<i>Leptospermum continentale</i>	1-4m x 1-2m	Tubestock
Woolly Tea-tree	<i>Leptospermum lanigerum</i>	2-6m x 1-3m	Tubestock
MEDIUM SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Austral Indigo	<i>Indigofera australis</i>	1-2m x 1-2m	Tubestock
Smooth Parrot-pea	<i>Dillwynia glaberrima</i>	1-2m x 1-2m	Tubestock
SMALL SHRUBS			
COMMON NAME	SCIENTIFIC NAME	MATURE SIZE (H X W)	POT SIZE
Pultenaea stricta	<i>Rigid Bush-pea</i>	1m x 0.5-1m	Tubestock
Hop Goodenia	<i>Goodenia ovata</i>	1m x 1m	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

SMALL TREES & LARGE SHRUBS



Acacia mearnsii



Acacia melanoxylon



Acacia pycnantha



Acacia stricta



Leptospermum continentale



Leptospermum lanigerum

MEDIUM & SMALL SHRUBS



Indigofera australis



Dillwynia glaberrima



Pultenaea stricta



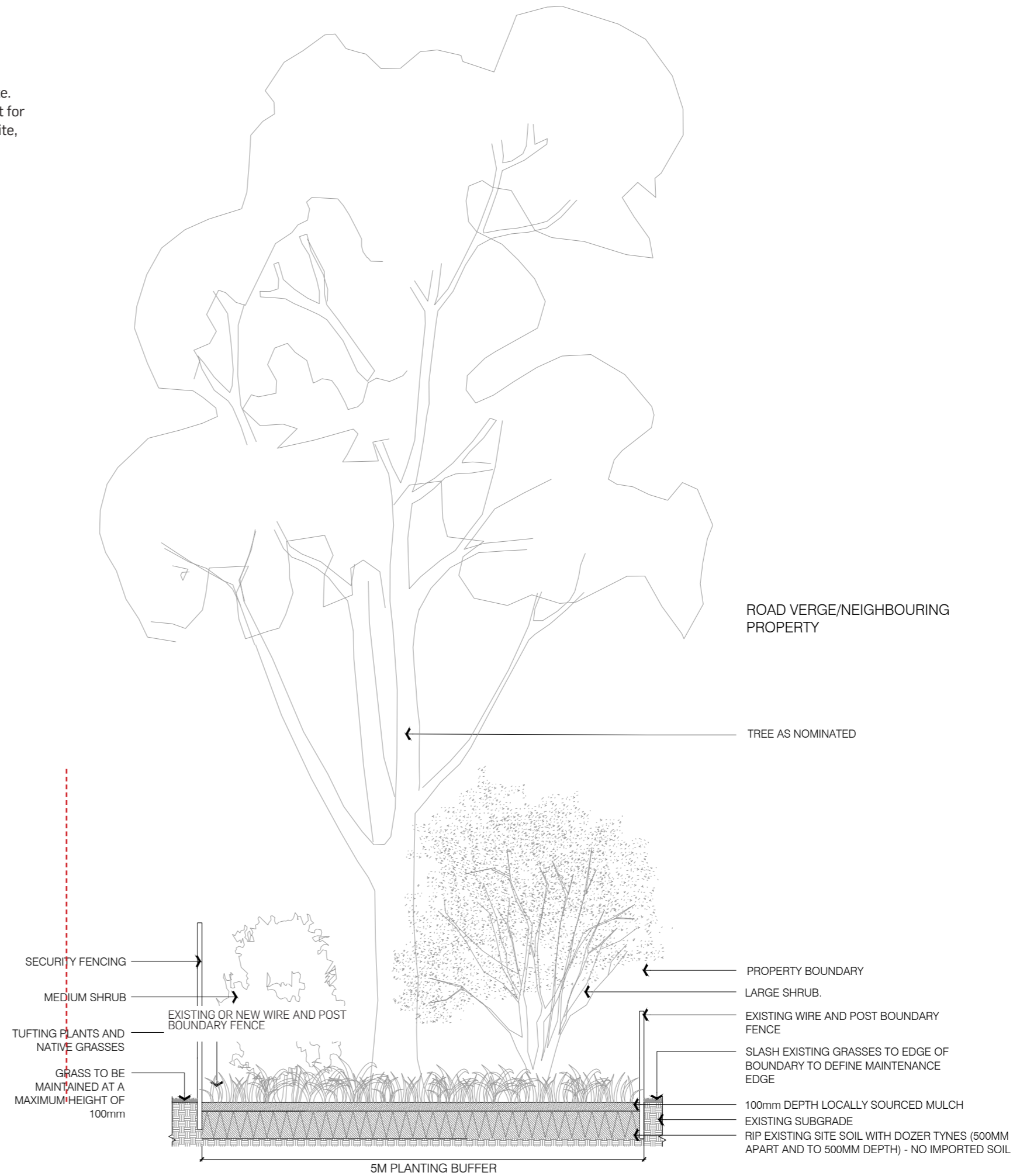
Goodenia ovata

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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.

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**TYPICAL PLANTING SECTION
1:50@A3**

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