

Warrnambool Botanic Gardens Masterplan



Warrnambool Botanic Gardens by Natasha Bieniek
Image thanks to Warrnambool Art Gallery

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- Janet McDonald, Mandy King and Pat Varley - Friends of the Warrnambool Botanic Gardens
- Neil Ballard, WCC Rural Access Officer
- Kevin Sparrow- Friends of Swan Reserve

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1 Executive Summary

This Masterplan for Warrnambool's Botanic Gardens was developed in 2016 – the same year the gardens celebrated 150 years on the site. This Masterplan guides future improvement, development, and management of the gardens for the next 15 years.

In early 2016 Warrnambool City Council's Project Working Group prepared a Background Report detailing the issues and opportunities identified during extensive stakeholder engagement and community consultation conducted by Council officers. This Background Report should be read in conjunction with this Masterplan (see Appendix One).

In mid-2016, Michael Smith and Associates (Landscape Architecture and Urban Design), with STORM Consulting, Traffix Group, Homewood Consulting and CMF Consulting, were appointed to develop this Masterplan for the Gardens. The process undertaken by the consultant is summarised in Section 3.

In developing this plan and its recommendations, consideration was given to the previous plans developed for the gardens in 1994 and 2005; local strategies such as the Warrnambool Open Space Strategy and Warrnambool – a Healthy City; the challenges and opportunities for the Gardens, as assessed by the consultants, Council's Project Working Group, key stakeholders, the Friends of the Warrnambool Botanic Gardens and the community.

The recommendations in this plan respect William Guilfoyle's design philosophy by retaining and enhancing the classical English, gardenesque and picturesque elements that have remained unspoilt for 150 years, and identifying improvements which will encourage residents and visitors, to utilise, enjoy and learn from this special place.

As the Botanic Gardens are an important element of Warrnambool's living heritage, they should be celebrated and valued during their next century as they have been in the past 150 years.



1.1 Vision

The following vision for the Warrnambool Botanic Gardens was developed as the guiding statement for this plan, and refined following community feedback.

This Vision has influenced the recommendations and priorities in this Masterplan.

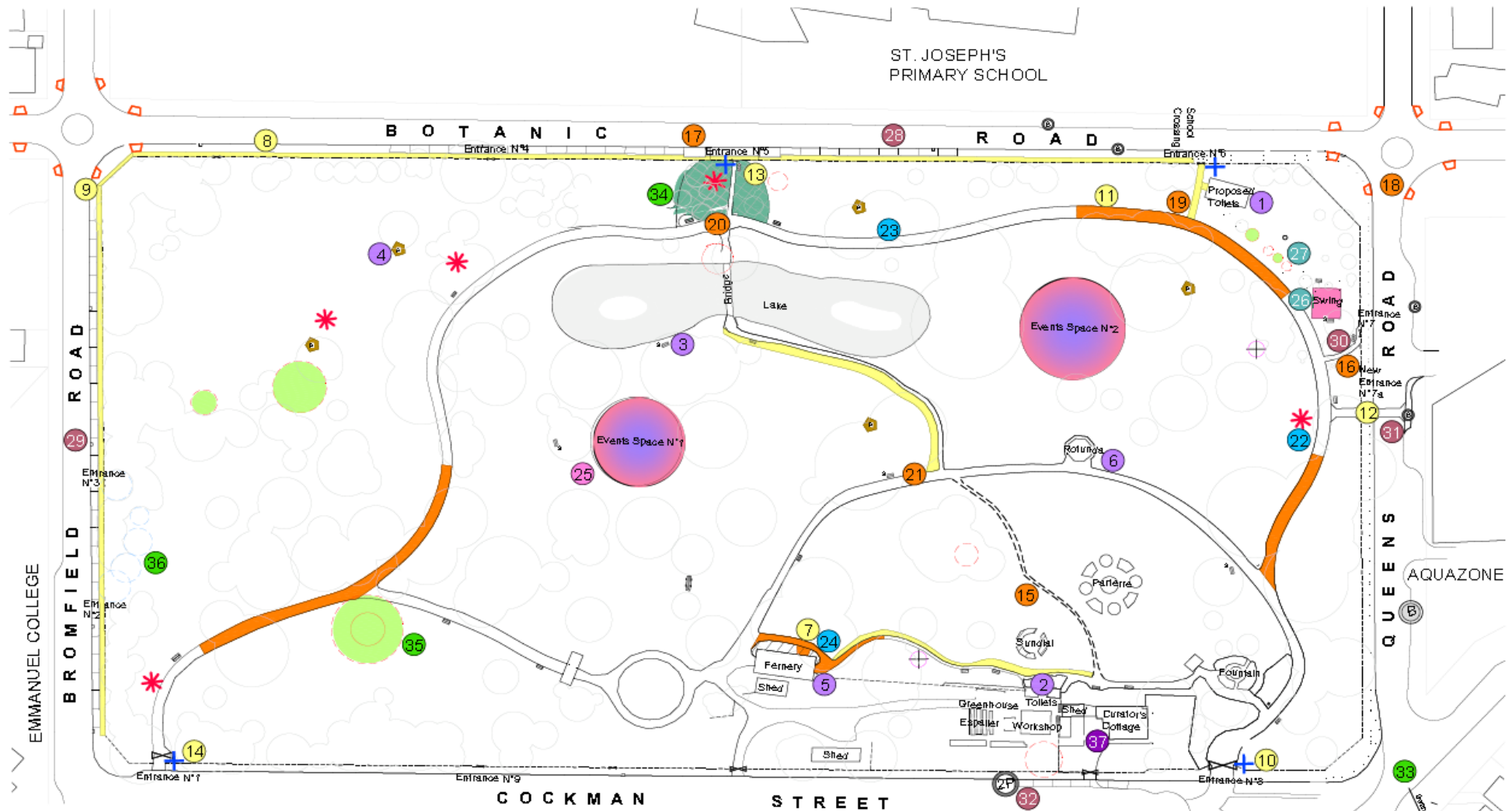
Warrnambool Botanic Gardens is a serene and beautiful heritage landscape; a special place that encourages us to celebrate the past, enjoy the present and develop a sustainable future for current and future generations.

1.2 Masterplan Recommendations

Following is a summary of masterplan recommendations that are detailed in Chapter 7. These recommendations are also noted on the Masterplan overleaf.

1. Infrastructure	Priority
1. Construct new toilet block in the northeast corner and retain existing toilets for staff.	High
2. Install seating under selected trees, avoiding palms and pine trees.	Medium
3. Install picnic platforms.	Medium
4. Construct a window to allow users of the elevated walkway to view inside the Fernery.	High
5. Investigate costs to upgrade the Rotunda to facilitate regular public access.	High
6. Undertake a cost/benefit analysis in regard to installing free Wi-Fi in the gardens.	High
2. Connectivity and Wayfinding	Priority
1. Construct an elevated walkway to the north side of the Fernery to avoid the Moreton Bay Fig tree's root buttress.	High
2. Construct a concrete footpath on the northern perimeter (along Botanic Road).	High
3. Design and install wayfinding signage to Russell's Creek Walking Trail and to Swan Reserve.	Medium
4. Install boardwalks or flexible surfacing to create accessible and safe paths where tree roots are affecting internal pathways.	High
5. Construct a new gardens entrance and pedestrian crossing point opposite Aquazone's main entrance (Queens Road).	Low
6. Design and construct an arbour and new garden beds to Entrance N°5 (Botanic Road) to improve its sense of arrival.	High
7. Design and install information at Entrances N°1, 5, 6 and 8 to provide a site map and indicate walking distances/times to other destinations near the gardens.	Medium
3. Accessibility	Priority
1. Remove the narrow asphalt path between the sundial and parterre.	High
2. Increase the width of the paths to the southeast side of the lake and the northwest of the existing toilets.	High
3. Construct a DDA-compliant surface to the existing drinking fountain near Entrance N°7.	High
4. Provide disabled car parking spaces at Entrance N°5 on Botanic Road.	High
5. Install tactile bands on the footpath at the corner of Botanic Road and Queens Road.	Medium
6. Construct a path between Entrance N°6 stile opening at the school crossing to link the garden's loop path, and the new public toilets.	High
7. Provide an accessible drinking fountain/bottle refill tap near Entrance N°5.	High
8. Maintain a minimum clearance of 2.2 metres from tree branches overhanging internal paths.	High
4. Heritage and Art	Priority
1. Implement a program to design and install sculptures/ artworks throughout the gardens.	Medium
2. Install additional interpretive signage describing Guilfoyle's design philosophy, plant names and horticultural features.	High
3. Retain some sections of the limestone edging to the asphalt pathways as a heritage feature.	Medium

5. Gardens and Landscaping	Priority
1. Link Swan Reserve and the Botanic Gardens through the provision of signage at both the gardens and Swan Reserve.	High
2. Add additional plantings of low shrubs within garden beds particularly under groups of existing trees.	High
3. Plant new specimen trees including succession planting to manage the ageing tree population.	High
4. Remove selected Cypress and Pine trees to the perimeter of the gardens to enhance views into and out of the Gardens.	High
7. Events	Priority
1. Develop a policy to identify and encourage appropriate events and activities in the gardens to increase visitation and ensure sustainability.	High
2. Designate appropriate events spaces where temporary infrastructure may be used.	Medium
3. Consider a fee schedule for hosting of 'for-profit' events within the Gardens.	Medium
8. Play	Priority
1. Retain and refurbish the Giraffe swing.	Medium
2. Design and develop sensory and nature play areas.	Medium
9. Parking and Transport	Priority
1. Construct inset parallel car parking along the southern side of Botanic Road.	High
2. Construct inset parallel car parking along the eastern side of Bromfield Street.	Low
3. Provide bicycle parking at the key entry points.	High
4. Relocate the bus stop on Queens Road and construct a kerb extension with pram crossings to both sides of Queens Road to facilitate pedestrian crossing between AquaZone and the Gardens.	Low
5. Investigate the need for parking restrictions (2 hour parking) on Cockman Street near Entrance N°8.	Low
10. Drainage and Water	Priority
1. Upgrade the irrigation system, for more sustainable and efficient use of water and labour.	High
2. Continue the maxi-cable automatic irrigation system implementation within the gardens.	High
3. Investigate options for stormwater harvesting within the gardens.	Low
11. Commercial Opportunities	Priority
1. Investigate the feasibility of utilising the Curator's Cottage for gardens-related uses and services (e.g. café, exhibition space, administration area).	Low



LEGEND

- ⊙ Proposed seat
- ⊠ Proposed drinking fountain
- ⊠ Proposed picnic platform
- ⊠ Proposed tactile bands
- ⊙ Existing pine/cypress tree to be removed



- Proposed Oak tree to replace existing tree to be removed as part of the succession planting
- Proposed garden bed with display plants
- Existing tree groups to be retained

- Proposed widened footpath
- Existing footpath to be removed
- Proposed boardwalk systems to span tree roots
- Tree proposed to be removed as per the Arbotist's recommendations



- Proposed events space where mobile stages/ platforms can be set up
- Possible location for art/sculpture
- Possible location for play elements

- ⊙ Proposed bus stop
- ⊙ Possible parking restriction
- ⊙ Proposed bicycle parking
- ⊙ Proposed inset car park spaces
- ⊙ Proposed location for wayfinding signage.

MASTERPLAN RECOMMENDATIONS - PLAN
WARRNAMBOOL BOTANIC GARDENS
WARRNAMBOOL CITY COUNCIL



<p>Amendments</p> <p>Tracked 13/03/2017 4:00pm Entered by L. McLeod 27/03/2017 4:00pm Entered by K. White 02/04/2017 4:00pm Entered by R. Lusham 02/04/2017 4:00pm Entered by R. Lusham 07/02/2017 T. Amended by L. McLeod</p>		<p>18/03/2017 10:00am Entered by L. McLeod 18/03/2017 10:00am Entered by L. McLeod 18/03/2017 10:00am Entered by L. McLeod</p>
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SITE-SPECIFIC RECOMMENDATIONS

Infrastructure

- 1 Construct new toilet block to the northeast corner.
- 2 Existing toilets to be closed to public - for staff use only.
- 3 Install seats under selected trees, avoiding palms and pine trees.
- 4 Install picnic platforms under selected trees.
- 5 Construct a window to allow users of the elevated walkway to view the ferns within the Fernery.
- 6 Investigate costs to upgrade the Rotunda to current building/ accessibility standards to enable public use.

Connectivity and Wayfinding

- 7 Construct an elevated walkway to the north side of the Fernery to avoid the Moreton Bay Fig tree's root buttress.
- 8 Construct a concrete footpath on the north external perimeter (Botanic Road)
- 9 Construct a concrete footpath on the west external perimeter (Bromfield Street)
- 10 Design and install wayfinding signage to Russell's Creek Shared Path and to Swan Reserve.
- 11 Install boardwalks or flexible surfacing where tree roots are affecting paths.
- 12 Construct a new gardens entrance opposite AquaZone to connect the two sites.
- 13 Design and construct an arbor and garden beds to Entrance N⁶ to improve its sense of arrival.
- 14 Design and install markers/signage at Entrances N¹, 5, 6 and 8 to provide a site map and indicate walking distances to other parks and destinations.

Access for All

- 15 Remove the narrow asphalt path between the fountain and parterre. Increase the width of the path to the southeast side of the lake and to the northwest side of the existing toilets
- 16 Construct a DDA-compliant surface to the existing drinking fountain near Entrance N⁷.
- 17 Provide two disabled car parking spaces at Entrance N⁶ on Botanic Road.
- 18 Supply and install tactile bands at the footpath to the corner of Botanic Road and Queens Road and to the corner of Botanic Road and Bromfield Street.
- 19 Construct a path link between the Entrance N⁶ stile opening at the pedestrian crossing and the garden's circuit loop path. This will connect to the new public toilets.
- 20 Provide an accessible drinking fountain and bottle refill tap near Entrance N⁶.
- 21 Maintain a minimum clearance of 2.2 metres from tree branches overhanging internal paths.

Heritage and Art

- 22 Develop a program to design and install sculptures/artworks
- 23 Install more interpretive signage describing Guilfoyle's design philosophy, plant names and horticultural elements.
- 24 Retain some sections of the limestone edging to the asphalt pathways as a heritage feature.

Events Infrastructure

- 25 Designate appropriate events spaces where temporary infrastructure may be used.

Play Infrastructure

- 26 Refurbish and maintain the Giraffe swing.
- 27 Design and develop sensory and natural play areas.

Parking and Transport

- 28 Construct inset parallel car parking along the southern side of Botanic Road.
- 29 Construct inset parallel car parking along the eastern side of Bromfield Street.
- 30 Provide bicycle parking at key entry points to the gardens.
- 31 Relocate the bus stop on Queens Road and construct a kerb extension with pram crossings to both sides of Queens Road to facilitate pedestrian crossing between AquaZone and the gardens.
- 32 Investigate the need for weekday timed parking restrictions (2 hour parking) on Cookman Street near Entrance N⁶.

Gardens and Landscaping

- 33 Link Swan Reserve to the botanic gardens through the provision of directional signage at both the gardens and Swan Reserve.
- 34 Add additional plantings of flow shrubs and within garden beds particularly under groups of existing trees.
- 35 Plant new specimen trees including succession planting to manage the ageing tree population.
- 36 Remove selected Cypress and Pine trees to the perimeter to allow views in and out of the gardens.

Commerce

- 37 Investigate the feasibility of utilising the Curator's Cottage for gardens related uses and visitor services.

GENERAL AND MANAGEMENT RECOMMENDATIONS

Infrastructure

- a) Undertake a cost/benefit analysis in regard to installing free Wi-Fi in the gardens.

Events Infrastructure

- b) Consider a fee schedule for hosting of 'for-profit events' within the gardens.
- c) Develop a policy to identify and encourage appropriate events and activities to increase visitation and ensure sustainability of the gardens.

Recreation/Social Use

- d) Develop a policy to identify and encourage appropriate events and activities to increase visitation and ensure sustainability of the gardens.

Drainage and Water

- e) Upgrade the irrigation system, for more sustainable use of water and labour.
- f) Continue the maxi-cable automatic irrigation system implementation within the gardens.
- g) Investigate options for stormwater harvesting within the gardens.

2 Introduction

Warrnambool is Victoria's largest coastal city outside Port Phillip Bay, and is located approximately 270 kilometres south west of Melbourne. The population is 33,501 (ERP, June 2014) and is expected to reach 46,000 by 2036.

The Warrnambool Botanic Gardens ('the gardens') is a regionally significant open space of 8.1 hectares bounded by Botanic Road, Bromfield Street, Cockman Street and Queens Road. There are two neighbouring schools; Emmanuel College to the west and St. Joseph's Primary School to the north.

The centrally located site is a short walk to other destinations such as the Aquazone Aquatic Centre (to the east), Russell's Creek Shared Path (150m to the north) and Swan Reserve, a native, waterwise garden which was established by the Warrnambool and District Society for Growing Australian Plants (approximately 300m to the south east). The northern edge of Warrnambool's CBD is approximately 400 metres south of the gardens.

As was common across Australia, the Warrnambool Botanic Gardens was originally established on a different site near the Hopkins River in east Warrnambool. The curator at the time the gardens were moved was Charles Scoborio; he continued for a time as the first curator of the gardens in their current location.

The Warrnambool Botanic Gardens is one of the earliest botanic gardens in Victoria and is one of the most intact of William Guilfoyle's provincial botanic garden designs. William Guilfoyle was born in Chelsea, England in 1840 and migrated to Australia in 1853 with his parents. His father was a botanist and ran a nursery in the Tweed River district in northern New South Wales. William and his father undertook the landscape design and planting of residential properties in New South Wales. Guilfoyle travelled as part of the HMS Challenger's scientific expedition to the South Pacific where many new plant species were discovered. Recording and working with tropical plants gave William inspiration to use palms and unusual plant combinations.

The Warrnambool Botanic Gardens are Guilfoyle's first design layout of a botanic garden, with several in the area to follow (Koroit, Camperdown, Horsham and Hamilton). He was also involved in the schematic layout of several private gardens in the western district.

In 1873 Guilfoyle replaced Baron Ferdinand von Mueller as the Director of the Royal Botanic Gardens Melbourne and he was commissioned by the Borough of Warrnambool in 1877 to design the layout for the Warrnambool Botanic Gardens. Von Mueller established many networks for plant and seed collecting throughout provincial Victoria and from the 1860's there was a great horticultural interest in various private and public gardens swapping and propagating plants. Guilfoyle was reputedly a broad scale 'landscaper and plants person'. He benefited from the state-wide interest in plants initiated by von Mueller, and embraced by private property owners and curators of gardens in Victoria and New South Wales.

The Warrnambool Botanic Gardens combine the picturesque and gardenesque styles.

It features expansive sweeping lawns and curvilinear paths where view cones subtly interplay between broad scale to contained spaces. A man-made lake with a curvilinear form, strategically located and spaced specimen trees; and dense shrub beds, particularly under groups of existing trees contribute to this classic style

The gardens have an extensive collection of plants, including remnants of original planting, at least 40 different coniferous species (including the rare *Pinus torreyana*) within the Pinetum and the perimeter. The Lone Pine in the centre of the gardens was planted in 1934. It is one of the four original *Pinus brutia* planted in Victoria). In addition there are aquatic plants within the lake, and mixed ferns.

The garden's large open lawn areas are utilised by many casual visitor, for community events and wedding ceremonies. The gardens are also a popular place for photography and informal family/social gatherings.

2.1 Scope

The Warrnambool Botanic Gardens Masterplan aims to guide the development, management, operation and use of the gardens for at least the next 15 years. The area covered by the Masterplan includes the area bounded by Botanic Road, Bromfield Street, Cockman Street and Queens Road.



Council's Project Working Group prepared a background report that summarised the known issues and opportunities for the gardens, which formed the basis of Part A of the project (refer appendices).

Part B of the Project, which was undertaken by the consultant team in conjunction with Council's Project Working Group, included:

- Analysis of the issues and opportunities identified in the Background Report
- Identification and documentation of additional issues and opportunities
- Assessment of the opportunities
- The development of a GIS-based tree database and an arborist's assessment of 354 trees.
- Site visits and interviews with the Friends of the Warrnambool Botanic Gardens and other key stakeholders
- Consideration of community input and feedback
- Preparation of a Draft Masterplan and Report

The Part B tasks are detailed in the Appendices.

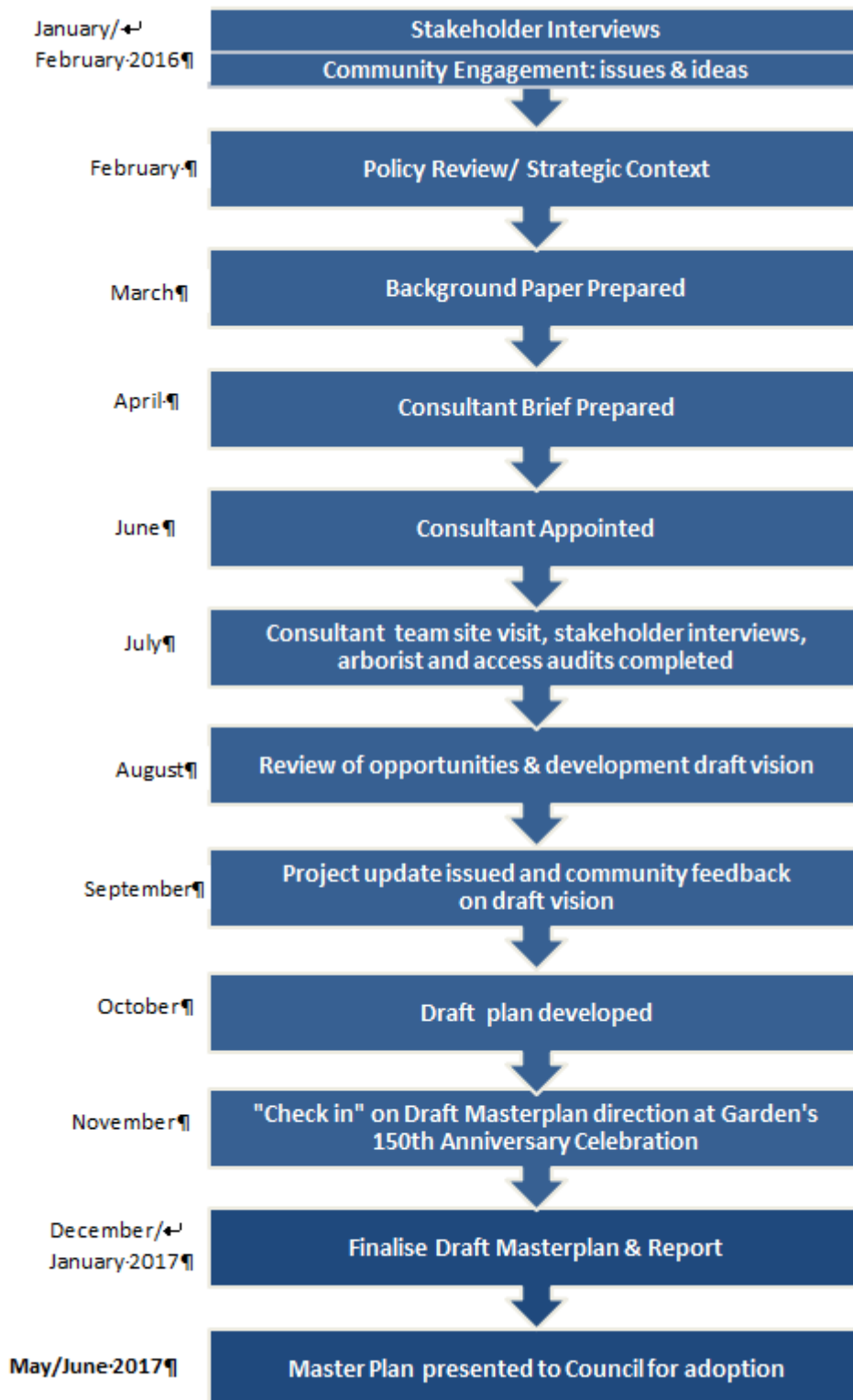
2.2 *Project Aims*

In its brief to consultants Warrnambool City Council set the following aims for the Masterplan:

- Develop a Masterplan for the Warrnambool Botanic Gardens that take into account Warrnambool's changing demographics and future needs, furthering its goals and objectives as 'Warrnambool – a Healthy City'
- Provide clear direction for Council and stakeholders by determining priorities, service levels and resourcing around the future development, management, operation and programming/activation of the botanic gardens over at least the next 15 years.
- Prepare a functional and realistic Masterplan for the Warrnambool Botanic Gardens.

3 Process

The diagram details the actions undertaken to inform the development of the Masterplan.



COMMUNITY ENGAGEMENT – No.1:

Issues And Ideas – February 2016

Extensive community engagement was undertaken to explore what visitors, residents and stakeholders love about the Gardens, and the changes and improvements they would support in the future.

In summary there were:

- **73 surveys completed**
- **8 submissions received**
- **Many conversations held at Australia Day in the Gardens 2016**
- **Interviews with key stakeholders**

The message was clear – people enjoy and value the Gardens, but often reflected that they don't go there as often as they should.

The top 5 things people told us they loved about the Gardens were:

- ✓ The trees
- ✓ The pond & ducks
- ✓ Open, grassed areas
- ✓ It's peaceful character & presentation/maintenance
- ✓ Botanical variety

The top 5 things people told us they would like changed or improved were:

- ❖ More trees & plants
- ❖ Improve toilets
- ❖ Better access & walkways/paths
- ❖ More information & signage
- ❖ Places to sit/play/things to do

The submissions received included:

- Careful management of the botanical collection is a priority
- Enhance and promote the significance of the gardens
- Recognition of the dedicated leadership and work of the Curator and gardeners
- Need to introduce automated watering systems
- Fix the paths
- Improve disability access – especially paths and toilets
- Opportunity for café/tearooms on site
- Better lighting
- Rotunda too high/inaccessible - make more useable
- Improve access from the gate at the corner of Cockman and Bromfield Streets
- Need tree replacement – loss of older trees is impacting garden's character
- Stop using chemicals in the gardens
- Promote more to visitors

In summary, while community responses identified opportunities for improvement of the gardens, a common theme was that Warrnambool is lucky to have a beautiful, peaceful, garden that has a special heritage character, which must be protected and enhanced as the foundation for any future improvements.

Following the community engagement outlined above, Council's Project Working Group (PWG) prepared a Background Report (see Appendix 1) that provides detailed information about the site, current use and management, and highlights a range of existing issues to focus the development of this Masterplan.

Since the appointment of the consultant in June 2016 the following activities have informed the project:

<p>July 2016</p>	<p>Inception and site analysis Following the initial meeting and site visit by the consultant team and the PWG, other Council officers, and the Friends of the Warrnambool Botanic Gardens, a report was prepared outlining the additional issues and opportunities identified.</p> <p>Together with the issues and opportunities previously identified in the Background Report, they were combined to undertake an Assessment of Merit (see Appendix 6) and were disseminated to members of the PWG and the consultant team for review.</p>
<p>August 2016</p>	<p>Assessment of opportunities The consultant team assessed each opportunity and provided a recommendation about level of priority assigned to each. Eleven (11) categories were used to theme the opportunities. These have continued through the project and have been used in this report (refer Section 7).</p> <p>Tree audit and assessments Homewood Consulting undertook the detailed tree audit as a GPS database of 354 trees in the gardens and met with the Curator to discuss preliminary assessments and findings.</p> <p>Project Working Group meeting and Council staff workshop An informal workshop was held to develop a Draft Vision for the botanic gardens.</p> <p>Councillor Briefing The Draft Vision, issues and opportunities were presented to Councillors for their feedback.</p>
<p>September 2016</p>	<p>Project Update and feedback on the Draft Vision: Community Engagement # 2 A project update was published (see Appendix 10) and a community survey was undertaken to gauge reactions to the Draft Vision and the issues and key directions identified. Highlights of the feedback received regarding each theme are provided in Chapter 7.</p> <p>Discussion with representatives of the Friends Group and the Curator Council Officers, the Friends of the Botanic Gardens and the consultant team leader met via phone conference. Key issues and opportunities were discussed to inform the drafting of the Masterplan.</p>
<p>October 2016</p>	<p>Preparation of the Draft Masterplan The consultant team prepared the draft Masterplan for presentation during the next phase of community consultation in November 2016.</p>
<p>November 2016</p>	<p>150th year Anniversary Celebration – Community Engagement # 3 Council officers presented the draft Masterplan at a community event in the gardens on 13th November 2016 for community feedback. Community input was also sought via a survey online and in hard copy. This was distributed to those who had previously engaged in the project consultation.</p>
<p>February 2017</p>	<p>Draft Masterplan The consultant team created a draft Masterplan for refinement and sign off by the PWG, followed by presentation to Council for adoption.</p>

4 History

The Warrnambool Botanic Gardens is Crown Land gazetted for botanic gardens with Council appointed as the Committee of Management. The site of the Warrnambool Botanic Gardens was selected in 1866.

4.1 Statement of Significance

The early development of the gardens owes much to the Government Botanist, Ferdinand von Mueller who arranged for many plants to be sent from the Melbourne Botanic Gardens to Warrnambool and other botanic gardens in regional Victoria. Charles Scoborio was the first curator of the Warrnambool Botanic Gardens; he also assisted in obtaining plants through the Government botanist

William Guilfoyle, the Director of the Melbourne Botanic Gardens between 1873 and 1909, was commissioned by Warrnambool Borough Council to design the Warrnambool Botanic Gardens in 1877.

The National Trust registered the Warrnambool Botanic Gardens in 1990 and they were added to the National Estate in 1992. The National Estate's Grants Program awarded funds in 1995 for plans to improve the botanic gardens and since then, half of those recommendations have been implemented.

In 2006 the botanic gardens were added to the Victorian Heritage Register (H2090). Their citation was for historical, scientific, aesthetic and social significance to the State of Victoria.

The Warrnambool Botanic Gardens is historically significant as one of the earliest provincial botanic gardens and along with the Hamilton Botanic Gardens, are the most intact of William Guilfoyle's provincial botanic garden designs. The gardens are Guilfoyle's first design layout of a botanic garden with several in the area to follow being Koroit, Camperdown, Horsham and Hamilton.

The botanic gardens are of scientific significance for their extensive collection of plants including remnants of original planting, at least 40 different coniferous species (including the rare *Pinus torreyana*) within the Pinetum and the perimeter, the Lone Pine in the centre of the gardens planted in 1934 (one of the four original *Pinus brutia* planted in Victoria). In addition there are aquatic plants within the lake and mixed ferns from the Otway Ranges within the Fernery.

The botanic gardens are of aesthetic significance due to Guilfoyle's design which combines the picturesque and gardenesque styles and features broad sweeping lawns, curvilinear paths where view cones subtly interplay between broad scale to contained spaces, the man-made lake of its curvilinear form, strategically located and spaced specimen trees and dense shrub beds particularly under groups of trees.

The subtle interplay of the broad scale grassed areas against massed herbaceous shrub borders provides contrast and emphasises the importance of both the bold grassed areas and the visual containment of garden beds. In the dynamics of contrast between containment and broad grassed areas, there are still the distant vistas or windows beyond the gardens which was a trait inherent in Guilfoyle's garden layouts. The sundial, the fountain and associated urns are key features of the gardens and are typical of the layout of the late 19th century public and botanic gardens. Their use in prime areas, is consistent with other Guilfoyle's garden layouts.

The botanic gardens are of social significance for their long-term association with the community, tourists and students. The gardens have a significant role in landscape, botanical and horticultural education. In addition to hosting major events and musical performances, the gardens are popular for weddings, photographs and family gatherings.

4.2 Context

Warrnambool's Botanic Gardens, show a clear expression of the setting, history and purpose. The layout clearly blends the scientific approach into a landscape setting, that allows the gardens to become a place of casual and passive recreation and enjoyment with the opportunity to observe and learn about trees, shrubs, herbs and perennials. Botanic gardens evolved from 18th century gardens where plants, often from other parts of the world, were grown, trialled and displayed to inform the people of the plant and country of origin.

The Royal Horticultural Society (RHS) in England define a botanic garden as:

'A garden in which a diversity of plants is grown for purposes of study and instruction and in which they are arranged according to a system of classification, not necessarily landscape harmony or unison. Plants are clearly labelled and some botanic genera/family are grown together.'

This purpose of the botanic garden is further supported by the International Agenda for Botanic Gardens in Conservation's⁴ definition of a botanic garden:

'Botanic gardens are institutions holding documented collections of living plants for the purposes of scientific research, conservation, display and education.'

The function of a botanic garden as a trial ground for the introduction of new plants was characteristic of all provincial botanic gardens in Victoria during the 19th century. The RHS stated that 'the stock of plants in a botanic garden is maintained and enriched by the international exchange of seeds, less often of plants, between botanic gardens'. In Victoria Baron Ferdinand von Mueller was appointed the director of the Royal Botanic Gardens Melbourne and he arranged plants as a systematic garden for scientific research and trialling rather than a collection of plants to create a landscape setting. William Guilfoyle, who was appointed director in 1873, modified his layout fifteen years later. Guilfoyle's approach to the Royal Botanic Gardens was to combine plant collections more randomly and let the setting and layout create interest and stimulation for the visitor. It is this philosophy that is inherent within the provincial gardens in western Victoria that Guilfoyle either designed or had input into the design.

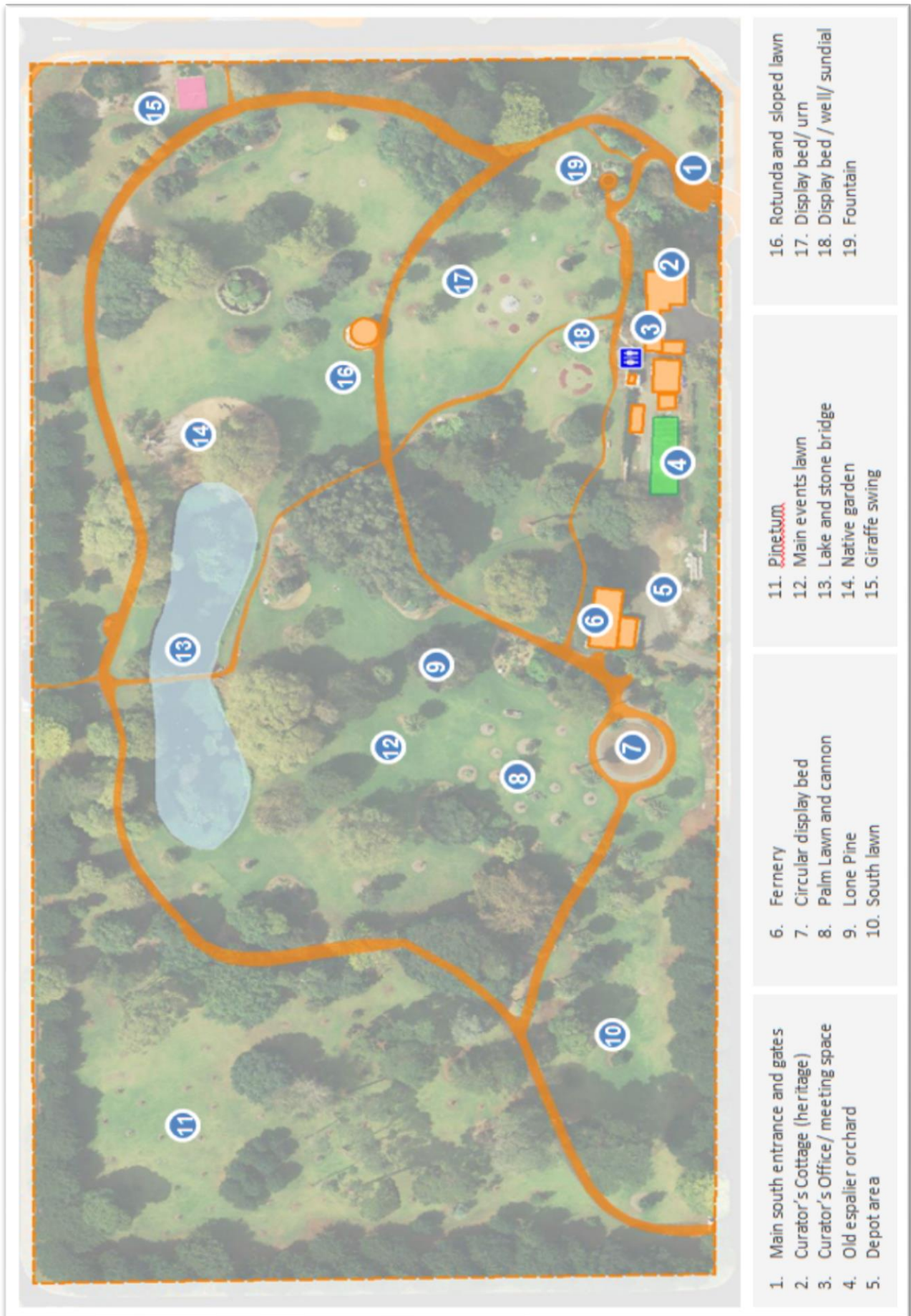
Paul Fox¹ in his book *Clearings: Six Colonial Gardeners and Their Landscapes* speaks of William Guilfoyle's design ethos that arose from three aspects of Guilfoyle's life following his migration to New South Wales with his family from England: his exposure to the picturesque qualities of the Sydney Botanic Gardens, his experience of the Australian rainforest in wild conditions on his family's property near Tweed River in northern New South Wales, and his travels as a member of a scientific expedition in the South Pacific.

Andrew Saniga², in his book *Making Landscape Architecture in Australia*, mentions Guilfoyle's influence on the garden layouts for the homesteads Mooleric and Turkeith at Mt. Gellibrand where a broad palette of plant material was used, including palm trees and other species that reflected the image he had formed from his rich colonial experiences. Guilfoyle had a hand in the layout of other western district properties of Dalvui and Mawallok. Guilfoyle was keen to experiment with Australian native trees and shrubs and his planting often included New South Wales rainforest species, unlike predecessors where only exotic species were used as the image of the Australian bush was quite threatening to early colonial settlers.

In Victoria, some botanic gardens are simply parkland or a reserve of specimen trees with isolated garden beds. This is not the case for Warrnambool's Botanic Garden.

The Warrnambool Botanic Gardens exhibits a strong botanical framework, in the classic gardenesque style, for future generations to enjoy, learn from and reflect on.

Existing Conditions



Extract from Background Report Courtesy: Warrnambool City Council

The views within the gardens are underpinned by the topographical difference in level between Cockman Street, and Botanic Road to the north which is significantly lower. This sloping topography is most evident at the southeast entrance, adjacent to the Curators Cottage. At this entrance, near the fountain and parterre garden, the visitor is presented with a view of the eastern half of the gardens over specimen trees and confined groups of trees, reinforcing Guilfoyle's design philosophy of views beyond or windows within the garden to the broader landscape.

Throughout the gardens there are contained groupings of mainly exotic trees, combined with perennial planting and shrub beds underneath tree groups. These groups collectively create the contrast to the sweeping grassed areas and curvilinear paths, particularly evident to the eastern half of the gardens.

4.3 *Strengthening Heritage Values*

There is scope to enhance the quality work undertaken over the past decade by the Curator and Friends Group establishing low shrubs, perennials and groundcovers underneath existing mature trees, in difficult areas of dry shade. New/additional planting should be confined to existing mulched areas, rather than create new garden beds. The plantings should be concentrated along pathways to provide botanic interest in the array of species already established and between the curvilinear pathways and broad expanse of sweeping lawn that join paths and larger garden beds.

In December 2016, a detailed inspection was undertaken of the 31 separate garden bed areas, most underneath existing trees. A recommended planting list (referred to in section 7.6, and reproduced in full in the Appendix) identifies species performing well in the gardens and suitable species observed elsewhere by the consultant team.

All of the specimen trees and palms in the gardens have dedicated mulch rings around their base, covering an area midway between each tree's structural root zone and tree protection zone. This is a contemporary and accepted treatment in tree management to avoid dried grass underneath trees and importantly, provide better air movement and water percolation to root systems than would otherwise occur in a grass to trunk situation.

The Curator has identified improvements to the irrigation system that will lead to more effective application of water in the evenings when there is less evaporation. Currently irrigation is manually managed through moving sprinklers. This is labour intensive and an inefficient use of water as it is applied during the day (working hours).

As part of the arborist's assessment, a significant number of trees (161) were identified as requiring important pruning works and procedures will assist in extending the life expectancy of specimen trees in the gardens. The spatial qualities of the gardens have been documented and future planting must respect the physical separation of specimen trees and respect the view cones.

The management of the existing trees to prolong life expectancy, careful siting of any replacement trees and limiting shrub planting to maintain view cones and open vistas, will protect the flowing curves and Guilfoyle design character of the gardens.

The following curatorial management recommendations should apply to improve the botanical value and protect design character of the Gardens:

- (a) Limit tree planting to replacement only trees and confirm location by checking that the proposed location of any canopy tree over time will not interfere with long range and contained view cones.
- (b) Limit additional shrub and perennial infill planting to the established garden beds within the eastern half of the gardens of which there are 31 existing garden beds and 2 proposed garden beds. The emphasis on perennial and small shrub selection is important as the large garden beds underneath trees presents the horticulturist with the most difficult growing conditions of all – dry shade, in a climate that is likely to experience hotter summers with climate change. The challenge is to nominate plants that tolerate dry shade, can withstand the rigor of an even drier climate in the future and provide seasonal colour, either through flower or foliage or both. Fortunately, the Curator and the Friends Group have initiated a significant amount of under planting beneath trees and resources need to be made available – irrigation, topsoil and plants and labour - to effectively undertake the supplementary planting in the autumn of 2017, 2018 and 2019. A recommended planting list (referred to in section 7.6), is available in full in the Appendix 9.
- (c) The removal of some of the Cypress and Pine trees to the perimeter to allow views into and out of the gardens.
- (d) Install additional plant labels.

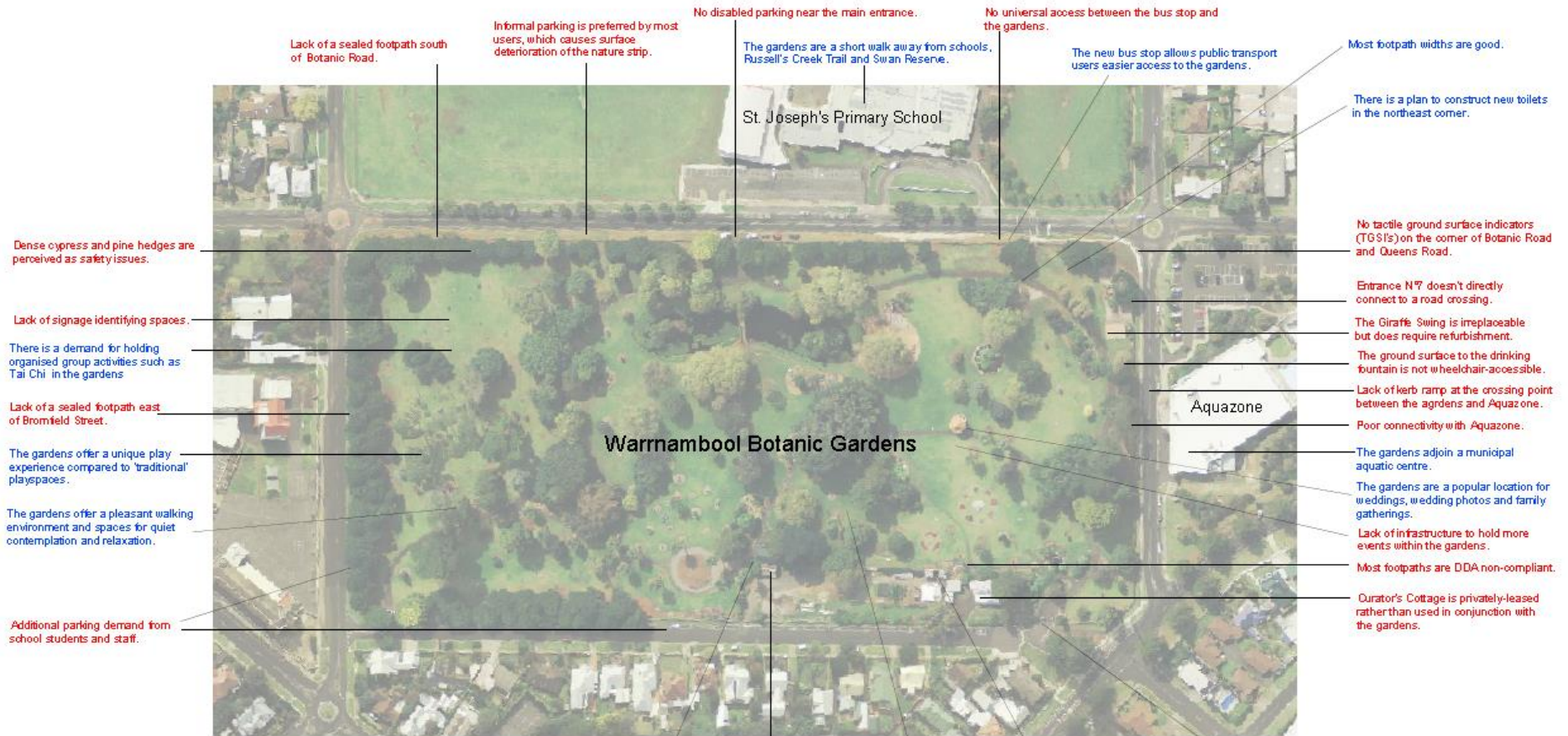
A challenge for some botanic gardens is the lack of labelling to trees, shrubs, herbs and perennials. This can be due to insufficient funds to produce and maintain labels, theft or vandalism or lack of those responsible in understanding of the purpose of a botanic garden. Botanic gardens should educate visitors, making the science of botany more easily understood.

In Warrnambool's case, some trees, shrubs, herbs and perennials are labelled but ideally, at least one or two representative species of each plant should be labelled.

To improve botanical interpretation, representative species should be labelled, making nominated garden beds dedicated or destination beds for educational purposes. Implementing labelling protocols in several main beds in one area would assist visitor understanding of the garden's plantings and the educational role of the gardens.

While information online has made learning about plants easily accessible, there remains the need for people to be able to touch and smell foliage, fruits and stems. This is a key value of botanic gardens in the future.

The actions described above have been included in the masterplan recommendations identified in section 7 of this report.



DETAIL STRENGTHS
 - The existing picnic tables are generally wheelchair accessible.

DETAIL ISSUES
 - Limited variety of seating options.
 - There could be more picnic tables.
 - Lack of botanical labels for plants.
 - Limestone soldier course edging on some footpaths is DDA non-compliant.
 - Lack of bicycle parking to serve the gardens.

The gardens provide memory-making experiences such as feeding the ducks and climbing the roots of the Moreton Bay Fig tree.

William Guilfoyle's design is fairly intact.

Issues and Challenges are indicated in RED.
 Strengths are indicated in BLUE.

ANALYSIS PLAN
WARRNAMBOOL BOTANIC GARDENS
 WARRNAMBOOL CITY COUNCIL

Authorisation	MICHAEL SMITH AHD ASSOCIATES Laurena Pearce Architecture a h d i n design
Project Name	Warrnambool Botanic Gardens
Client	Warrnambool City Council
Issue	Analysis Plan
Project No.	18-002
Client Ref	
Drawing No.	Sheet 1 of 1

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Urban GIS
 Date: 31.10.2018
 Project No: 18-002
 Client Ref:

5 Previous Planning

The Warrnambool Botanic Gardens Conservation and Development Plan was carried out in 1995 with funds made available by the Commonwealth of Australia under the National Estate Grants Program. A review of this plan was done in 2004, with around 50% of the recommendations since implemented.

The status of recommended actions are summarised below.

5.1 1995 MASTERPLAN

RECOMMENDATION	Actioned
1. Retain Guilfoyle's philosophy and vision through maintaining the original layout and plants.	Yes
2. Retain views into the gardens.	Yes
3. Remove elm trees and poplars from the northeast corner to re-establish Guilfoyle's design intent.	Partially
4. Re-plant the garden beds according to Guilfoyle's design intent.	Partially
5. Adapt the former Curator's Cottage for other functions such as tea rooms, a gallery and horticultural centre. OR	No
6. Refurbish the Curator's Cottage to house one of the senior gardens staff.	No
7. Construct 'architecturally-sensitive' extensions to the Curator's Cottage for use as meeting rooms, toilets, etc.	No
8. Reconstruct the external staircase of the Rotunda, speaker's balcony and timber/wire balustrade. Make use of the Rotunda as tea rooms for special functions.	Partially
9. Establish a garden/orchard for the use of schools and the community.	No
10. Construct a new entrance into the botanic gardens from the municipal pool area (now Aquazone).	Yes
11. Relocate the Giraffe Swing to the municipal pool area (now Aquazone).	No
12. Implement an ongoing tree replacement program.	Yes
13. Retain the two cypress arch features.	No
14. Retain the four commemorative tree plantings.	Yes
15. Retain the Pinetum's spatial layout and species composition.	Yes
16. Retain the Norfolk Island Pine trees in the triangle adjacent to the main entrance (now Entrance N°8).	Yes
17. Maintain the existing form of the lake and bridge and add plantings within the lake islands and to the border of the lake.	Yes
18. Conserve the well shed structure.	Yes
19. Retain the south perimeter picket fence along Cockman Street.	Yes
20. Conserve the cannon and the Memorial Gates at the main entrance (now Entrance N°8).	Yes
21. Retain the dual pathway system, i.e. the wide promenades and the narrower 'personal' pathways.	Yes
22. Reconstruct the perimeter timber picket fence particularly on Queen Street (now Queens Road) and re-plant boundary windbreaks and hedges.	Yes
23. Re-establish the Scoborio-period northern entrance (now Entrance N°5) on	Yes

Botanic Road.	
24. Re-plant the circular bed near the Fernery with a perennial display surrounding a central feature tree.	Yes
25. Establish an Otway Rainforest area with dense planting to the south of the Fernery.	No
26. Conserve the fountain and associated features and plantings.	Yes
27. Conserve components of the depot precinct.	Yes
28. Retain existing gas lamp and install two new gas lamps near the main entrance (now Entrance N°8).	Yes
29. Provide labels for all existing trees and shrubs and label new plantings.	Partially
30. Ensure infrastructure and amenity facilities are all-abilities accessible particularly the footpaths, entrances, seats, picnic tables and shelters.	No
31. Review Council's policy of allowing weddings to be held within the gardens free of charge.	No
32. Appoint additional staff, i.e. a full-time heritage consultant and a part-time landscape architect, to assist the Curator in the management of the gardens.	No

5.2 2004 MASTERPLAN

Whilst the 2004 Masterplan was adopted by Council, many recommendations were not implemented due to resourcing limitations. Readers will note that many recommendations from the 2004 Plan are quite similar to some recommendations proposed in this report.

RECOMMENDATION	Actioned?
1. Utilise the front garden of the Curators Cottage and garden bed 4 as a demonstration area for drought tolerant gardening.	Partially
2. Reserve a portion of the Curators Cottage for use as the office of the Curator of the gardens.	No
3. Investigate options for the use of the Curators Cottage as a Community Meeting place and Headquarters for the Friends Group.	No
4. Provide staff car parking and storage for maintenance equipment and vehicles, making and storage of compost and soil within the depot area.	Yes
5. Establish an 'imaginative play structure' area next to the proposed Rainforest.	No
6. Remove the shed on the southern boundary when no longer required.	Yes
7. Establish a picnic area to the northern lower Pinetum lawn including picnic facilities and bus parking on Botanic Road.	No
8. Develop an integrated interpretive signage system for the cultural history and the botanical information.	No
9. Establish an indigenous garden bed at the northern end of the eastern lawn area to provide screening from the school.	No
10. Extend the internal footpath system towards the proposed Rainforest from the 1995 Masterplan.	No

6 Trees and Plantings

6.1 Arborist's Assessment

Homewood Consulting prepared an assessment of 354 existing trees within the botanic gardens. The audit undertaken in August 2016 has created a detailed database of the garden's trees, locating them using GIS mapping, identifying the botanic name and common name of each tree, the origin, i.e. exotic, native or indigenous, each tree's canopy dimensions, trunk diameter, health, structure and useful life expectancy. From the audit each tree's contribution to the landscape setting, its individual botanic or horticultural significance has informed a tree's retention value.

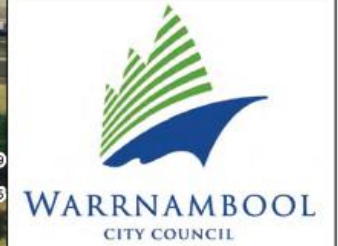
Important information to ensure protection of root systems was recorded, based on each tree's trunk diameter, to determine the Root and Tree Protection Zones that are required. These zones establish parameters for any construction or trenching operations within a tree's root zone.

The assessment identified twelve (12) trees, mainly cypress and poplars, that need to be removed and a further 161 trees were assigned a priority of arboricultural work including deadwood removal, canopy and weight reduction pruning. These trees were categorised from urgent to low priority works. These works should commence immediately and be completed within the next 24 to 36 months (by 2020). All works are to be undertaken by a qualified arborist, experienced in management of veteran trees, in accordance with Australian Standards.

A full copy of the Arborist's report can be found in the Appendix.

The Arborist recommends these trees be removed (August 2016) – refer plan overleaf.

Tree Number	Botanic Name
44	<i>Populus nigra</i> 'Italica'
45	<i>Populus nigra</i> 'Italica'
46	<i>Populus nigra</i> 'Italica'
47	<i>Populus nigra</i> 'Italica'
88	<i>Corynocarpus laevigatus</i>
143	<i>Salix babylonica</i>
162	<i>Acacia implexa</i>
163	<i>Acacia mearnsii</i>
297	<i>Hesperocyparis macrocarpa</i>
301	<i>Pinus pinaster</i>
319	<i>Cupressus torulosa</i>
349	<i>Cinnamomum camphora</i>



**Warrnambool
 Botanic Gardens**

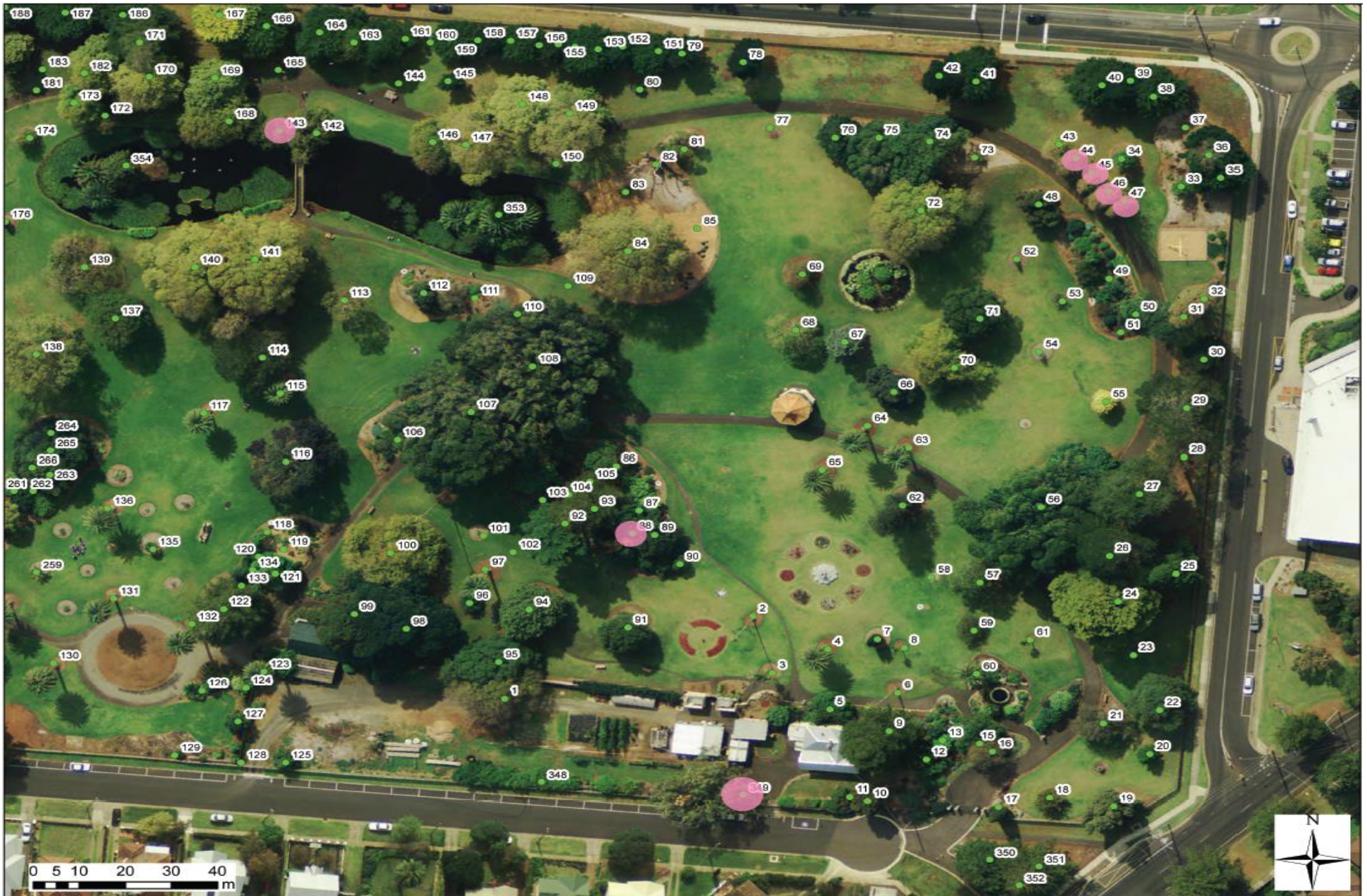
Legend

- Existing tree
- Tree recommended for removal

Base Information Supplied By:
 Warrnambool City Council
 Date: September 2016
 Plotted: Blake Clancy
 Projection: GDA 94 Zone 55



150 Junction Road
 Nunawading VIC 3131
 Tel/Fax: 03 9877 4114
 ABN: 39 531 880 706



7 Masterplan Recommendations

7.1 Infrastructure

Current Situation

The existing public toilets are located in the south-east corner of the gardens, west of the Curator's Cottage. Council's Public Toilet Strategy (2014) identified the existing toilets as unsuitable for public use and recommended the construction of a new public toilet facility to service visitors to the gardens.

Temporary toilet facilities will still be required to service community events such as WUNTA and Australia Day. The northeast corner is the proposed location for the new toilets as it has the support of Heritage Victoria and is able to be serviced by existing sewer lines without pumping.



The number and type of seats in the gardens is inadequate. There are only three existing picnic tables.



Existing seat and picnic table at the gardens

Community Feedback

The highest priority for infrastructure is new toilet facilities. Opinion was divided on whether the existing toilet facilities should be retained (but supplemented with additional facilities built elsewhere in the gardens), upgraded or decommissioned to make way for a new toilet block. Additional seating options and picnic facilities were strongly supported.

Recommendations:

7.1.1 Construct new toilet block to the northeast corner and retain existing toilets for staff use only. HIGH PRIORITY

The proposed location for new toilet facilities in the northeast corner provides improved accessibility as it is on a lower/more level section of the gardens and has better access to the most highly used areas – rotunda, lake, events spaces.

The proposed toilet facilities will have good accessibility for the proposed disabled car spaces on Botanic Road, and be in close proximity to the proposed new main entrance (Entrance N°5). The new toilet block should be carefully designed to integrate into the garden setting.



Existing toilets



Rotunda

7.1.2 Install seating under selected trees, avoiding palms and pine trees. MEDIUM PRIORITY

Permanent shaded seating options within the gardens are needed in summer months. These should be located in flat areas near paths to provide good access. Users should also be encouraged to bring their own rugs and chairs during events.

Whilst traditional outdoor seats and tables can be utilised, creative options should also be considered.



7.1.3 Install picnic platforms.

The provision of table-like timber decks or platforms will allow people to enjoy the gardens for a longer visit, even if the grassed areas are wet. The timber platforms combine flexible seating and tables for groups of people. The installation of picnic platforms should be considered in the most used areas such as near the Giraffe Swing, the rotunda and the lake.



Examples of a timber picnic platform seats & decks.



7.1.4 Undertake a cost/benefit analysis of installing free Wi-Fi in the gardens. HIGH PRIORITY

Research shows that free Wi-fi encourages people to spend more time in public spaces. Wi-fi access provides opportunities to promote other local destinations, events and activities in the city. Wifi infrastructure in the gardens could be considered as part of a more extensive city-wide network.

Wi-fi login data provides valuable information about site utilisation rates, time/day/length of stay and information about gardens users. The data could prove valuable to inform planning and promotion of activities and improvements to the gardens.

7.1.5 Investigate costs to upgrade the Rotunda to facilitate regular public access.

HIGH PRIORITY

The Rotunda is an iconic feature of the gardens (refer image page 27) and creates curiosity and interest for visitors.

Visitors to the Gardens would like to access the podium to gain a view and different aspect of the gardens. An audit of facilities, steps and handrail/balustrade conditions should be undertaken to determine whether providing regular public access is feasible.

7.1.6 Construct a window to allow visitors to view inside the Fernery.

HIGH PRIORITY

An opportunity to create a feature window to the north side of the fernery, providing views of the fern canopies from the proposed elevated walkway providing a memorable experience for visitors.



7.2 Connectivity and Wayfinding

Current Situation

The condition of some footpaths in sections of the gardens largely due to invasion by tree roots particularly from the large Elms, Oaks, Poplars and Morton Bay Fig trees is a risk to users and limits site accessibility. Some sections of the paths are very narrow, steep and do not comply with contemporary access standards.

While there is existing information signage more interpretive information on the history and botanical values of the gardens and information about the location of facilities such as toilets, pathway loops, botanical and other features, and other destinations in the city is needed.

Community Feedback

There was widespread support for widening/improving the internal footpaths and elevating some to prevent damage to tree roots and create safe walkways.

Better access into the gardens from Aquazone and connectivity to adjoining streets is also supported.

Recommendations

7.2.1 **Construct an elevated walkway to the north side of the Fernery to avoid the nearby Moreton Bay Fig tree's root buttress.** **HIGH PRIORITY**

An elevated walkway will protect the Moreton Bay Fig tree to the north side of the Fernery and add an interesting and memorable feature for visitors.

Refer concept sketch in section 7.1.



Existing Moreton Bay Fig tree next to the Fernery
Proposed elevated walkway would extend between the tree and the Fernery.

7.2.2 Construct a footpath on the northern external perimeter (Botanic Rd). HIGH PRIORITY

7.2.3 Construct a footpath on the western external perimeter (Bromfield Street). HIGH PRIORITY

Completing the perimeter footpath (outside the gardens fence) will create walking loops between internal paths and footpaths from the surrounding areas. The top priority for footpaths is the northern perimeter (Botanic Road) where the new main feature entrance is proposed and adjacent to the proposed public toilets.

7.2.4 Design and install wayfinding signage to Russell's Creek Shared Path and Swan Reserve.

MEDIUM PRIORITY

Connection to other walkable destinations nearby is important to encourage visitors to enjoy other parks and public places. The key destinations should be highlighted on a map to be installed at main entry/exit points. Additional information about the destinations could be provided on the signage or online. Strengthening the connection to other locations in the area builds on the gardens close proximity to Warrnambool's CBD, other parks and recreational spaces, and encourages visitation to related assets (eg Swan Reserve).

7.2.5 Install boardwalks or flexible surfacing where tree roots are affecting internal paths.

HIGH PRIORITY

Elevated boardwalks will improve accessibility and will protect tree roots from further damage. The boardwalks must support site maintenance vehicles/equipment and be permeable to water. There is currently around 250 metres of asphalt pathways affected by tree roots. Options such as rubaroc, modwood, elevated boardwalk and/or weldlok fibre grid reinforced boardwalks/platforms should be considered. These materials will improve accessibility in the gardens, in addition to being permeable to stormwater and allowing trees to continue to grow with minimal root disturbance.

7.2.6 Construct a new gardens entrance and pedestrian crossing point opposite Aquazone to connect the sites.

LOW PRIORITY

Aquazone, which is immediately opposite the gardens in Queens Road, is a very popular facility with annual attendance of 220,000+ visits per year. Encouraging Aquazone users to visit the gardens would increase use of the Gardens. The entrance should be directly opposite the AquaZone entrance and be wider than the current entrance (N°7). Consideration of improved road safety for pedestrians should be included in the design. A signature sculpture piece could be considered, but the new entrance should not detract from the nearby Giraffe Swing.



Existing conditions at Entrance N°7

7.2.7 Design and construct an arbour and new garden beds at Entrance N°5 to improve its sense of arrival. HIGH PRIORITY

As the most used entrance to the Gardens, the presentation of the northern entrance should be significantly improved. A detailed design including the removal of adjacent cypress and pine trees, installation of an arbour, and seating should be prepared, and a new garden bed with planting of colorful, drought tolerant groundcovers and small shrubs is recommended. The installation of artwork at this location should be considered.



Existing conditions at Entrance N°5



7.2.8 Design and install information at Entrances N°1, 5, 6 and 8 to provide a site map and walking distances/times to other destination near the gardens.

MEDIUM PRIORITY

A gardens map including site amenities, internal loop paths, main features of the gardens and the time/distance to other parks and destinations in the area would enhance experience of the gardens and encourage visitors to explore the site and surrounds, promoting physical activity.



Example of possible Wayfinding signage.

7.3 Accessibility

Current Situation

Accessibility in the gardens is poor.

The existing toilets, along with some paths, gates, seating, drinking fountains and car parking do not comply with contemporary access standards.



Community Feedback

The community clearly identified the need for improved access to public toilets and car parking, connected by safe paths around and within the site.

Recommendations

- 7.3.1 Remove the narrow asphalt path between the sundial and parterre. HIGH PRIORITY**
- 7.3.2 Increase the width of the paths to the southeast side of the lake and northwest of the existing toilets. HIGH PRIORITY**

- 7.3.3 Construct a DDA-compliant surface to the existing drinking fountain near Entrance N°7. HIGH PRIORITY**

Drinking fountains should be all-abilities accessible. The existing drinking fountain at entrance N°7 may be accessible for people in wheelchairs however, the surface surrounding the fountain is uneven and requires repair.



Existing drinking fountain near Entrance N°7

- 7.3.4 Provide disabled car parking spaces at Entrance N°5 on Botanic Road. HIGH PRIORITY**

Entrance N°5 off Botanic Road is the ideal place to install two disabled parking spaces as it is to become the new main entrance and will be adjacent to the proposed new toilet location. The only existing disabled parking is on the south side in Cockman Street and from this point accessibility across the site is difficult due to the change in levels.

- 7.3.5 Install tactile bands at the footpath at the corner of Botanic Road and Queens Road. MEDIUM PRIORITY**

Tactile bands at intersections will make access into the gardens easier and safer for visually impaired persons. Tactile bands and markers at intersections are now mandatory as part of accessibility compliance.

7.3.6 Construct a path between the Entrance N°6 stile opening at the school crossing to link the garden's circuit loop path and the new public toilets. HIGH PRIORITY

An accessible path to the proposed toilets from Entrance N°6 and from the gardens circuit loop path will provide a path for visitors in the gardens and to the proposed new public toilet facility.



Existing internal footpath to be connected to Entrance N°6

7.3.7 Provide an accessible drinking fountain and bottle refill tap near Entrance N°5.

HIGH PRIORITY

An accessible drinking fountain is required in the gardens for the benefit of visitors near the proposed new main Entrance N°5.

7.3.8 Maintain a minimum clearance of 2.2 metres from tree branches overhanging internal paths.

HIGH PRIORITY

Ensuring all tree branches are at least 2.2 metres away from the surfaces of internal footpaths will facilitate ease of movement within the gardens for people with wheelchairs, walking frames, prams and bicycles.

7.4 Heritage and Art

Current Situation

The original Guilfoyle design layout for the gardens is fairly intact and some original remnant vegetation (three *Eucalyptus viminalis* subsp. *cygnetensis*, one *Bursaria spinosa* and a few *Acacia melanoxylon*³) are present.

The history of the Gardens can be further celebrated through art, wayfinding and information signage. Some existing information signage such as those identifying the Rotunda and the Lone Pine contain QR codes that lead to the Warrnambool Botanic Gardens website. The use of QR codes can be expanded to a range of promotional and educational applications.

The Friends of the Warrnambool Botanic Gardens have restored and installed interpretive information about the historic well located in the south eastern part of the gardens (see overleaf).

Community Feedback

The community supports the introduction of sculptures/artworks in the gardens.



Recommendations

7.4.1 **Implement a program to design and install sculptures/artworks throughout the gardens.**

MEDIUM PRIORITY

Any sculpture or artworks should be located as an edge to garden beds. Artworks could be permanent, or ephemeral (temporary). Consider installing some on the north side of the gardens close to the entrance points.

7.4.2 **Install additional interpretive signage describing Guilfoyle's design philosophy, plant names and horticultural elements.**

HIGH PRIORITY

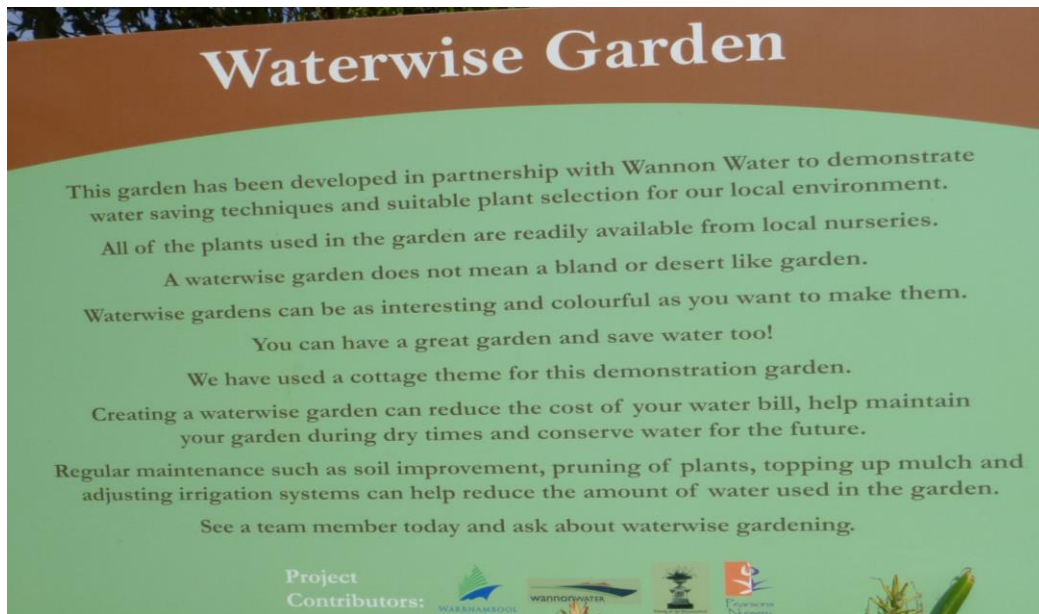
Informing people of the history and layout of the gardens will add another dimension to their experience.

Link information to other Guilfoyle-designed gardens.

Very few plants are labelled in the gardens. Informing people of the genera/ species/common name and country of origin assists visitors in learning about plants.

See samples of existing signage and labelling overleaf.

Examples of existing signage:



7.4.3 Retain some sections of the limestone edging to the asphalt pathways as a heritage feature. MEDIUM PRIORITY



Existing limestone/sandstone soldier course edging at the edges to footpaths

Based on recent advice from Heritage Victoria (July 2016), removal of some of the soldier coursing of limestone/ sandstone rock edging would be acceptable. Retaining sections (several

20-30 metre lengths) of limestone edging on footpaths subject to heritage approval will showcase the gardens' original heritage features

The edging helps to deflect surface water along paths and at junctions with garden beds retains soil and leaf material. The issue is that in some parts, the stone edges are trip hazards.



Children playing on the historic cannon.

7.5 Recreation and Social Use

Current Situation

Playing amongst the Moreton Bay Fig tree roots, around the lake and feeding the ducks in the gardens, are described by many as local memory-making experiences for children for generations. The gardens are a popular place for picnics and social gatherings for groups of all sizes.



In the past the Friends of the Warrnambool Botanic Gardens (FOWBG) conducted free guided tours of the gardens on the second and fourth Sunday of the month. Since mid 2016, these tours have been suspended and tours are now only conducted on request. The FOWBG have also conducted seasonal, plant-related activities for many years.

There is scope to increase utilisation and enjoyment of the gardens by creating opportunities for group recreation activities such as Tai Chi, Yoga etc. art classes, gardening workshops, landscaping and design short courses hosted in the gardens. A policy framework to define compatible uses is needed to guide, promote and manage these opportunities.

Community Feedback

The community supports passive recreation within the gardens and the gardens taking on an intergenerational/educational learning role. The community supports compatible activities which increase utilisation of the space.

Recommendations

7.5.1 Develop a policy to identify and encourage appropriate events and activities in the gardens to increase visitation and ensure sustainability.. HIGH PRIORITY

Encouraging group activities has the potential to attract more regular users to use the gardens. There is opportunity to link with Aquazone and other recreation providers to utilise the gardens for appropriate programs.



7.6 Gardens and Landscaping

Current Situation

A considerable amount has been achieved in maintaining and restoring the original Guilfoyle vision – sweeping paths, bold/expansive lawns, vistas both within and out of the gardens and the planned balance of trees and shrubs.



There are 31 existing garden beds around trees, and large shrubs in the gardens. These exclude the mulched areas around specimen trees. Appropriate species have been planted as understorey planting in quite difficult conditions of dry shade under evergreen trees, particularly Moreton Bay Fig Trees. Some mature and declining trees need replacement in the future. As part of the Masterplan, an arboricultural assessment was undertaken on 354 existing trees within the gardens (refer Section 6).

It should be noted that the large Manna Gum in the Gardens is believed to be the last remnant tree within the municipality. This should be noted through information on site and protected.

Community Feedback

The community feedback included suggestions for additional landscape elements, such as a themed garden (eg children's garden), more local indigenous plants, showcasing of rare and endangered species and more trees to be planted.

Recommendations

7.6.1 Link Swan Reserve and the Botanic Gardens through the provision of signage at both the gardens and Swan Reserve. HIGH PRIORITY

Swan Reserve is an excellent native garden approximately 300 metres southeast of the Warrnambool Botanic Gardens. The reserve has excellent interpretive information on the native plants the Friends of Swan Reserve have established. Some of the plants are hard to grow/unusual species, many from southwestern Australia. Swan Reserve should be considered as an adjunct in the visitor experience to the Warrnambool Botanic Gardens.

7.6.2 Add more themed plantings of low shrubs and within garden beds particularly under groups of existing trees. HIGH PRIORITY

The Curator has numbered each of the garden beds; most are underneath trees and as a result are dry, shady sites – making them difficult to grow.

The recent supplementary understorey planting of perennials and permanent low shrubs and groundcovers under trees has been very successful in creating a 'lower level' spatial dimension and visually assists in defining spaces within the garden areas.

The underplantings are emphasising of the flowing curves of garden beds against the broad expansive scale of lawns and paths; all part of Guilfoyle's design philosophy.

The understorey planting under large trees such as the Moreton Bay Fig Trees and other large trees has provided spatial contrast to the broad grassed areas and subtle containment while still allowing the broader vistas across the gardens.

The existing floral beds and parterre garden beds at the sundial are to be retained.

A plan of the garden beds and a planting list nominating suitable planting for each bed is provided in Appendix 9.

7.6.3 Add more specimen trees, including succession planting, to manage the ageing tree population. HIGH PRIORITY

A GIS database of the existing trees has been prepared as part of this Masterplan study. A succession plan will assist in achieving the vision for the gardens and maintain the important balance between open space and trees. Oak trees will be planted in place of trees that are recommended for removal as per the recent arborist report (see Appendix 8). Planting Oak trees in the next five years would ensure succession principles.

Oak trees are chosen as the main replacement specimen trees because of the following reasons:

- Oak trees complement the existing design theme of the Warrnambool Botanic Gardens.
- Oak trees were often used as specimen trees in parks and gardens, which are of the picturesque style.
- They are in keeping with the majestic form of canopy to other trees within the gardens.
- Many Oak species are available. Some Oaks are quite unusual as seen in the gardens such as Kyneton. A few species are evergreen which is unusual for trees that are predominantly deciduous, making them a botanically-interesting genera.
- They are pest and disease resistant as opposed to elms and poplars.
- Some species are amazingly drought tolerant, as some come from Algeria and Turkey, as opposed to other trees such as Silver Birch, Alders and Maples.
- Plants and grass can generally survive underneath mature trees as opposed to cedars and pines.

7.6.4 Remove selected Cypress and Pine trees around the perimeter of the gardens to allow views in and out. HIGH PRIORITY

Some incremental removal to the perimeter of groups of cypress and pines will allow views in and out of the gardens which would align with Guilfoyle's design philosophy of creating interesting spaces and view cones.



Families enjoy the sundial and parterre.

7.7 Events

Current Situation

The Gardens hosts at least two major events each year (Australia Day and Wunta Fiesta) and utilises temporary staging and infrastructure for these events.



Wunta Fiesta Jazz in the Gardens is a popular annual event

Three phase power is only available in the rotunda which is used for private functions, particularly weddings in the summer months. Currently no fees are charged for private functions held within the gardens, however a small booking fee is charged for access to the services in the rotunda. Alcohol consumption in the gardens is allowed under Council's local law.

Community Feedback

Demand exists for the rotunda to be used for events. Noise level needs to be maintained at levels that would not disturb the residents living near the gardens.

Recommendations

7.7.1 Develop an events and activities policy to guide and manage appropriate and sustainable use of the gardens. HIGH PRIORITY

The development of a Council policy is needed to guide appropriate use of the gardens, and give consideration to the introduction of fees for commercial activities, or for groups/individuals who require access to services (eg power and water) and for people requiring access to the rotunda.

The policy should also include management and access arrangements for events. It is recommended the policy include the prohibition of vehicle access to the gardens, unless approved by the Curator.

7.7.2 Designate appropriate events spaces where temporary infrastructure may be used. MEDIUM PRIORITY

A permanent structure locks in the space used for events and is not recommended. The rotunda is regularly used for private functions. There must be flexibility in the location of event spaces on the lawn areas, so as to reduce wear and tear.

7.7.3 Consider a fee structure for hosting of 'commercial/for-profit' events within the gardens..

MEDIUM PRIORITY



Marquee erected for 150th Anniversary Celebrations in 2016

7.8 Play

Current Situation

As previously noted, playing amongst the Moreton Bay Fig tree roots, around the lake and feeding the ducks in the gardens, are described by many as local memory-making experiences for children for generations.



The iconic Giraffe swing is the only piece of play equipment and is located in the northeast side of the gardens across from Aquazone.

The timber picket fence of weathered grey cypress surrounding the gardens, while a barrier to general accessibility, prevents children running on to the adjacent roads.

Community Feedback

The community supports growing opportunities for play in the gardens, however the incorporation of more play equipment is not supported.

Recommendations

7.8.1 Retain and refurbish the Giraffe swing.

MEDIUM PRIORITY

The Giraffe swing is a landmark and is one of the elements contributing to make the gardens special and a memorable experience for children. The Giraffe swing is included in Council's asset register and is scheduled for renewal in three years.



Existing Giraffe swing

7.8.2 Design and develop sensory and nature play areas.

MEDIUM PRIORITY

Inclusion of scented, attractive or textured foliage through plantings which encourage interaction and play is recommended - eg. maze, a pencil pine arch/arbor, dry creek bed, vegetable/flower gardens.



7.9 *Parking and Transport*

Current Situation

Currently many visitors park on the nature strips in surrounding streets, which causes damage.

Access to sufficient parking is only problematic during large events.

There is no formal arrangement between Council and the nearby schools for using school grounds to meet peak parking demand. St. Joseph's Primary School grounds to the north are used for overflow parking on weekends and particularly for Australia Day and Wunta's Jazz in the Gardens events.

Community Feedback

The highest priority for parking is to provide accessible parking on Botanic Road, and forming marked and constructed bays along this frontage.

Recommendations

7.9.1 **Construct inset parallel car parking along the southern side of Botanic Road. HIGH PRIORITY**

As Entrance N°5 on Botanic Road functions as a main entry point to the gardens, it is a high priority to provide formal parking along Botanic Road.

7.9.2 **Construct inset parallel car parking along the eastern side of Bromfield Street.**

LOW PRIORITY



Existing informal parking on Botanic Road near Entrance N°5

7.9.3 **Provide bicycle parking at key entry points.**

HIGH PRIORITY

Providing bicycle parking infrastructure adjacent to key entrances will encourage people to cycle to the gardens, rather than travelling by car.

7.9.4 **Relocate the bus stop on Queens Road and construct a kerb extension with pram crossings to both sides of Queens Road to facilitate pedestrian crossing between AquaZone and the Gardens.**

LOW PRIORITY

7.9.5 Investigate the need for weekday timed parking restrictions (2 hour parking) on Cockman Street near Entrance N°8. LOW PRIORITY

Cockman Street is heavily used for informal all day parking by students and staff from a nearby school. Restricting parking to two hours for some car park spaces at the east end of Cockman Street will ensure sufficient parking is available for visitors to the gardens.

7.10 *Drainage and Water*

Current Situation

Currently there is reliance on intensive manual labour for irrigation of gardens beds and lawns. An automated maxi-cable irrigation system is currently in use for some parts of the gardens. None of the footpaths are permeable to water.

Community Feedback

Comments were made regarding making water-wise gardening more visible in the gardens in order to inspire home gardeners.

Recommendations

7.10.1 Upgrade the irrigation system, for more sustainable and efficient use of water and labour. HIGH PRIORITY

Automated irrigation systems will enable watering at night, which is the most efficient use of water and infiltration into the soil profile. This watering regime is also most effective from a plant water take-up perspective. The grassed areas will be dry during visitation hours.

7.10.2 Continue to implement the maxi-cable automatic irrigation system. HIGH PRIORITY

The existing maxi-cable automatic irrigation system currently in use will complement the abovementioned watering regime.

7.10.3 Investigate options for stormwater harvesting. LOW PRIORITY

Consideration and research about more sustainable water use can open opportunities for partnerships with organisations and educational institutions to attract researchers to investigate irrigation options. This kind of partnership is currently in place at the Royal Botanic Gardens in Melbourne.

7.11 Commercial Opportunities

Current Situation

The Curator's Cottage is leased for residential use. It would need renovation before it could be utilised for other purposes.

Community Feedback

The community supports the possible future use of the Curator's Cottage for visitors services (eg café, exhibition space and related activities).

Recommendations

7.11.1 Investigate the feasibility of utilising the Curator's Cottage for gardens related uses and services (e.g. café, exhibition space, administration). **LOW PRIORITY**

The Curator's Cottage has potential for commercial operations and could provide services which would attract visitors. Council would need to investigate feasibility of this new use as the Curator's Cottage in its current form generates an income from its residential rental.

If the cottage is used for non-residential purposes in the future, consideration could be given to providing access to space for the Friends of the Warrnambool Botanic Gardens group.



Existing Curator's Cottage

8 References

¹ P Fox (2004) *Clearings: Six Colonial Gardeners and their Landscapes*, The Miegunyah Press, Melbourne.

² A Saniga (2012) *Making Landscape Architecture in Australia*, University of New South Wales Press, Sydney.

³ VHD (2016) *Heritage Report for the Warrnambool Botanic Gardens*. Sourced from VHD website.
<http://vhd.heritagecouncil.vic.gov.au/places/1877/download-report>

⁴ Botanic Gardens Conservation International (2016) *International Agenda for Botanic Gardens in Conservation*. Sourced from the BGCI website.
http://www.bgci.org/files/Worldwide/News/SeptDec12/international_agenda_web.pdf

Warrnambool Botanic Gardens Masterplans (1995 & 2004).

9 Appendices

- 9.1 *Appendix 1 – Warrnambool Botanic Gardens and Lake Pertobe Background Report*
- 9.2 *Appendix 2 – Summary of Issues and Opportunities from Background Report*
- 9.3 *Appendix 3 – Summary of Additional Issues and Opportunities*
- 9.4 *Appendix 4 – Friends of Warrnambool Botanic Gardens - Meeting Notes*
- 9.5 *Appendix 5 – Traffic Issues and opportunities - Traffix Group*
- 9.6 *Appendix 6 – Arborists Report and Tree Audit - Homewood Consulting*
- 9.7 *Appendix 7 – Recommended Garden Bed Planting Schemes*
- 9.8 *Appendix 8 - Project Update – Published September 2016*