

# Wittunga Botanic Garden Masterplan Review

June 2020







**Botanic Gardens and State Herbarium**  
**Masterplan Report**  
**Wittunga Botanic Garden**

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and State Herbarium  
Adelaide | Mount Lofty | Wittunga**

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# CONTENTS

<b>EXECUTIVE OVERVIEW</b>	<b>P4</b>	4.9 SURROUNDING RESERVES AND FACILITIES	P46
		4.10 PLANNING POLICIES AND CONTROLS	P50
<b>ACKNOWLEDGEMENTS</b>	<b>P5</b>		
<b>1.0 INTRODUCTION</b>	<b>P7</b>	<b>5.0 GUIDING PRINCIPLES</b>	<b>P53</b>
1.1 PURPOSE OF THE MASTERPLAN	P8	5.1 BOTANIC GARDENS PRINCIPLES	P54
1.2 STRUCTURE OF THE REPORT	P9		
		<b>6.0 KEY ISSUES AND OBJECTIVES</b>	<b>P57</b>
<b>2.0 MASTERPLAN CONTEXT</b>	<b>P13</b>	6.1 GARDEN COMPOSITION	P59
2.1 PURPOSE OF BOTANIC GARDENS	P14	6.2 VISITOR EXPERIENCE	P64
2.2 MANAGEMENT	P15	6.3 COLLECTIONS	P68
2.3 BOTANIC GARDENS STRATEGIC PLAN AND POLICIES	P16		
2.4 VISITOR PROFILE	P20	<b>7.0 STRATEGIC RESPONSES AND ACTIONS</b>	<b>P75</b>
		7.1 GARDEN COMPOSITION	P77
<b>3.0 SITE HISTORY</b>	<b>P23</b>	7.2 VISITOR EXPERIENCE	P83
3.1 PRE-EUROPEAN HISTORY	P24	7.3 COLLECTIONS	P89
3.2 GARDEN DEVELOPMENT	P25		
3.3 RECENT HISTORY	P27	<b>8.0 MASTERPLAN</b>	<b>P95</b>
		8.1 OVERALL PRINCIPLES	P96
<b>4.0 SITE ANALYSIS</b>	<b>P29</b>	8.2 MASTERPLAN	P104
4.1 LOCATION AND SURROUNDING LAND USE	P30	8.3 PROJECT PRIORITIES	P105
4.2 LANDSCAPE STRUCTURE	P32	8.3 DELIVERY PLAN	P115
4.3 LIVING COLLECTIONS	P34		
4.4 TOPOGRAPHY AND SOILS	P36	<b>APPENDICES</b>	<b>P121</b>
4.5 WATERWAYS AND DRAINAGE	P38	A INDICATIVE MATERIAL PALETTE	P122
4.6 MOVEMENT   PEDESTRIAN	P40	B REFERENCES	P123
4.7 MOVEMENT   VEHICLE	P42		
4.8 HERITAGE	P44		

# EXECUTIVE OVERVIEW

Wittunga Botanic Garden is a highly valued public asset, managed by the Board of the Botanic Gardens and State Herbarium since 1965. Built around the garden structure and plant collections developed by the Ashby family, Wittunga features a unique display of Australian and South African plant species with direct connections through their shared Gondwana ancestry and interrelated geographic zones adaptation. More recently there has been a focus on developing living collections which feature local South Australian flora.

The current configuration of the Garden has changed little since its completion in the late 1970's and the natural bush settings have matured to provide an engaging experience for visitors. Intensive horticultural maintenance, previously required within the Garden, is unsustainable in the current and future climate with new methodologies and innovative practices required to ensure the long term viability of Wittunga.

The initial Masterplan supported the development of the current structure and use of the Garden and the revision provides even stronger direction for sustainable change that will improve accessibility and encourage greater use and appreciation of this unique resource. Central to the recommendations within the original and revised Masterplan is the need to practice and promote resilient use of climatically suitable plant species, water resources and natural materials. Living collections will also continue to be developed, which have strong local provenance material sourcing and support the many plant adaptation and cultural connection stories inherent in the Wittunga living collections. At a time of challenging climatic trends, the role that Wittunga Botanic Garden can and does play in *ex situ* conservation is more important than ever.

Realisation of key initiatives within the Masterplan will exemplify the cultural and environmental importance of Wittunga to the community past, present and future.



# ACKNOWLEDGEMENTS

This Masterplan was commissioned by the Botanic Gardens and State Herbarium under the direction of the Botanic Gardens Project Team Group. The consultant team gratefully acknowledges the input and assistance of the following people:

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1.0

# Introduction

1.1 PURPOSE OF THE MASTERPLAN

1.2 STRUCTURE OF THE REPORT

The purpose of this Masterplan for the Wittunga Botanic Garden is to outline the future direction for infrastructure development, community activation and support for the operation and function of the Garden. This revision of the second masterplan is very timely as both infrastructure improvements and living collection development is occurring and being proposed for the estate.

Current and future developments to the Botanic Garden will reflect a desire to activate the estate, share the sites cultural importance, promote and educate the community about sustainable horticulture and the conservation of local plant communities.

Opened to the public in 1975, the Wittunga Botanic Garden is one of the three botanic gardens governed by the Board of the Botanic Gardens and State Herbarium (BGSH), the others being the Adelaide Botanic Garden and Botanic Park and the Mount Lofty Botanic Garden.

Originally a farming property owned and operated by the Ashby family, Wittunga is recognised for its collection of southern Australian and South African plant species, with its setting providing a backdrop for recreation and appreciation of the collection. The site also still embraces local grey box woodland and newer wild sourced provenance South Australian plant community collections.

Wittunga also has a strong cultural significance to the past and present Kurna people, on whose land the botanic garden was established, and a fascinating history of perseverance, experimentation and innovation that adds important cultural layers to the Botanic Garden and meaning to the local community.

Once the BGSH Board took on the governing responsibility of the Botanic Garden in 1965, the period to 1975 was spent developing and implementing a garden design for Wittunga in readiness for opening to the public. Modifications and improvements have occurred incrementally in accordance with the previous Masterplan, with still more that can be achieved.

Guided by the Board of the Botanic Gardens and State Herbarium's Strategic Plan 2017-2025, the revision of the first Wittunga Botanic Garden Masterplan will:

- Provide a framework and staged directions for future improvements to Wittunga Botanic Garden;
- Reflect the legislation outlined in the *Botanic Gardens and State Herbarium Act 1978* and Regulations 2007;
- Illustrate achievable outcomes for Wittunga Botanic Garden;
- Identify completed and current projects;
- Identify future projects and priorities; and
- Provide a basis for infrastructure prioritisation planning and funding.



## 1.2 STRUCTURE OF THE REPORT

The Masterplan Report is divided into eight sections, with an appendix, and follows a logical progression of research and analysis, determination of key issues and objectives, proposed strategic responses and associated actions, through to the development and presentation of the Masterplan. The Report is organised in the following sequence:

### **Section 1: Introduction**

- Defines the purpose of the Masterplan Report.

### **Section 2: Masterplan Context**

- Provides an overview of plans and policies that provide direction for the management of the Garden.

### **Section 3: Site History**

- Provides insight into the history and development of Wittunga, from mixed use farm to Botanic Garden.

### **Section 4: Site Description**

- Contains site analysis of the Wittunga Botanic Garden including location and surrounding land use, topographical structure, heritage and existing infrastructure, water collection, movement and the living collections.

### **Section 5: Guiding Principles**

- Determines the principles which guide the direction of the Masterplan.

### **Section 6: Key Issues and Objectives**

- Outlines issues and opportunities informing the Masterplan.

### **Section 7: Strategic Responses And Actions**

- Outlines the strategic direction for the Masterplan. Both Section 6 and 7 are divided into three categories, Garden Composition, Visitor Experience and Collections. These categories are broken down into subcategories, each with an end objective and action.

### **Section 8: Wittunga Botanic Garden Masterplan**

- Illustrates the Masterplan and the layers comprising it together with detail of the Garden 'precincts' and project priorities.

### **Appendices:**

- Includes an Indicative Materials Palette and References used in the report.

Abbreviations used within the report include the following:

- BGS - Botanic Gardens and State Herbarium
- DEW - Department for Environment and Water.
- DPTI - Department of Planning, Transport and Infrastructure.

## 1.2 STRUCTURE OF THE REPORT

### Process

The original Masterplan was developed through a detailed program of consultation with the Board of the Botanic Garden and State Herbarium, Management and Staff. This revision was intended to bring the strategic priorities up to date and be a source of guidance for future infrastructure, programme and collection development opportunities.

To enable the review five key processes have been used: key staff meetings, large group meetings with staff, a comprehensive community engagement process, input and guidance from the Board of the BGSH and guidance from professional landscape architects Oxigen. This unique and complex review engagement process has allowed a shared vision and understanding of the unique qualities of Wittunga.

The draft summary map and key concepts of the draft Masterplan were shared with our community through several onsite community engagement days.

The feedback provided invaluable knowledge and insight to ensure the Masterplan revisions conclusively address the current and future needs of Wittunga.

The completed Masterplan provides considered, sustainable directions for Wittunga Botanic Garden that will incrementally improve and define a most-valued cultural asset.













2.0

# Masterplan Context

- 2.1 PURPOSE OF BOTANIC GARDENS
- 2.2 MANAGEMENT
- 2.3 BOTANIC GARDENS STRATEGIC PLAN AND POLICIES
- 2.4 VISITOR PROFILE



## 2.1 PURPOSE OF BOTANIC GARDENS

The 'International Agenda for Botanic Gardens in Conservation' defines the purpose of Botanic Gardens:

*"Botanic Gardens are cultural institutions holding documented collections of living plants for the purpose of scientific research, conservation, display and education"*

Most importantly, the living collections are the foundation of all botanic gardens and, while the core focus remains on botanic collections and advancement of plant knowledge to the wider community, there is also a move towards sustainable and low water use plantings.

This is evident in the three South Australian gardens where the planting of Australian native species is given preference for cultural, educational, conservation, maintenance and sustainability reasons.

The Botanic Gardens and State Herbarium Strategic Plan 2017 – 2025 importantly reflects the aspirations of the Botanic Gardens, providing objectives and actions with short and long-term goals.

As part of the Department for Environment and Water (DEW) the Gardens also reflect the DEW Corporate Plan. These actions and goals strategically align with South Australian government priorities.

Central to the Vision for the BGSH is inspiring the community to actively contribute to the sustainability of our world.

Clearly, sustainability is of utmost importance as the Garden and the State move forward and adapt to the environmental and economic challenges ahead. In this changing climate, the role of the Gardens in educating and informing the community is paramount.

### Wittunga Botanic Garden

Today Wittunga Botanic Garden, together with Adelaide Botanic Garden and Botanic Park and Mount Lofty Botanic Garden, are estates governed by the Board of the Botanic Gardens and State Herbarium on behalf of the Government of South Australia.

Initial planning for Wittunga evolved from a horticulturist's interpretation of Edwin Ashby's original designs and ideas with the botanical collections of southern Australia and South Africa being the foundation of the Garden.

Wittunga, through the unique investment of experimentation and research by Edwin and Keith Ashby, portrays a history of sustainable practice in both species selection and horticultural management.

As an exemplar of early directions in local species conservation including the sites Grey Box woodland, site specific innovation and promotion of climatically suitable species, Wittunga is ideally situated to promote sustainable horticultural principles and practice to the community.

The display of southern Australian and South African species illustrates the close relationship, and contrasting features of the South African and southern Australian flora, expressing the ancestral Gondwanan connection of the continents.

This is intrinsic within the living collection, offering opportunities for interpretation and promotion of sustainable plant species for the community to use and enjoy.

## 2.2 MANAGEMENT

The Botanic Gardens and State Herbarium are managed under the *Botanic Gardens and State Herbarium Act 1978* and the Botanic Gardens and State Herbarium Regulations 2007. The Board of the Botanic Garden and State Herbarium is required to administer the Act when establishing, maintaining and managing botanic gardens or any other land under their control.

The functions of the Board, outlined in section 13.1 of the *Botanic Gardens and State Herbarium Act 1978*, are as follows:

- to establish and maintain botanic and other gardens for the use and enjoyment of members of the public on land vested in or placed under the control of the Board; and
- to establish and manage in, or in connection with its gardens, exhibitions of interest in the fields of botany, horticulture, biology, conservation of the natural environment or history; and
- to establish and maintain a herbarium and, subject to this Act, to retain original specimens included in the herbarium; and
- to accumulate and care for specimens (whether living or preserved), objects and things of interest in the fields of botany, horticulture, biology, conservation of the natural environment or history;
- to accumulate and classify data in regard to any such matters;
- to manage all lands and premises vested in, or placed under the control of, the Board;
- to manage all funds vested in, or under the control of, the Board and to apply those funds in accordance with the terms and conditions of any instrument of trust or other instrument affecting the disposition of those funds;
- to carry out, or promote, research into matters of interest in the fields of botany, horticulture, biology, conservation of the natural environment or history;
- to disseminate information of interest in the fields of botany, horticulture, biology, conservation of the natural environment or history;
- to provide consultant services; and
- to perform any other functions of scientific, educational or historical significance that may be assigned to the Board by regulation.

The Botanic Gardens and State Herbarium Regulations 2007 sit under the *Botanic Gardens and State Herbarium Act 1978*. Any amendments to the botanic garden that sit outside these regulations are to be reviewed and endorsed by the Board, or their delegates.



## 2.3 BOTANIC GARDENS STRATEGIC PLAN AND POLICIES

### Strategic Plan 2017 – 2022

The Board's first Strategic Plan, developed for the 2002-2005 period, immediately preceded the 2006 Masterplan for Adelaide Botanic Garden and Mount Lofty Botanic Garden. Since that time, four consecutive Plans have been produced (2007-2009, 2009-2012, 2012-2017, 2017-2022), each plotting a course for strategic growth and detailing priorities for the organisation as a whole and BGS's three Garden estates.

The focus of the current Strategic Plan 2017-22 is to develop BGS as a global destination through focusing on three key areas: "creating destination gardens", "deepening science", and "facilitating lifelong learning and engagement".

Taken one-by-one, the activities to address these focus areas at the Wittunga Botanic Garden over the next five years include:

#### Creating Destinations Gardens

Undertake a formal review and update of the 2012 Wittunga Botanic Garden Masterplan (this report);

- A revitalisation of the living collection, and diversification of the herbarium, living and cultural collections; and
- Raise the standard of the site's infrastructure to improve visitor experience and working environment.

### Deepening Our Science

- Increase efficiencies in the application of information and technology management systems, and modernising collections management practices;
- Acting to assist in the conservation of SA flora and reducing the risk to threatened species; and
- Proactively demonstrating carbon-neutrality practices to the community.

### Facilitating Lifelong Learning and Engagement

- Become a destination for horticultural and botanical learning by providing spaces for enriched, evolving and innovative learning experiences;
- Develop a culturally diverse range of collections to engage a broader demographic of visitors;
- Engage with secondary and tertiary students to build lifelong connections with the Garden; and
- Develop innovative ways of interpreting the Garden's collections, science, horticulture and research.

The Strategic Plan 2017-2022 also nominates several key actions aimed at enhancing the profile of the Garden's staff and expertise, evolving the Garden's business model through adapting new funding opportunities, including the generation of revenue through commercialisation and non-government funding programmes, and diversifying and strengthening scientific and public partnerships.

## 2.3 BOTANIC GARDENS STRATEGIC PLAN AND POLICIES

### FOUNDATION DOCUMENTS

To support the implementation of the *Botanic Gardens and State Herbarium Act 1978*, the Botanic Gardens and State Herbarium Regulations 2007, the Strategic Plan and this Masterplan, several foundation documents have been created or are identified as needing to be created. These documents are:

- Facility Asset Management Plan
- BGSB Tourism Strategy
- Various BGSB policy documents (see next section)

### POLICIES

#### Science and Conservation Policy 2004 (Adopted)

This Policy provides a framework for integrated plant conservation programmes.

The establishment of partnerships between BGSB and other scientific and conservation organisations provides opportunities for training, bilateral research and the dissemination of information at both a national and international level.

This Policy is currently under review to ensure a whole of institution approach to science and conservation.

#### Tree Replacement Policy 2004 (Adopted)

This Policy provides guidelines for the ongoing management and maintenance of BGSB's tree canopies across its garden estates and the implementation of recommendations outlined in the 2004 Tree Study. This Policy is currently under review, with a particular focus on tree succession planning for a living asset and a changing climate.

#### Foraging Policy 2018 (Adopted)

This policy is intended to govern the foraging of living collection material from BGSB collections. Recipients permitted by the Director to forage living collection materials are required to comply with the terms and conditions set forth in this policy.

This policy supports national and international conventions on biodiversity.

#### Asset Management Policy (DEW Adopted)

The BGSB is committed to applying best practice asset management principles and safe work practices to achieve its business objectives for the benefit of the community and stakeholders whilst complying with all legislative, statutory and reporting requirements. This Asset Management Policy has been developed to set out commitments and expectations for decisions, activities and behaviours concerning the management of non-current assets. The Policy is reviewed every three years.



## 2.3 BOTANIC GARDENS STRATEGIC PLAN AND POLICIES

### COLLECTIONS POLICIES

The Collection Policies 2013 is the current framework for the management of BGSH collections. The document outlines three policies; the Living Collection, State Herbarium Collection and Cultural Collection.

The Living Collection Policy outlines the direction and guidelines for plants on public display, plants held for research and the seed bank collection used for conservation, research, and educational activities. This policy provides a holistic approach to the collections of all three Gardens and retains a level of quality control to the Garden's most important assets.

The collections management framework is currently under review. This new management planning documentation will be endorsed by the BGSH Board.

The State Herbarium Collection Policy supports the scientific research within and outside of South Australia by providing a guideline for herbarium specimen preparation and conservation, managing and organising storage facilities suitable for long-term specimen care, providing access to specimens and their associated data, and establishing procedures that ensure the ongoing availability of specimens for present and future research.

The Cultural Collection Policy serves the collection of artworks, paintings, economic botany collection, statuary, sculpture, memorials, artefacts, medals, library, archives photography, craft and historical equipment collected over the past 150 years. This collection 'connects people to history', 'increases the richness of the visitor's experience' and 'promotes the Botanic Gardens as a place of cultural life and creativity'.

## 2.3 BOTANIC GARDENS STRATEGIC PLAN AND POLICIES

### NEW EMERGING CONSIDERATIONS

Recent government investment will support the activation of the site through upgrades to the gardens, including a formalised, nature play space and garden revitalisation of both collections and basic infrastructure.

### INTERNAL CONSIDERATIONS

#### BGSH Management Considerations

BGSH is managed by the Government of South Australia through the provisions of the *Botanic Gardens and State Herbarium Act 1978*. The Board of the Botanic Gardens and State Herbarium (the Board) is established pursuant to section 6 of the Act and is subject to the general direction and control of the Minister for Environment and Water. The Board is responsible for the administration of the Act and has responsibility for the three Garden estates: Adelaide Botanic Garden, Mount Lofty Botanic Garden and Wittunga Botanic Garden.

There are several key areas that need to inform BGSH's key management priorities for Wittunga Botanic Garden:

- The landscape in which BGSH operates has undergone significant changes since the publication of the previous Masterplan. In October 2016, the administration of the State Herbarium was reintegrated with the Botanic Gardens, thereby strengthening the institution in the fields of plant sciences and conservation. This reintegration is supporting a living collections review and succession planning for a changing climate.
- Technology advancements can provide BGSH with better understanding of visitor use and preferences and opportunities to use such data to inform management of assets and related operations. Significant technological support solutions are needed to enable BGSH to harness these opportunities.
- The growth in South Australian tourism provides further opportunities for BGSH to proactively participate in this industry and create memorable visitor experiences. There are opportunities to focus on the domestic and international experience seeker market and evoke connections between visitors and the themes associated with Wittunga Botanic Garden living and cultural collections, garden landscapes and heritage assets.



Wittunga Botanic Garden is valued highly by the local community who use the Garden principally for passive recreation. Anecdotally, it is understood that nearly all visitors to the Garden are from suburbs in close proximity to Wittunga Botanic Garden, however most visitors who participate in guided walks by the Friends of the Botanic Gardens are not local. Visitor numbers to the Garden are steadily increasing.

Enhancing the physical presentation and function of Wittunga, coupled with the establishment and promotion of sustainable horticulture and wild sourced local provenanced collections will provide a more attractive and engaging setting for visitors from the broader Adelaide community and for interstate and overseas visitors.

The following initiatives will assist in attracting people to Wittunga:

1. Improved street presence and signage
2. Improved internal signage and interpretation
3. Promotion of Wittunga as a sustainable landscape and educational resource for all
4. Improved connections to Wittunga from the Blackwood retail hub and Coromandel railway station
5. Further development of links to the Blackwood community and educational programs for local schools
6. Increased site activation, including more public programmes and events
7. Activation of heritage buildings with a compatible commercial use and reconfiguration of the administration buildings
8. Development of a natural play space
9. Improvements to visitor car parking facilities and on site amenities







EDWIN ASHBY IN THE MALUKA BEDS, 1933







3.0

# Site History

- 3.1 PRE-EUROPEAN HISTORY
- 3.2 GARDEN DEVELOPMENT
- 3.3 RECENT HISTORY

The Kurna were the First Nations people known to have inhabited the grey box woodland of the Blackwood hills. This region of the Mount Lofty Ranges, including Blackwood, was known as “piraldi”, a word with various meanings including ‘the moon’, ‘shaven’ or ‘bald’.

The Kurna moved seasonally, travelling along coastal areas in summer then moving to the foothills in winter for shelter and firewood. The stringy bark forests of the Mount Lofty Ranges marked their eastern boundary.

There are no known cultural sites within Wittunga Botanic Garden. The ‘Ashby Reserve Maintenance Plan’ (2003), researched and developed by Enid Robertson, indicates that nearby Ashby Reserve has caves possibly used by the Kurna people for shelter.

‘Wittunga’ is understood to mean ‘beside water’.

*Source: Blackwood Forest Recreation Park, Seedling Art Space, <http://www.seedlingartspace.asn.au/history.htm>*

*Source: Jacob Kochergen, Ashby Reserve Maintenance Plan, City of Mitcham (2003)*



The Wittunga estate was originally established by Edwin Ashby in 1902 as a family residence and mixed farm. Ashby had a keen interest in gardening, particularly South African and Australian plantings, and this became the foundation of the living collections and early garden structure at Wittunga.

The early 'house' garden was English in style with surrounding pastoral lands used for orchards and grazing. Although beginning as a "formal English gentleman's garden", Ashby became "increasingly fascinated by Australian native flora, specialising in its cultivation and collecting numerous plants from the bush throughout southern Australia."

In the mid 1920's, the Maluka Beds at Wittunga were developed. Given the nickname of 'Maluka: the Boss' from the book 'We of the Never Never' by Jeanie "Mrs. Aeneas" Gunn, Edwin Ashby's Maluka Beds comprised raised beds filled with imported sandy soil.

The beds were designed to improve growing conditions by replicating sandhills and improving drainage. These beds still remain at Wittunga.

In the 1930's, Edwin Ashby experimented with methods of cultivation and developed the 'Ashby system' of watering, giving plants a deep soaking every three to four weeks rather than more frequent light surface watering.

An area known as the Never Never was established by Ashby, with another area to the south left in its natural state and referred to as the Wild Part. In the Wild Part naturally occurring native species were mixed with introduced Western Australian species.

Edwin Ashby was one of a growing number of gardeners at the time who appreciated the qualities of Australia's native flora and sought to introduce these species into garden plantings.

In 1934, a bushfire burnt through Wittunga Botanic Garden, gutting the house and destroying many of Ashby's records and collections. One plant surviving from the fire was a Camellia, located at the south-eastern corner of the House – its retention and interpretation forms part of the history of the Garden.

The layers of development, including early introduced plantings, form an important part of Wittunga's botanic collection and contribute towards the Garden's historic, cultural and botanic importance.

*Source: Enid Robertson, 2006-2012, Ashby Edwin (1861-1941), <http://adb.anu.edu.au/biography/ashby-edwin-5066>*

*DEWNR, 2003, Botanic Gardens of Adelaide Wittunga Living Collections Policy*

#### A Gift to The Board of The Botanic Gardens

Keith Ashby, son of Edwin Ashby the original founder of the Wittunga estate, wrote a letter to the Chairman of the Board of Governors of Adelaide Botanic Gardens in 1964 proposing the donation of Wittunga to the Board of the BGS. Keith requested two conditions on the donation:

*1 – “That the property shall be maintained as a garden for posterity and not be capitalized on by subdivision”.*

*2 – “That my wife shall have the right to live in the house for the rest of her life”.*

These conditions were formalised in the Deed of Gift 1965. The Deed of Gift is a legal document stating the terms for the donation of Wittunga to the Board. The document states that the ‘said land (Wittunga) shall form part of the botanic garden under the control of the Board and shall be maintained and developed by the Board as a botanic garden’.

Source: Joseph Reginald Kearman, Crown Solicitor, 1965, Deed of Gift Between Arthur Keith Ashby and The Governors of the Botanic Garden.

#### The Handover

Wittunga was donated to the Botanic Gardens of Adelaide in 1965. The garden immediately surrounding the house (named ‘The House Garden’) had its own eclectic mix of plant species and was fenced from the rest of the property.

Keith Ashby continued to contribute to the property over the years after donation to the Botanic Gardens of Adelaide. Keith worked closely with the Botanic Gardens of Adelaide increasing the collection. From 1968 – 69 over 80 Erica, 31 Banksia and 80 indigenous species were planted. At this time Bruce Grivell was employed with the Botanic Gardens of Adelaide and worked closely with Keith on these plantings.

During the late 1960’s a number of plant deaths led to the discovery of *Phytophthora cinnamomi*, a soil-based fungus found in part of the Garden.

This root-rot fungus had not been previously recorded in South Australia. The Botanic Gardens of Adelaide took immediate action to learn the extent of spread and determine ways to prevent future growth.

The Board of the Botanic Gardens and the State Herbarium assumed full responsibility for Wittunga after the death of Edwin Ashby’s son Keith in 1971.

At this time the garden was extended to encompass an area of 14 hectares. Later, an additional 1.2 hectares was purchased adjoining the north western corner. These initial works, under the responsibility of the Board, were opened to the public in 1975.



Before opening to the public, the farming property required facilities suitable for its use as a botanic garden. These facilities included visitor car parking, toilets, pathways, fencing, administration building, potting shed and garage.

Most of the original structures existing from the Ashby Farm were demolished. This included the removal of a vine trellis in 1974. The vine trellis sat at the base of the Maluka Beds and connected the Maluka Beds to the Terraces.

Enid Robertson, granddaughter of Edwin Ashby, noted with concern the removal of the vine trellis along with the removal of the Ashby watering system in the 'Never Never' region of the Garden.

Wittunga Botanic Garden officially opened on the 14th of September 1975. The area which was accessible to the public at this time was only the house, terrace beds and lake. By the late 1970's, visitor numbers increased. At this time there were six permanent staff and two trainees. In 2020 there are two and one half permanent staff and one trainee.

The *Erica* species collections were established by Bruce Grivell who was a nursery supervisor in 1975 when the Garden opened. Through his passion for the genus *Erica*, Bruce developed several *Erica* cultivars within Wittunga, including the registered cultivars 'Wittunga Gem' and Wittunga Satin'. These varieties were propagated and sold by the commercial nursery industry.

Wittunga Botanic Garden, with its collection of southern Australian and South African flora, illustrates the Gondwanan connection between the continents of Africa and Australia. The original intentions and directions for the Garden have been upheld and developed as the Garden has matured, with these early philosophies guiding the development of the first and this revision of the Masterplan.

Source: Cas Middlemis, 2012, *Wittunga Botanic Garden – A brief history*









4.0

# Site Analysis

- 4.1 LOCATION AND SURROUNDING LAND USE
- 4.2 LANDSCAPE STRUCTURE
- 4.3 LIVING COLLECTIONS
- 4.4 TOPOGRAPHY AND SOILS
- 4.5 WATERWAYS AND DRAINAGE
- 4.6 MOVEMENT | PEDESTRIAN
- 4.7 MOVEMENT | VEHICLES
- 4.8 HERITAGE
- 4.9 SURROUNDING RESERVES AND FACILITIES
- 4.10 PLANNING POLICIES AND CONTROLS



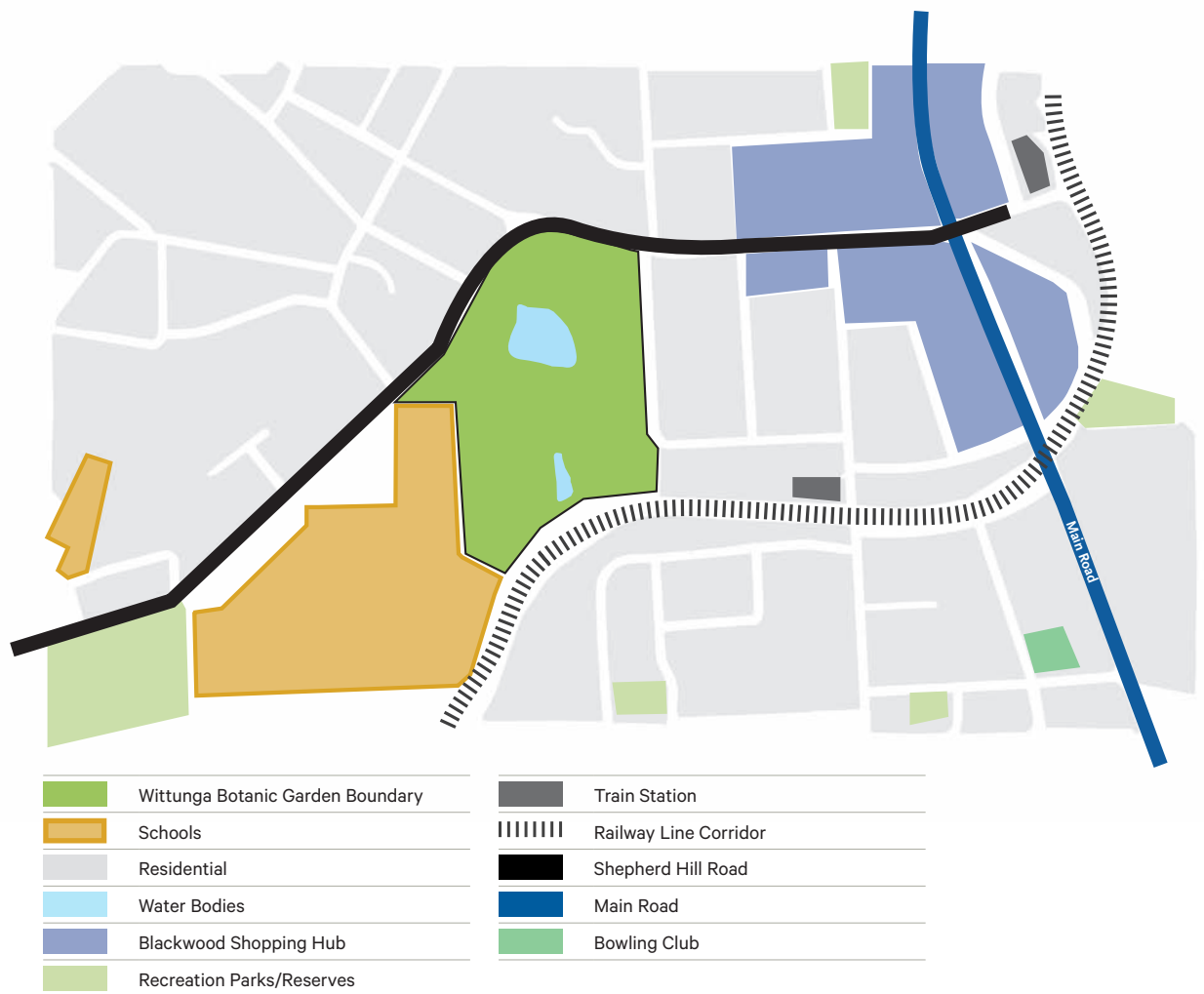
Wittunga Botanic Garden is located on a ridge along Shepherds Hill Road. The boundary between the suburbs of Blackwood and Eden Hills passes through the Garden with the south facing slopes of Wittunga situated within the Sturt River Catchment Zone.

The Blackwood Primary School is situated immediately west with an access gate located along the Garden and School border allowing access during schooltimes.

The Blackwood Shopping Precinct is located 500m east of the Garden. Currently, a red brick path system used throughout Blackwood connects the Garden to the Blackwood Shopping Precinct along Shepherds Hill Road.

The Garden is accessible by public transport along Shepherds Hill Road and the railway line. The Coromandel Train Station is located 400m to the south-east, a short walk along Brighton Parade and Fern Road.

The Ashby Reserve, 'Watiparinga' was once connected to the larger 'Wittunga Farm' land. This reserve is situated on the northern side of Shepherds Hill Road as part of the greater parklands surrounding the Garden.





## 4.2 LANDSCAPE STRUCTURE

The plant collections of Wittunga Botanic Garden are the guiding influence for development of the Garden. The current landscape structure is defined by the following physical attributes:

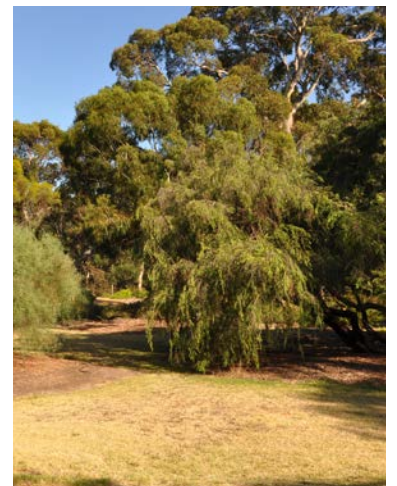
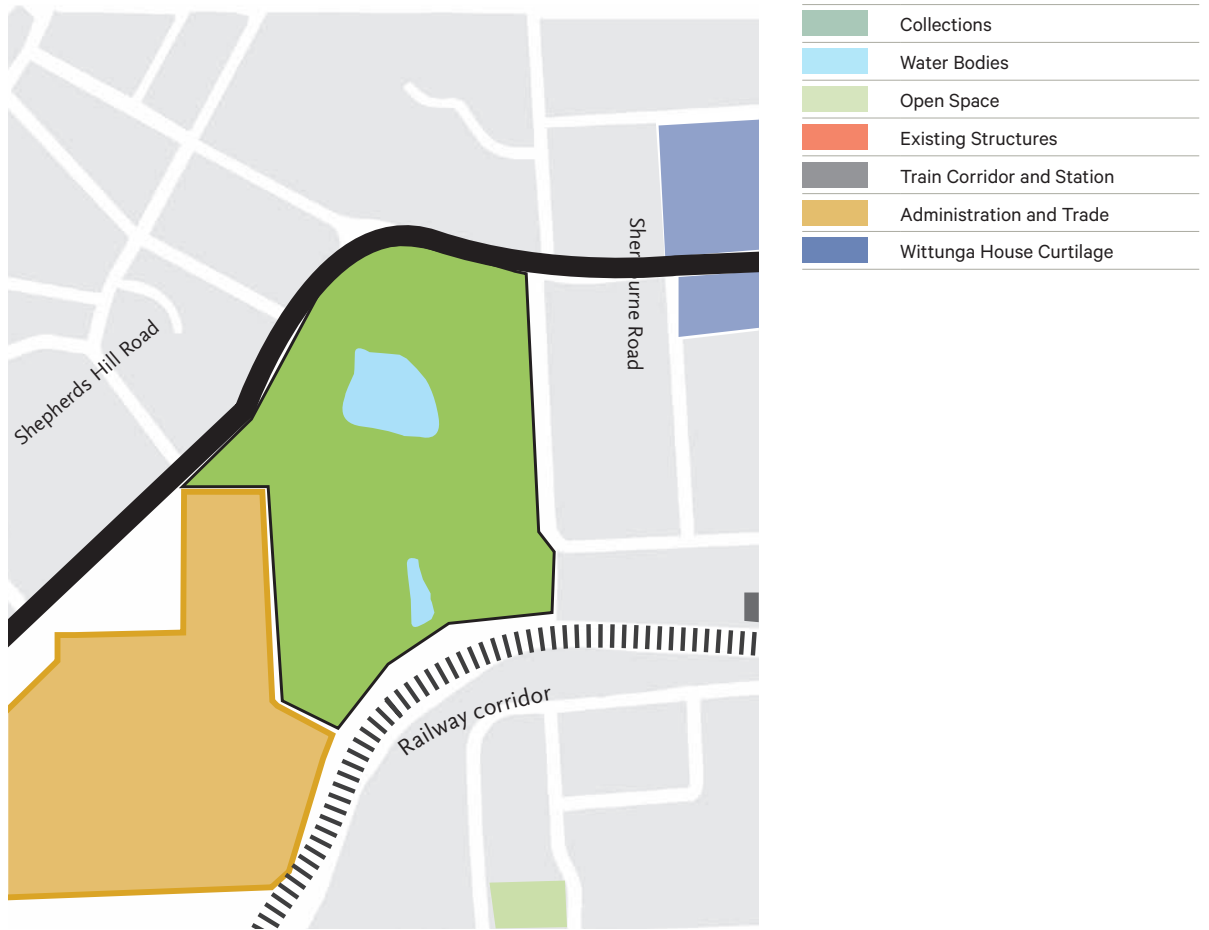
- Terrace Beds and Maluka Beds
- Water bodies
- Natural valley through the centre of the Garden
- Railway embankment

The Terrace Beds and Maluka Beds were developed by Edwin Ashby as part of his original garden. These beds define the movement system through the north-eastern section of the Garden.

The two water bodies are situated to the north and south of the Garden. The main northern lake provides a focal point for visitors. The water body to the south is an ephemeral billabong.

This billabong fills quickly and fluctuates with each season. A 'bog garden', is situated within the natural valley linking the two water bodies north and south. This 'bog garden' requires a more regular water supply to retain bog plants.

A railway embankment is situated at the southern edge of the Garden and is visually dominant. Currently, there is little under storey planting to soften the appearance of the embankment.



The living collections provide the framework of the Wittunga Botanic Garden. There are two primary themes to the collections:

1. Australian Native plantings, including a majority of southern Australian species.
2. South African native plantings, including those originally introduced by Edwin Ashby as part of his garden plantings.

Within each theme, the plantings have been both consolidated and added to. Currently, there are distinctive and important plantings of Kangaroo Island and Fleurieu Peninsula native species within the South Australian plantings, and planting characteristics of the Fynbos within the South African plantings.

More recently, bird-attracting species consistent with these themes have been added to the living collections to increase the Garden's diversity and educational value.





Wittunga Botanic Garden is situated on a distinct natural valley running around the main lake and north to south through the centre of the Garden.

The main lake sits higher than the southern portion of the Garden, establishing a batter to the south of the lake. The Garden grades around the lake and forms a natural valley to the centre of the garden which terminates into the ephemeral billabong.

According to 'Ashby Reserve Maintenance Plan' (June 2003) Wittunga Botanic Garden is situated on the Eden Fault Block which has shaped the current topography, soils and drainage patterns of the region.

Anecdotally, the Garden soil structure is challenging to work with, especially for certain plant species. As stated in the Wittunga Botanic Garden Plant Collections Policy, much of the Garden soil is a shallow sandy loam layer over clay, with some areas having almost no sandy loam left due to continual erosion in the past.

The south western area of the Garden is identified as having a heavy clay type soil. The clay soils tend to be unsuitable for the majority of plant groups being cultivated within the Garden.

A remedy used in past practices (established initially by Edwin Ashby) was to raise beds and fill with imported sandy loam soil to improve existing drainage.

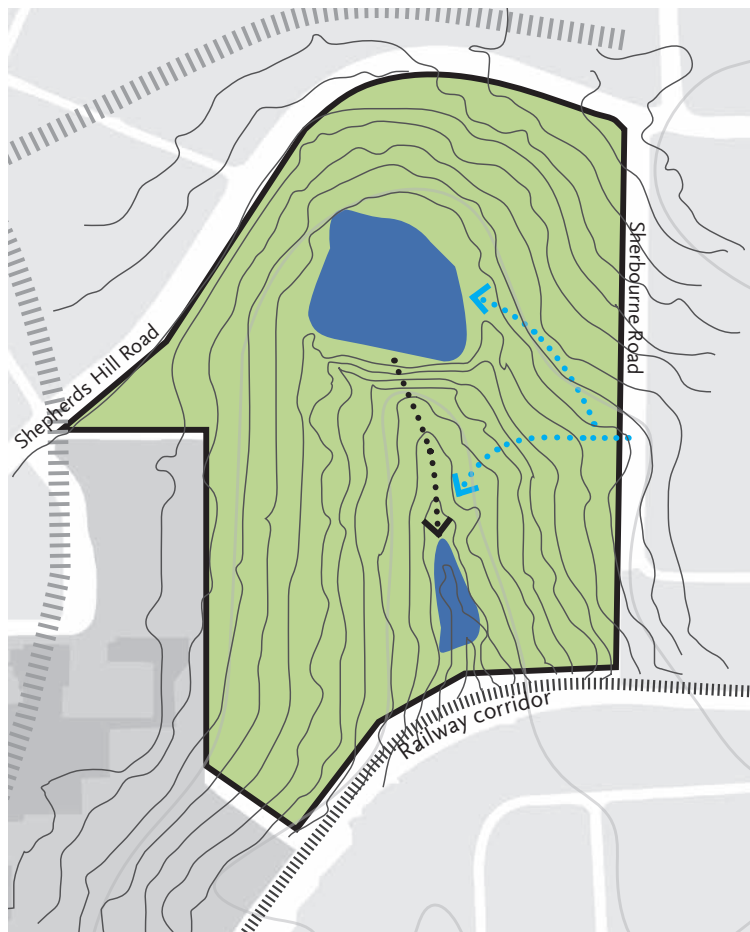
A known problem throughout the Garden since the late 1960's is the presence of *Phytophthora cinnamomi*. This soil pathogen is particularly evident in the south western corner of the Garden.

Senior research officers suggest that *Phytophthora* could be managed with the consideration of soil drainage and increased organic matter to the soil. Any new plant species added to the Garden will need to be considered for their resistance to *Phytophthora*.

#### Comment:

The Masterplan Report recommends further analysis of soil PH and *Phytophthora* locations within Wittunga. This analysis will inform the appropriate planting types for certain locations. It may also determine a modified management regime.





	Contours
	Swales
	Depression
	Water bodies
	Ridges



Water is collected from Shepherds Hill Road to the north and from the business precinct in Blackwood to the east.

Water collected from the east moves overland through a swale and flows into an ephemeral lake or 'Billabong'. Water collected from the north is directed into the main lake.

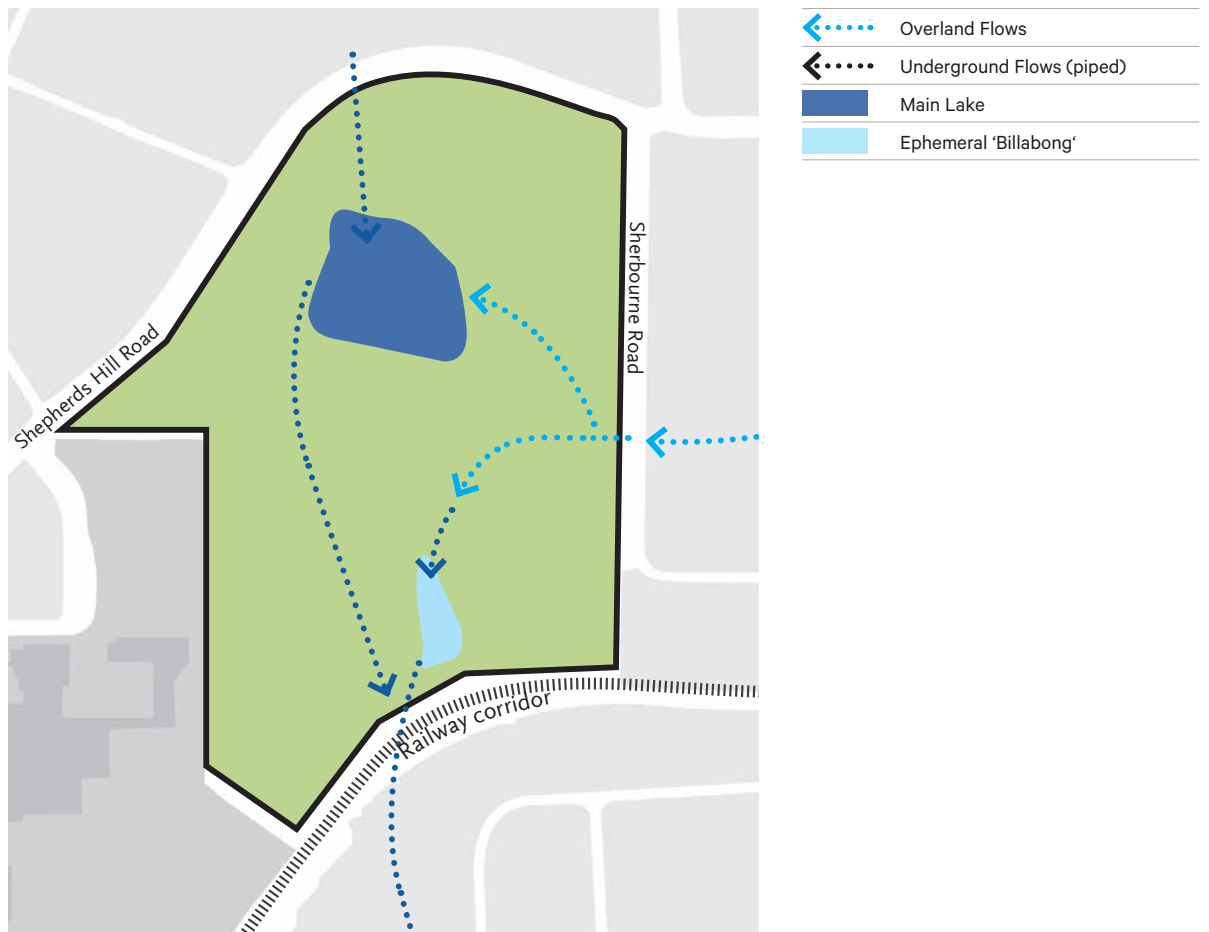
Through winter the open swales overflow and erode the surrounding paths and mulched beds. The ephemeral lake to the south fills quickly and overflow is piped under the train line and out towards the Sturt River. Any overflow from the main lake is also piped underground and out towards the Sturt River.

Due to the heavy clay soils, water runs over the landscape slowly absorbing into the soil with a majority of the water drainage collecting within the central valley.

A particular drainage problem occurs to the western side of the Garden where water runoff comes from Shepherds Hill Road and the Blackwood Schools.

This water runs into the Garden, causing increased erosion and water logging to the western beds in high rainfall periods. A concrete drain has been constructed along the western boundary to alleviate the problem however it has become a high maintenance issue, which requires continual up keep.





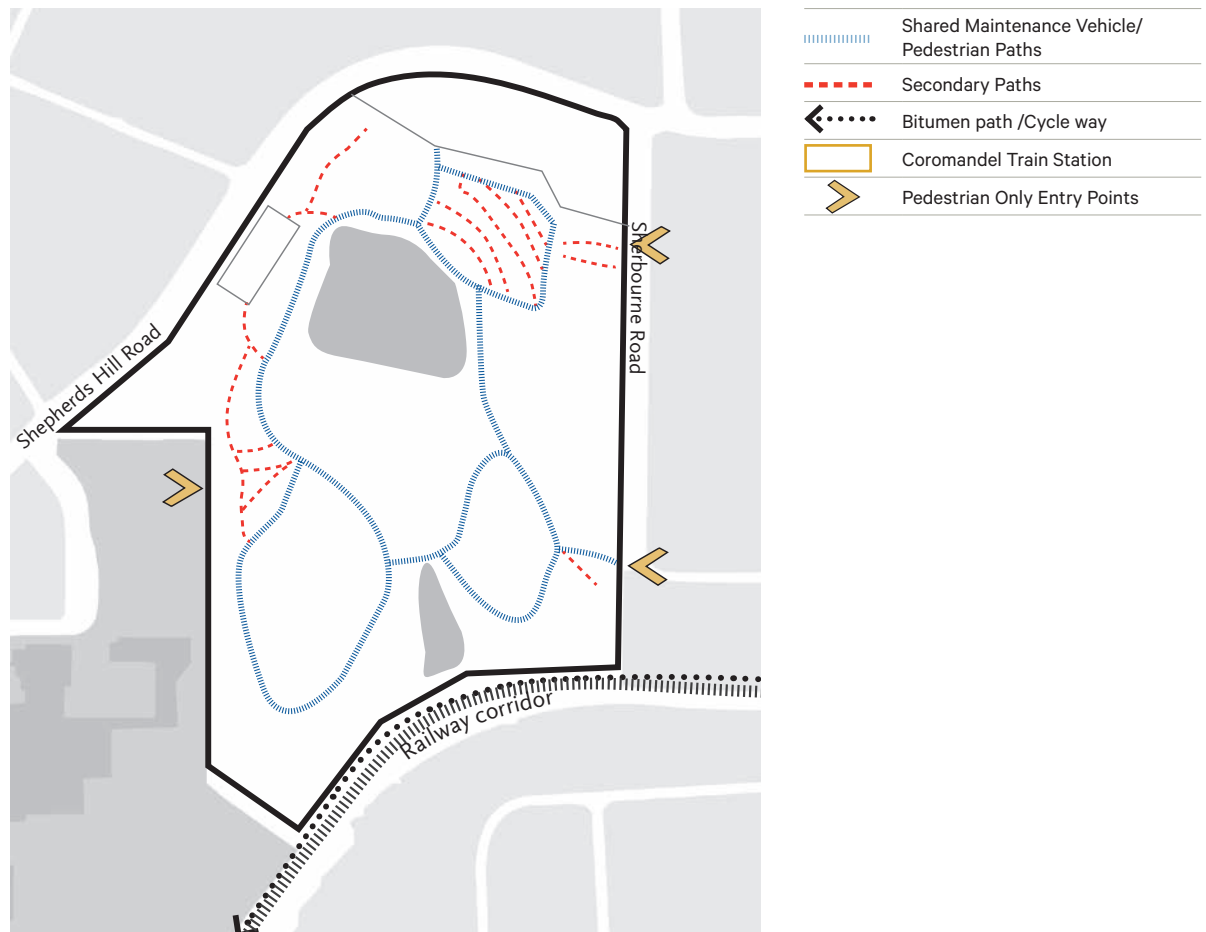
Movement through Wittunga Botanic Garden occurs primarily on a single path system. A main bitumen loop path provides the primary access for pedestrians and maintenance vehicles around the Garden.

The main visitor access and movement occurs to the north from the visitor car park to the main lake.

Pedestrian entrances occur primarily along Sherbourne Road. Currently, there is no formal path system directing visitors to these pedestrian entrances. A locked gate exists between the Blackwood Primary School and Wittunga's western boundary for access during school times.

A bitumen pedestrian/cycle path runs along the back of the Garden connecting to the Coromandel Train Station. There is no access into the Garden from this pedestrian/cycle path.



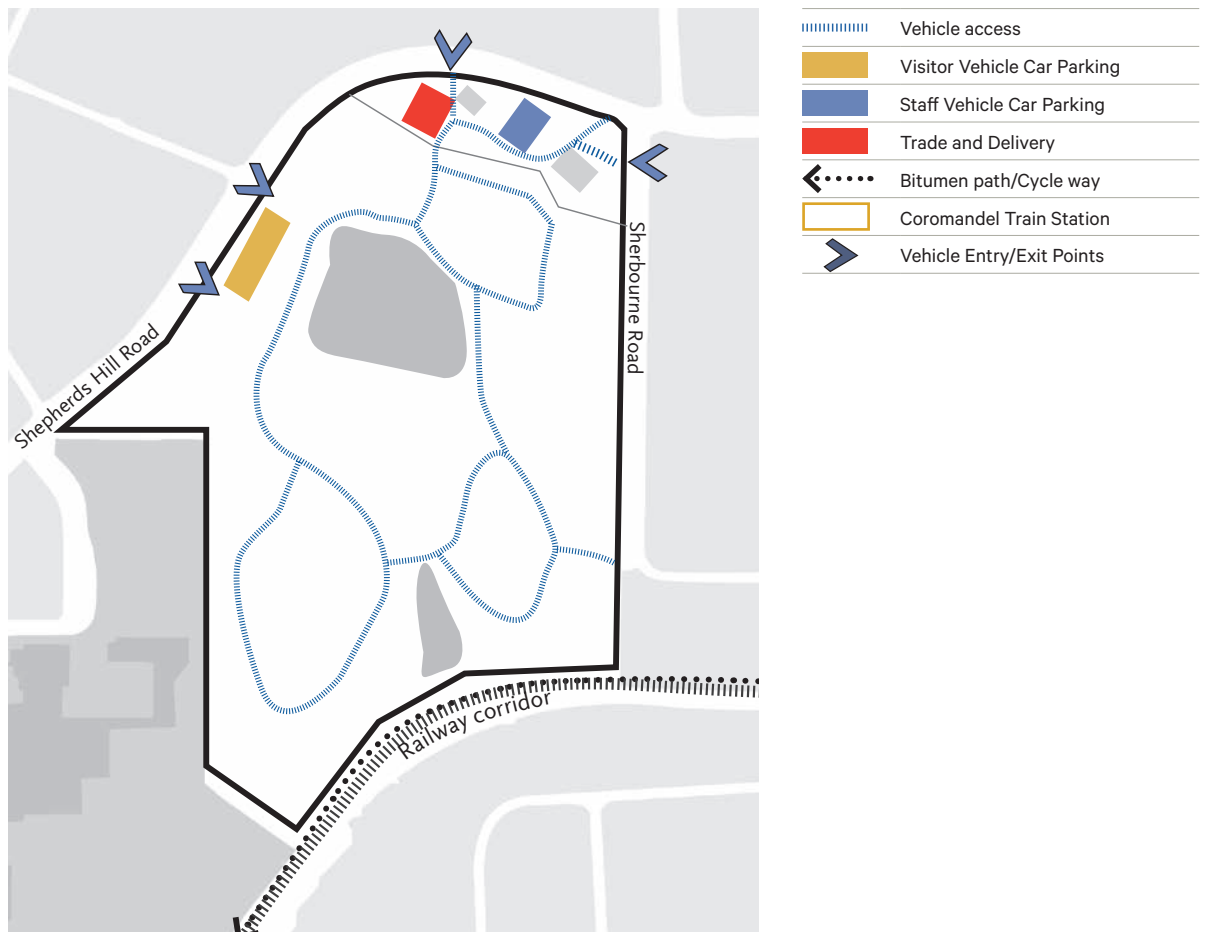


Wittunga Botanic Garden has an internal road system used by maintenance vehicles, which is also the primary pedestrian path around the Garden. This path system provides access to all areas of the Garden, not just for maintenance vehicles but emergency services.

A public car park is located to the north of the Garden accessible by most small passenger vehicles from Shepherds Hill Road. Buses are unable to enter the car park.

A staff car park is located to the north east, adjacent the Wittunga House. Vehicles can access the staff car park from either Shepherds Hill Road, an entrance predominately for trade and deliveries, or from Sherbourne Road, the existing entrance to the Wittunga House.





The Wittunga Botanic Garden and the Wittunga Homestead are places of heritage significance.

The Wittunga Botanic Garden is listed as a State Heritage Place. The citation for its selection states:

*'The garden contains over one hundred Erica species and cultivars which is the largest collection in Australia. The Erica collection is almost entirely the work of Mr Edwin Ashby and his son Keith. In addition to Ericas there is also an extensive collection of Protea and Australian plants. More recently, the garden has established a collection of species endemic to the southern region of South Australia, including the Fleurieu, Yorke and Eyre Peninsulas and Kangaroo Island, the only such collection of its type.'*

Wittunga House is listed as a Local Heritage Item under the Mitcham (City) Development Plan. The Wittunga Homestead (excluding the interior) is designated a place of local heritage value, as it:

- displays historical, economic or social themes that are of importance to the local area; and
- is associated with a notable local personality or event.





## SURROUNDING RESERVES AND FACILITIES

In close proximity to Wittunga there is a wide variety of bushland reserves, parks and playgrounds. The following tables indicate the reserves and facilities within a 1.0 kilometre and 2.5 kilometre radius:

Reserve (1.0 km radius - 314 ha)	Facilities
<b>Bushland Reserves</b>	
Ashby Reserve (large reserve)	Woodland reserve walking trails
Karinya Rotary Reserve	Playground (adult, youth, junior) with swings, slides and action stations, shelters, BBQ facilities, skatepark, toilet, Bush for Life Reserve, Scout Group, Soccer Oval and Blackwood Rotary Shed.
Blackwood Hill Reserve + Oval	Woodland reserve walking trails and the Tom Roberts Horse Trail, oval used by sports clubs for football and cricket, playground (junior + youth), rockers and swings
Ashby Reserve (small reserve)	Walking track through reserve
Bailey Reserve	Walking track through reserve
<b>Parks and Playgrounds</b>	
Gibbs Park	Sporting Facilities
Hewett Sports Ground	Oval for community use, tennis courts, playground (junior + youth) with swings, slide, see-saw and action station
Ossie Goldsworthy Reserve	Playground (junior) with swing, spring animals and action station, seating and shelter
Waite Street Reserve	Electric BBQ, lawn, playground (youth + junior) with swings, slide and small action station, parking, picnic tables, seating, basketball, netball and hopscotch
Bowling Club	Lawn bowls
Colebrook Blackwood Reconciliation Park	Seating, sculpture, interpretation and 'campfire' gathering

Refer to Surrounding Reserves and Facilities plan on page 48.

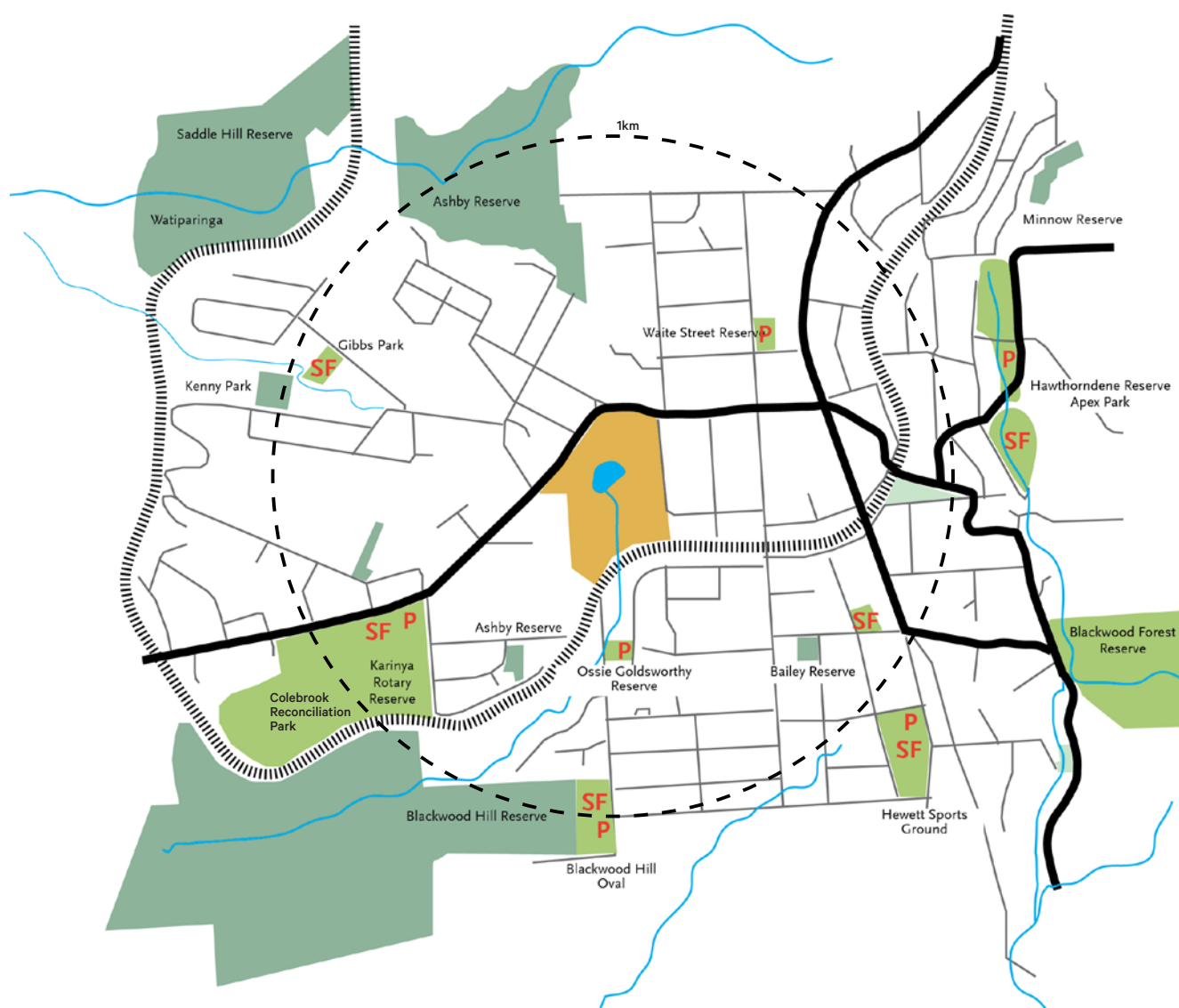
## SURROUNDING RESERVES AND FACILITIES

The following table is a desktop study and, as such, does not include the full details of surrounding reserves and associated facilities:

Reserve (1.0 – 2.5 km radius – 1,648 ha)	Facilities
<b>Bushland Reserves</b>	
Shepherds Hill Recreation Park	Woodland reserves walking trails, bike jump track, a pony club and archery range.
Sturt Gorge Recreation Park	Woodland reserve walking trails
Saddle Hill Reserve	Woodland reserve walking trails
Watiparinga Reserve	Woodland reserve walking trails
Blackwood Forest Reserve	
Kenny Park	
<b>Parks and Playgrounds</b>	
Manson Oval (adjacent Bellevue Heights Primary)	Oval for community use, playground (youth + junior) with swing, spring animals and action station
Hawthorndene Reserve - Apex Park	Oval for community use, electric BBQ, BMX track, picnic tables, seating, shelter, tennis court, playground + toilets.
Whicker Park	Picnic tables, playground (youth + junior) with swing, spring animals, hang glide and climbing equipment.
Mountbatten Reserve	
Bellevue Heights Reserve	
McTaggart Reserve	
Jackson Reserve	Picnic table, seating, playground with swings, rocker and action station
Frank Smith Park	
Archibald Reserve	Picnic tables, playground with rocker + swings and lookout deck
Minnow Reserve	
Dunns Reserve	
Suffolk Road Reserve	BMX track, playground (youth + junior) with swings, see saw and action station, seating and shelter
Brookman Crescent Reserve (Blackwood Park)	Shelters, lawn and seating
Highfield Drive Reserve (Blackwood Park)	Shelters, lawn, seating, picnic tables, playground (youth + junior) with swings, climbing structure, rocker, spinner and see saw

\*In addition, there are numerous parcels of open space throughout Craighburn Farm, Coromandel Valley, Hawthorndene and Glenalta, some bushland reserves and others maintained with seating and lawned areas.





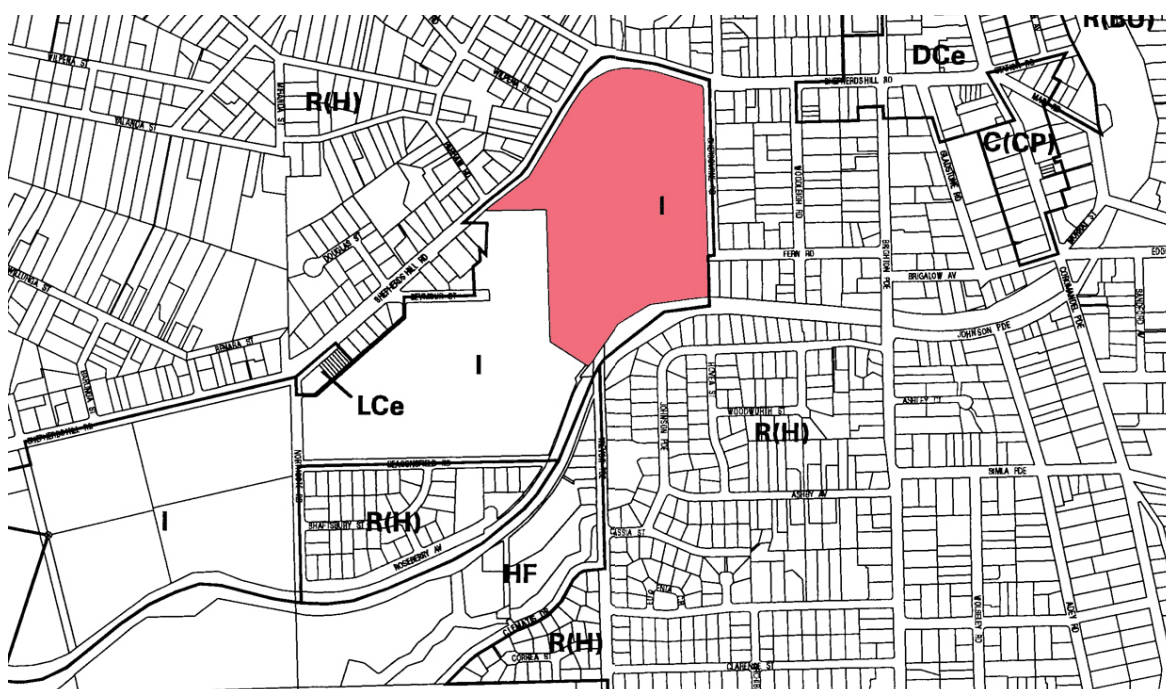






### Development Plan

Wittunga Botanic Garden falls under the planning controls outlined in the Mitcham (City) Development Plan (Consolidated 20 February 2020). The Garden is located within the Institutional Zone (refer figure below).



### Objectives

There are nine objectives within the Institutional Zone. The two objectives most relevant to Wittunga Botanic Garden are:

- Objective 1: The Zone is to accommodate public and private activities of an institutional and/or open character.
- Objective 7: The Eden Hills area accommodating educational and recreational activities with the existing vegetation and park-like setting retained and reinforced by additional plantings where appropriate.

### Development Controls

Development controls for the Institutional Zone include:

- Development undertaken in the Institutional Zone should be for public and private activities of an institutional and/or open character.
- Building development within the zone should be sympathetic to, and clustered with, existing buildings to preserve the open character of the zone.
- No additional allotments should be created in the zone for purposes other than those associated with and necessary for, educational or research activities.



**Non-Complying Development**

The Development Plan notes that ‘Shops or groups of shops with a gross leasable area greater than 50 square meters but not including a plant nursery’ are non-complying within the Institutional Zone. In other words, shops (greater than 50 square metres) are discouraged, but this does not apply to a plant nursery.

**Heritage**

The Development Plan (and *Development Act 1993*) includes a number of controls for the conservation of heritage places. The Wittunga Botanic Garden and the Wittunga Homestead are heritage listed places (refer Heritage Section 4.8). As such, any modifications or improvements must be in accordance with relevant heritage planning controls and requirements.

**Trees and Vegetation**

The Development Plan also includes controls for preservation of natural vegetation and Significant and Regulated trees.

Regulated and Significant Trees in the City of Mitcham Local Government Area are legislated by the *Development Act* and *Native Vegetation Act*. The *Development Act 1993* was recently amended to include the *Development (Regulated Trees) Amendment Act 2009* and *Development (Regulated Trees) Variation Regulations 2011*.

Consistent with the Department of Planning and Local Government release ‘Protecting Regulated and Significant Trees’, the ‘Development Act applies only where Native Vegetation Clearance consent is not required’.







The background of the entire page is a photograph of a garden. In the upper half, there are several tall, mature trees with dense green foliage, some with light-colored bark. Sunlight filters through the leaves, creating a dappled effect. In the lower half, there is a dense thicket of green shrubs and bushes, some with small white flowers. The overall scene is vibrant and natural.

5.0

# Guiding Principles

5.1 BOTANIC GARDENS PRINCIPLES



The three BGSB Botanic Gardens operate under an Act and Strategic Plan that sets a vision, mission and guiding principles outlining the legislative requirements as well as management and development of the Gardens.

The Masterplan guiding principles cover:

1. Precinct Connections (neighbourhood)
2. Garden Structure (acknowledge existing, response to site topography & cultural interventions)
3. Entries and Arrival Experience
4. Themed precincts and Trails
5. Destinations
6. Waterways









The background of the entire page is a close-up photograph of several purple bell-shaped flowers, likely from the Campanula genus. The flowers are in various stages of bloom, with some showing their white centers and yellow stamens. The background is softly blurred, showing more flowers and green foliage.

6.0

# Key Issues and Objectives

- 6.0 KEY ISSUES AND OBJECTIVES
- 6.1 GARDEN COMPOSITION
- 6.2 VISITOR EXPERIENCE
- 6.3 COLLECTIONS



6.o

KEY ISSUES AND OBJECTIVES

Key issues arising from the analysis of Wittunga Botanic Garden have been organised in the following categories:

a.

Garden Composition

b.

Visitor Experience

c.

Collections

The categories are consistent across all estates.

The following chapter discusses the masterplanning issues generated by each of the categories and sub-categories. Each sub-category then generates an objective that is stated at the conclusion of the discussion.

6.1 Garden Composition	6.2 Visitor Experience	6.3 Collections
Built Heritage Garden Heritage Spatial Arrangement Key Views Waterways Staff Facilities Infrastructure	Visitor Facilities Physical Access Way Finding Disability Access Public Safety Events and Functions Education and Interpretation Arts	Living Collections Flora Conservation Environmental Sustainability

## 6.1 GARDEN COMPOSITION

### Built Heritage

Wittunga Botanic Garden is a place of significant importance in the Blackwood region that retains the original homestead and stone Apple Store of the Ashby family property; first established in 1902. The buildings are a Board asset and are audited through the whole of government strategic asset management process.

- Wittunga House is listed on the local heritage register, being an excellent representation of early 20th century Adelaide architecture. Damaged by bushfire in 1934, the stone-fronted Queen Anne style residence was re-built, with the addition of a rear verandah, and retained as the Ashby family residence until it was gifted to the Board. The building has been well-maintained with the circular configuration of the entrance driveway still present. The original gates to Wittunga House have been removed with entrance pillars, constructed prior to 1925, still in place.
- Currently used as a storage shed, the Apple Store associated with Wittunga House adds to the heritage value of the homestead and associated garden. Originally used for farm duties and fruit storage, the building presents an excellent opportunity for interpretation. It is assumed the Apple Store also assisted in the operations of the Wittunga Nursery, one of the earliest plant nurseries in Australia to propagate and sell Australian plant species.

**Objective:** Allow public access to Wittunga House garden and the Apple Store curtilage. Explore options for alternative use of the Apple Store and use interpretation and way finding to communicate the history of Wittunga.

### Garden Heritage

Wittunga Botanic Garden is listed on the State Heritage Register. Its rich history of farming, horticulture and water management is still evident in the garden structure adjacent to Wittunga House and the established tree and understorey planting

throughout the Garden. The variety of collections and thematic zones are arranged in systematic, ecological and geographical groupings adding diversity to the fabric of the Garden.

- Remnants of the original English style garden adjacent to Wittunga House still exist and the traditional form of the front garden, driveway and forecourt to the house enhances the building and its address to Shepherds Hill Road. The English style garden represents the first step in the progression of Edwin Ashby's garden and his search for species that could tolerate the climate and soils together with gardening techniques that would best support their growth.
- The raised Maluka Beds are still in much the same form as they were first envisaged with the introduced sandy soil and raised profile assisting drainage and plant development. The heritage listed beds are a highly significant feature of Wittunga and provide a profound example of Ashby's innovation and determination to successfully grow plants in relatively harsh conditions. The raised stone walls extend in an east-west direction down the eastern slopes of the Garden providing structure and form adjacent the homestead. Gravel paths provide access to either side of the beds.
- The Terrace Beds were constructed by Keith Ashby, commencing in 1941, and provide a defined structure of sloping gardens reaching from the western verandah of Wittunga House to the ornamental lake. Informal gravel pathways follow the site contours providing direct contact with the varieties of South Australian and South African plants.
- In the outer reaches of the Garden the Ashbys set up the Never Never, including a range of Australian and South African species, and the Wild Part that retained the existing virgin scrub. The informal structure of these gardens has been revised generationally but still represents the original intention and form. The Never Never zone is the site where the Ashby system of watering was trialled and implemented.



## 6.1 GARDEN COMPOSITION

### Garden Heritage Cont.

**Objective:** Clearly define the garden heritage zones within Wittunga providing interpretative signage and public art to inform and educate visitors about the garden's history of design, innovation and experimentation.

### Spatial Arrangement

Wittunga Botanic Garden is defined by the existing landform of ridges and a central valley with modifications to the landform creating a lake and ephemeral water-course.

This arrangement affects how the Garden is used and understood, with most activity occurring in the higher, northern portion of the site where access and movement is easiest.

- The spatial experience of Wittunga Botanic Garden is derived from the topography of the site, the original siting and location of the homestead and themed gardens by Edwin Ashby and the subsequent garden design and implementation of the Botanic Garden.
- The Maluka Beds, Terrace Beds, and Fynbos zone have distinct spatial forms that distinguish them from the bushland and grassed arboreta plantings. Located adjacent large expanses of irrigated grass they contrast with the park-like zones that are popular spaces for passive recreation.
- In the northern half of the garden, the ornamental lake evokes an inward focus toward the attractions of the open water body. The spatial experience in the southern half of the garden differs markedly below the soil berm that retains the lake with the adjacent railway embankment dominating views and closing any visual or physical connection to the lower reaches of the valley.

- The boundary of the Garden is defined by fences with the tubular steel fence on Shepherds Hill Road being perceived as a barrier to visual and physical access. There is a tubular steel fence to the Blackwood Primary School border with the remainder of the site having a rudimentary cyclone mesh fence. The main entry is from the western car park with access not permitted to Wittunga House at the north-east corner of the Garden. Other minor pedestrian entries connect to adjacent streets, the Coromandel Train Station and the Blackwood Primary School.
- The northern portion of the Garden, including the homestead, Apple Store and BGSB operational facilities, is closed to public access. This significantly affects the spatial characteristics of the Garden, the visual and physical accessibility from Shepherds Hill Road and the overall perception of Wittunga.
- Movement through the site, for most visitors, commences at the public car park on Shepherds Hill Road where the Garden has large, open grassed areas with views and access to the ornamental lake. From the banks of the lake, pathways extend in loops moving through various treatments ranging from enclosed, naturalistic bushland planting to open, grassed arboreta. Dividing the site below the dam wall of the lake is the riparian zone reflecting the natural topography of the site.
- The rail embankment at the southern extent of the Garden restricts the natural visual and physical access to the lower reaches of the valley below Wittunga. The physical structure in this portion of the Garden is somewhat diluted, being dominated by large areas of grass, diminished under-planting and the impact of the embankment.

**Objective:** Enhance and reinforce the existing positive spatial experiences of the garden, simplify navigation and movement and clarify the variety of experiences throughout the garden.

## 6.1 GARDEN COMPOSITION

### Key Views

The topography of the site affords views into the centre of the Garden from many vantage points within the Garden. Views into the site from surrounding streets are restricted by screening from existing tree and understorey planting.

- The informal structure of the Garden does not provide any formal geometry to create axial vistas. Open, grassed areas in the north-western portion of the Garden provide multiple opportunities for panoramic views toward the lake and lower southern extents. In the southern section of the Garden, views into the lower valley, billabong and ephemeral riparian zone are gained from pathways and grassed areas to the east and west.
- Key views within Wittunga are focused on the ornamental lake. Current access restrictions to the northern portion of the site prevent the opportunity to create defined views from the Wittunga House curtilage across the Terrace Beds and through to the lake. The top of the dam berm affords views across the southern portion of the Garden although currently there are no access paths to this part of the site.
- Defined lookout points are not provided at Wittunga. Viewing points directly across the lake are afforded from adjacent shelter structures and the gravel 'beach' on the western edge of the lake.

**Objective:** Enhance key views within the Garden to improve the aesthetic experience and assist orientation. Create new views into the site to enhance the address of Wittunga and promote the Garden.

### Waterways

Wittunga collects stormwater from surrounding suburbs in the ornamental lake and in the lower billabong and Bog Garden. Overflows leave the site and pass under the railway embankment to a tributary of the Sturt River known as Magpie Creek.

- Stormwater is retained in the ornamental lake and billabong with overflows piped to the southern extent of the Garden. The water level fluctuates dependant on local weather conditions. Water for the ornamental lake is collected from Shepherds Hill Road and associated stormwater systems.
- The ornamental lake and billabong attract water birds, freshwater turtles and other fauna that add to the biodiversity of plant and animal life within the Garden. Habitat planting and flowering flora provide food and shelter for bird and animals
- Wittunga receives stormwater from the Blackwood shopping precinct and adjacent streets on the eastern edge of the garden. These short-term stormwater events can create flooding and safety issues as they enter the Garden through an informal creek system and overland flow across grassed areas below the ornamental lake. Safety, maintenance and repair of this watercourse is an ongoing management issue. Grated and open stormwater pits are located along the stormwater system with similar associated issues.
- Supply of water for the Bog Garden and billabong below the berm of the lake is inconsistent affecting the qualities of the ephemeral riparian zone and the viability of some species.

**Objective:** Maximise the retention of stormwater to maintain and enhance the existing watercourse. Explore options for irrigation use from on-site water storage. Promote sustainable water management practice.



## 6.1 GARDEN COMPOSITION

### Facilities

Facilities for the BGSB are centralized in the operational facility at the northern extent of Wittunga with the central administration of the Garden based at the Adelaide Botanic Garden.

- Principal facilities used by the BGSB include offices, staff meeting rooms and purpose-built depot facilities with the historic Apple Store used for tractor and tool storage. Redundant nursery facilities and storage sheds are still present on site and reflect the change in use and associated staff levels on site.
- Wittunga House is currently leased to a commercial tenant. Facilities within the building are adequate for the current function and use although the physical structure of the old homestead limits the options for extensive re-configuration. Current lease arrangements do not preclude alternative uses in the future.

**Objective:** Consolidate facilities to suit current requirements and maintain commercial use of Wittunga House.

### Infrastructure

Opened in 1975, the current infrastructure represents an incremental approach to development of the site over the 45 years of public use. While adequate for the requirements of a recreational park the materials and furniture do not have a consistent quality that enhances and defines the character of a botanic garden.

- Major pathways throughout Wittunga have a bitumen surface with a concrete 'rollover' kerb. These pedestrian pathways extend throughout the site forming the primary path network. Importantly these paths are used by BGSB staff as access tracks for maintenance vehicles, particularly during winter months when the site is saturated. The bitumen path has been patched and repaired and, together with the concrete kerbing, provides a functional but aesthetically poor footpath.
- Large drains positioned on the main carriageway are unsightly and potentially hazardous.

## 6.1 GARDEN COMPOSITION

### Infrastructure Cont.

The secondary network of paths consists of gravel / rubble paths and compacted granulitic sand paths of varying widths with smaller areas of unit paving. The granulitic sand paths enhance the more naturalistic bushland planting zones and the gravel / rubble paths provide access into specific garden zones from the primary path network.

- Garden structures include gazebos of various sizes that function as resting points, picnic sites and backdrops for weddings. These popular destinations are located throughout the centre of the Garden.
- Small footbridges cross the stormwater creek and the overflow chute at the southern edge of the billabong. The timber and steel structures both pose safety concerns due to their design, condition and location.
- Garden furniture includes timber seats and benches, bins, bike racks, picnic settings, information boards and life ring stands. The furniture is traditional in form and, while consistent in the use of timber and steel materials, varies in condition and comfort.
- Lighting within the Garden is not currently required due to the restricted access times. Amenity and functional lighting around the existing buildings and BGSH facilities is provided for after hours use by staff. Temporary outdoor lighting is set up for individual events from the power outlet hub adjacent the northern lawns.

- Automatic irrigation from potable mains water sources is provided to lawns and planting beds with large sections of the Garden relying mainly on natural rainfall. Currently, some sections of irrigated grass are turned off to reduce water usage.
- Fence types include brown, tubular steel to the majority of the Shepherds Hill Road boundary and galvanized steel chain mesh to the remaining boundaries with Sherbourne Road and the rail corridor. The boundary with Blackwood Primary School has a black tubular fence. Gates are locked at night to prevent access. The fence along Shepherds Hill Road presents as a physical and visual barrier along most of the north-western boundary supported by the screen planting of trees and shrubs within the Garden. Internally there are chain mesh fences separating Wittunga House from the public section of the Garden and a small section of tubular steel fencing preventing access to the northern edge of the lake near the stormwater inlet.

**Objective:** Implement a review of existing infrastructure and assets and develop a program for staged development and replacement to improve quality and usability.

Utilise the Wittunga Botanic Garden Style Guide to ensure consistency and quality throughout the Garden. Employ the use of durable, sustainable materials that reduce long-term maintenance needs.



## 6.2 VISITOR EXPERIENCE

### Visitor Facilities

Wittunga Botanic Garden does not have a main entrance or formal visitor information centre. The public car park is the principal point of entry with information leaflets available from distribution stands next to the car park.

- The public car park is located on the north-western edge of the Garden with a one-way flow of traffic entering and exiting to Shepherds Hill Road. Access into the car park is not clearly defined and can be difficult when crossing Shepherds Hill Road. Car park usage varies significantly, being lower during the week and full during high usage periods on weekends or public holidays. On-street parking is not permitted close to the car park entry and additional cars must park at greater distances from the Garden which is inconvenient. Larger vehicles, such as buses, are unable to enter the car park.
- Toilet facilities are located adjacent the north-western and south-eastern boundaries of the Garden. Built in the 1970's, the brick structures reflect the building style of this period. Both are in good condition, but lack visual appeal. The toilet adjacent to the car park and Shepherds Hill Road is used most due to its location.

**Objective:** Review existing visitor facilities and determine other car parking and access options on the northern boundaries of the garden based on the feasibility study to improve the visitor experience.

### Physical Access

Public access to Wittunga is principally from three entrances, the car park on Shepherds Hill Road and two pedestrian gates on Sherbourne Road. Access around the garden is defined by the path networks with most areas being easily accessible, although, due to the topography, the southern section of the garden is more physically challenging. Public access to the north-eastern portion of the site is not permitted.

- Entry to Wittunga Botanic Garden is free and the Garden is open to the public every day of the year between 8.30am and 4.00pm weekdays and 10.00am to 5.00pm on weekends and public holidays, extended to 6.00pm during daylight saving.
- Access to Wittunga is not clearly defined at its principal public interface on Shepherds Hill Road. Being the most visible landmark at the north-east corner of the Garden, Wittunga House is not open for public access and has poor presentation to the street due to the inferior quality of the fencing and adjacent gardens. Almost half of the northern boundary is closed to the public with two vehicle access points to the Wittunga House facility being the only breaks in the fencing until the public car park. The entry at this point is designed to cater for vehicles, but is also used by pedestrians, presenting a conflict between pedestrians and vehicles.
- Connections from adjacent streets to Wittunga Botanic Garden are through relatively indistinguishable pedestrian access gates on Sherbourne Road. Links to the Blackwood shopping precinct and Coromandel Train Station are not well defined.
- The topography of the site affects the volume of people using specific areas of the Garden dependent on their age or physical ability. Steeper sections of the Garden south of the lake are used less than the gently sloping lawns adjacent the lake edge.

**Objective:** Provide safe and legible public access to Wittunga from adjacent major and minor streets.

## 6.2 VISITOR EXPERIENCE

### Wayfinding

For most visitors to Wittunga the north-western car park is the first point of departure into the Garden proper. Information leaflets are available adjacent the car park providing visitors with a guide to the spatial layout, collections and features of Wittunga. Throughout the Garden there are way finding signs similar in style to the Adelaide Botanic Garden.

- Way finding signs are located throughout the Garden at key junctions of the path network and at the north-western car park entrance. Information signs regarding opening times and permissible activities are fixed to the pedestrian gates on Sherbourne Road. The signs are consistent with the BGSB standard suite of signs used at Adelaide and Mount Lofty.

**Objective:** Improve the way finding system to encourage and direct visitors to the variety of collections and features within the Garden, with improved entrance signage and internal directional signage.

### Disability Access

Access to Wittunga for people with a disability is limited. Adjacent streets are at a higher level than the garden creating access issues at public entry points. The topography reduces the opportunity for equal access to all sections of the Garden.

- Within the Garden general access around the primary path network is limited to the sections with a lesser longitudinal grade. The steeper sections of the path network are challenging for people with mobility issues or wheelchairs.
- The bitumen paths provide a smooth surface for people with mobility difficulties, however concrete 'rollover' kerb edging creates a significant obstacle, preventing easy access to adjacent areas of lawn or gravel / rubble paths. Exposed aggregate paving slabs have an inconsistent surface and wide gaps between pavers making movement difficult for wheelchairs and mobility aids. Informal rubble and granularitic sand paths are less easier to use.
- Parking spaces are designated for visitors with a disability at the north-western car park. The car park can be difficult to use for larger vehicles.
- Entry to shelters is either over the concrete 'rollover' kerb edging or across grassed or mulched areas of the garden making access problematic.

**Objective:** Extend and improve disability access provision at entry points, and throughout the Garden where the topography allows, by providing safe passages of travel and ease of access to all amenities in compliance with access standards.



## 6.2 VISITOR EXPERIENCE

### Public Safety

Wittunga is generally a safe public space to visit and use. Safety issues arise around the edges of the ornamental lake with access restricted, but not prevented, from most of the banks.

- Pedestrian entry to Wittunga at the north-western car park is not satisfactory with pedestrians using the vehicular access roads as a footpath. In addition, the grade of these entry roads is steep and problematic to use for most visitors. The northern entry point off Sherbourne Road is also difficult due to existing grades and path treatment with the south-east entry gate and associated paths providing the easiest access into the Garden.
- The edge of the lake and the dam berm are steep at many points with fencing preventing direct access to the northern bank adjacent the stormwater inlet. The top of the dam berm is accessible offering views to the southern half of the Garden. Opportunities to view the lake from the dam berm are opening up with planting between paths and the lake edge discouraging access to the water. These locations attract inquisitive visitors and pose safety concerns.
- Water bodies pose challenges to safety in publicly accessible spaces such as Wittunga. Coupled with the potential dangers of steep banks, the Garden often has vigorous short-term storm water events that rush through the informal creek on the eastern flank of the site and overland across sloped lawns. This is an area of concern for the Garden.
- Wittunga Botanic Garden closes late in the afternoon reducing the need for public lighting and the perceived and real dangers of moving through public open space at night. With low visitor numbers there are times when sections of the Garden seem isolated from public view causing concern to some visitors.

**Objective:** Manage and improve current and any future public safety concerns throughout the Garden.

### Recreation and Events

Wittunga is primarily used for passive recreation pursuits such as walking, relaxing, picnicking and learning about plants. The largest public event held was Wittunga Under the Stars. Smaller community events include the Grey Box Community Day held by the Urban Biodiversity Unit and Waterwise at Wittunga by the Friends of the Adelaide Botanic Gardens. The Garden is also popular for wedding ceremonies and photography.

- Wittunga is valued by the local community for the character and quality of the open space, the aesthetic qualities of the lake and the collection of plants. The high level of maintenance distinguishes the Garden from surrounding reserves and the nearby Belair National Park.
- Under the *Botanic Gardens and State Herbarium Act* (1978) and Regulations (2007), ball games, cycling, skating, scooters, pets, sound equipment, drones, lighting of fires and alcohol are not permitted.

**Objective:** Maintain, manage and improve existing facilities for public recreation and for small private events and larger community events.

## 6.2 VISITOR EXPERIENCE

### Education and Interpretation

Wittunga is a many-faceted resource offering opportunities for interpretation and education on several levels. The property is an important asset to the Blackwood region being a tactile example of its early farming history including fruit orchards and more traditional sheep and livestock.

Coupled with this, Wittunga had one of the early Australian plant nurseries that grew from Edwin Ashby's interest and exploration of southern Australian plant species. In addition, Ashby's innovative ideas for soil and water management are an exemplar of developing sustainable management techniques.

- The history of the Ashby property is explained in brief on the information leaflets for the Garden. With public access to the homestead and associated Apple Store not permitted the visitor experience of the historic property is significantly reduced. Artefacts used at the farm are stored in the Apple Store and other locations but are not used for interpretation.
- With a background of research into climatically suitable plant species from southern Australia and South Africa, coupled with the development of sustainable management practices, Wittunga is underutilised as a resource for education and interpretation.
- The Wittunga Naming Walk is a series of twenty-four interpretative signs demonstrating how plants are named scientifically and the origins of their names, either from a person or characteristic of the plant.
- Plant species are named in accordance with BGSB protocol and information signage throughout the Garden educates and informs visitors about the plant groupings and their characteristics.

- Friends of the Adelaide Botanic Gardens are a great asset to Wittunga and provide guided walks every Tuesday from the beginning of August until the end of November. The walks provide an informative description of the Garden's history and collections. The Friends also conduct annual walks for History Month, Paleo Week, Planet Ark Tree Day and lecture walks for booked groups.

**Objective:** Create positive connections between people and plants and educate visitors about the history of the Wittunga Botanic Garden. Maximise educational opportunities which foster learning about the plant world, particularly in the Garden's key areas of research, collection development and sustainable horticultural management. Link educational activities to the Australian National Curriculum. Utilise communication media that maximise the interpretive value of collections and education of sustainable plant and water use in home gardens. Investigate 'Schools Education Programmes' and the possible inclusion of Wittunga in their curriculum.

### Arts

Wittunga Botanic Garden does not have any public art works. There may be opportunities for short term installations that would promote and activate the Garden. Permanent or temporary public art installation proposals are to be submitted to the Gardens for assessment against the Botanic Gardens of Adelaide Arts Policy and Cultural Collection Policy.

**Objective:** Manage, maintain and enhance the Gardens cultural collection and public art.



## 6.3 COLLECTIONS

### Living Collection

The principal asset of Wittunga Botanic Garden is the collection of predominantly southern Australian and South African plant material. Critical to the success of the Garden is the form and quality of the living collection displays.

Based on the investigative rigour of Edwin Ashby, the collection derives from his search for plants grown and established in similar environmental conditions to those experienced at Wittunga.

As such, the Garden is a tangible reflection of Ashby's early forays into environmental sustainability and research.

Wittunga is known for its *Erica* collection and display, together with the commercially available cultivars developed in the Garden. The *Erica* plantings are recognised as a signature species of Wittunga and compliment the unique Fynbos plantings that display species from the Western Cape of South Africa.

The Collection Policies 2013 Living Collection Policy defines the seven primary themes used throughout the sites:

- **Geographical:** A collection or display of plants based on a defined geographical area
- **Biological and Ecological:** Collections and displays of plants which grow together in biological or ecological communities defined by a particular range of environmental conditions
- **Taxonomic and Evolutionary:** A collection of plants which demonstrates principles of plant classification and evolution
- **Ornamental and Landscape:** A collection of plants grown for their ornamental and landscape qualities
- **Historical and Cultural:** Plants which display aesthetic, scientific, historical or social values for past and present generations
- **Conservation:** Plants which require protection due to their status in line with State, National or International conservation strategies. This will also cover the conservation of old cultivars and ornamental plant collections
- **Research Collections:** Plant collections which promote scientific research or are assembled for further research.

The Policy also identifies "Focus Collections" within the living plant collection. Focus collections relevant to Wittunga Botanic Garden include:

- South Australian Flora
- Mediterranean Garden Flora (South African Mediterranean climatic zone)
- Flowering Trees
- Charismatic plants

**Living Collections Cont.**

Wittunga has important historical collections with some planting zones and selected species dating back to the original plantings of Edwin Ashby. Principal zones identified in plant collection plans for Wittunga include:

- **Wittunga House Planting:** There is little remaining from the original English style plantings adjacent to Wittunga House. Hints to the structure of the house garden are still evident in the layout of the carriageway/driveway and several mature plant species. The area suffers from low levels of maintenance and a definite theme. Opportunities exist to restore Edwin Ashby's original planting structure enhancing the address of Wittunga House to Shepherds Hill Road and providing an interpretative departure point for the evolution of the Garden. The rear house garden consists of lawn with mature and establishing plant species in mulched beds. Views and physical connection to the Garden and lake are restricted by the rear fence and large shrubs/small trees. There is little to define the style of the rear garden.
- **Terrace Beds:** South African species are used in the terrace beds providing continuation of the original Ashby planting scheme. The terraces are one of the preferred destinations in the Garden due to the physical structure of the beds, its relationship to topography and the attractive outlook to the homestead and ornamental lake.
- **Maluka Beds:** Integral to the story of innovation and adaption to climate and site are the heritage listed Maluka Beds. The original structure of the beds is still evident however the planting scheme lacks definition. Mature trees shade the beds reducing light and affecting the success of some species. Other shade-loving species dominate portions of the beds. Removal of selected large shrubs and trees would open up the beds and improve opportunities for display of plant foliage and flowers. The relationship of the beds to Wittunga House is poor with screen planting and fencing restricting physical and visual connection.
- **Never Never:** Originally used for trialling and development of the Ashby Method for successful establishment of plants, the Never Never consists mainly of Australian species with some exotic taxa. The distinction of the Never Never from the adjacent Wild Part to the south is not clear with the bushland treatments seeming continuous. Physical examples of the Ashby Method of earthed up rings, a defined collection plan and associated interpretation would re-invent the original structure and use of the area and educate visitors about sustainable management practices.
- **Lake Edge:** Planting around the lake edge varies and includes zones of local wetland species, terrestrial species and areas of bare soil and stormwater outlet pipes. Visual amenity and habitat is being progressively improved through a program of weed removal and local riparian plant species revegetation.
- **Kangaroo Island and Fleurieu Peninsula Planting:** Comparisons between the closely associated species on the Fleurieu Peninsula and Kangaroo Island reinforce the themes Ashby explored in relation to the continents of Australia and Africa. Current distinctions between each planting zone are not clear.



## 6.3 COLLECTIONS

### Living Collections Cont.

- **Heath Garden:** Western Australian heath species have been consolidated to provide a high amenity collection zone.
- **Myrtaceae Collection:** The majority of this collection is on the southern and western boundaries of the Garden although the extents are not clearly defined. At the southern extent wet, winter conditions affect establishment and ongoing vigour of some of the plantings.
- **Drainage Area above the Billabong:** Located below the dam berm of the ornamental lake the ephemeral, riparian planting theme and Bog Garden is not well established. This is principally due to a lack of consistent water flow with minor overflows from the lake occurring irregularly. Coupled with this, surface water flows through this zone and is collected in the lower billabong.
- **Outer Southern Areas:** Planting in the outer southern areas of the Garden is indistinct with arboreta plantings of *Grevillea robusta* not supporting the planting themes of Wittunga. *Eucalyptus* species and associated under-planting dominate the planting beds surrounding large expanses of grass that are currently not irrigated. Other arboreta plantings include the South African *Widdringtonia* sp. This portion of the Garden has a heavy clay base that stays wet for long periods of the colder months and is excessively dry in the summer.
- **Western Australian Plantings:** Many of the Western Australian under-storey planting has failed in its current location suggesting the representation of understorey species from this geographical zone be relocated and included in other beds. Tree species have succeeded and could be focussed as an arboretum planting. Habitat and display plantings should include the *Hakea* and *Banksia* collections, with specific reference and examples of *Banksia ashbyi* (named after Edwin Ashby) and *Acacia ashbyae* (named after Alison Ashby.)
- **Fynbos Planting:** Situated on the western slopes above the ornamental lake, the fynbos planting beds have previously been viewed as a counterbalance to the Terrace Beds on the eastern slopes below Wittunga House. The fynbos has been consolidated and enhanced with further opportunities to display the fundamental similarities and subtle differences between Western Australia's kwongan vegetation and South Africa's fynbos vegetation, which are both considered 'heathlands'.
- **Butterfly Collection:** Located at one of the more popular locations in the Garden adjacent the lake beach, the butterfly plant collection informs visitors of plants that attract butterflies to their gardens. The planting is consistent with the theme and can be reinforced further, possibly to extend across the main pathway and down to the lake edge.
- **South African Cultivars:** South African cultivars are sporadically present throughout the Garden. Consolidation of cultivars in a designated planting zone is proposed to display and compare with other similar taxa and related Australian species.
- **South African Geophytes:** Geophytes are spread sporadically through the Terrace Beds where they provide seasonal variety and enhance the planting structure of the beds. Again, consolidation of the South African Geophytes is proposed to display and inform visitors about safe, low maintenance, low water use plant selections for their gardens.

**Living Collections Cont.**

- Grey Box Community Woodland: Existing stands of *Eucalyptus microcarpa* (Grey Box) throughout the Garden are supported by woodland under-planting varying in density dependant on location and maintenance regime. Grey Box trees in themed zones closer to northern portion of the Garden have a higher level of maintenance than the plantings on the southern boundaries where they are set in large, mulched beds. Current plantings are labelled individually but interpretation of the overall display is required to inform and educate visitors about local plant species and the reintroduction of natural habitat.

**Objective:** Manage and consolidate current and future living collections in accordance with the BGSB internal review to maximise their scientific and cultural value.

*Phytophthora cinnamomi*, first identified at Wittunga in the late 1960's, has had a profound effect on the health and vigour of selected plant taxa within the Garden.

- Decisions regarding species selection, movement of collections and general management practices should continue to be cogniscent of the implications the root rot fungus can have on the development of the Masterplan.

**Objective:** Ensure the future changes to the Living Collection seek to reduce the effects of *Phytophthora* wherever possible in accordance with best management practice.

**Flora Conservation**

The BGSB play an important role in plant conservation on a local and international level. With the specific planting themes present at Wittunga, and a program of restoring grey box woodland throughout the southern extents of the site, the Garden acts to conserve threatened local flora.

- As signatory to the International Agenda for Botanic Gardens in Conservation, the BGSB support the objectives – to “define and promote the role of botanic gardens around the world in the conservation of the world’s biodiversity”. The BGSB seeks to establish global partnerships and alliances between Gardens and develop evaluation and monitoring procedures for global biodiversity conservation.
- The BGSB participates in the Royal Botanic Gardens Kew’s Millennium Seed Bank Partnership, a conservation programme focused on global plant life faced with the threat of extinction and plants of most use for the future. Allied to this is the South Australian Seed Conservation Centre located at Adelaide Botanic Garden. It was established to help safeguard South Australian flora against extinction through banking seed for future use. The seed is also used by seed scientists to develop germination and storage protocols.
- The BGSB promote the use of plants adapted to the local environment, contribute to the conservation of native vegetation and biodiversity values and support Government strategies for the conservation of biodiversity.
- With the original property established as a working farm, land was cleared and planted to create apple and pear orchards. Commonly, remnant trees are retained in the creeks and valleys of a farm where the land is too steep or inaccessible or along boundary fences. At Wittunga trees were removed and the valley filled to create a stormwater storage dam and ornamental lake. Existing trees were retained in the Wild Part and at other locations throughout the Garden. Some examples of mature Grey Box and Blue Gum trees, and the direct progeny of the original vegetation at Wittunga, can therefore collectively be considered remnant.

## 6.3 COLLECTIONS

### Flora Conservation Cont.

- The extension of the existing grey box woodland species theme provides the opportunity for Wittunga to re-introduce natural habitat, represent local provenance species and add to the seed bank for nursery and revegetation purposes.

**Objective:** Manage, maintain and enhance the Garden policy of flora conservation and sustainability with a specific focus on the local grey box woodland and other South Australian planting typographies.

### Environmental Sustainability

Wittunga has been an exemplar of environmental sustainability from early in its inception through the commitment and exploration of sound management techniques developed and used by Edwin Ashby. Future enhancement of the Garden will support the Strategic Plan and progress environmental reconciliation within the Garden with local species habitat connecting to the broader vegetation pattern of the southern foothills.

- The BGSB participates in the protection, enhancement and enrichment of the urban environment.

- Several management techniques are currently employed to reduce water use and maintenance requirements. Mains water irrigation systems to large, grassed areas are turned off and areas beneath trees are mulched rather than having planted beds or grass. De-accessioning has occurred to plant species that require a high level of maintenance or irrigation.
- Detention of stormwater, and short-term retention during storm events, assists in the general management of stormwater in the Blackwood precinct. Ornamental lakes create habitat for local fauna and provide high visual amenity for visitors to the Garden.
- Themes of climatically appropriate plant collections support a sustainable methodology for environmentally responsible management at Wittunga. These themes can be further interpreted to visitors and members of the local community to enable them to achieve more sustainable outcomes for their home gardens.

**Objective:** Provide leadership to the broader community on sustainable environmental issues and initiatives. Enhance the initiatives already in place and further promote the values of sustainability to the community, with Wittunga an exemplar of best management practice.













7.0

# Strategic Responses and Actions

- 7.0 STRATEGIC RESPONSES AND ACTIONS
- 7.1 GARDEN COMPOSITION
- 7.2 VISITOR EXPERIENCE
- 7.3 COLLECTIONS



7.0

STRATEGIC RESPONSES AND ACTIONS

The strategic responses and actions in the following section of the report are derived from the analysis and interpretation of current key issues and objectives. They respond to a detailed program of investigation and consultation.

The process for determination of the responses and actions has included individual and group meetings with BGSB staff to determine key directions for Wittunga and gain feedback to ideas and proposals. Inherent within this are the principles, together with the collective experience and specific understanding of the operation and issues that affect the future success of Wittunga.

Responses from the engagements are reflected in the Masterplan following consultation with members as a group and individually. The community engagement process provided valuable feedback on the aspirations of the local and broader community, related industries, state and local government bodies.

Strategic Responses and Actions related to Wittunga Botanic Garden have been organised in the following categories:

- a. Garden Composition
- b. Visitor Experience
- c. Collections

The following chapter discusses the Masterplanning issues generated by each of the categories and sub-categories. Each sub-category then generates an objective that is stated at the conclusion of the discussion.

7.1 Garden Composition	7.2 Visitor Experience	7.3 Collections
Built Heritage Garden Heritage Spatial Arrangement Key Views Waterways Staff Facilities Infrastructure	Visitor Facilities Physical Access Way Finding Disability Access Public Safety Events and Functions Education and Interpretation Arts	Living Collections Flora Conservation Environmental Sustainability

## GARDEN COMPOSITION

### Built Heritage

#### Strategic Response:

Allow public access to the gardens around Wittunga House.

#### Actions:

- Define and upgrade a pedestrian entry point to Wittunga House at the northern end of Sherbourne Road
- Replace the existing fence around the 'House Garden' and re-plant the garden with species in the style of the original planting scheme
- Remove the bitumen driveways and replace with gravel driveways
- Remove the existing shed to the west of Wittunga House and relocate required storage items to the Garden's depot

#### Strategic Response:

Determine a new use for the Apple Store and associated curtilage with interpretation of its history and connection to Wittunga House.

#### Actions:

- Relocate existing maintenance vehicles and storage from the Apple Store to the 'potting shed/office' and new purpose built sheds
- Relocate the existing chemical store and fuel shed to the 'potting shed/office' curtilage in accordance with all relevant WHS regulations
- Investigate new commercial uses for the Apple Store with the possibility of a retail plant nursery outlet
- Provide a distinct physical and visual connection between the Apple Store and Wittunga House
- Provide interpretation of the Apple Store and the history of Wittunga as an orchard and farm

### Garden Heritage

#### Strategic Response:

Enhance the public address of Wittunga House to Shepherds Hill Road and Sherbourne Road and reinstate the structure, form and planting style of the 'English' House Garden.

#### Actions:

- Procure and implement a garden design for the House Garden representative of the original 'English' garden style
- Utilise the existing entry on Sherbourne Road for pedestrian-only access to the Botanic Garden and Wittunga House
- Consider removing fencing between the House Garden and the adjacent Maluka Beds and Terrace Beds to re-connect the House Garden with the Botanic Garden
- Provide interpretation of the House Garden and its relationship to the surrounding gardens, including recognition of the remaining species from the original planting

#### Strategic Response:

Retain the heritage listed Maluka Beds and restore a mixed planting palette indicative of the experimental approach used by Edwin Ashby.

#### Actions:

- Prepare a revised collections plan for the Maluka Beds enhancing the species mix used by Edwin Ashby for experimentation and research
- Provide interpretation of the history and physical design of the Maluka Beds



# GARDEN COMPOSITION

## Garden Heritage Cont.

### Strategic Response:

Maintain and reinforce the structure of the Terrace Beds and 'Never Never' gardens.

### Actions:

- Reinforce the existing layout of the Terrace Beds with stone edging and walling enhancing the structure of the beds and their relationship to the adjacent Maluka Beds
- Review the existing species and collections plan policy for the Terrace Beds to ensure visual connection and views from Wittunga House across the Terraces to the lake is maintained
- Provide physical examples of the 'Ashby system of watering' in the 'Never Never' garden including associated interpretation that reinforces the history of sustainable management practices

## Spatial Arrangement

### Strategic Response:

Define and clarify the variety of landscape treatments and gardens within Wittunga to provide greater clarity to the collection and enhance the spatial experience within the Garden.

### Actions:

- Review the collections plan and ensure future collections and arboreta plantings are clearly defined and reinforce the intention of the masterplan
- Consolidate the operational facilities of Wittunga Botanic Garden in the north western corner of the Garden and investigate the possible relocation of selected concrete storage bins to both the north western and south western corner of the Garden

### Strategic Response:

Improve pedestrian access into and through Wittunga Botanic Garden to increase visitor numbers, activate the Garden and simplify navigation.

### Actions:

- Provide defined pedestrian access points at the northern and north western extents of the Garden to 'open up' the Garden to Shepherds Hill Road and improve access to all parts of the Garden
- Remove fencing between the House Garden and the Botanic Garden to allow access around Wittunga House and to adjacent streets
- Upgrade and redefine the Sherbourne Road entrances to the Garden
- Provide more direct pedestrian movement throughout the Garden and to the new and existing entrances
- Encourage the City of Mitcham to extend the streetscape treatment on the southern side of Shepherds Hill Road from Woodleigh Road to Wittunga House at the intersection of Shepherds Hill Road and Sherbourne Road
- Encourage DPTI and the City of Mitcham to provide a defined pedestrian linkage between Coromandel Train Station and Wittunga Botanic Garden

### Strategic Response:

Improve the address and physical presentation of Wittunga Botanic Garden to Shepherds Hill Road.

### Actions:

- Remove the cyclone mesh fence around Wittunga House and provide new fencing in accordance with the Style Guide
- Provide new landscape treatments at each new and existing major pedestrian entry point to more clearly identify the entrances to the Garden and provide 'badging' of Wittunga to its major street address –Shepherds Hill Road

**Spatial Arrangement Cont.****Actions (Cont.):**

- Review the collections plan for the planting beds adjacent Shepherds Hill Road and provide a distinctive planting theme that distinguishes the Garden from other residential, educational and commercial properties on Shepherds Hill Road and is attractive to pedestrian and vehicular traffic
- Re-paint or replace the existing steel fence on Shepherds Hill Road
- Explore options for visually 'breaking' the Shepherds Hill Road boundary and provide a more aesthetically appealing street address

**Strategic Response:**

Improve the water quality and lake edge treatment to enhance views across the lake.

**Actions:**

- Re-grade the northern bank of the lake and continue local riparian species planting to improve the appearance and habitat qualities of the lake edge. Continue this treatment around the lake edge where required to improve biodiversity and screen stormwater piping and other infrastructure from public view
- Relocate the main stormwater outlet pipe from Shepherds Hill Road to allow for improved treatment and presentation of the lake edge
- Remove weed species such as Bamboo, Pampas Grass and Ash Trees from the southern banks and island and replace with local riparian species to improve habitat and views across the lake and to the southern extent of the Garden
- Re-grade the lake 'beach' and top with a pebble that aesthetically supports the 'beach' treatment and is low maintenance
- Remove the island in the middle of the lake

**Key Views****Strategic Response:**

Maximise the existing key views within the Garden and create new key views that add to the overall aesthetic quality of the Garden and assist orientation and navigation throughout the site.

**Actions:**

- Incremental removal and replacement of trees and large shrubs, as appropriate and in support of collection plans, where required to allow key views from the House Garden and Terrace Beds to the lake
- Provide pedestrian access to viewing points around the edge of the lake with key views to the north and south

**Strategic Response:**

Screen views of the operational facilities of the Garden, including the storage bins and staff car parking.

**Actions:**

- Maintain and enhance existing planting that screens the operational facility zones from within the Garden and along Shepherds Hill Road



## GARDEN COMPOSITION

### Key Views Cont.

#### Strategic Response:

Improve views and visual access into the Garden from Shepherds Hill Road in accordance with the living collection policy and planting plans.

#### Actions:

- Remove middle layer large shrubs from the boundary planting beds adjacent Shepherds Hill Road to improve views into the Garden
- Provide signature plantings of clean-trunked trees with distinctive foliage and flowering characteristics

### Waterways

#### Strategic Response:

Review effectiveness of water storage systems and stormwater inlets/outlets throughout the Garden to optimise use and storage of on-site water.

#### Actions:

- Investigate the use of bore water for irrigation to supplement the mains water supply and potential re-use of stormwater
- Assess the stability of the soil berm at the southern edge of the lake
- Commission an audit and review of stormwater collection, storage capacity and potential re-use within the Garden
- Remove the underground stormwater pipe north-east of the detention basin and develop an open creek system
- Provide additional bank stabilisation with rockwork and planting to the stormwater inlet creek on the eastern side of the Garden to prevent damage to adjacent planting beds during rain events

#### Strategic Response:

Improve the bank treatment and associated habitat of the water bodies within the Garden

#### Actions:

- Continue to implement a program for the staged removal of weed species on the banks of the ornamental lake and 'billabong'
- Re-grade the banks of the lake and plant with local riparian plant species to improve habitat for bird and animal life, screen unsightly soil banks and stormwater infrastructure and reduce safety concerns

## GARDEN COMPOSITION

### Staff Facilities

#### Strategic Response:

Consolidate the overall footprint of the BGSB works depot to minimise visual and physical impact on the amenity and presentation of the Garden.

#### Actions:

- Conduct a detailed review and audit of the works depot to determine the most efficient use of facilities and space
- Remove the greenhouse to allow for a new fit for purpose storage shed and storage bins
- Remove the shade house and provide a new relocated shade house
- Investigate options for relocating the green waste and other storage bins to the south-west corner of the Garden

#### Strategic Response:

Repurpose the Apple Store and investigate other compatible commercial uses for the building that improve the presentation of the Store to Shepherds Hill Road and re-connect the Store to Wittunga House.

#### Actions:

- Relocate tractors and other machinery to a new purpose built storage facility and the potting shed/office building

### Infrastructure

#### Strategic Response:

Continue to implement the Wittunga Botanic Garden Style Guide for furniture, infrastructure and hard landscape elements to provide a consistent image and quality for the Garden.

#### Actions:

- Incrementally replace the current suite of furniture with an approved standard suite of furniture that enhances the quality, comfort and amenity of the Garden for visitors
- Ensure all new furniture is aesthetically appropriate and easy to maintain and replace in accordance with the Style Guide
- Develop a custom suite of shelters with staged replacement of the existing Gazebos. Locate the shelters at key viewing points with aesthetically pleasing backdrops suitable for a range of uses including picnics and wedding ceremonies

#### Strategic Response:

Review existing infrastructure and assets to determine current and future replacement needs in accordance with the Style Guide for the Garden.

#### Actions:

- Develop a program for the staged replacement of infrastructure and assets



**Infrastructure Cont.****Strategic Response:**

Reconfigure and upgrade the path network, in conjunction with revisions to the collections, to provide a distinct hierarchy of major and minor pathways that improve navigation and orientation throughout the Garden.

**Actions:**

- Incrementally upgrade paths to reflect the intention of the masterplan
- Clearly define the hierarchical structure of the path networks throughout the Garden
- Upgrade the bitumen pathway with a new surface treatment and incrementally remove concrete rollover kerb edging to provide greater accessibility
- Maintain overland stormwater flow paths for stormwater runoff and drainage on the major path network where required

**Strategic Response:**

Review the existing footbridges and replace with structures that are aesthetically appropriate for their location, comply with safety requirements and have low long-term maintenance requirements.

**Actions:**

- Ensure all new structures comply with existing safety standards and do not increase maintenance requirements

**Strategic Response:**

Upgrade fencing and gates around the Garden boundaries to improve the amenity and presentation of the Garden to the street.

**Actions:**

- Replace fencing and gates on Sherbourne Road and around Wittunga House Garden
- Re-paint or replace the existing tubular steel fence on Shepherds Hill Road

- Provide new fencing and signage at the proposed new pedestrian entrances and existing pedestrian entries being retained

**Strategic Response:**

Investigate the possible use of bore water as a long-term irrigation source for the Garden, based on successful bores used in regional fruit tree orchards.

**Actions:**

- Obtain an indication of the likely yield and quality for a bore at Wittunga
- Commission a feasibility study to determine the viability of installing a bore for irrigation, the requirements for installation and associated infrastructure needs with a full cost analysis

**Strategic Response:**

- Maintain the operational lighting requirements and provide feature lighting at the proposed new entrances on Shepherds Hill Road.

**Actions:**

- Develop a lighting strategy for Wittunga to guide future lighting requirements of the Garden
- Upgrade lighting for any new works to ensure safety standards are maintained for BGSH staff and visitors to the Garden
- Provide sustainable LED feature lighting at new entrances to promote the aesthetic appeal of the Garden and to guide visitors to evening events
- Install CCTV security coverage across the Wittunga Botanic Garden site

## 7.2 VISITOR EXPERIENCE

### Visitor Facilities

#### Strategic Response:

Provide additional car parking to service visitors entering the site from Shepherds Hill Road.

#### Actions:

- Review and determine car parking numbers required for Garden operations
- Improve existing entry points in consultation with the DPTI and the City of Mitcham
- Extend the northern car park and provide additional car parking
- Retain the existing entrance ramp to the northern car park as a secondary entrance for vehicle access
- Relocate the exit ramp of the northern car park to allow for the additional car park spaces
- Explore options within the City of Mitcham for car parking off Sherbourne Road should additional car parking be required in the future

#### Strategic Response:

Improve access to the northern car park and reduce the steep gradient of the entrance and exit ramps.

#### Actions:

- Determine and assess options for staged improvements to the northern car park entrance and exit ramps in consultation with DPTI and the City of Mitcham to comply with current safety and access standards
- Investigate options for providing a slip-lane to the northern car park on Shepherds Hill Road in consultation with DPTI and the City of Mitcham

#### Strategic Response:

Review and determine new locations for signage boards, entry signage and wayfinding throughout Wittunga Botanic Garden.

#### Actions:

- Develop a signage strategy for Wittunga Botanic Garden

#### Strategic Response:

Investigate a partnership with a commercial nursery to introduce a retail outlet operating out of the Apple Store and enhance the visitor experience at Wittunga.

#### Actions:

- Relocate the existing BGSB vehicle storage from the Apple Store to a purpose built storage facility in the north-western corner of the Garden
- Encourage a retail nursery to use the Apple Store as an outlet

#### Strategic Response:

Improve amenity for visitors to the Garden.

#### Actions:

- Provide Wi-Fi connectivity throughout the Garden
- Upgrade shelters and other facilities to improve amenity for visitors
- Provide robust all-access drinking fountains at strategic locations throughout the Garden
- Develop the Garden as a 'stand-alone' operation to allow flexibility in leasing arrangements

#### Strategic Response:

Realise opportunities to enable visitor access to iconic buildings such as the Wittunga House and the Apple Store.

#### Actions:

- Encourage brand aligned commercial opportunities eg. a retail nursery outlet to provide coffee and other refreshments; pending an approved business plan



## 7.2 VISITOR EXPERIENCE

### Visitor Facilities Cont.

#### Strategic Response:

Relocate and replace the existing toilet facilities.

#### Actions:

- Investigate the use of recycled water or alternative water sources for toilet flushing in the new toilets
- Investigate the need for change rooms inside the new toilet facilities and footwashing outside the new toilet facilities

### Physical Access

#### Strategic Response:

Improve visitor access to Wittunga Botanic Garden from Shepherds Hill Road and Sherbourne Road.

#### Actions:

- Provide new pedestrian entrances at Wittunga House and at the western extent of the Garden directly opposite the existing pedestrian crossing on Shepherds Hill Road
- Retain and improve the south-east entrance with new planting, paving, fencing and signage
- Define each new entry point at the northern extent of the Garden with new planting, paving, fencing and signage
- Establish a major footpath connection through the Garden between the proposed new and existing entry points
- Ensure all entrances are designed to welcome visitors and provide easily accessible information signage about the Garden, its operating hours and permissible activities
- Ensure adequate facilities are provided for cyclists to park/store bicycles while visiting the Garden

#### Strategic Response:

Improve the presentation and recognition of Wittunga Botanic Garden on Shepherds Hill Road.

#### Actions:

- Provide new identification signage and entry treatments at the proposed new pedestrian entrances at Sherbourne Road and the western extent of the Garden
- Replace the fencing around the Wittunga House curtilage in accordance with the proposed Masterplan
- Re-paint or replace the existing tubular steel fence on Shepherds Hill Road
- Provide new fencing and signage at the proposed new pedestrian entrances and existing pedestrian entries being retained

#### Strategic Response:

Improve the physical and visual connection between Blackwood shopping precinct and Wittunga Botanic Garden in partnership with the City of Mitcham.

#### Actions:

- Extend the Blackwood retail precinct paving treatment from the intersection of Woodleigh Road and Shepherds Hill Road to Sherbourne Road intersection and footpath around Wittunga House
- Develop a distinct planting palette for the street trees and understorey planting between the Main Road roundabout and Wittunga House in partnership with the City of Mitcham to define the connection between Blackwood and the Wittunga Botanic Garden

**Physical Access Cont.****Strategic Response:**

Provide clear directions to Wittunga Botanic Garden from the Coromandel Train Station.

**Actions:**

- Promote Wittunga Botanic Garden as a destination that is easily accessible for visitors travelling by train
- Pursue DPTI to change the name of 'Coromandel' Railway Station to 'Wittunga Botanic Garden' Railway Station

**Strategic Response:**

Ensure all new and existing access points and pathway connections are designed for all-access wherever possible.

**Actions:**

- Design and implement new entry treatments, public car parking and paths that comply with current standards for access where topography allows

**Way Finding****Strategic Response:**

Define the main entry points and major path network within the Garden and provide clearly legible information signage to improve way finding.

**Actions:**

- Provide four distinct entrances at the south-east, north-east, northern and north-western extents of Wittunga to maximise connectivity to and through the Garden
- Determine a major path network that connects the four entrances with looped circulation paths around the ornamental lake, grassed arboreta and feature collections within the Garden

- Staged removal of screen planting to improve views and assist navigation into and through the Garden; particularly the weed species on the lake edge
- Provide information boards and visitor information at all entry points to improve navigation and orientation within the Garden

**Strategic Response:**

Create attractive recreation zones linked to the major path network and centrally located within the Garden to encourage visitors to use more of the Garden.

**Actions:**

- Revise the current location of shelters and picnic/passive recreation zones within the Garden
- Provide easily accessible destination points such as shelters, viewing decks, natural play spaces and the lake beach to encourage people to visit and stay in the Garden

**Strategic Response:**

Revise the existing signage system to correlate with the proposed hierarchical path network throughout the Garden

**Actions:**

- Review the existing signage system, including the Naming Walk, in relation to the proposed masterplan and revise to ensure it is logical and easily understood by visitors

## 7.2 VISITOR EXPERIENCE

### Disability Access

#### Strategic Response:

Improve disability access at entrances and throughout the Garden

#### Actions:

- Incrementally upgrade existing paths to ensure accessible paths of travel where contours allow
- Ensure all new works and upgrading of existing facilities is compliant with the disability access codes and current standards
- Ensure steep zones within the Garden are identified on the visitor information maps and throughout the Garden to avoid distress for people with mobility issues
- Incrementally remove the concrete rollover kerb edging of the major path network to improve accessibility to shelters, grassed areas and collection zones
- Ensure path materials and widths for the major path network are compliant with the disability access codes and current standards where possible
- Progressively replace existing path materials that are difficult to use for wheelchairs and people with mobility issues
- Ensure disability compliant car parking spaces are provided in all new car parks within the Garden

#### Strategic Response:

Improve disability access to buildings within the Garden.

#### Actions:

- Ensure future proposals for the public and staff buildings have all access requirements for disabled visitors, whilst maintaining heritage values

#### Strategic Response:

Upgrade existing furniture and shelters to improve equal accessibility for all users.

#### Actions:

- Incrementally replace the existing furniture with a distinct suite of furniture and shelters that are easily accessible, aesthetically appealing and easy to maintain
- Provide all-access drinking fountains throughout the Garden
- Ensure furniture and shelters have appropriate treatments for visually impaired visitors to the Garden



## 7.2 VISITOR EXPERIENCE

### Public Safety

#### Strategic Response:

Improve pedestrian safety at the entrances to Wittunga Botanic Garden.

#### Actions:

- Designate the current pedestrian and vehicle access to the northern car park for vehicles only
- Ensure clear sightlines are maintained at the interface of car parks and pedestrian zones to reduce possible accidents
- Provide a new pedestrian entry at the western extent of the Garden opposite the existing pedestrian crossing servicing Blackwood Primary School
- Provide a new pedestrian entry at the northern extent of the Garden adjacent the entrance to the proposed commercial nursery facility
- Ensure all entrances off Shepherds Hill Road are safe for visitors to use

#### Strategic Response:

Manage bushfire risk to minimise the threat to public safety and assets.

#### Actions:

- Review and implement the Bushfire Response Plan for Wittunga Botanic Garden, in accordance with DEW standards, and ensure the Plan is taken into consideration for all infrastructure development.

#### Strategic Response:

Reduce the risk associated with stormwater inflows from the Blackwood retail precinct.

#### Actions:

- Upgrade all footbridges, culverts and detention zones where required to meet current safety standards
- Strategically install planting as a 'soft' method to reduce safety concerns around the creek and associated stormwater infrastructure

#### Strategic Response:

Reduce the safety risks associated with the banks of the ornamental lake and billabong.

#### Actions:

- Remove the existing tubular steel fence around the banks of the lake
- Remove weed species from the lake edge and billabong
- Review access and egress to the banks of the lake and billabong
- Re-vegetate the banks of the two water bodies with local wetland plant species to prevent physical access to steeper sections of the banks, conceal stormwater infrastructure and restore habitat
- Re-grade sections of the lake 'beach', re-define the extent of the 'beach' and install a pebble topping to improve presentation and assist in reducing maintenance
- Use physical plant behaviour and 'concealed' fencing to preclude access to the steepest sections of the banks where it is necessary to ensure public safety
- Seek advice on signage options to inform people of steep banks and safety for users

#### Strategic Response:

Maintain and monitor public safety risk associated with trees in the Garden.

#### Actions:

- Continue programmed arboricultural maintenance activities

## 7.2 VISITOR EXPERIENCE

### Strategic Response:

Continuously maintain all pathways to reduce risk of injury from unstable or slippery surfaces

### Actions:

- Audit the condition of existing pathway surfaces within the Garden and develop a maintenance program to repair or replace damaged or unsafe surfaces
- Incrementally replace the existing bitumen path and concrete rollover edging with a durable, all-weather paving treatment

### Recreation and Events

### Strategic Response:

Enhance the quality of open, grassed space within the Garden to increase passive recreational use and allow for small private and larger community events.

### Actions:

- Maintain the open areas of grass on the northern side of the lake
- Develop a 'Grand Lawn' in the WA Arboretum zone to create a space for larger community events
- Define a 'Wedding Lawn' with shelter and backdrop suitable for weddings and celebrations
- Develop a hierarchy of grassed areas with associated irrigation and maintenance requirements

### Strategic Response:

Provide access to all sides of the lake to improve the recreational experience for visitors to the Garden.

### Actions:

- Remove the weed species from the lake banks
- Provide opportunities for visitors to stop and view the flora and fauna of the lake

### Strategic Response:

Facilitate additional activation of Wittunga Botanic Garden as a premium local event space.

### Actions:

- Promote Wittunga Botanic Garden as an event space for community markets, art installations, performances and other public events
- Encourage Blackwood Primary School and other local schools to use Wittunga as an outdoor classroom
- Prioritise nature play integration into the formal and informal Garden landscape

### Strategic Response:

Create desirable spaces and supporting amenity within the Garden for private functions, such as weddings, in a managed and sustainable way.

### Actions:

- Improve sites used for premium events, wedding ceremonies, other functions and community events within the Garden
- Provide power connections to the Grand Lawn and Wedding Lawn event spaces

**Living Collections****Strategic Response:**

Consolidate the living collections providing distinct high amenity collection zones and lower maintenance grassed arboreta and bushland planting zones that improve legibility of the collection for visitors to the Garden.

**Actions:**

- Review all existing planting plans and thematic plantings against the revised Living Collection Policy and implement in accordance with the Collection Development Plan
- Restore the structure and form of the House Garden using predominantly South African and southern Australian taxa together with retention of selected historic plantings

**Strategic Response**

Ensure all decisions regarding species selection, movement of collections and general management practices seek to reduce the effect of biosecurity impacts within the Garden.

**Actions:**

- Employ best horticultural practice for the management of biosecurity risks
- Explore options for grafting susceptible plant species to resistant stock as a means of maintaining diversity
- Ensure management practices for *Phytophthora cinnamomi* and other potential pathogens support biosecurity initiatives

**Flora Conservation****Strategic Response:**

Expand and conserve the existing collection of local indigenous plant species.

**Actions:**

- Build on the existing Grey Box Community Woodland planting and extend the collection along the southern railway corridor in both habitat and arboreta settings
- Re-vegetate the banks of the ornamental lake and 'billabong' with local indigenous wetland and riparian taxa
- Source and use local provenance plant material where possible in accordance with the Living Collection Policy
- Promote the conservation and use of local woodland and riparian species

**Strategic Response:**

Ensure that all conservation significant native plant species indigenous to the region are represented in the conservation seed bank and, where appropriate, are available for on-ground restoration projects.

**Actions:**

- Collect and store seed from conservation significant native flora species and undertake seed biology studies to support on-ground restoration projects
- Build further relationships with seed sources and support *in situ* and *ex situ* conservation practices



**Environmental Sustainability****Strategic Response:**

Promote and demonstrate sustainable horticultural practice and water conservation at Wittunga as an exemplar to the community.

**Actions:**

- Provide interpretative signage illustrating the history of sustainable practices and innovation at Wittunga with demonstrations of the 'Ashby Method' of earthed up rings for successful plant establishment
- Demonstrate water-wise 'dry gardening' initiatives within the Garden related to storage and use of water
- Ensure sustainable and ethical materials are used throughout the Garden
- Ensure all irrigation operations employ current water-wise technology to avoid wastage of water
- Continue to plant predominantly low water use plants throughout the Garden

**Strategic Response:**

Seek alternative water sources for BGSB operational and irrigation needs to reduce reliance on mains water.

**Actions:**

- Investigate the option of using bore water as a water source for the operational facility, toilets, irrigation and top-up to the lake during extended dry periods
- Explore the opportunities for aquifer recharge from stormwater entering the Garden

**Strategic Response:**

Utilise solar technologies and passive building design principles in the design of future buildings or upgrades.

**Actions:**

- Ensure future capital works building projects utilise passive solar building design principles, and where possible solar power technologies

**Education and Interpretation****Strategic Response:**

Recognise and interpret the history of the Wittunga property.

**Actions:**

- Allow public access to the curtilage around Wittunga House and the Apple Store and provide interpretation of the farm, orchard, nursery and Ashby family history
- Display the remaining artefacts from Wittunga farm and provide demonstrations of Edwin Ashby's innovative ideas for soil and water management

**Strategic Response:**

Retain the existing Naming Walk interpretation signage.

**Actions:**

- Ensure the Naming Walk signs are retained throughout the Garden with minor relocation should they be required by future upgrading or new works

**Strategic Response:**

Implement Interpretation Masterplan Actions for Wittunga Botanic Garden

**Actions:**

- Encourage self-guided walks on all visitor information
- Continue to operate the free guided walks conducted by the Friends of the Adelaide Botanic Gardens
- Develop virtual interpretive tours of the Garden
- Develop interpretive trails informing visitors of, for example, Wittunga's Kaurua Cultural history and Gondwana ancestry

**Strategic Response:**

Provide demonstration gardens illustrating the use of sustainable plant species and building materials, low water use, 'dry gardening' techniques, habitat creation, local provenance species and planting themes using specific groups of plants.

**Actions:**

- Allocate areas in the Garden for demonstration gardens
- Provide a range of garden designs and treatments suitable for display of specific living collections
- Provide information about the watering regimes of various plant groups used in the demonstration gardens

**Education and Interpretation Cont.****Strategic Response:**

Promote and develop further educational partnerships with local schools and educational institutions.

**Actions:**

- Encourage local schools to use Wittunga as an educational resource
- Provide multi-use settings for passive recreation and as outdoor classrooms for teachers and students
- Promote Wittunga as an educational resource as well as a Botanic Garden
- Promote project-based partnerships with local schools

**Strategic Response:**

Enhance public awareness of the Aboriginal relationship with the Garden and the Blackwood precinct.

**Actions:**

- Provide interpretation of the pre-European history of the site
- Provide interpretation of the Kaurua use and name of local indigenous plant species within the Garden

**Arts****Strategic Response:**

Apply the institutional BGSB Events policy for performance events and permanent or temporary public art installations at Wittunga

**Actions:**

- Utilise and abide by the BGSB Events Policy

**Strategic Response:**

Encourage performance events and short-term art installations and displays at Wittunga.

**Actions:**

- Provide settings for performance events and short-term art installations in accordance with the Events Policy and encourage the local and broader community to participate













8.0

# Masterplan

- 8.1 OVERALL PRINCIPLES
- 8.2 MASTERPLAN
- 8.3 PROJECT PRIORITIES
- 8.4 DELIVERY PLAN



## 8.1 OVERALL PRINCIPLES

### Introduction

The Masterplan for Wittunga Botanic Garden encapsulates the aspirations of the Botanic Gardens and State Herbarium providing direction for incremental improvements that will realise the engaging potential of Wittunga.

It brings together the unique cultural history evident in the structure and purpose of the original farm and gardens, the existing modified landform and features, the presentation and representation of the collection and improvements to access and usability for visitors to the Garden.

Critical to the success of the Masterplan is the premise of ‘opening up’ Wittunga to the broader community. With a key component of the Gardens’ mission being to “Connect people with the botanical world” the decision-making inherent within the Masterplan is driven by principles of improving access, providing information and exemplifying sustainability.

### Access

Physical and visual access into Wittunga is improved, providing clearly designated entry points and legible internal path networks that give greater permeability throughout the Garden and heighten visitor experiences.

A defined hierarchy of paths connect the visitor to destination points within Wittunga where they can experience the beauty and diversity of the collection and general ambience of the Garden.

### Information

Clear conveyance of information to visitors enables their experience to be relaxed, informative and inspiring. Improved identification of entry points direct visitors into the Garden where details of destinations and attractions are provided.

Interpretive signage throughout the Garden details the history and heritage of Wittunga together with information about the collection and demonstration gardens illustrating sustainable methodologies.

### Sustainability

Wittunga has a history of sustainable horticultural practice that informs the Masterplan both through physical improvements and the cultural representation of the collection. As an exemplar to the community it is imperative that BGSB sets achievable goals for Wittunga’s development and provides guidance and inspiration for the community to ensure resilience against future economic and climatic challenges.

The following chapter graphically illustrates the landscape layers forming the framework of the Wittunga Botanic Garden Masterplan:

- **Entries**
- **Pathways**
- **Waterways**
- **Living Collection**
- **Car Parks**
- **Shepherds Hill Road**
- **Buildings, Facilities and Structure**

Each proposed plan highlights key moves that collectively deliver the Masterplan, and from this, individual projects and their priorities for implementation are determined.





# 8.1 PROPOSED ENTRIES

## Key Moves

- Provide easily accessible, safe pedestrian entrances that encourage people to enter and experience the Garden while improving the connection paths and permeability of Wittunga.
- Improve the existing entrances on Sherbourne Road and provide new entrances on Shepherds Hill Road opposite the existing pedestrian crossing and at the proposed nursery site.
- Ensure vehicle access to the Garden is separated from pedestrian access utilising existing vehicle entries where possible, providing new entries and improving safety and ease of entry to the Garden.





# 8.1

## PROPOSED PATH NETWORK

### Key Moves

- Clearly define a primary path network throughout the Garden, connecting the site from east to west and to a new northern entry through the proposed nursery site.
- Link the path network to destination points such as high amenity collection zones, viewing decks, shelters, car parking, the Apple Store / nursery and Wittunga House.



### LEGEND

- |  |   |
|--|---|
| <span style="color: purple;">—</span> PRIMARY PATH NETWORK | <span style="color: orange;">—</span> MINOR PATHS |
| <span style="color: teal;">—</span> SECONDARY PATH NETWORK |   |



## 8.1 PROPOSED WATERWAYS

### Key Moves

- Improve the presentation, safety, water conservation and habitat of the waterways and provide designated locations to view and interact at the waters edge.



## 8.1 PROPOSED COLLECTION

### Key Moves

- Consolidate the living collections providing distinct high amenity collection zones and lower maintenance grassed arboreta and bushland planting zones that improve accessibility of the collection for visitors to the Garden.





# 8.1 PROPOSED CAR PARKS

## Key Moves

- Reduce the steep gradient of the entrance and exit to the northern car park. Reconfigure the northern car park maintaining entry from the same location on Shepherds Hill Road and relocating the exit further west.
- Provide additional car parking with a new entry adjacent the Apple Store.
- Provide a new car park for the proposed nursery site.



8.1

PROPOSED BUILDINGS & INFRASTRUCTURE

- Key Moves
- Re-purpose the Apple Store.

— Consolidate the Operational facilities.

— Provide new shelters, decks and viewing sites.

— Provide new toilets.

— Provide new formal nature play space.



## 8.2 MASTERPLAN





8.3

PROJECT PRIORITIES

The Wittunga Botanic Garden Masterplan defines various actions and related projects that will incrementally deliver and fulfil the intentions of the Plan.

The projects occur in ‘precincts’ with many of the outcomes reliant on the integration of several minor projects to achieve the overall project outcome. Coupled with this, there are individual items that reinforce and enhance the quality of the outcomes.

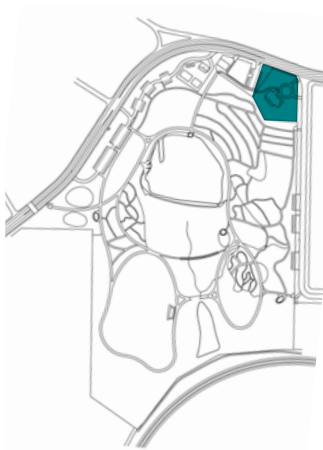
Prior to commencing the projects, feasibility studies, audits, reviews, investigations and design development must occur to ensure delivery of the projects is achievable and reaches the standards and intentions of the

Masterplan. For the purpose of determining project priorities the timeframes for delivery have been nominated as follows:

(H)	High Priority	ie. 1 -5 years
(M)	Medium Term Priority	ie. 5 – 10 years
(L)	Longer Term Priority	ie. 10 + years
(R)	Recurrent Works	ie. Ongoing

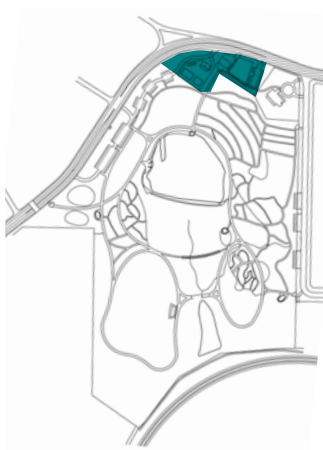
## 8.3 PROJECT PRIORITIES

### 01 Wittunga House Curtilage



Projects	Priorities
<ul style="list-style-type: none"> <li>Replace the existing boundary fence around the House Garden</li> </ul>	L
<ul style="list-style-type: none"> <li>Procure and implement a garden design for the House Garden</li> </ul>	L
<ul style="list-style-type: none"> <li>Remove fencing between the House Garden and the adjacent Maluka Beds and Terrace Beds</li> </ul>	L
<ul style="list-style-type: none"> <li>Remove the vehicle driveways and replace with pedestrian paths</li> </ul>	L

### 02 Apple Store, Associated Curtilage and Connection to Wittunga House

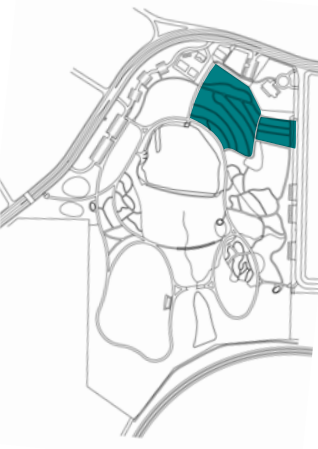


Projects	Priorities
<ul style="list-style-type: none"> <li>Investigate new compatible commercial uses for the Apple Store with the possibility of a retail plant nursery outlet</li> </ul>	H
<ul style="list-style-type: none"> <li>Relocate existing maintenance vehicles and BGA storage from the Apple Store to the 'potting shed/office' and new purpose built sheds</li> </ul>	H
<ul style="list-style-type: none"> <li>Relocate the existing chemical store and fuel shed to the 'potting shed/office' curtilage</li> </ul>	H
<ul style="list-style-type: none"> <li>Remove the existing storage bays</li> </ul>	H
<ul style="list-style-type: none"> <li>Provide a link between the Apple Store and Wittunga House</li> </ul>	H
<ul style="list-style-type: none"> <li>Provide interpretation of the historic Apple Store</li> </ul>	M

8.3

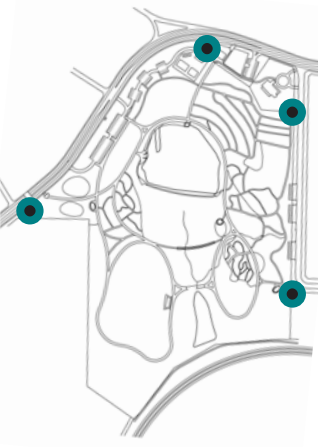
PROJECT PRIORITIES

03 Maluka Beds, ‘Never Never’, ‘Wild Part’ and Terrace Beds



Projects	Priorities
<ul style="list-style-type: none"><li>Retain the Maluka Beds and restore a mixed planting palette</li></ul>	R
<ul style="list-style-type: none"><li>Maintain and reinforce the structure of the Terrace Beds, ‘Never Never’ and ‘Wild Part’ gardens</li></ul>	R

04 Pedestrian Entrances



Projects	Priorities
<ul style="list-style-type: none"><li>Provide a defined pedestrian access point at the north western extent of the Garden</li></ul>	H
<ul style="list-style-type: none"><li>Improve the existing entry point to the east of the Maluka Beds</li></ul>	H
<ul style="list-style-type: none"><li>Provide a defined pedestrian entry point at the western extent of the Garden</li></ul>	H
<ul style="list-style-type: none"><li>Improve the south eastern pedestrian entry to the Garden</li></ul>	M



8.3

PROJECT PRIORITIES

05 Internal Path Network



Projects	Priorities
<ul style="list-style-type: none"><li>Reconfigure the internal path network and incrementally replace or upgrade existing paths</li></ul>	H
<ul style="list-style-type: none"><li>Consolidate the use of secondary paths in the high amenity collection zones</li></ul>	H-M

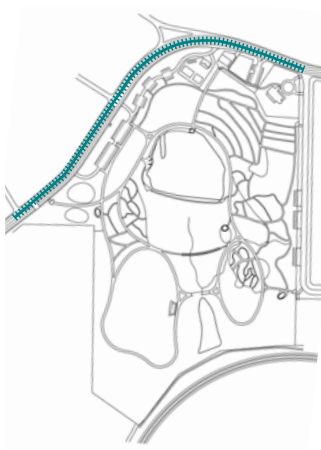
06 External Path Connection to Blackwood



Projects	Priorities
<ul style="list-style-type: none"><li>Encourage the City of Mitcham to extend the streetscape treatment on the southern side of Shepherds Hill Road from Woodleigh Road to Wittunga House</li></ul>	H

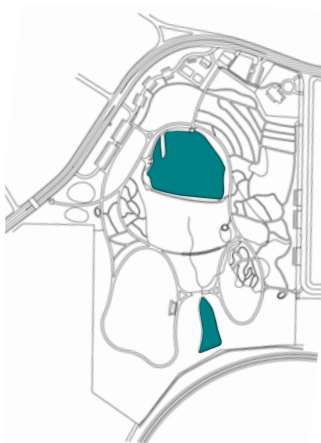
## 8.3 PROJECT PRIORITIES

### 07 Shepherds Hill Road



Projects	Priorities
• Review the existing steel fence on Shepherds Hill Road	H
• Review existing planting along Shepherds Hill Road	R
• Remove middle layer large shrubs from the boundary planting beds adjacent Shepherds Hill Road to improve views into the Garden	R
• Provide a distinctive planting theme on Shepherds Hill Road boundary	R

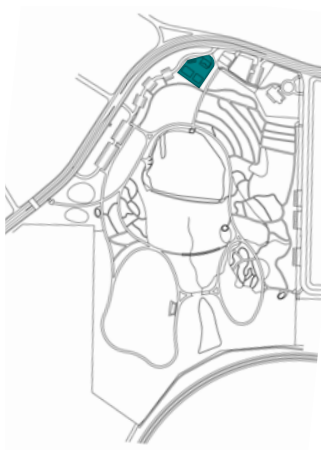
### 08 Lake Edge and Billabong



Projects	Priorities
• Re-grade the lake 'beach' and top with a pebble treatment	H
• Review general arrangement of the lake/beach/boardwalk	M
• Incrementally re-grade the banks of the lake where required and plant with local riparian species	M
• Remove the pool fence on the lake bank	M
• Incremental removal of weed species such as Bamboo, Pampas Grass and Ash Trees from the ornamental lake banks, lake island and billabong	R
• Incremental removal and replacement of trees and large shrubs where required to allow key views from the House Garden and Terrace Beds to the lake	R
• Plant edges of water bodies to reduce access to the lake / billabong edges and associated stormwater infrastructure	R

## 8.3 PROJECT PRIORITIES

### 09 BGA Works Depot



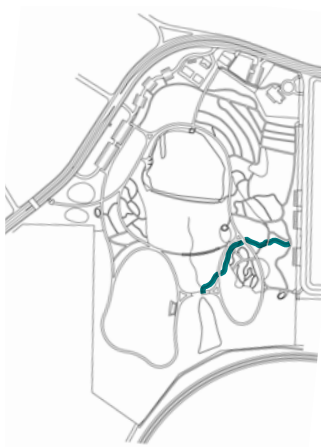
#### Projects

- Review the shade house
- Remove the glasshouse
- Relocate tractors and other machinery to a new purpose built storage facility and the potting shed/office building
- Consolidate all operational facilities

#### Priorities

H  
H  
H  
M

### 10 Stormwater Inlet Creek



#### Projects

- Review stormwater inlets into Wittunga Botanic Garden

#### Priorities

H



8.3

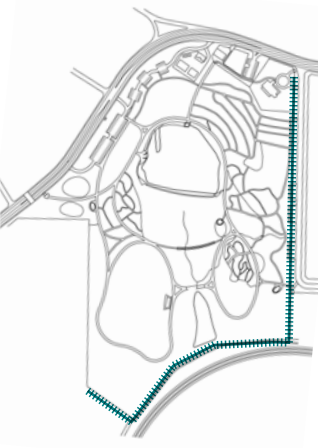
PROJECT PRIORITIES

11 Footbridges and Main Pathway Bridge



Projects	Priorities
• Replace minor footbridges	M
• Review main pathway bridge over creek	M

12 Southern and Eastern Boundary Fencing

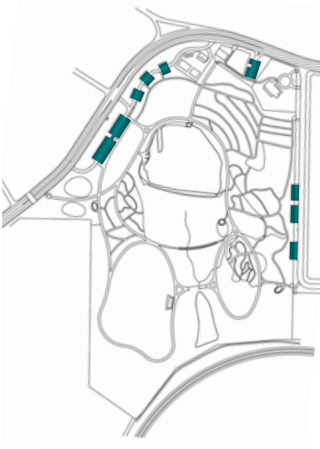


Projects	Priorities
• Incrementally replace chain wire mesh fencing on southern and eastern boundaries	L

8.3

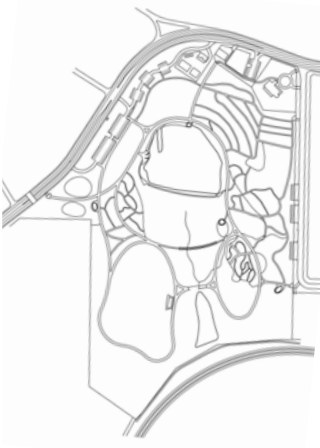
PROJECT PRIORITIES

13 Car Parking



Projects	Priorities
<ul style="list-style-type: none"><li>Define car parking for BGA operations and retail nursery</li></ul>	H
<ul style="list-style-type: none"><li>Extend the northern car park, reconfigure the existing entrance ramp and relocate the exit ramp to provide safe access and additional car parking</li></ul>	H

14 Signage and Information Boards

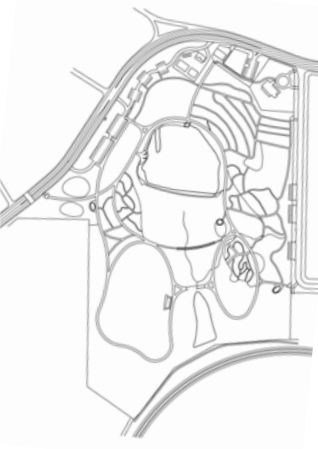


Projects	Priorities
<ul style="list-style-type: none"><li>Review and implement priority changes to signage and visitor information</li></ul>	M

8.3

PROJECT PRIORITIES

15 Furniture and Landscape Elements



Projects	Priorities
<ul style="list-style-type: none"><li>Review Style Guide for furniture, infrastructure and hard landscape elements</li></ul>	H
<ul style="list-style-type: none"><li>Provide drinking fountains at strategic locations in the Garden, dependent on potable water supply</li></ul>	H
<ul style="list-style-type: none"><li>Replace the current suite of furniture</li></ul>	M
<ul style="list-style-type: none"><li>Replace and relocate shelters</li></ul>	M

16 Toilets



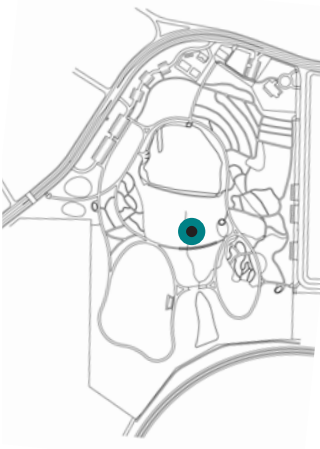
Projects	Priorities
<ul style="list-style-type: none"><li>Replace the existing Shepherds Hill Road toilet facility with a new repositioned toilet facility</li></ul>	H
<ul style="list-style-type: none"><li>Progressively upgrade the existing Sherbourne Road toilet facility</li></ul>	M-L



8.3

PROJECT PRIORITIES

17 Living Collection



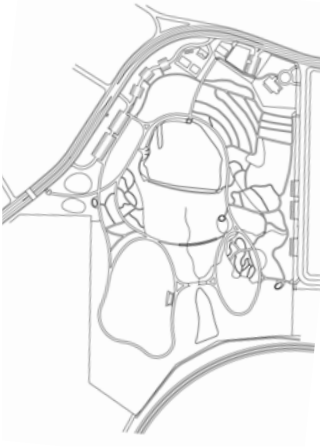
Consolidating the living collections to simplify and reduce maintenance requirements throughout the Garden and to provide distinct high amenity collection zones and lower maintenance grassed arboreta and bushland planting zones.

Many of the recommendations for revisions and relocation of the Living Collection will occur as recurrent works based on detailed review and approved revisions to the Collections Policy.

Projects requiring additional funding are indicated below:

Projects	Priorities
<ul style="list-style-type: none"><li>Relocate the Butterfly Garden collection to the Bird Garden as a high amenity collection zone</li></ul>	M

18 Interpretation Signage and Education



Projects	Priorities
<ul style="list-style-type: none"><li>Provide interpretation aligned to the BGSB Interpretation Masterplan</li></ul>	H
<ul style="list-style-type: none"><li>Install educational garden displays and interpretation to illustrate various water requirements for climatically themed plant species together with sustainable horticultural management practices</li></ul>	H

## 8.4 DELIVERY PLAN

ACTION		next 5 years	next 10 years	> 10 years
<b>Project 1 - Integration into the Precinct</b>				
External Path Connection to Blackwood	Encourage the City of Mitcham to extend the streetscape treatment on the southern side of Shepherds Hill Road from Woodleigh Road to Wittunga House			
<b>Project 2 - Accommodation Review</b>				
Apple Store, Associated Curtilage and Connection to Wittunga House	Investigate new uses for the Apple Store with the possibility of a retail plant nursery outlet			
BGA Works Depot	Consolidate all operational facilities			
<b>Project 3 - Water and Waterway Management</b>				
Lake Edge and Billabong	Re-grade the lake 'beach' and top with a pebble treatment			
Storm water Inlet Creek	Review storm water inlets into Wittunga Botanic Garden			
Lake Edge and Billabong	Review general arrangement of the lake/beach/boardwalk			
Lake Edge and Billabong	Incrementally re-grade the banks of the lake where required and plant with local riparian species			
Lake Edge and Billabong	Incremental removal of weed species such as Bamboo, Pampas Grass and Ash Trees from the ornamental lake banks, lake island and billabong			
Lake Edge and Billabong	Incremental removal and replacement of trees and large shrubs where required to allow key views from the House Garden and Terrace Beds to the lake			
Lake Edge and Billabong	Plant edges of water bodies to reduce access to the lake / billabong edges and associated stormwater infrastructure			

## 8.4 DELIVERY PLAN

ACTION		next 5 years	next 10 years	> 10 years
<b>Project 4 - Collections and Thematic Landscape Development</b>				
Living Collection	Relocate the Butterfly Garden collection to the Bird Garden as a high amenity collection zone			
Wittunga House Curtilage	Procure and implement a garden design for the House Garden			
Maluka Beds, Never Never, Wild Part and Terrace Beds	Retain the Maluka Beds and restore a mixed planting palette			
Maluka Beds, Never Never, Wild Part and Terrace Beds	Maintain and reinforce the structure of the Terrace Beds, 'Never Never' and 'Wild Part' gardens			
Shepherds Hill Road	Review existing planting along Shepherds Hill Road			
Shepherds Hill Road	Remove middle layer large shrubs from the boundary planting beds adjacent Shepherds Hill Road to improve views into the Garden			
Shepherds Hill Road	Provide a distinctive planting theme on Shepherds Hill Road boundary			
<b>Project 5 - Building Management</b>				
Apple Store, Associated Curtilage and Connection to Wittunga House	Relocate existing maintenance vehicles and BGA storage from the Apple Store to the 'potting shed/office' and new purpose built sheds			
Apple Store, Associated Curtilage and Connection to Wittunga House	Relocate the existing chemical store and fuel shed to the 'potting shed/office' curtilage			
Apple Store, Associated Curtilage and Connection to Wittunga House	Remove the existing storage bays			
BGA Works Depot	Review the shade house			
BGA Works Depot	Remove the glasshouse			
BGA Works Depot	Relocate tractors and other machinery to a new purpose built storage facility and the potting shed/office building			



## 8.4

## DELIVERY PLAN

ACTION		next 5 years	next 10 years	> 10 years
<b>Project 6 - Site Infrastructure Management</b>				
Apple Store, Associated Curtilage and Connection to Wittunga House	Provide a link between the Apple Store and Wittunga House			
Pedestrian Entrances	Provide a defined pedestrian access point at the north western extent of the Garden			
Internal Path Network	Reconfigure the internal path network and incrementally replace existing paths			
Internal Path Network	Consolidate the use of secondary paths in the high amenity collection zones			
Shepherds Hill Road	Review the existing steel fence on Shepherds Hill Road			
Furniture and Landscape Elements	Review Style Guide for furniture, infrastructure and hard landscape elements			
Furniture and Landscape Elements	Provide drinking fountains at strategic locations in the Garden, dependent on potable water supply			
Toilets	Replace the existing Shepherds Hill Road toilet facility with a new repositioned toilet facility			
Lake Edge and Billabong	Remove the pool fence on the lake bank			
Footbridges and Main Pathway Bridge	Replace minor footbridges			
Footbridges and Main Pathway Bridge	Review main pathway bridge over creek			
Furniture and Landscape Elements	Replace the current suite of furniture			
Furniture and Landscape Elements	Replace and relocate shelters			
Toilets	Progressively upgrade the existing Sherbourne Road toilet facility			
Wittunga House Curtilage	Replace the existing boundary fence around the House Garden			
Wittunga House Curtilage	Remove fencing between the House Garden and the adjacent Maluka Beds and Terrace Beds			
Wittunga House Curtilage	Remove the vehicle driveways and replace with pedestrian paths			
Southern and Eastern Boundary Fencing	Incrementally replace chain wire mesh fencing on southern and eastern boundaries			

## 8.4 DELIVERY PLAN

ACTION		next 5 years	next 10 years	> 10 years
<b>Project 7 - Visitor Experience and Event Management</b>				
Pedestrian Entrances	Improve the existing entry point to the east of the Maluka Beds			
Interpretation Signage and Education	Provide interpretation aligned to the BGSB Interpretation Masterplan			
Interpretation Signage and Education	Install educational garden displays and interpretation to illustrate various water requirements for climatically themed plant species together with sustainable horticultural management practices			
Apple Store, Associated Curtilage and Connection to Wittunga House	Provide interpretation of the historic Apple Store			
Pedestrian Entrances	Improve the south eastern pedestrian entry to the Garden			
Signage and Information Boards	Review and implement priority changes to signage and visitor information			
<b>Project 8 - Traffic Management</b>				
Car Parking	Define car parking for BGA operations and retail nursery			
Car Parking	Extend the northern car park, reconfigure the existing entrance ramp and relocate the exit ramp to provide safe access and additional car parking			











# Appendix

- A INDICATIVE MATERIAL PALETTE
- B REFERENCES



# A INDICATIVE MATERIAL PALETTE

The following recommendations detail items and materials to be used for landscape elements at Wittunga. The 'Style Guide' for the Garden guides the future direction and implementation of furniture and infrastructure treatments:

ITEM	MATERIAL
Shelters	Painted steel with feature timber batten panels and corrugated profile colorbond roofing
Viewing platforms	Painted steel balustrading and frame with timber and web-forge decking
Bridge	Painted steel balustrading and frame with timber and web-forge decking
Entrance Paving	High quality honed unit paver
Major Paths	AC7 Hotmix with 5mm galvanized steel edging and concrete kerb edging where required to direct overland storm water flows
Secondary & Minor Paths	Compacted granulitic sand (clay content)
Lake Beach	Rubble topped with 100mm depth 10-15mm local river pebble
Entry Fences	Feature fencing – Steel and stone
Lake Fences (concealed)	Hardwood timber posts and galvanized wire
Boundary Fences	Shepherds Hill Road – Painted tubular steel Sherbourne Road – Painted tubular steel Blackwood Primary School – Painted tubular steel Railway Corridor – Painted tubular steel
Garden Furniture	Seats – Steel and timber Bollards – Steel and timber Drinking Fountain – Cast aluminium with 2-pack epoxy finish Information and Interpretation Boards – material to be determined



## B

## REFERENCES

- *Board of the Botanic Gardens and State Herbarium Strategic Plan 2017-2013*
- *Board of the Botanic Gardens and State Herbarium Collection Policies (2013)*
- *Enid Robertson, 2006-2012, Ashby Edwin (1861–1941), <http://adb.anu.edu.au/biography/ashby-edwin-5066>*
- *Stephen Forbes, Botanic Gardens of Adelaide, Catalogue of Plants (2010)*
- *Blackwood Forest Recreation Park, Seedling Art Space, <http://www.seedlingartspace.asn.au/history.htm>*
- *Cas Middlemis, Wittunga Botanic Garden - A Brief History, (2012), (Unpublished Draft)*
- *Jacob Kochergen, Ashby Reserve Maintenance Plan, City of Mitcham, (2003)*



Government of  
South Australia



Board of the  
Botanic Gardens  
and State Herbarium