



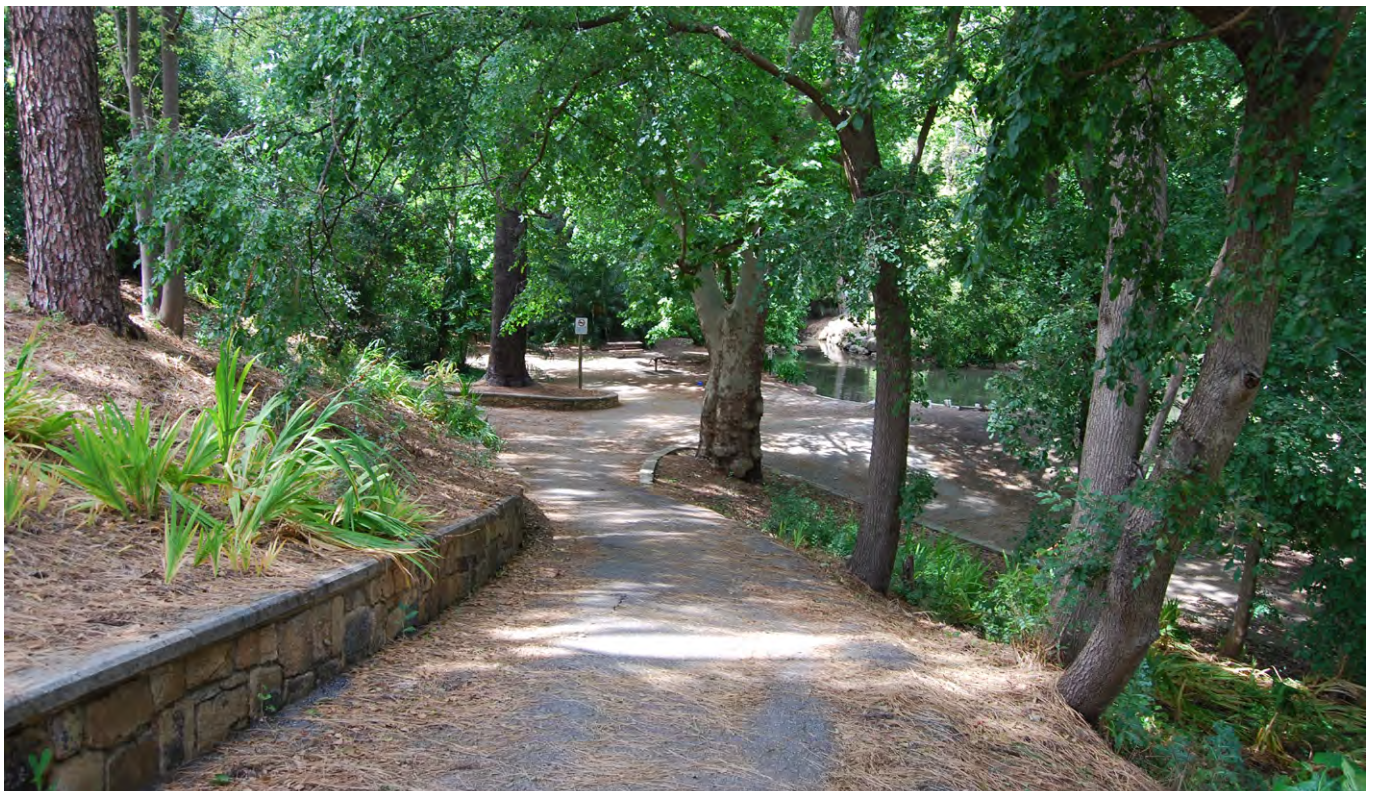
MICHAEL PERRY RESERVE HISTORIC GARDEN ADAPTATION PLAN

January 2019

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Prepared by Birdseye Studios and Mulloway



INTRODUCTION & BACKGROUND

BACKGROUND

Michael Perry Reserve is a 3.2 hectare reserve located on Kurrajong Avenue in Stonyfell, within the City of Burnside. In 2012 a Vegetation Management Plan was developed by City of Burnside for the whole reserve. This plan identified the historic garden area (Zone 7) and recommended that a more detailed garden heritage plan be developed to guide revitalisation and future management of this area. The following report outlines a comprehensive plan for the future management and adaptation of the historic garden section (Zone 7) of Michael Perry Reserve within the City of Burnside.

Michael Perry Reserve was created in the 1970's, named after a Burnside City Councillor, Alderman and Mayor from 1958 to 1983.

The reserve was established from the subdivision of the former Clifton Estate which dates back to the 1850s and supports a number of historic plant specimens from the original garden in specific portions of the reserve. The reserve is currently listed as a Local Heritage Place which recognises the extent of the reserve and notable mature planting and rare species of palms and pines

The reserve is also bisected by a section of Second Creek, defined by a series of u-shaped stone weirs along the creek bed. The remnant historic plant specimens which remain in the reserve vary in condition, with some in decline due to age and are in need of a long term replacement strategy.

PRINCIPLES OF HISTORIC GARDEN MANAGEMENT

'Gardens are dynamic growing entities. Accordingly we must accept that growth, deterioration, death and re-planting will occur in the design and plantings; they cannot be frozen in time as in a museum' (Jones 1998).

Garden conservation implies the authentic conservation of a garden as far as available evidence suggests. Garden conservation depends upon varying considerations. These include the degree of intactness of the garden, evidence of the original garden form and composition, and judgement to undertake maintenance, adaptation, preservation, reconstruction or restoration actions.

- **Maintenance** - means the continuous protective care of a garden and its setting.
- **Preservation** – means retaining the components of the garden in their existing state and preventing further deterioration. It recognises that all places and their elements change over time at varying rates. Preservation is extremely difficult as plants grow and die and a garden will continue to evolve. In contrast, it may be possible to preserve physical garden components, together with the general design qualities of the garden in terms of the scale of spaces in the garden and period of plants.
- **Restoration** – means returning the garden to an earlier form by the removal of new additions without the introduction of new elements. Again, this is extremely difficult as plants will grow and die resulting in the need for new plants.
- **Reconstruction** – means returning the garden to an earlier known form and style, and is distinguished from restoration by the introduction of new components. Reconstruction recognises the dynamic nature of plants but the static integrity of the design and physical elements of the garden.
- **Adaptation** – means modifying the garden to accommodate new uses or management requirements.

Conservation approaches were originally devised for buildings which are static objects. Their application to gardens and landscapes, which are dynamic places, is therefore extremely difficult.

Gardens require maintenance more frequently than buildings. They differ also in that they contain elements which change with the seasons, grow and die. Many historic gardens feature mature trees planted as avenues, border plantings or specimens. These trees may define the original design and character of the garden, and correct management is essential to maintain the significance of the garden.

As opposed to restoring or reconstructing the original garden, for which detailed plans are not available, an adaptation plan has been chosen for the reserve to create a landscape which captures historical aspects, preserves remaining heritage items of significance and acknowledges environmental requirements, management requirements and the needs of the community.

REPORT CONTENTS

The report provides the following information:

- Detailed historical Overview
- Extant Fabric & Use
- Conceptual layout for a revitalised garden with typical sections and policies for future adaptation, development and maintenance
- Recommended planting lists
- Potential for volunteer programs

PROJECT PURPOSE

The purpose of this plan is to provide guidance on the future management and use of the reserve, whilst retaining and complementing the remaining heritage values within the reserve from the historic Clifton Estate from which the reserve was created. Since the creation of the reserve many specimens from the former garden have declined or disappeared due to age. Notwithstanding this, there are still a number of specimens in good health. Given the disparate nature of the remaining specimens the fabric of the garden is in need of revitalisation.

The aim of this report is to :

- Provide a concise and comprehensive historical overview of the reserve and aspects of the Clifton Estate which are of relevance
- Provide a comprehensive survey and review of the extant fabric, detailing condition and historical value in the area identified as the historic garden (Zone 7) in accordance with the Michael Perry Management Plan.
- Provide details of feedback on management of the reserve from key stakeholders
- Propose policies for the ongoing management and use of the reserve
- Propose a new adapted layout retaining historical values which identifies proposed uses, and new plantings which complement heritage values which meets Council and community expectations
- Propose comprehensive planting lists which are unique and capitalise on the garden's historical significance

The aim of the project is not to restore or reconstruct the original layout and plantings, but to adapt and design a landscape that captures aspects of its history and purpose of the original garden whilst meeting Council and community expectations for use and management.



HISTORICAL CONTEXT

The following timeline provides an overview of the ownership history of the site:

Timeline

- 1841 80 Acres purchased by Mr. Harry Osbourne
 - 1850 Sold to Mr. C.D. Sismey
 - 1852 House known as 'Clifton' built by Mr. Sismey
 - 1872 Mr. Sismey returned to England
 - 1872 Property purchased by Mr. Nathaniel Alexander Cox
 - 1908 Death of Mr. Cox with estate passing to wife then nephew
 - 1934 Estate purchased by Dr. Michael Schneider
 - 1976 Estate purchased by T. & G. Mutual Life Soc. Ltd.
 - 1977 Acquired by Council for reserve and recreation purposes
 - 1979 (June) First stage of development as Botanic reserve commenced
 - 1980 8th March - declaration and opening as The Michael Perry Botanic Reserve by Mayor of Burnside, Mrs' Coralie J. Soward
- Refer to Appendix A for historic images of the reserve.

Heritage Significance

The heritage value of the site was documented in a heritage survey prepared by the State Heritage Branch in 1987, which describes the heritage significance of the site:

This portion of land, 3.15 hectares in area, slopes down towards Second Creek and is thickly forested with a range of native and exotic trees and shrubs including many rare specimens of palms and pines. It is a remnant of the once famous garden of "Clifton" (16 Waratah Way) which was planted by its second owner, Nathaniel Knox, a lawyer, Theosophist and keen gardener. The Knoxes held the property from 1872 to 1926, during which time both the house and the garden estate were transformed.

*In 1980 the Burnside Council acquired the land and dedicated it as a public reserve, later planting a sensory garden there and developing it as a botanic park. It is named after a well known Councillor.
The reserve is a beautiful and significant remnant of one of the earliest estates in the area and has much heritage value.*

Botanical History

Newspapers of the last century have praised the beauty of the gardens of Clifton Estate noting the hundred year old native and exotic flora. The two key contributors to the garden were owners' Nathaniel Alexander Knox (resident 1872-1908) and Dr Michael Schneider (resident 1934-1976), who are both described as keen botanists. Sources suggest that Knox planted most of the exotic species.

Zone 7 is where the historic garden was located, so it is reasonable to argue that the plants discussed by media and naturalist groups were in this area.

The following is a list of sources that discuss the flora of Clifton Estate.:

GRS/10581/00001/4/RWS00497 – Underground water prospects for Dr M Schneider at Burnside. Dated 28/5/1943.

- “Two boreholes have been selected. Site A is a short distance downstream from the track leading down to the flat, and is opposite or adjacent to a small waterlily pond...Site B is about the same distance upstream from the track and is adjacent to a large Bunya tree.”

News, 'Old World Garden', 3 April 1939, p. 8.

- “...and afternoon tea was served under huge willow trees near the creek.”

News, 'People and their plans', 26 September 1940, p. 9.

- “Apart from the charm of wooded slopes and shady, winding paths, there is a rippling stream lined with arum lilies.”

The Advertiser, 'Among the people', 25 September 1939, p. 17.

- "Walking down to a gully we crowded on to a small bridge across the stream to look at the papyrus of ancient Egypt."
- "We walked along a narrow path, and above us the light filtered through the soft green Aralia leaves..."
- "And what handsome trees are there- Cedar of Lebanon, pencil cypress. Bunya Bunya pines, the cones of which weigh 12 ½ lb, camphor laurel, deodar."
- "We paused at a grass tree, estimated by the rings on it to be 500 years old. It revels in the botanical name of Xanthorrhoea."

Historical aerial photographs on the following pages reveal the previous arrangements of the land in 1949, 1959 and 1968 to provide an historical impression of the site.

Historical Sources

Newspaper articles

- News, 'Old World Garden', 3 April 1939, p. 8.
- News, 'People and their plans', 26 September 1940, p. 9.
- The Advertiser, 'Among the people', 25 September 1939, p. 17.

Books

- Elizabeth Warburton, *The paddocks beneath: a history of Burnside from the beginning*, Corporation of the City of Burnside, 1981.

State Records South Australia

- GRS/8702/00009/24/73/00056 – Proposed subdivision of section 904. Report of geological investigations
- GRS/10581/00001/4/RWS00497 – Underground water prospects for Dr M Schneider at Burnside.

City of Burnside Library

- Stonyfell agriculture
- Aerial photographs of South Australian suburbs
- Stonyfell environment
- Stonyfell history



Structure? Hut / shed
 Driveway/clearing?
 Circular structure (well?)
 Andrews Walk
 Lawn / clearing / court?
 Small structure
 Lawn / clearing
 Clifton Manor Estate
 Small structure
 Imported planting
 Adjoining shed to house?
 House and sheds?
 Current day extent of Michael Perry Reserve (from Google)

Gatekeeper's lodge
 structure?
 formal planting
 dirt road/path
 formal planting
 Subdivisions
 Water tank/reservoir
 dirt road

PRELIMINARY

Drawing No. **SK 04**
 Date Issued
 March 2018

Project No. **COBU02**
 Rev. •

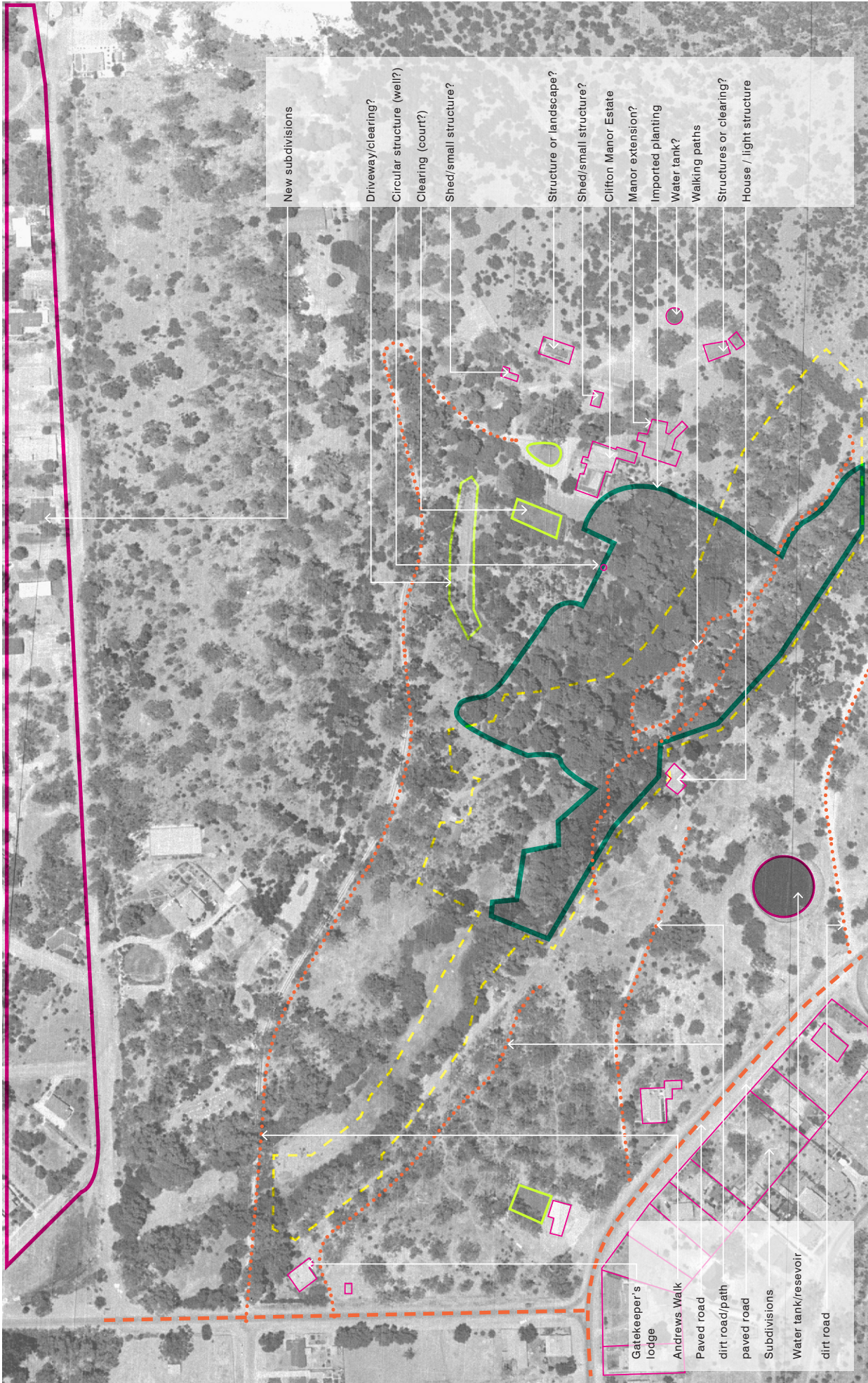
Project **Michael Perry Botanic Reserve**

Drawing Title
1949 - January 10th
 Time unknown

Client
 City of Burnside

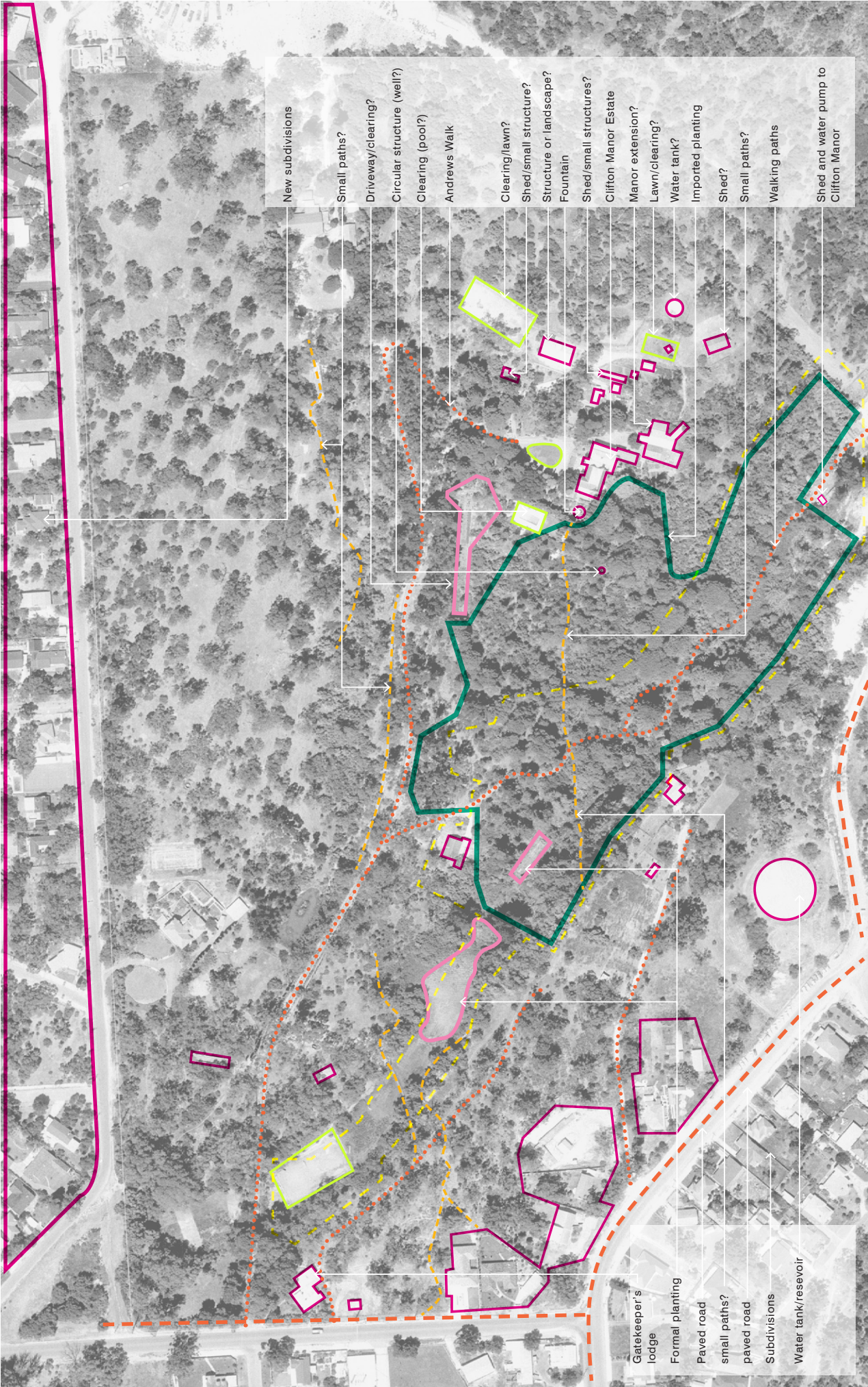
Check and verify levels and dimensions on site prior to commencing work.
 Confirm any discrepancies. Do not scale of drawing.

mu|loway
 architecture | interpretation | urban design | conservation | interior



PRELIMINARY

 architecture interpretation urban design conservation arbors	Check and verify levels and dimensions on site prior to commencing work. Confirm any discrepancies. Do not scale off drawing.	Client City of Burnside	Project Michael Perry Botanic Reserve	Drawing Title 1959 - January 3rd Time: 1205-1310	Project No. COBU02	Drawing No. SK 05	Rev. •	Date Issued March 2018
	PRELIMINARY							



PRELIMINARY

Date Issued
March, 2018

Rev. •

Drawing No.
SK 06

Project No.
COBU02

Drawing Title:
1968 - November 15th
Time: 1345-1450

Project
Michael Perry Botanic Reserve

Client
City of Burnside

Check and verify levels and dimensions on site prior to commencing work.
Confirm any discrepancies. Do not scale off drawing.

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architecture | interpretation | urban design | conservation | interiors



EXTANT FABRIC

STRUCTURE

Path Network

Throughout the garden there are three types of pathway surface which reflect the varying character of each portion of the garden (Zone 7):

- Hot mix pathways leading from Kurrajong Avenue to the north-west to an ornamental pond area, these are also used for maintenance vehicle access to the pond and amenity block.
- Gravel pathways around an irrigated turf area which provide maintenance access, and leading from the pond area to the eastern boundary of the reserve
- Informal pathways (earth) to the east in an area densely planted with a high number of remnant garden plants. Evidence of stone edging buried in some locations lining pathways

Refer to the Existing Conditions Plan for details of the layout and notable features.

REMNANT GARDEN SPECIES

Trees

In accordance with a tree survey conducted by a qualified arborist in November 2017, there was a total of 170 living trees and 5 dead trees identified within the garden area. In accordance with the Development Act 1993:

10 are identified as 'Significant';
18 are 'Regulated';
120 are unregulated; and
27 are exempt.

The survey identified a high number of the trees which are likely to be remnant specimens from the former Clifton Estate gardens. A total of 64 tree species were noted to be present in the reserve. Of these 64 species, 24 species are likely to have originated from the original plantings based on site observations and historical research.

A subsequent tree survey was conducted in March 2018 to conduct further assessment of 85 notable remnant tree specimens to provide further assessment of landscape value and precise tree locations. Of the 85 trees assessed:

- 59 are rated as having high landscape value;
- 26 are rated as having moderate landscape value; and
- 8 groups of trees are rated as having low landscape value.

Shrubs and Groundcovers

Site visits were conducted in November 2017 to document shrubs and ground covers. A total of 21 species were identified throughout the reserve. Of these species, approximately 18 are likely to have originated from the original plantings based on historical research and site observations.

A large irrigated turf area exists in the north-western corner of the reserve.

Declared Weeds

A number of weed species have been identified within the reserve. A total of 11 species are identified as 'Declared Plants' under the Natural Resources Management Act 2004 and require management intervention to control their spread. In addition, 6 species are identified as having a weedy habit which require control or removal.

Historical Items & Memorials

5 memorial plaques have been identified on site which make reference to:

- Commemoration planting by the Rotary Club in 1980
- Reserve redevelopment in 1995, joint venture between DEET East Side Skill Share and City of Burnside
- City of Burnside Coat of Arms



Informal Garden pathways, looking east



Hot mix pathways leading to pond area, looking east



Gravel pathways



Open irrigated turf area, looking south towards Second Creek



Pond area



Gravel pathway at north western corner looking west



Philadelphus sp.



Malviscus arboreus adjacent pond area



Camelia sp.



Cordyline sp. adjacent pond area



Hedera helix spreading habit



Large *Pinus pinea* adjacent southern bank of Second Creek

- Commemoration of the naming of Michael Perry Reserve
- Memorial to Shirley Robins OAM and identifies adjacent memorial Wollemi Pine planting

SECOND CREEK

Second Creek bisects the area identified as the historic garden. An ornamental pond exists within the centre of the reserve which is created by an existing stone weir. Environmental management works have been undertaken by the City of Burnside and volunteers along the banks of the creek to remove weeds and plant indigenous plants to stabilise embankments, improve water quality and improve habitat.

Initial creekline restoration and stabilisation works were co-funded by the Adelaide and Mount Lofty Ranges Natural Resources Management Board.

Along the creek, both upstream and downstream of the pond, a series of stone drop structures exist within the creek bed which were installed in the 1990s to control erosion. In 2009 and 2010 works were undertaken with support from the Adelaide Mount Lofty Ranges Natural Resource Management Board to address problematic stream morphology, erosion adjacent to existing drop structures, weed growth, sediment accumulation in the pond and existing structures requiring upgrade or repair.

STRUCTURES & FURNITURE

The following structures and furniture are found within the garden:

- Stone and mortar retaining walls
- Dry stone retaining walls
- Bench seats
- Picnic tables
- Timber sleeper steps
- Garden shed
- Concrete edging
- Treated pine log fencing
- Heritage style light posts

The photos on the following page illustrate the different structures found within the garden of the reserve and the existing conditions plan on page 15 reveals their location.



Garden shed and mortared stone retaining walls



Drop structures within creek bed



Picnic area adjacent pond



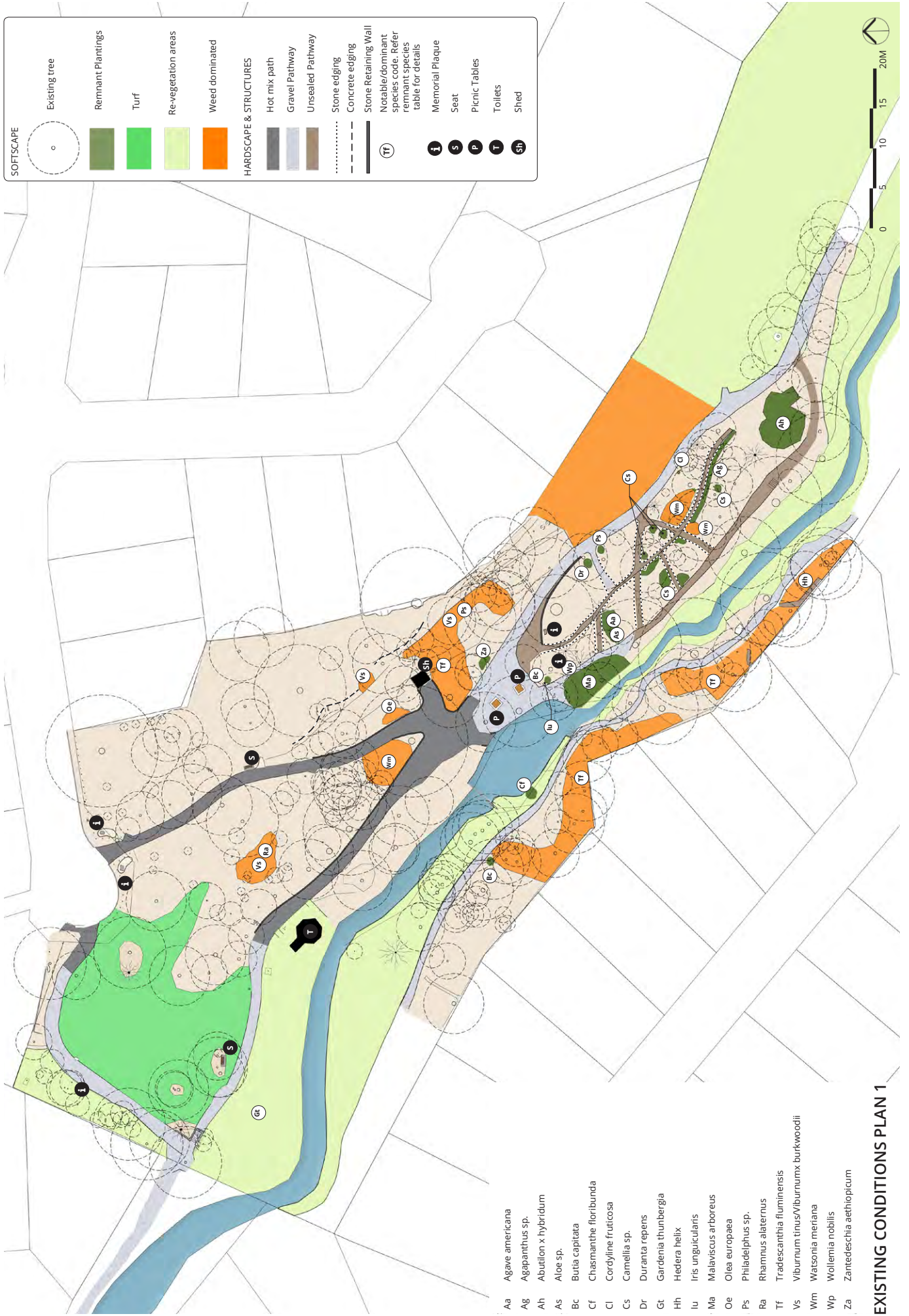
Dry stone retaining wall



Restored creekline with indigenous planting and rock amouring

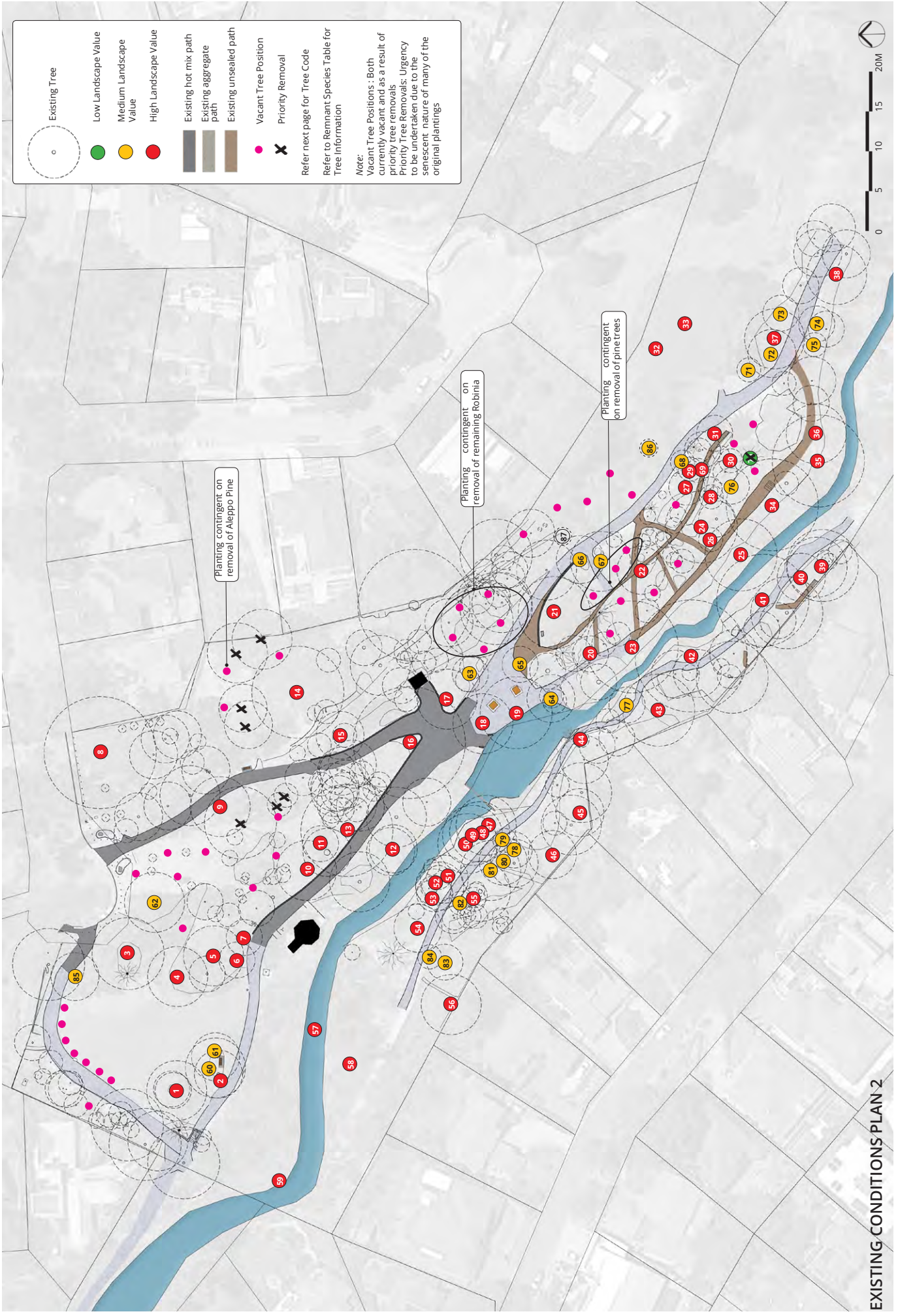


Plaque commemorating naming of Michael Perry Reserve



- Aa Agave americana
- Ag Agapanthus sp.
- Ah Abutilon x hybridum
- As Aloe sp.
- Bc Butia capitata
- Cf Chasmanthe floribunda
- Cl Cordylone fruticosa
- Cs Camellia sp.
- Dr Duranta repens
- Gt Gardenia thunbergia
- Hh Hedera helix
- Iu Iris unguicularis
- Ma Malaviscus arboreus
- Oe Olea europaea
- Ps Philadelphus sp.
- Ra Rhamnus alaternus
- Tf Tradescantia fluminensis
- Vs Viburnum tinus/Viburnumx burkwoodii
- Wm Watsonia meriana
- Wp Wollemia nobilis
- Za Zantedeschia aethiopicum

EXISTING CONDITIONS PLAN 1



Existing Tree

Low Landscape Value

Medium Landscape Value

High Landscape Value

Existing hot mix path

Existing aggregate path

Existing unsealed path

Vacant Tree Position

Priority Removal

Refer next page for Tree Code

Refer to Remnant Species Table for Tree Information

Note:

Vacant Tree Positions: Both currently vacant and as a result of priority tree removals

Priority Tree Removals: Urgency to be undertaken due to the senescent nature of many of the original plantings



TREE CODES

Refer to Remnant Species table on page 18 for tree information

Plan ID no.	Species	Common name	Plan ID no.	Species	Common name
1	<i>Eucalyptus camaldulensis</i>	River Red Gum	45	<i>Cupressus cashmeriana</i>	Kashmir Cypress
2	<i>Eucalyptus camaldulensis</i>	River Red Gum	46	<i>Cupressus macrocarpa</i>	Monterey Cypress
3	<i>Eucalyptus cladocalyx</i>	Sugar Gum	47	<i>Casuarina cunninghamiana</i>	River Sheoak
4	<i>Pinus canariensis</i>	Canary Island Pine	48	<i>Populus alba</i>	silver poplar
5	<i>Pinus canariensis</i>	Canary Island Pine	49	<i>Populus alba</i>	Silver Poplar
6	<i>Araucaria heterophylla</i>	Norfolk Island Pine	50	<i>Populus alba</i>	Silver Poplar
7	<i>Pinus canariensis</i>	Canary Island Pine	51	<i>Populus alba</i>	Silver Poplar
8	<i>Eucalyptus cladocalyx</i>	Sugar Gum	52	<i>Populus alba</i>	Silver Poplar
9	<i>Eucalyptus cladocalyx</i>	Sugar Gum	53	<i>Populus alba</i>	Silver Poplar
10	<i>Cedrus deodara</i>	Deoder Cedar	54	<i>Populus alba</i>	Silver Poplar
11	<i>Araucaria cunninghamii</i>	Hoop Pine	55	<i>Populus alba</i>	Silver Poplar
12	<i>Ficus macrophylla</i>	Moreton Bay Fig	56	<i>Eucalyptus leucoxylon</i>	Blue Gum
13	<i>Cedrus deodara</i>	Deoder Cedar	57	<i>Eucalyptus camaldulensis</i>	River Red Gum
14	<i>Pinus halepensis</i>	Aleppo Pine	58	<i>Eucalyptus leucoxylon</i>	Blue Gum
15	<i>Pinus canariensis</i>	Canary Island Pine	59	<i>Eucalyptus camaldulensis</i>	River Red Gum
16	<i>Platanus x hybrida</i>	London Plane Tree	60	<i>Eucalyptus camaldulensis</i>	River Red Gum
17	<i>Cedrus deodara</i>	Deoder Cedar	61	<i>Eucalyptus camaldulensis</i>	River Red Gum
18	<i>Erythrina x sykesii</i>	Hybrid Coral Tree	62	<i>Pinus halepensis</i>	Aleppo Pine
19	<i>Platanus x hybrida</i>	London Plane Tree	63	<i>Aesculus hippocastanum</i>	Horse Chestnut
20	<i>Washingtonia robusta</i>	Mexican Fan Palm	64	<i>Prunus sp.</i>	Unknown
21	<i>Araucaria bidwillii</i>	Bunya Pine	65	<i>Liquidambar styraciflua</i>	Americian Sweetgum
22	<i>Pinus pinea</i>	Stone Pine	66	<i>Pinus halepensis</i>	Aleppo Pine
23	<i>Pinus pinea</i>	Stone Pine	67	<i>Pinus halepensis</i>	Aleppo Pine
24	<i>Pinus pinea</i>	Stone Pine	68	<i>Liquidambar styraciflua</i>	Americian Sweetgum
25	<i>Cupressus macrocarpa</i>	Monterey Cypress	69	<i>Liquidambar styraciflua</i>	Americian Sweetgum
26	<i>Cedrus deodara</i>	Deoder Cedar	70	<i>Sequoia sempervirens</i>	Redwood
27	<i>Phoenix canariensis</i>	Canary Island Date Palm	71	<i>Araucaria bidwillii</i>	Bunya Pine
28	<i>Washingtonia robusta</i>	Cotton Palm	72	<i>Callitris gracilis</i>	Southern Cypress Pine
29	<i>Washingtonia robusta</i>	Cotton Palm	73	<i>Callitris gracilis</i>	Southern Cypress Pine
30	<i>Cupressus macrocarpa</i>	Monterey Cypress	74	<i>Liquidambar styraciflua</i>	Americian Sweetgum
31	<i>Phoenix canariensis</i>	Canary Island Date Palm	75	<i>Liquidambar styraciflua</i>	Americian Sweetgum
32	<i>Pinus pinea</i>	Stone Pine	76	<i>Cupressus macrocarpa</i>	Monterey Cypress
33	<i>Pinus pinea</i>	Stone Pine	77	<i>Phoenix canariensis</i>	Canary Island Date Palm
34	<i>Cedrus deodara</i>	Deoder Cedar	78	<i>Populus alba</i>	Silver Poplar
35	<i>Eucalyptus camaldulensis</i>	River Red Gum	79	<i>Populus alba</i>	Silver Poplar
36	<i>Cedrus deodara</i>	Deoder Cedar	80	<i>Erythrina x sykesii</i>	Hybrid Coral Tree
37	<i>Quercus suber</i>	Cork Oak	81	<i>Erythrina x sykesii</i>	Hybrid Coral Tree
38	<i>Quercus suber</i>	Cork Oak	82	<i>Populus alba</i>	Silver poplar
39	<i>Eucalyptus camaldulensis</i>	River Red Gum	83	<i>Populus alba</i>	Silver Poplar
40	<i>Pinus canariensis</i>	Canary Island Pine	84	<i>Cupressus macrocarpa</i>	Monterey Cypress
41	<i>Pinus pinea</i>	Stone Pine	85	<i>Pinus halepensis</i>	Aleppo Pine
42	<i>Pinus pinea</i>	Stone Pine	86	<i>Araucaria bidwillii</i>	Bunya pine
43	<i>Pinus radiata</i>	Monterey pine	87	<i>Pyrus sp.</i>	Pear Tree
44	<i>Cupressus macrocarpa</i>	Monterey Cypress			

REMNANT SPECIES

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
Acacia dealbata	Silver Wattle	1	No	No	Some Acacia sp. planted in SA during 19th Century	NSW, ACT, TAS & VIC	Existing specimen has died and requires removal	
Acer sp.	Maple	2	Declared Weed: A. negundo Other species not declared	Unknown	Planted in SA in 19th Century: A. negundo 'Variegatum' A. campestre A. platanoides A. pseudoplatanus	Europe, North America or Northern Africa	Retain healthy specimens. Remove declared species if present	
Aesculus hippocastanum	Horse Chestnut	1	No	No	Cultivated in SA from 1840s	Europe	Retain healthy specimens	63
Paraserianthes lophantha (syn Albizia lophantha)	Cape Leeuwin Wattle	1	No		None	WA	Remove. Weedy habit	
Araucaria bidwillii	Bunya Pine	2	No	Yes	The largest specimen is a remnant of the original plantings, but some seedlings have also established. Cultivated in SA in late 1800s and early 1900s. Number of National Trust listed examples in SA	QLD	Retain healthy specimens. Remove new seedlings.	21, 71
Araucaria cunninghamii	Hoop Pine	1	No	Yes	Likely to be remnant specimens Planted in SA in late 1800s and early 1900s.	NSW, Qld, Papua New Guinea and Irian Jaya	Retain healthy specimens	11
Araucaria heterophylla	Norfolk Island Pine	1	No	Yes	Cultivated in SA from 1840s	Norfolk Island	Retain healthy specimens. Maintenance pruning required	6
Brachychiton acerifolius	Illawarra Flame Tree	1	No	No	Cultivated in SA from 1840s. Likely to have been planted as part of Rotary Club plantings in 1980	NSW, QLD	Retain healthy specimens	
Brachychiton populneus	Kurrajong	3	No	No	Cultivated in SA from 1840s	NSW, QLD	Retain healthy specimens	
Butia capitata	Butia Palm	1	No	Yes	Two specimens from 1928 in Waite Arboretum: var. capitata, var. pulposa	South America	Retain health specimens	Bc
Callistemon viminalis	Bottlebrush	4	No	No	Cultivated in SA from 1920s. Likely to have been planted as part of Rotary Club plantings in 1980.	NSW, QLD	Retain healthy specimens	
Callitris gracilis	Southern Cypress Pine	2	No	Yes	None. It is thought these specimens are remnants of the original native vegetation.	SA, VIC & NSW	Retain healthy specimens	72, 73

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
Camellia japonica	Camellia	6	No	No	Planted from 1840s, notably C. japonica & C. sinensis. Current specimens were planted after councils acquisition.	Southern and eastern Asia	Retain. Either retain as tree form or hard prune after flowering in spring to promote bushy growth.	
Casuarina cunninghamiana	River Sheoak	1	No	Yes	None	NSW, QLD	Retain healthy specimens but remove suckers and seedlings.	47
Cedrus atlantica	Atlas Cedar	1	No	Yes	Cultivated in SA 1900s -1920s	Northern Africa	Retain healthy specimens	
Cedrus deodara	Deoder Cedar	5	No	Yes: 1 original specimen, others likely to be self sown	Cultivated in SA 1900s - 1920s	Central asia	Retain healthy specimens	10, 17, 26, 34, 36
Corymbia citriodora	Lemon Scented Gum	1	No	No	Cultivated in SA 1920 - 1930s. Likely to have been planted as part of Rotary Club plantings in 1980.	Eastern Australia	Retain healthy specimens	
Crataegus monogyna	Hawthorn	Yes	Declared Weed	N/A	Cultivated in SA from 1840s	Europe, northwest Africa and western Asia.	Remove all.	
Cupressus cashmeriana	Kashmir Cypress	1	No	Yes	Taxonomy to be confirmed. Possibly C. torulosa which was widely planted in SA from 1880's.	Asia	Retain healthy mature specimens.	45
Cupressus macrocarpa	Monterey Cypress	6	No	Yes	Cultivated in SA from 1850s	North America	Retain healthy mature specimens. Remove all small seedlings and saplings. Maintenance pruning for safety.	25, 30, 44, 45, 46, 76, 84
Cupressus sempervirens	Mediterranean Cypress	6	No	No	Cultivated in SA from 1840s	Europe	Retain healthy mature specimens.	
Erythrina x sykesii	Hybrid Coral Tree	1	No	Yes	Like to be remnant specimens. E. corallodendron and E. crista-galli planted in SA from 1840s	Widespread in tropical & subtropical regions	Retain healthy specimens	81, 18, 80

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
<i>Eucalyptus camaldulensis</i>	River Red Gum	6	No	Large specimens may have been retained	Locally indigenous species. Was cultivated from 1880s in SA	Widespread native	Retain healthy specimens.	1, 2, 35, 39, 57, 59, 60, 61
<i>Eucalyptus cladocalyx</i>	Sugar Gum	3	No	Yes	SA indigenous species but which can be weedy in the AMLR. Was cultivated from 1880s in SA.	SA	Retain healthy specimens. Remove all small seedlings and saplings.	3, 8, 9
<i>Eucalyptus saligna</i>	Sydney Blue Gum	1	No	No	None. Likely to have been planted as part of Rotary Club plantings in 1980.	NSW, QLD	Retain healthy specimens	
<i>Eucalyptus leucoxylon</i>	Blue Gum	2	No	Yes	Locally indigenous species. Likely to be remnant from original vegetation.	SA, VIC	Retain healthy specimens	56, 58
<i>Ficus macrophylla</i>	Moreton Bay Fig	1	No	Unknown	Planted in SA from 1840s. A number of historically significant specimens around Adelaide.	NSW, QLD	Retain healthy specimens	12
<i>Fraxinus angustifolia</i>	Desert Ash	?	Declared Weed	Unknown	<i>Fraxinus</i> sp. cultivated in SA in 1800s	Europe, Asia & North Africa	Remove all	
<i>Gleditsia triacanthos</i>	Honey Locust	1	No	No	Cultivated in SA from 1840s	North America	Retain healthy specimens	
<i>Grevillea robusta</i>	Silky Oak	9	No	No. Likely to be seedlings from trees planted in original garden.	Cultivated in SA from 1840s	NSW, QLD	Retain good self seeded plants where appropriate but remove unwanted ones.	
<i>Hymenosporum flavum</i>	Native Frangipanni	1	No	No	Cultivated in SA from in late 1800s	NSW, QLD	Retain healthy specimens	
<i>Jacaranda mimosifolia</i>	Jacaranda	1	No	No	Cultivated in SA from in early 1900s	South America	Retain healthy specimens	
<i>Lagunaria patersonii</i>	Norfolk Island hibiscus	3	No	Unknown	Cultivated in SA from 1840s	Lord Howe Is. and Norfolk Is.	Long term removal on safety grounds	
<i>Leptospermum laevigatum</i>	Coastal Tea Tree	1	Declared Weed	No	N/A	Eastern Australia	Remove all	
<i>Liquidambar styraciflua</i>	American Sweetgum	1	No	Yes, but some specimens may have been established later.		North and central America.	Retain healthy specimens.	65, 68, 69, 74, 75
<i>Melaleuca armillaris</i>	Bracelet Honey Myrtle	1	No	No	Likely to have been planted as part of Rotary Club plantings in 1980.	SA, TAS, & VIC	Retain healthy specimens	
<i>Melaleuca nesophila</i>	Showy Honey Myrtle	6	No	No	Likely to have been planted as part of Rotary Club plantings in 1980.	WA	Retain healthy specimens. Remove specimens with inappropriate form.	

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
Melaleuca styphelioides	Prickly Paperbark	1	No	No	Likely to have been planted as part of Rotary Club plantings in 1980.	NSW, Qld	Retain healthy specimens	
Morus nigra	Black Mulberry Tree	1	No	Possibly	Cultivated in SA from 1840s	Europe	Retain healthy specimens.	
Olea europaea	Common Olive	2	Declared Weed	May have originated from original plantings	Widely cultivated in SA from 1840s. Major environmental weed	Europe, Africa	Eradicate all	Oe
Phoenix canariensis	Canary Island Date Palm	4	No	Yes	Cultivated in SA from 1840s	Canary Islands	Remove all but the most significant specimens. Identify female trees and remove if possible	27, 31, 77
Pinus canariensis	Canary Island Pine	5	No	Yes	Cultivated in SA from 1900s	Canary Islands	Retain healthy specimens	4, 5, 7, 15, 40
Pinus halepensis	Aleppo Pine	24	Declared Weed	Yes. Many likely to have grown from seeds of original plantings	Cultivated in SA from 1880s	Europe, North Africa	Staged removal of all, priority on poor condition specimens	14, 62, 66, 67, 85
Pinus pinea	Stone Pine	2	No	Yes	Cultivated in SA from 1840s	Europe	Retain healthy specimens. Undertake maintenance pruning to ensure safety	22, 23, 24, 32, 33, 41, 42, 43
Pinus sp.	Unknown	1	No	Yes	Many species cultivated in SA from 1840s	Various	Retain healthy specimens, unless identified as declared	
Pittosporum undulatum	Sweet Pittosporum	7	Declared Weed	Yes. Smaller specimens likely to have originated from original plantings	Cultivated in SA from 1840s	Eastern Australia	Remove all small trees and those with no landscape significance. Retain larger specimens away from watercourse with prominence.	
Platanus x hybrida	London Plane Tree	2	No	Yes	National trust listing of plantings dated in 1885. Other ssp. cultivated from 1840s.	Europe	Retain healthy specimens but remove any self seeded specimens growing next to creek line.	16, 19

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
Populus alba	Silver Poplar	12	No	Yes. Many likely to have grown from suckers of original plantings	Cultivated in SA from 1920s	North Africa, Europe, Central Asia	Retain health specimens. Remove seedlings / suckers as required	48, 49, 50, 51, 52, 53, 54, 55, 78, 79, 82, 83, 84
Prunus cerasifera	Cherry Plum	1	No	No	Prunus sp. cultivated in SA from early 1900s	Europe and Western Asia	Retain healthy specimens	
Prunus sp.	?	1	No	No	Prunus sp. cultivated in SA from early 1900s	Europe and Asia	Retain healthy specimens	64
Quercus ilex	Holm Oak	1	No	Possibly	Cultivated in SA in 1800s	Europe	Retain healthy specimens	
Quercus palustris	Pin Oak	2	No	No	Cultivated in SA in 1800s	Europe	Retain healthy specimens	
Quercus robur	English Oak	2	No	No	Cultivated in SA in 1800s. One oak planted originated from Kew Gardens planted when reserve was opened. There is a massive remnant specimen on Boral land immediately east of the reserve boundary.	Europe	Retain healthy specimens	
Robinia pseudoacacia	Black Locust	15	No	Yes. Specimens may have originated from original plantings	Cultivated in SA from 1840s	North America	Remove all suckers. Retain larger trees until death then replace with more suitable species.	
Salix caprea	Pussy Willow	1	Declared Weed	Yes	Cultivated in SA from 1840s . Historical information identifies these growing by the creek	Europe and Asia	Long term removal and replacement with non-weedy alternative.	
Sequoia sempervirens	Redwood	1	No	Yes	National Trust listed specimen from 1882 in Stirling	North America	Existing specimen has died and requires removal	70
Taxus bacata	English Yew	1	No	Yes	Taxus sp. cultivated in SA in 1800s	Europe	Retain healthy specimens	
Ulmus x hollandica	Dutch Elm	21	No	Yes. Specimens may have originated from suckers of original plantings	Cultivated in SA from early 1900s. Specimens in Waite date back to 1936	Europe	Keep suckers controlled. Only keep good trees in defined areas and control elm leaf beetle	

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
Washingtonia robusta	Mexican Fan Palm	4	No	Yes.	Cultivated in SA from 1920s	North America	Retain healthy specimens	20
Quercus suber	Cork Oak	1	No	Yes	Cultivated in SA from 1840s	Europe & Northwest Africa	Retain healthy specimens	37, 38
Stenocarpus sinuatus	Firewheel Tree	1	No	Yes	Specimens in Waite Aboretum date back to 1920s	NSW, QLD	Retain healthy specimens	
Washingtonia filifera	Cotton Palm	2	No	Yes	Cultivated in SA from late 1800s	North America	Retain healthy specimens	28, 29
Morus nigra	Black Mulberry Tree	1	No	Possibly	Cultivated in SA from 1840s	Asia	Retain healthy specimens.	
Wollemia nobilis	Wollemi Pine	1	No	No	None. Wollemi pine planted by local residents as a memorial.	NSW	May need to be relocated to a more suitable location in a garden bed due to proximity to path and previous vandalism.	Wp
Shrubs / Groundcovers								
Abutilon x hybridum	Chinese lantern	1	No	Yes	Abutilon sp. cultivated in SA during early 1900s.	Widely distributed through Tropical regions	Retain healthy specimens. Prune and control spread as necessary.	Ah
Cordyline fruticosa syn C. terminalis	Cordyline	3	No	Yes	None	Northern Australia, Papua New Guinea & Polynesi	Retain healthy specimens where suitable.	Cl
Duranta repens	Pigeon berry	1	No	Possibly	Cultivated from SA in 1850 - 1890s.	Mexico & South America	Retain healthy specimens.	Dr
Gardenia thunbergia	Forest Gardenia	1	No	Yes.	Cultivated in SA from 1850s. May be rootsock from grafted Gardenia sp. or remnant specimen.	Southern Africa	Retain healthy specimens.	Gt
Malaviscus arboreus	Wax Mallow	Many	No	Possibly		North & South America	Retain healthy specimens. Prune and control spread as necessary.	Ma
Philadelphus sp.	Mock orange	1	No	Possibly	Likely to be remnant from gardens. P. coronarius cultivated in SA from 1840s. Other sp. cultivated from 1920s.	Southern Europe	Retain healthy specimens.	Ps
Rhamnus alaternus	Italian Buckthorn	Numerous	Declared Weed	Specimens may have originated from original plantings	Cultivated in SA from 1840s. Often used as a hedging plant which has now naturalised and is a serious environmental weed.	Europe	Highly invasive, remove all.	Ra

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
Viburnum tinus	Laurestinus	Many	No	Unknown	Cultivated in SA from 1840s. Current specimens may have seeded from original plantings	Europe & North Africa	Retain health specimens. Control spread as necessary. Retain plantings where relevant to future design	Vs
Viburnum x burkwoodii	Snowball Tree	Many	No	Unknown	Cultivated in SA from 1840s. Current specimens may have seeded from original plantings	Cultivar	Retain health specimens. Retain plantings where relevant to future design	Vs
Ground Cover								
Aloe sp.	Aloe	4	No	Yes	Aloe sp. cultivated from SA from 1840s. Current specimens may have spread from original plantings	Southern Africa	Retain or relocate healthy specimens	As
Agapanthus sp.	Agapanthus	Many	No	Yes	Cultivated in SA from 1840s	Southern Africa	Invasive along creeklines. Remove all and replace with non-weedy alternative (eg Clivia miniata).	Ag
Agave americana	Century Plant	5	No	Yes	Cultivated in SA from 1840s	North America	Spreads by suckers. Do not allow uncontrolled spread. Remove from path edges due to sharp spines.	Aa
Chasmanthe floribunda	Aunt Eliza	Multiple spreading	No	Unknown	None	South Africa	Weedy habit. Eradicate all.	Cf
Chlorophytum sp.	Spider plant	Multiple spreading	No	Unknown	None	Asia, Africa	Weedy habit. Eradicate all.	
Jasminum mesnyi	Primrose Jasmin	1	No	Unknown	None. Other Jasminium sp. have historically been planted in SA from 1840s.	Asia	Retain health specimens. Control as required.	
Hedera helix	Ivy	Multiple spreading	No	Yes	Cultivated in SA from 1840s	Europe	Retain where it is in the juvenile groundcover form but prevent climbing of trees and structures where it attains adult form, flowers and seeds. Ivy is an environmental weed when spread by seed.	Hh
Iris unguicularis	Algerian Iris	Multiple spreading	No	Yes	Iris sp. cultivated in SA from 1840s	Mediterranean	Retain healthy specimens. Propagate for future use	Iu
Rosa canina	Dog rose	2	Declared Weed	Unknown	Cultivated in SA in 1800s	Europe, Africa & Asia	Eradicate all.	
Tradescantia fluminensis	Trad	Multiple spreading	No	Unknown	None	South America	Weedy habit. Eradicate all. Manage erosion to exposed slopes following removal.	Tf

Species	Common name	No.	Declared Weed	Likely historic specimen(s)	Historic significance*	Origin	Management Strategy	Plan ID no.
<i>Viola ordata</i>	Common Violet	Multiple spreading	No	Unknown	Cultivated in SA from 1840s	Europe and Asia	Weedy habit. Eradicate all	
<i>Zantedeschia aethiopicum</i>	Arum lily		Declared Weed	Yes	Cultivated in SA from 1840s	South Africa	Significant environmental weed. Eradicate all	Za

***Historical Planting Sources**

University of Adelaide 2018, *Waite Arboretum Catalogue* <<https://www.adelaide.edu.au/waite-historic/arboretum/catalogue/>>

Adelaide Botanic Gardens 2018, *Catalogue of Plants* <<http://botanicgdns.rbe.net.au/collections/online/>>

National Trust of Australia 2018, *National Trust Significant Tree Register* <<https://www.nationaltrust.org.au/services/significant-tree-register/>>

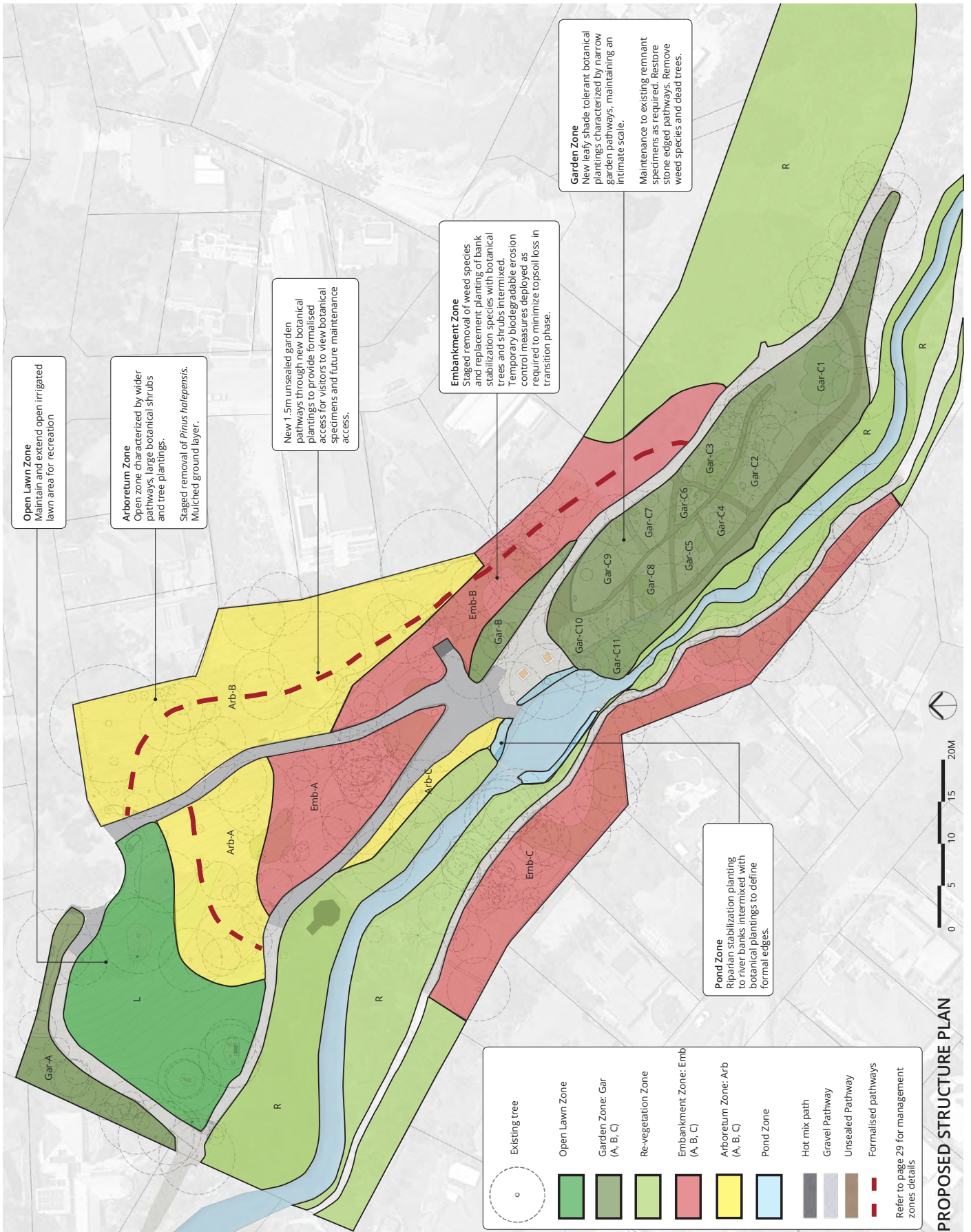
Jones, David S. (David Sydney) & Payne, Pauline & Adelaide (S.A.) Corporation & South Australia. Department for Environment, Heritage and Aboriginal Affairs & Heritage South Australia 1998, *Gardens in South Australia 1840-1940 : guidelines for design and conservation*, Dept. for Environment, Heritage and Aboriginal Affairs and the Corporation of the City of Adelaide, Adelaide

Colour Code :

- Remnant species
- Declared weed
- Environmental weed



ADAPTATION PLAN



MANAGEMENT ZONES

A number of management zones have been identified across the site. They have been intended to provide a framework for future management policies (Refer adaptation policies section) :

Garden Zones (Gar-A, Gar-B, Gar-C) : Intimate scale garden area with varied botanical plantings and narrowed pathways. Zone B is a flat area at the base of the steep bank. Zone C is the core garden area with the highest density of remnant specimen plantings

Open Lawn : Existing and extended open irrigated lawn area

Arboretum Zones (Arb-A, Arb-B, Arb-C) : Open zone characterised by wider pathways, large botanical shrubs and tree plantings. Zone C is a narrow strip between existing path and Creekside revegetation

Embankment Zones (Emb-A, Emb-B, Emb-C) : Embankment areas to be planted with stabilisation species and erosion control measures to be applied

Pond : Pond area with indigenous riparian species and specimen plantings

Revegetation : Existing and new revegetation areas with indigenous riparian flora. Outside of the historic garden precinct.

ADAPTATION POLICIES

Summary

The nature of gardens is not static; plants and landscapes change over time. Historical information does not reveal the exact nature of the former garden and the current arrangement is unlikely to resemble the original form. The former estate also had 3 owners which may have had differing approaches to maintaining and altering the landscape of the estate.

Broadly, evidence of the previous gardens suggest that a high number of species were introduced into the gardens, with historical information acknowledging former owners as having a passion for botany.

The original plantings did not appear to have a geographic or taxonomic theme, although many Gymnosperms (conifers) did feature in the plantings. Specimens were likely chosen for their form, stature and availability. Many of the specimens planted were from other colonial settlements of the time such as South Africa, other Australian States and Territories and specimens swapped and traded across the colonial network.

In adapting the reserve, the following policies seek to maintain this approach to planting design and continue to plant and maintain a wide range of botanical specimens.

The following policies do not seek to restore the garden to its former arrangement, but seek to adapt the garden and maintain remaining heritage values. The policies seek to identify and maintain historic specimens, structures items and introduce new plantings in the historic garden precinct of the reserve to ensure resilience and which meet current Council maintenance needs.

The following policies should be followed in accordance with the Proposed Structure Plan on page 26.

Remnant Botanical Plantings

The age, size and density of trees currently extant in the garden present a challenge to the establishment of new specimens due to the light, water and space competition. New specimens may not develop optimum form as they will elongate towards the light. For this reason some vacant tree positions may not be planted until existing adjacent specimens have reached the end of their useful life and have been removed. This also highlights the need for removal of some of the declared weed species (eg Aleppo Pines) prior to the establishment of new plantings.

1. Maintain existing remnant specimens identified in this report where specimens are identified in safe and healthy condition as determined by a suitable qualified arborist or horticulturalist. Undertake basic horticultural maintenance as necessary to ensure the survival and appearance of specimens
2. Undertake regular monitoring of remnant specimens to make assessments of condition
3. Remove dead or diseased specimens which pose a risk to safety
4. Remove all undesirable plants identified in this report and any declared plants that are regulated under the Natural Resources Management Act 2004 .
5. The Wollemi Pine and associated memorial plaque should be relocated to a more suitable location, possibly in one of the re-developed

garden beds where it can be viewed from the path but not impacted by park users.

6. In other areas of the reserve (outside Zone 7), any remnant botanical specimen plantings that are non-weedy and of good health and form should be maintained even if they are surrounded by indigenous revegetation. However if they were removed on health or safety grounds they should not be replaced in their current position to allow those areas to become fully indigenous over time.

New Botanical Plantings

7. New plantings should be undertaken in accordance with the proposed structure plan (Refer Page 28). Trees, shrubs and ground layer plants in these zones should be chosen to reflect:
 - Historical plantings of the era when the garden was developed and nurtured (1840 – 1970) (Refer to Historical Context on Page 5). Many of the species planted during this time became naturalised and are now declared or environmental weeds. These species should not be planted and should be gradually removed from the garden.
 - Gardens of the size and scale of the former Clifton Estate often included a wider range of species than suburban gardens and their resources meant that a wider range of exotic specimens were often sought.
 - Cues to species selection can also be taken from other large private and public gardens in SA including the Adelaide Botanic Gardens where stately specimens of exotic and native species may be found.

8.

Choose:

- Exotic and native species:
 - That were commonly used in stately gardens and public botanical gardens between 1840 -1970's,
 - That are unusual, rare or with educational value, interesting forms and taxonomy,
 - Large, stately trees where space allows,
- Ground layer species that are:
 - Tough, suited to growing beneath trees and long lasting,
 - Suited to prevent bank erosion on steep slopes.

Avoid:

- Species common in contemporary home gardens, urban reserves and streetscapes.

Do not use:

- Species that are known to or likely to become weedy,
- Have high water requirements,
- Require high maintenance, particularly ground layer plantings (eg annuals or herbaceous perennials).

Garden- Zone A

9. Trees and shrubs with good form should be retained
10. Poor specimens should be removed and replaced with specimen trees and large shrubs to form a dense screen
11. Hardy groundcovers and low shrubs should be planted at front of bed adjacent to pathway
12. Plantings should be predominantly non-indigenous native species with horticultural appeal

Garden - Zone B

13. Existing specimens with new wide spaced trees should be augmented
14. Low border plantings should be used to main path and specimen shrubs behind
15. Staged removal of weed species should be undertaken to allow replanting

Garden - Zone C

16. Planting within this zone should reinforce historical axes formed by the remnant narrow garden pathways and create an intimate experience for visitors. A variety of leafy shade tolerant botanical plantings should be planted with formal planting to define path edges

17. Existing remnant garden specimens should be maintained as required.
18. Stone edged pathways, identified on site as being historically relevant, should be restored and maintained where evidence exists. Path surfacing should be consistent with typical treatments found in historic South Australian gardens during the period of 1840-1970
19. No additional pathways other than the pathways identified on the proposed structure plan should be created
20. Dead trees, weed species and poor specimens should be removed to enable replanting

Open Lawn

21. Irrigated lawn should be maintained and extended for recreation
22. A single species row of medium sized specimen trees should be established adjacent to the pathway on the north western side, without compromising the open space

Arboretum - Zone A

23. Planting within this zone should maintain an open character characterised by large specimen trees, widely spaced, and a broad range of botanical plantings
24. Ground layer should be mulched
25. A new sealed path should be created to allow visitor and maintenance access to botanical plantings
26. Removal of poor specimens and declared weeds should be undertaken
27. Low border plantings should be used to reinforce the main pathway

Arboretum - Zone B

28. Planting within this zone should maintain an open character characterised by large specimen trees, widely spaced, and a broad range of botanical plantings
29. Ground layer should be mulched
30. A new sealed path should be created connecting through Embankment B to the Main Trail to allow visitor and maintenance access to botanical plantings
31. Staged removal of Aleppo Pines should be undertaken
32. Low border plantings should be used to reinforce the main pathway

Arboretum - Zone C

33. Existing high value trees should be maintained and new specimen trees or feature plants should be established where space is available and keeping the open character of this zone.
34. Ground layer should be mulched

Embankment - Zone A

35. Plantings within this zone should be widely spaced, Arboretum style specimens
36. Dense shrub plantings may be used to deter access
37. Ground layer should be mulched

Embankment - Zone B

38. Staged removal of weed species should be undertaken to allow for replacement with planting of bank stabilisation species and specimen trees where possible
39. Appropriate biodegradable erosion control measures should be employed where necessary to prevent erosion and topsoil loss during replanting and establishment. "Management" trails cut along the contour may need to be used to facilitate management of the steep slopes.
40. Existing pathway connecting Arboretum Zone B with Main Trail should be restored

Embankment - Zone C

41. Staged removal of weed species should be undertaken to allow for replacement with planting of bank stabilisation species and specimen trees where possible

Pond

42. Invasive species should be removed and replaced with predominantly indigenous riparian species
43. Non-invasive specimen plantings can remain and be augmented by new specimens

Revegetation

44. Plantings in both existing revegetation and areas in-development should be indigenous riparian species
45. Staged removal of remaining weed species should be undertaken
46. Any historic remnant, non-invasive garden species, should be retained

Interpretation

Refer to the Interpretation Strategy/Framework Section on page 33 for further interpretive strategies proposed for the site

47. Interpretive signage should be introduced which provides information to visitors regarding the historical significance of the site
48. Botanical labels should be provided for all historical botanical specimens and new specimens which indicates:
 - The Genus and the species of the plant, using upper and lower case lettering at the top of the label
 - The Family to which it belongs in smaller lettering, prefixed by the word 'family'
 - The vernacular name, if there is one in common usage
 - A distribution map or a worded distribution.
 - Details of historic significance or date planted as relevant
49. All signage should be durable and resistant to vandalism
50. Public art should be promoted in the reserve

Structures (General)

51. Unused structures which are not of historic significance should be removed

Shed

52. The shed is in need of immediate works to ensure safety and to exclude the public. Removal is considered and either :
 - Reconstruction of the hillside slope or
 - Rebuilding of a small garden shed that could be used to store volunteer garden materials if a volunteer program was established.

Fences, Barriers and Gates

Due to the highly used and secluded nature of the reserve there may be a need to use barriers to deter pedestrians and bike riders to keep off the garden beds and revegetation areas.

53. As much as possible natural materials and plantings should be used to prevent access :
 - Low barrier shrubs or tussocks may be used to define beds.
 - Existing dry rock walls and edges should be restored and if needed extended for definition.
 - Logs may be used in informal area such as adjacent revegetation zones.
54. Where there are additional needs:
 - Natural or aged/recycled timber posts with agricultural style wire or two timber cross pieces (Refer Image 1)

- Metal edging hoops (historically traditional in botanic or municipal parks) (Refer Image 2)
- Natural rock barriers should be used to define revegetation zones (Refer Image 3)



Image 1 : Timber Posts



Image 2 : Metal Edging Hoops



Image 3 : Natural Rocks

Retaining Walls

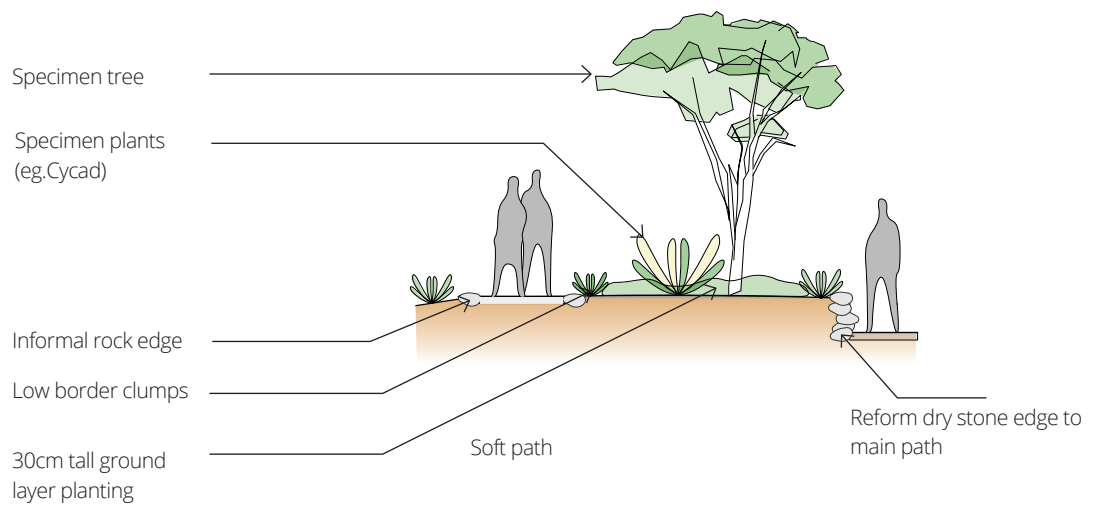
55. As much as possible natural materials should be used for any new construction and be consistent with the existing elements of historical relevance

Irrigation

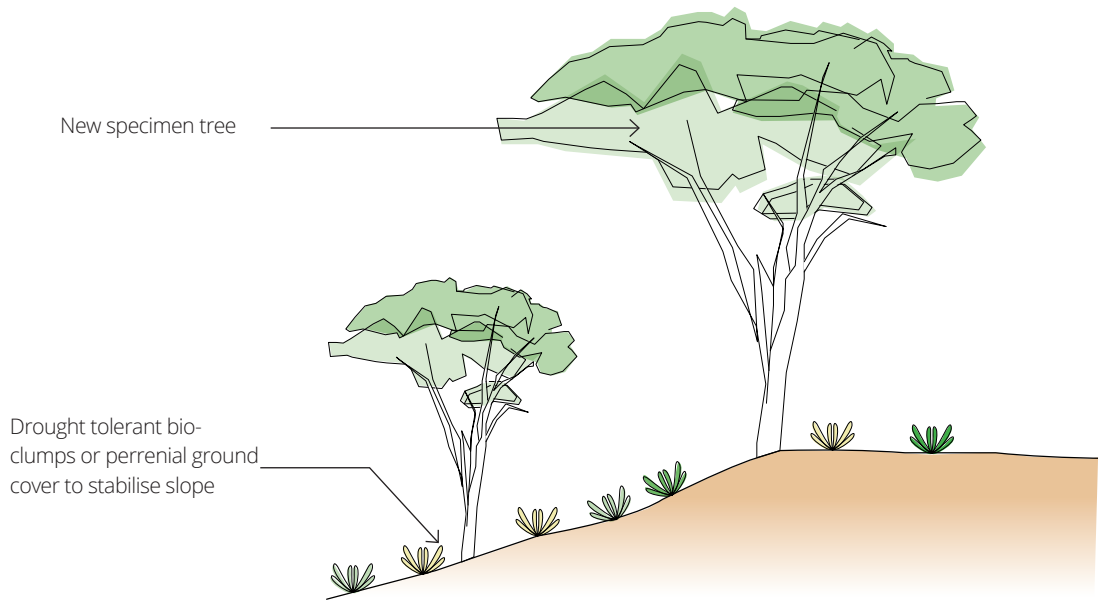
The major garden renovation is dependent on establishment of a new irrigation extension.

56. The main garden area (Refer Plan : Garden - zone B & C) will require a new water main extension to be irrigated. This could be done as an extension from the existing toilet/drinking fountain area. The rest of the reserve is on stand-alone battery operated solenoids and the same is recommended for the garden area.
57. Arboretum areas are recommended to be watered manually but some dripper lines can be used for plant establishment.

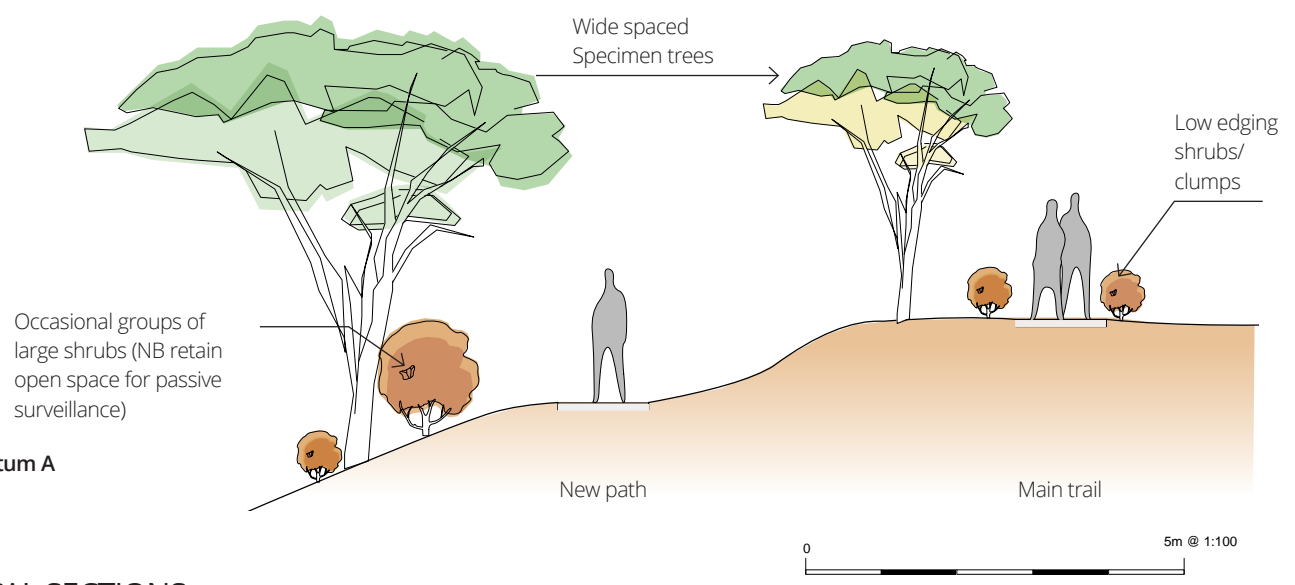
Garden C



Embankment



Arboretum A



TYPICAL SECTIONS

INTERPRETATION STRATEGY/Framework

Providing interpretation is aimed at enriching the on-site experience by revealing its significance through a variety of means. The following outlines a strategy and framework for future and ongoing interpretation within the Reserve. There are a number of signage elements within and around the reserve relating to different aspects. These include;

Wayfinding

Project recognition

Environmental interpretation

Risk management

Memorialisation and personal recognition.

Based on the understanding of the history of the place the interpretation should follow a clear framework and should be consistent and compatible with the other forms of signage or information. Generally this refers to on-site elements, but can also refer to the on-line and publication material associated with the place.

Themes / Key Messages

A theme identifies the key message in the interpretation. It should be simple and clear, providing a link between stories or pieces of information. "A theme is the main point or message the communicator is trying to convey about a topic. It is the answer to 'so what' or 'big deal'. It is the moral to the story." (Sam Ham and Betty Weiler Developing Interpretive Themes 2003)

The key themes/messages to be communicated to the visitor in the interpretation at Michael Perry Botanical Reserve are;

- Kurna people occupied the Adelaide plains prior to European colonization.
- Water supply is critical to human life and informs settlement patterns.
- European colonization was based on land ownership and subdivision.
- A number of key people associated with the property had significant roles within the establishment of Adelaide.
- The continued growth of population and densification of cities often results in change from rural to residential land use.
- The establishment of the Reserve was a direct result of the emergence of conservation movements and civic establishment.
- The understanding of the interplay between indigenous and exotic plants and landscapes is complex and in continuous review

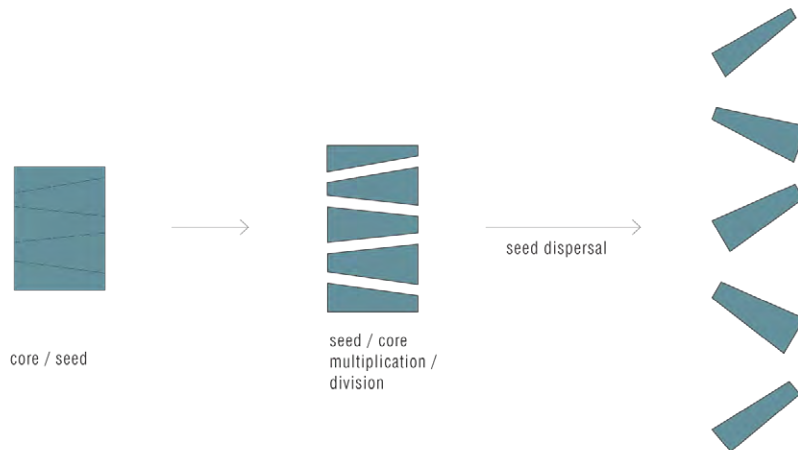
Storylines

Some of the main stories associated with the site are as follows;

- Kurna uses of the waterway and land
- Wattle and Daub huts
- Henry Osborne - 80 acres of land
- George Dean **Sismey**, builds 15 room house and stable (named Clifton Manor?)
- Knox family, house additions and establishing estates gardens, subdivided (sold approx 40acres)
- Schneider Family – wildlife sanctuary, charity functions
- Subdivision into 114 Allotments and eight acre reserve
- Naming of reserve – Burnside Mayor, Alderman and Councillor, Michael Perry
- Current uses of reserve
- Cattle natural spring to drink when travelling into the hills
- 1954 earthquake opened the spring the source of the creek?

Preliminary Strategies

The interpretation strategy will work as an integrated system, operating as a series of clues and metaphors that provide a holistic narrative when understood as a whole. This system can be represented by the following diagram:



The following are preliminary interpretive strategies proposed for the site. This is an in-progress, non-exhaustive list based on our initial observations of the site as well as general interpretive strategies for public spaces.

These are generic strategies that will need to be developed to specifically reflect the themes and storylines.

Provocative interpretation

Strategies for embedding heritage interpretation in a variety of provocative, incidental ways that set up questions and engender curiosity – integrated with pavements, landscaping, facades, playgrounds, artworks.

- Interpretation in the ground surface – in carpark/paths/landscaping. May be text-based or patterning.
- Embed within new or existing furniture.
- 3D sculptural elements.
- Interpretive artworks.

Existing furniture opportunities include; stone and mortar retaining walls, dry stone retaining walls, bench seats, picnic tables, timber sleeper steps, etc.

Didactic information

Strategies for detailed information delivery. Text and image-based information will form a key part of the interpretive experience. The main features of this aspect include;

- A style guide for graphics in-line with the City's own.
- Graphic panels (2D or 3D elements) – text & images.
- May also link digitally to external sites – e.g. Botanical Websites, City of Burnside website

In an attempt to provide a cohesive experience, these elements should, where possible, integrate wayfinding, risk management and interpretation.

FUTURE PLANTING LIST

Species	Common name	Possible Locations (Refer Proposed Plan p28)	Height / Spread	Origin	Historical Significance
Trees					
Aesculus x carnea	Red Horse Chestnut	Arb, Emb, Gar	10-12m/10-12m	Europe	
Afrocarpus falcata	Oteniqua	Arb, Emb	45-60m	South Africa	
Agathis robusta	Queensland Kauri	Arb, Emb	45m	South Africa	
Aloe bainesii	Tree Aloe	Arb, Emb, Gar	18m	Queensland	
Aloe dichotoma	Quiver Tree	Arb, Emb, Gar	7m	South Africa	
Aralia elata	Japanese angelica-tree	Arb, Emb, Gar	10m	Eastern Russia, China, Korea, Japan	Historical reference to Aralia (Refer to Historical section)
Araucaria columnaris	New Caledonia Pine	Arb, Emb	60m/3m	New Caledonia	
Arbutus menziesii	Madrone	Arb, Emb, Gar	10-25m	North America	
Brachychiton acerifolius	Flame Tree	Arb, Emb	10-35m/10-15m	NSW, QLD	Cultivated in SA from 1840s. Likely to have been planted as part of Rotary Club plantings in 1980
Brachychiton discolor	Queensland Lacebark	Arb, Emb, Gar	5-15m/4-5m	NSW, QLD	
Brachychiton rupestris	Queensland Bottle Tree	Emb, Gar	4-8m/2-4m	QLD, NSW	
Butia capitata	Wine Palm	Arb, Emb, Gar	4-6m/2-3m	South America	Two specimens from 1928 in Waite Arboretum : var. capitata, var. pulposa
Calodendron capense	Cape Chestnut	Arb, Emb, Gar	6-10m/4-6m	South Africa	
Cantua buxifolia	Peruvian Magic Tree	Arb, Emb, Gar	4m/2.5m	South America	
Castanospermum australe	Morton Bay Chestnut	Arb, Emb, Gar	8-20m/4-8m	QLD, NSW	
Cedrus deodara	Deodar Cedar	Arb, Emb, Gar	15-30m/0-12m	India, Himalayas	Cultivated in SA 1900s-1920s
Cedrus libani	Cedar of Lebanon	Arb, Emb, Gar	15-30m/6-20m	Lebanon	Noted in reports from 1939
Ceratonia siliqua	Carob	Arb, Emb, Gar	8-10m/4-5m	Mediterranean	
Cercis siliquastrum	Judas Tree	Arb, Emb, Gar	6-8m/3-4m	S. Europe to E. Asia	
Corymbia calophylla	Marri	Arb, Emb, Gar	13-25m/10-13m	Western Australia	
Cupressus cashmeriana	Kashmir Cypress	Arb, Emb, Gar	12-18m/4-6m	India, Himalayas	Yes, present in the reserve
Cupressus torulosa	Bhutan Cypress	Arb, Emb	45m	South Asia	
Dais cotinifolia	Tree Daphne	Emb, Gar	3-5m/4-5m	South Africa	
Dracaena drago	Dragon Tree	Arb, Emb, Gar	8-9m/5-6m	Canary Islands	Present in Attunga gardens. Could be transplanted

<i>Erythrina crista-galli</i>	Cockspur Coral Tree	Arb, Emb, Gar	5-8m/2m	South America	
<i>Euphorbia tirucalii</i>	Milk Bush	Arb, Emb, Gar	1.2-2.4m/1.2-2.4m	South Africa	
<i>Ficus</i> sp.		Arb, Emb, Gar			
<i>Flindersia australis</i>	Crows Ash	Arb, Emb, Gar	15-20m/5-15m	NSW, QLD	
<i>Ginkgo biloba</i>	Maidenhair Tree	Arb, Emb	25m/9-12m	China, Japan	
<i>Harpephyllum caffrum</i>	Kaffir Plum	Arb, Emb	25m/11m	South Africa	
<i>Juglans regia</i>	Walnut	Arb, Emb	20-25m/20-25m	China, Europe	
<i>Liriodendron tulipifera</i>	Tulip Tree	Arb, Emb, Gar	20m/8m	North America	
<i>Livingstonia australis</i>	Cabbage Palm	Arb, Emb	25m/5-6m	NSW, QLD, Vic	
<i>Maclura pomifera</i>	Osage orange	Arb, Emb, Gar	18-15m/8m	North America	
<i>Nolina recurvata</i>	Ponytail	Arb, Emb, Gar	5m/2m	South America	
<i>Phoenix reclinata</i>	Senegal Date Palm	Arb, Emb, Gar	8-15m	Africa	
<i>Podocarpus elatus</i>	Plum Pine	Arb, Emb	40m	New Zealand, SE Asia	
<i>Quercus ilex</i>	Holly Oak	Arb, Emb	20-24m/8-12m	Mediterranean	Cultivated in SA from 1800s
<i>Quercus cerris</i>	Turkey Oak	Arb, Emb	25-35m/5-6m	Europe to SW Asia	
<i>Quercus macrocarpa</i>	Burr Oak	Arb, Emb	30m/15m	North America	
<i>Rhus typhina</i>	Staghorn Suman	Emb, Gar	5m/6m	North America	Historically cultivated in SA
<i>Sequoia sempervirens</i>	California Redwood	Arb, Emb, Gar	18-115m/13m	North America	National Trust listed specimen from 1882 in Stirling
<i>Stenocarpus sinuatus</i>	Wheel-of-Fire Tree	Arb, Emb, Gar	8-20m/2-5m	NSW, QLD	
<i>Taxodium distichum</i>	Swamp Cypress	Arb, Emb, Gar	15-18m/4-6m	North America	
<i>Tetraclinis articulata</i>	Alerce	Arb, Emb, Gar	16-15m/4m	Africa	
<i>Toona ciliata</i>	Red Cedar	Arb, Emb, Gar	8-20m/6-8m	QLD, NSW	
<i>Trachycarpus fortunei</i>	Chinese Windmill Palm	Arb, Emb, Gar	12-20m/1.5-2.5m	China, Japan, India, Myanmar	
Shrubs					
<i>Artemesia arborescens</i>	Wormwood	Arb, Gar	2m/1.5m	Mediterranean	
<i>Caesalpinia gilliesii</i>	Desert Bird of Paradise	Arb, Gar	2-3m/2-3m	Argentina, Uruguay	
<i>Calycanthus floridus</i>	Carolina Allspice	Arb, Gar	11.8-3m/1.8-4m	Southern North America	
<i>Capparis spinosa</i>	Caper Bush	Arb, Gar	1m/2m	Mediterranean	

Chaenomeles sp.	Flowering Quince	Arb, Gar	1.8/3m	China	
Cordyline australis	NZ Cabbage Palm	Arb, Gar	5-6m/2m	New Zealand	
Crinum pedunculatum	Swamp Lily	Arb, Gar	2-3m/2-3m	Australia	
Crotalaria cunninghamii	Green Birdflower	Arb, Gar	4m	Northern Australia	Yes, as species named after Allan Cunningham, 19th botanist
Cycas thouarsii	Madagascar Cycad	Arb, Gar	6-8m	Australia	
Diosporys whyteana	Bladder Nut	Arb, Gar	5-7m/1.5-3m	Northern Australia	
Doryanthes palmeri	Palmer Lily	Arb, Gar	3m/4m	Madagascar	
Encephalartos sp.	Bread Palm	Arb, Gar	6m	Africa	
Fatsia japonica	Aralia	Arb, Gar	1.5-4m/1.5-4m	Japan	Noted in historical records of the garden from 1939
Gardenia thunbergia	Forest Gardenia / Stompdoorn Gardenia	Arb, Gar	3-4m/2-4m	South Africa	Cultivated in SA from 1850s.
Garrya elliptica	Catkin Tree	Arb, Gar	12-5m/2-5m	California	
Grewia occidentalis	Crossberry	Arb, Gar	2-3m/2-3m	Southern Africa	
Hebe microcarpa		Arb, Gar	2m/1.5m	New Zealand	Historically cultivated in SA from 1840s.
Hibiscus heterophyllus	Native Rosella	Arb, Gar	1.8m	Australia	
Hibiscus syriacus	Syrian Hibiscus	Arb, Gar	2-4m/1-1.8m	India, Asia	
Macrozamia sp.	Burrawang	Arb, Gar	1.5-2m/1.5-2m	NSW	
Mahonia japonica	"Barberry"	Arb, Gar	2m/3m	Japan, Taiwan	
Philadelphus sp.	Mock Orange	Arb, Gar	1-6m/1-6m	Americas, Asia, SE Europe	Cultivated in SA from 1920s
Phormium sp.	NZ Flax	Arb, Gar	5m/4.5m	New Zealand	
Xanthorrhoea quadrangulata	Grass Tree	Arb, Gar	3-5m/1-1.5m	SA, Vic, Tas, NSW, NT	Historical information references the existence of Xanthorrhoea
Ground Layer					
Aloe cultivars	Aloe	Gar	15-30cm	Arabia, Africa, Madagascar	Aloe cultivated in SA from 1840s
Arthropodium cirratum	Renga Renga Lily	Gar	1.2m/0.5m	New Zealand	
Clivea miniata	Natal Lily	Gar	0.45m/2-3m	South Africa	
Coprosma kirkii		Gar, Emb	1m/2.5m	New Zealand	
Doryanthes excelsa	Gynea Lily	Gar	2-4m/2-4m	NSW	
Dyckia spp., Puya spp.	Bromeliad (Pitcairnoidea types)	Gar	3m/	Andes	

<i>Iris unguicularis</i>	Algerian Iris	Gar, Arb	0.5m/3m	Greece, Turkey, Western Syria, Tunisia	Iris sp. cultivated in SA from 1840s
<i>Myoporum parvifolium</i>	Creeping Boobialla	Gar, Emb	0.2m/1.5-2m	SA, Vic, NSW	
<i>Plectranthus argentatus</i>	Silver Spurflower	Gar, Arb	0.3m/1m	QLD, NT	
<i>Polypodium</i> sp.	A creeping fern.	Gar	0.3/1.3m	Central Americas	
<i>Raphiolepis</i> spp.	Indian Hawthorn	Gar	1.2m/1.5m	India	
<i>Trachelospermum</i> sp.	Star Jasmine	Gar	4-6m/4-5m	Japan, Korea, China, Vietnam	
Bank Stabilisation					
<i>Grevillea</i> 'Little Thicket'	Little Thicket Grevillea	Emb	0.5/1m	NSW	
<i>Lomandra longifolia</i>	Mat Rush	Emb	1-1.5m/1-1.3m	Australia	
<i>Dianella brevicaulis</i>	Coast Flax-Lily	Emb	1m/1.5m	QLD, NSW, Vic, Tas, SA, WA	
<i>Hardenbergia violacea</i>	Native Lilac	Emb	1-2m/1-2m	SA, Vic, NSW, Tas, QLD	

Proposed Indigenous Riparian Planting List for Revegetation & Pond Areas :

Carex fascicularis

Carex gunniana

Carex appressa

Cyperus vaginatus

Ficinia nodosa

Juncus pallidus

Juncus caespiticus

Juncus subsecundus

Microlaena stipoides

Rytidosperma species (syn. *Austrodanthonia*)

Themeda triandra

VOLUNTEER PROGRAM

There is a potential to create a local volunteer program where volunteers are recruited, inducted and supported to undertake regular maintenance and improvement of the garden areas.

Such a volunteer program would need to have defined roles for volunteers and actions to be guided by this plan.

Guidance and supervision would need to be given by nominated City of Burnside staff members to ensure that any plantings or other activities were consistent with the plan.

The benefits of such a group would be to ensure community ownership and passive surveillance of the garden.

In addition, other volunteer programs such as Conservation Volunteers Australia, or Work for the Dole projects could be utilised for implementation to aspects of the plan or maintenance of the garden.



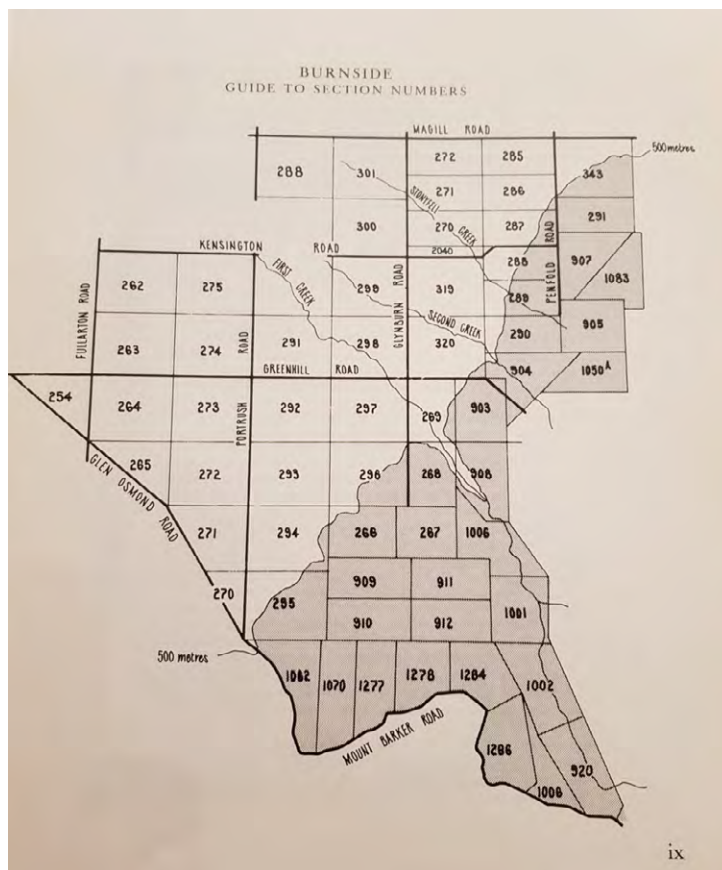
APPENDIX A : HISTORIC IMAGES



Native animals in Clifton Manor Estate 'sanctuary' . Date Unknown

'...Dr Schneider himself lived there until his death in 1970. He had it declared a sanctuary and made a large netted enclosure for emus, kangaroos and koala bears.' Elizabeth Warburton, The paddocks beneath: a history of Burnside from the beginning, Corporation of the City of Burnside, 1981 (Page 37)

'At Clifton, Dr Schneider has a miniature zoo. In a tall eucalypt we saw koala bears sleepily perched in tree forks. A vermin-proof netting fence surrounds 30 acres, and in this enclosure are pairs of the Kangaroo Island scrub and red kangaroos, emus, Cape Barron geese, curlews, plover, fallow deer, English pheasants, peacocks, guinea fowls, ibis, a Pacific gull... and a broлга...' The Advertiser, 'Out Among the People', 26 December 1938 (Page 11)



Allotment Plan- Michael Perry Reserve is located on what was known as Section 904. Date: Unknown



Clifton Manor Estate subdivision real estate brochure. Date: 1972



Clifton Manor. Date: Unknown

Images on this page sourced from- File on the property "Clifton Manor" : 1852-1975 [local history] Burnside Library