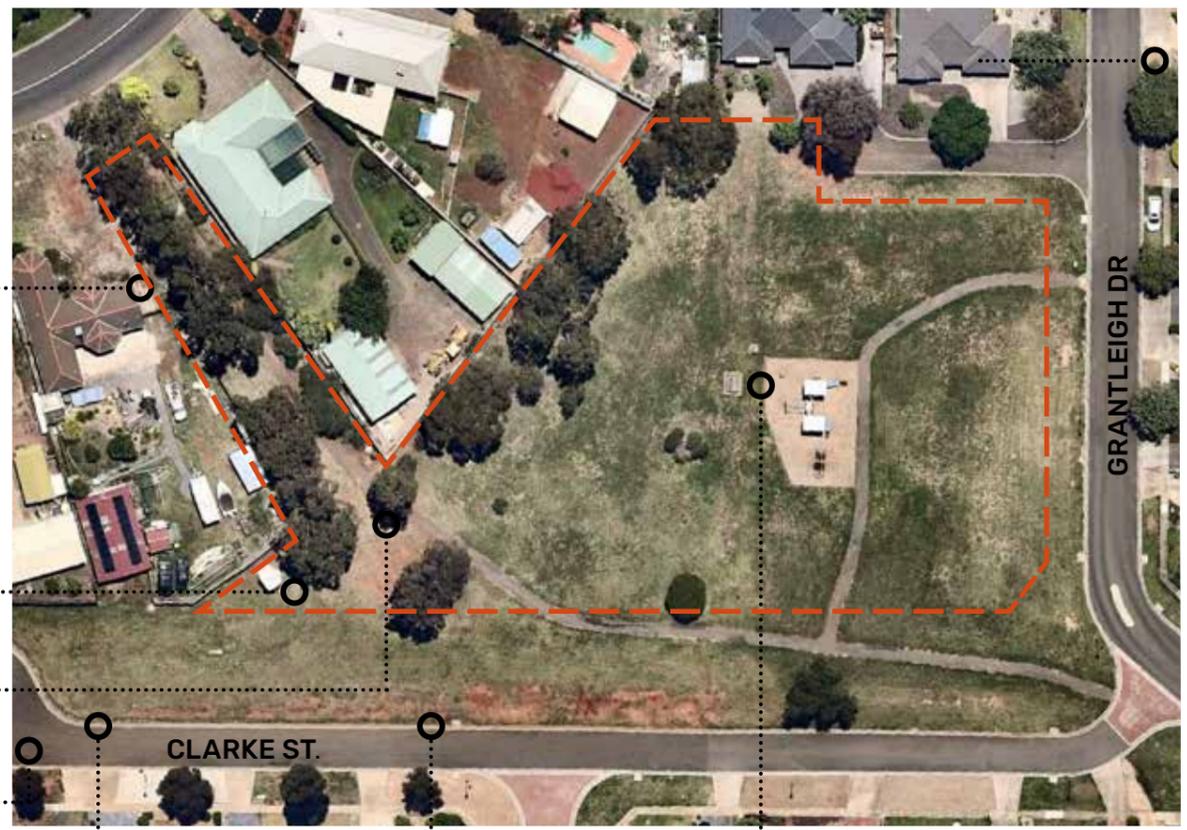


PROJECT BACKGROUND

In recent decades Darley has become a major suburban area of Bacchus Marsh, requiring ongoing development of open space assets to provide enhanced recreational opportunities.

Moorabool Shire has identified this reserve as a target for investment in upgraded public amenity. It is planned that landscaping works will be undertaken over a number of years, subject to funding.



Walkway
Narrow walkways such as this are a feature of the urban design of this neighborhood.

Often bare and neglected, this one has been extensively planted and maintained by civic-minded neighbors. Requires some management to ensure vegetation does not reduce public safety (hiding places).

Asphalt path is broken and unsafe due to damage by tree roots

Tree planting
Eucalypts along the western boundary. Generally in fair condition and with useful life expectancy.

Paths
Existing path layout and number and location of street crossing points requires further consideration

History
Clarke St comprising the south boundary of the site presumably acknowledges Kenneth Clarke, a significant character in the settlement of the district, and the naming of Bacchus Marsh.

Erosion
Low embankment requires regrassing and exclusion of vehicles.

Passive surveillance
Three boundaries are open, allowing good views into the reserve.

Play Area
A basic 'off the shelf' playground with picnic table and rubbish bin.

OPEN SPACE LINKAGES

Potential future biolink/path linkage
Open space linkages exist along Hallets-Clarke-Douglas-Conn-Riverbend streets potentially linking the Lerderderg Track and uplands to the west with the Lerderderg River.

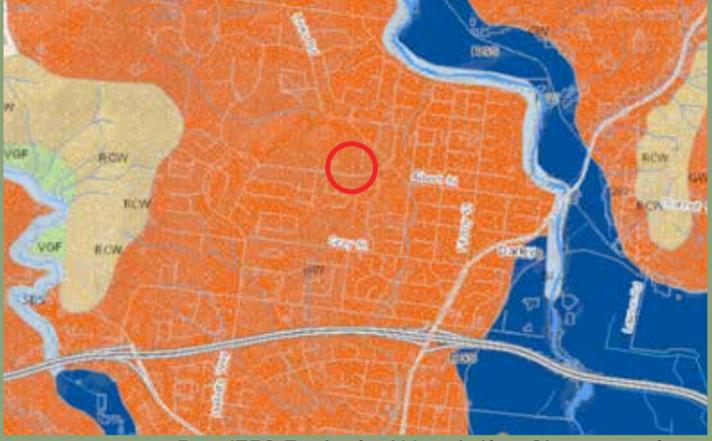
This link including Clarke/Grantleigh Reserve could become a biolink and off-road pedestrian/cycle link in the future, providing ecological and social benefits.



ECOLOGICAL CONTEXT

Pre-1750 Vegetation
The original vegetation on the site prior to colonisation was Grassy Woodland (EVC 175), a widespread vegetation type across the western plains of Victoria, of which very little is left due to the impact of agriculture and urbanisation

It is characterised by widely-spaced large trees, a sparse shrub layer and a rich understory of grasses and herbs.



Pre-1750 Ecological Vegetation Class mapping

Existing Remnant Vegetation
The area has been cleared for many years for agriculture, and there is very little remnant vegetation in the area.



Current remnant vegetation mapping

SITE IMAGES



SITE ANALYSIS

CLARKE/GRANTLEIGH ST RESERVE
Darley



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REV A
DATE: Dec 2020
SCALE 1:1000 @ A3





Drainage Swale
Swale allows harvested stormwater to soak into the soil to sustain vegetation and recharge groundwater. Grassed swale with 1 in 5 banks (mowable). Terminates at new grated pit below deciduous tree grove.

Removable bollards or gate for maintenance access.

Open Grassy Woodland
Indigenous canopy trees (eg River Red Gum) planted at approx 10m spacing to provide improved wildlife habitat and park amenity.

Maple Grove
Mass-plant small-medium deciduous trees to create a dense, cool and shaded landscape experience. Trees potentially benefit from passive irrigation.

Picnic Facilities
Construct picnic shelter (6x4m), seating, picnic tables, BBQ and drinking fountain with gravel surfacing.

Playground
Replace timber edging with rubber berm, and upgrade/replace play equipment subject to safety audit.

Grassed Play Area
Irrigated warm-season turf grass species promoting lush, quality lawns for play and picnic activities.

Concrete Paths
Replace existing cracked asphalt paths with concrete paths 1.5m wide.

Vehicle Barriers
Install barrier elements - recycled plastic bollards, boulders and trees - around park perimeter, within a band of gravel to reduce maintenance.

Raised pathway
Fibreglass-reinforced plastic grating (or similar root-sensitive treatment) over path sections damaged by tree roots.

Neighborhood Planting
Facilitate ongoing contribution to park maintenance by nominated residents (eg provide mulch, plants etc)

Existing Trees
To remain.

Linking Pathway
Link reserve to existing linear park pathway network.

Street Trees
Plant street trees to match existing trees along Clarke St and Grantleigh Dr.

Stormwater Reuse
Existing side entry pit adapted to pipe stormwater into the swale during small-medium rain events. Flow volume limited by pipe dimension (ie trickle-pipe arrangement).

Revegetation
Upper end of swale vegetated with indigenous tubestock (300m²) to provide habitat and increase biological diversity.

Peppercorn Tree
Central pathway and lawn laid out in line with existing tree.

Ironbark Grove
Entry marked by large boulders and close-planted grove of Red Ironbarks (*Eucalyptus tricarpa*).

Design Principles

- Identify opportunities for ongoing development of the public open space resource, over time as funds become available;
- Preserve and improve local ecological diversity by investigating opportunities for habitat restoration and re-connection;
- Maintain and re-establish natural processes such as rainfall infiltration;
- Plant more shade trees to mitigate climate change and the urban heat-island effect;
- Manage peoples access to and within the park;
- Maximise opportunities for social connection, passive recreation and play;
- Implement Crime Prevention Through Environmental Design (CPTED) techniques to maintain personal safety;
- Use ecological design to reduce maintenance costs, while recognising public preference for coherence and order in park landscapes.

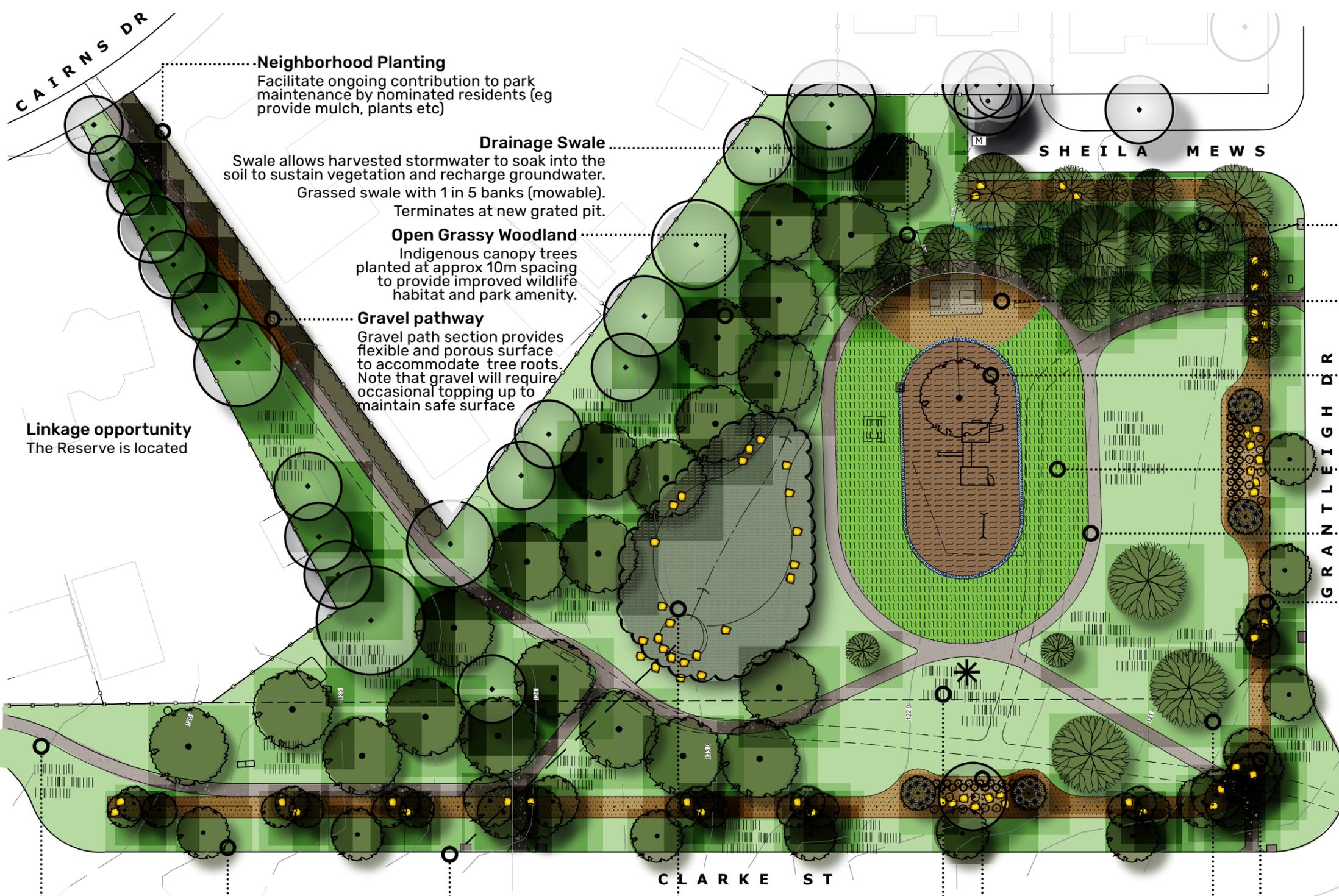
SKETCH DESIGN

CLARKE/GRANTLEIGH ST RESERVE
Darley



DRAWING #: 2034 LMP02
REV A
DATE: Dec 2020
SCALE 1:500 @ A3





Neighborhood Planting

Facilitate ongoing contribution to park maintenance by nominated residents (eg provide mulch, plants etc)

Drainage Swale

Swale allows harvested stormwater to soak into the soil to sustain vegetation and recharge groundwater. Grassed swale with 1 in 5 banks (mowable). Terminates at new grated pit.

Open Grassy Woodland

Indigenous canopy trees planted at approx 10m spacing to provide improved wildlife habitat and park amenity.

Gravel pathway

Gravel path section provides flexible and porous surface to accommodate tree roots. Note that gravel will require occasional topping up to maintain safe surface

Linkage opportunity
The Reserve is located

Placemaking opportunity
Consider clarifying the name of the reserve to reflect the connection with Kenneth Scobie Clarke (c. 1806-79) credited as one of the first white men in the district, who had a cottage nearby, eg Kenneth Clarke Park. Clarke's significance in the early history of the district could be indicated through interpretive artwork and theming of the playground or shelter.
Potentially funding could be sought as part of the Sequicentennial of the Moorabool Shire.

Maple Grove

Mass-plant small-medium Maple trees to create a dense, cool and shaded landscape experience, benefiting from passive irrigation.

Picnic Facilities

Construct picnic shelter (6x4m), seating, picnic tables, BBQ and drinking fountain with gravel surfacing.

Playground

Replace timber edging with concrete or bluestone blockwork, and upgrade/replace play equipment subject to safety audit. Playground shaded by large evergreen tree, eg Moretpon Bay Fig

Grassed Play Area

Irrigated warm-season turf grass species promoting lush, quality lawns for play and picnic activities.

Concrete Paths

Replace existing cracked asphalt paths with concrete paths 1.5m wide.

Vehicle Barriers

Install barrier elements - recycled plastic bollards, boulders and trees - around park perimeter, within a band of gravel to reduce maintenance.

LEGEND

- Existing tree: To be retained and protected during construction.
- Existing tree: To be removed prior to construction.
- Existing Vegetation: Retain
- Proposed trees (Evergreen, deciduous): Refer Plant Palette
- Proposed Tufting Plants: Refer Details &/or Specifications
- Revegetation area: Wood-mulched and planted with indigenous tubestock
- Concrete path: 75mm pedestrian path, finish to client selection.
- Soft Fall: Impact absorbant play surfacing to Australian Standards
- Existing or Proposed Grass Lawn: Turfed or seeded to client selection, refer notes. Reinstate existing grass naturestrip to existing condition.
- Grass lawn (turf)
- Gravel surface: Crushed rock, eg granite, basalt, limestone or recycled crushed concrete, compacted to 75mm depth.
- Concrete kerb: playground edging 500W 200H
- Bollards: Recycled plastic bollards, at 1600cts to exclude vehicles
- Existing fence: To be retained
- Proposed grassed swale. 4.0m wide table drain provides passive irrigation from adjacent road surfaces.
- Maintenance access: Lockable gate or removable bollards to MSC standards.
- Sculpture: Future potential sculpture or artwork location, subject to funding.

Linking Pathway

Link reserve to existing linear park pathway network.

Street Trees

Plant street trees to match existing trees along Clarke St and Grantleigh Dr.

Stormwater Reuse

New side entry pit to pipe stormwater into the swale during small -medium rain events.
Flow volume limited by pipe dimension (ie trickle-pipe arrangement), with existing pit accommodating overflow in peak rainfall events

Revegetation

Upper end of swale vegetated with indigenous tubestock (300m²) to provide habitat and increase biological diversity.

Potential Artwork Location

Interpretive element recognising the historical connections of the naming of the park, or ecological significance of the indigenous vegetation.

Peppercorn Tree

Central pathway and lawn laid out in line with existing tree.

Feature Trees

Large deciduous trees, eg Pin Oak, Scarlet Oak and Claret Ash.

Ironbark Grove

Entry marked by large boulders and close-planted grove of Red-flowering Ironbarks.

CONCEPT LANDSCAPE PLAN

CLARKE/GRANTLEIGH ST RESERVE
Darley



DRAWING #: 2034 LMP03
REV A
DATE: Dec 2020
SCALE 1:500 @ A3



PLANTING PALETTE - ORNAMENTAL

CODE	BOTANICAL NAME	COMMON NAME	H X W (m)	INSTALLATION SIZE
EVERGREEN TREES				
	<i>Acacia dealbata</i>	Silver Wattle	6-30 x 5-10	200mm pot
	<i>Acacia meamsii</i>	Black Wattle	8-25 x 6-10	200mm pot
	<i>Acacia melanoxylon</i>	Blackwood	8-20 x 4-10	200mm pot
	<i>Acacia pendula</i>	Silver Myall	6-8 x 4-6	300mm pot, 1.5m high
	<i>Acacia pycnantha</i>	Golden Wattle	3-8 x 2-5	200mm pot
	<i>Allocasuarina littoralis</i>	Black Sheoke	4-8 x 2-5	300mm pot, 1.5m high
	<i>Brachychiton populneus</i> 'Jerilderie Red'	Black Kurrajong	8 x 7	300mm pot, 1.5m high
	<i>Eucalyptus leucoxylon</i> ssp <i>connata</i>	Melbourne Yellow Gum	10-20 x 6-20	300mm pot, 1.2m high
	<i>Eucalyptus melliodora</i>	Yellow Box	10-15 x 8-10	300mm pot, 1.2m high
	<i>Eucalyptus sideroxylon</i> 'Rosea'	Red-flowering Ironbark	15 x 6-10	300mm pot, 1.5m high
	<i>Eucalyptus viminalis</i> ssp. <i>cygnetensis</i>	Rough-barked Manna Gum	10-18 x 5-10	200mm pot
	<i>Eucalyptus ovata</i> var <i>ovata</i>	Swamp Gum	15-25 x 10-18	200mm pot
DECIDUOUS TREES				
	<i>Acer buergerianum</i>	Trident Maple	6 x 6	45ltr, 1.5m high min
	<i>Acer freemannii</i> 'Jeffersred/Autumn Blaze'	Autumn Blaze Maple	13 x 10	45ltr, 2.0m high min
	<i>Acer negundo</i> 'Sensation'	Sensation Box Elder Maple	9 x 6	45ltr, 1.5m high min
	<i>Acer platanoides</i> 'Columnare'	Norway Maple	10 x 4	1.5m high
	<i>Acer rubrum</i> 'Autumn Red'	Autumn Red Maple	13 x 9	45ltr, 1.5m high min
	<i>Acer rubrum</i> 'Bowhall'	Bowhall Red Maple	10 x 5	45ltr, 1.5m high min
	<i>Acer rubrum</i> 'October Glory'	October Glory Maple	12 x 9	45ltr, 1.5m high min
	<i>Fraxinus oxycarpa</i> 'Raywood'	Claret Ash	12 x 7	45ltr, 1.5m high min
	<i>Quercus coccinea</i>	Scarlet Oak	12-20 x 8-15	45ltr, 1.5m high min
	<i>Quercus palustris</i>	Pin Oak	15-18 x 8-10	45ltr / 2.5m high
	<i>Quercus robur</i> f. <i>fastigiata</i>	Fastigiate Oak	13 x 4	100 litre, 2.5m
SHRUBS & TUFTING PLANTS				
	<i>Banksia blechnifolia</i>	Femleaf Banksia	0.4 x 1.0	140mm pot
	<i>Dianella caerulea</i> 'Breeze'	Blue Flax Lily	0.6-0.7x0.6-0.7	140mm pot
	<i>Limonium perezii</i>	Perennial Statice	0.4 x 0.3	140mm pot
	<i>Lomandra longifolia</i> 'Tanika'	Tanika	0.5-0.6 x 0.65	140mm pot
	<i>Westringia fruticosa</i> 'Mund'	Prostrate Native Rosemary	0.4 x 1.5	140mm pot

Deciduous trees



SensationBox Elder Maple - *Acer negundo* 'Sensation'



Bowhall Red Maple - *Acer rubrum* 'Bowhall'



Norway Maple - *Acer platanoides* 'Columnare'

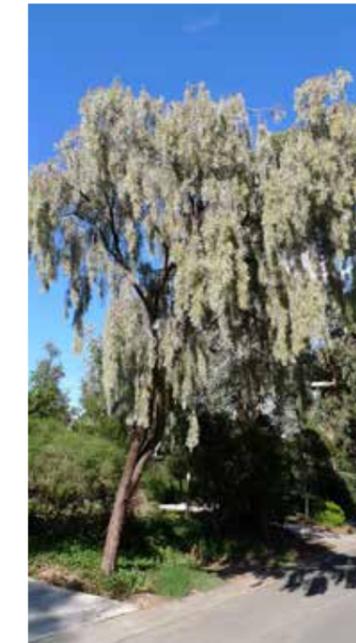
Native Trees



Black Sheoke - *Allocasuarina littoralis*



Black Kurrajong - *Brachychiton populneus* 'Jerilderie Red'



Silver Myall - *Acacia pendula*



Red-flowering Ironbark - *Eucalyptus sideroxylon* 'Rosea'

PLANTING PALETTE - REVEGETATION

Based on Bacchus Marsh Native Plant List

BOTANICAL NAME	COMMON NAME	H (m)	W (m)
EVERGREEN TREES			
<i>Acacia implexa</i>	Lightwood	8-15m	4-6m
<i>Acacia pycnantha</i>	Golden Wattle	3-6m	2-4m
<i>Bursaria spinosa</i> subsp. <i>spinosa</i>	Sweet Bursaria	3-6m	2-4m
<i>Eucalyptus camaldulensis</i>	River red gum	>15m	>6m
SHRUBS			
<i>Acacia paradoxa</i>	Hedge Wattle	3-6m	1-2m
<i>Acacia verniciflua</i> (Bacchus Marsh Variant)	Varnish Wattle	1-3m	1-2m
<i>Cassinia arcuata</i>	Drooping Cassinia	1-3m	1-2m
<i>Leptospermum continentale</i>	Prickly Tea- Tree	3-6m	1-2m
<i>Ozothamnus ferrugineus</i>	Tree Everlasting	3-6m	2-4m
<i>Pultenaea pedunculata</i>	Matted Bush-Pea	<1m	2-4m
<i>Sclerolaena muricata</i> var.	Black Roly Poly	<1m	<1m
GROUNDCOVERS			
<i>Calocephalus citreus</i>	Lemon Beauty- heads	<1m	<1m
<i>Calocephalus lacteus</i>	Milky Beauty- Heads	<1m	<1m
<i>Chrysocephalum apiculatum</i> s.l.	Common Everlasting	<1m	1-2m
TUFTING PLANTS			
<i>Austrostipa semibarbata</i>	Fibrous Spear-grass	<1m	<1m
<i>Carex appressa</i>	Tall Sedge	<1m	<1m
<i>Ficinia nodosa</i>	Knobby Club-Sedge	1-3m	1-2m
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	<1m	1-2m
<i>Microlaena stipoides</i> var.	Weeping Grass	<1m	<1m
<i>Phragmites australis</i>	Common Reed	1-3m	<1m
<i>Poa labillardierei</i>	Common Tussock- grass	<1m	<1m
<i>Themeda triandra</i>	Kangaroo Grass	<1m	<1m

Indigenous Trees



Blackwood - *Acacia melanoxylon*



Melbourne Gum - *Eucalyptus leucoxylon* ssp *connata*



Black Wattle - *Acacia meamsii*



Golden Wattle - *Acacia pycnantha*

Shrubs and Tufting Plants



PLANT MATERIALS

CLARKE/GRANTLEIGH ST RESERVE
Darley



DRAWING #: 2034 LMP04
REV A
DATE: Apr 2021
SCALE NTS



Paving



Perimeter landscape bed - Bollards within planted garden bed.



Grassed swale - directs stormwater from street to water trees



Central grass play area - Village Green kikuyu

Furniture



Picnic setting - Furphy Metro style



Bench seat with arms - Furphy Metro style



Playground - Existing



Perimeter bollards - Recycled plastic, black, eg Brolga by Replas



Litter receptacle - Furphy Avenue style



Trowel-finish concrete - General paths



Locally sourced gravel (eg Sago Hill) - Garden beds & paths



Locally sourced landscape rock - Garden beds

Shelter



Picnic shelter - eg Landmark 6x4m K653 Cantilever Shelter



Timber cladding to steel columns

MATERIALS

**CLARKE/GRANTLEIGH ST RESERVE
Darley**



DRAWING #: 2034 LMP05
REV A
DATE: APRIL 2021
SCALE nts



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