
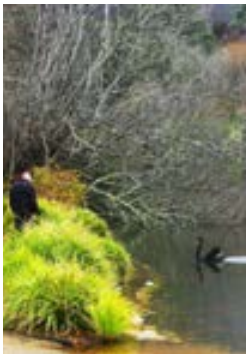









Mount Lofty Botanic Garden
Masterplan Review

February 2021

T.C.L
LANDSCAPE ARCHITECTURE
URBAN DESIGN

Board of the Botanic Gardens and State Herbarium

In the production of this Masterplan Review, T.C.L has collaborated intensely with key staff at the Botanic Gardens and State Herbarium of South Australia. T.C.L would like to acknowledge the critically important inputs of Director Dr Lucy Sutherland, Deputy Director Collections Dr Leonie Scriven, Cultural Collections Manager Tony Kanellos, Major Projects and Assets Manager Andrew Carrick, Robert Hatcher, Mark Oborn, and all the staff of the Mount Lofty Botanic Garden who participated in and provided invaluable contributions to the early workshop phase of the Review.

We also thank the many stakeholders, partners and individuals that provided ideas and comments for consideration, and for contributing to the yourSAy community engagement process.

Rev	Description	Date	By	Checked	Approved
1	Final draft	15.06.20	SB	DS	KC
2	Final draft for checking	25.09.20	SB	DS	KC
3	Final draft to Board	16.10.20	SB	DS	KC
4	Final	15.12.20	SB	DS	KC
5	Update	16.02.21	EL	DS	KC

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Introduction 1

1. Introduction

PURPOSE OF THE MASTERPLAN

The purpose of the Masterplan is to provide the guiding principles and strategies for a framework for long-term decision making. By identifying future projects and setting priorities, the Masterplan provides a basis for infrastructure planning and investment.

While the Board of the Botanic Gardens and State Herbarium's (the Board) Strategic Plan 2017-22 provides a strategic framework for the institution, the Masterplan translates this framework specifically into infrastructure requirements for the Mount Lofty Botanic Garden.

The Botanic Gardens and State Herbarium (BGSH) manages three gardens and an experimental field site – the Adelaide Botanic Garden (including Botanic Park), Mount Lofty Botanic Garden, Wittunga Botanic Garden and the Botanic Reserves under the *Botanic Gardens and State Herbarium Act 1978*. The Botanic Gardens of Adelaide Masterplan Report (July 2006) presented a plan for Mount Lofty Botanic Garden, as well as Adelaide Botanic Garden. This Masterplan supersedes the 2006 Masterplan in relation to the Mount Lofty Botanic Garden.

Established in the 1960's as a cool climate annex of the Adelaide Botanic Garden, the Mount Lofty Botanic Garden has become a popular icon of the Adelaide Hills region. While continuing to operate as an important centre for science and learning in the South Australia, its growing popularity as a recreational destination amongst locals and tourists has seen substantial growth in visitor numbers over the period since completion of the 2006 Masterplan.

STRUCTURE OF THE STUDY

This Masterplan sets out a contextual basis through a review of the 2006 Masterplan and the operating parameters of Mount Lofty Botanic Garden, as well as an understanding of the history and physical attributes of the site. Following this Introduction, Section 2 of the study specifically reviews the overall purpose of the Garden and the current management and policy framework under which the institution operates. Section 3 presents new emerging considerations taking into account the changes in the context of the Garden as a destination within the Adelaide Hills tourism market since the 2006 Masterplan.

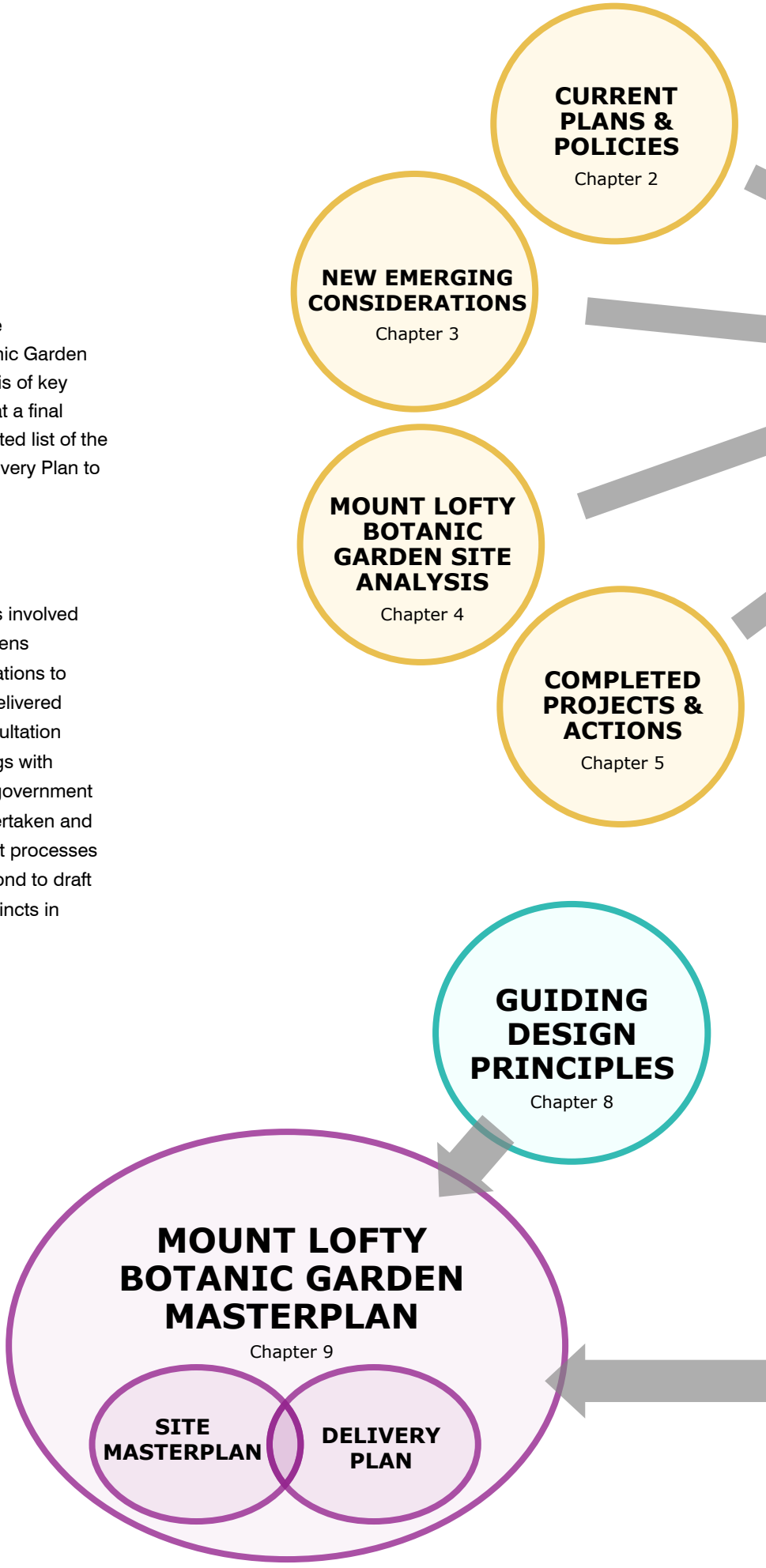
Section 4 covers site analysis using a graphic format, and reviews areas such as surrounding land use, recent and planned developments, existing waterways, existing landscape structure, existing heritage, current user movement patterns and existing collections and displays. Section 5 of the study presents a summary of the status of the projects and actions arising from the 2006 Masterplan and reports on other upgrades to the Garden completed since the Masterplan.

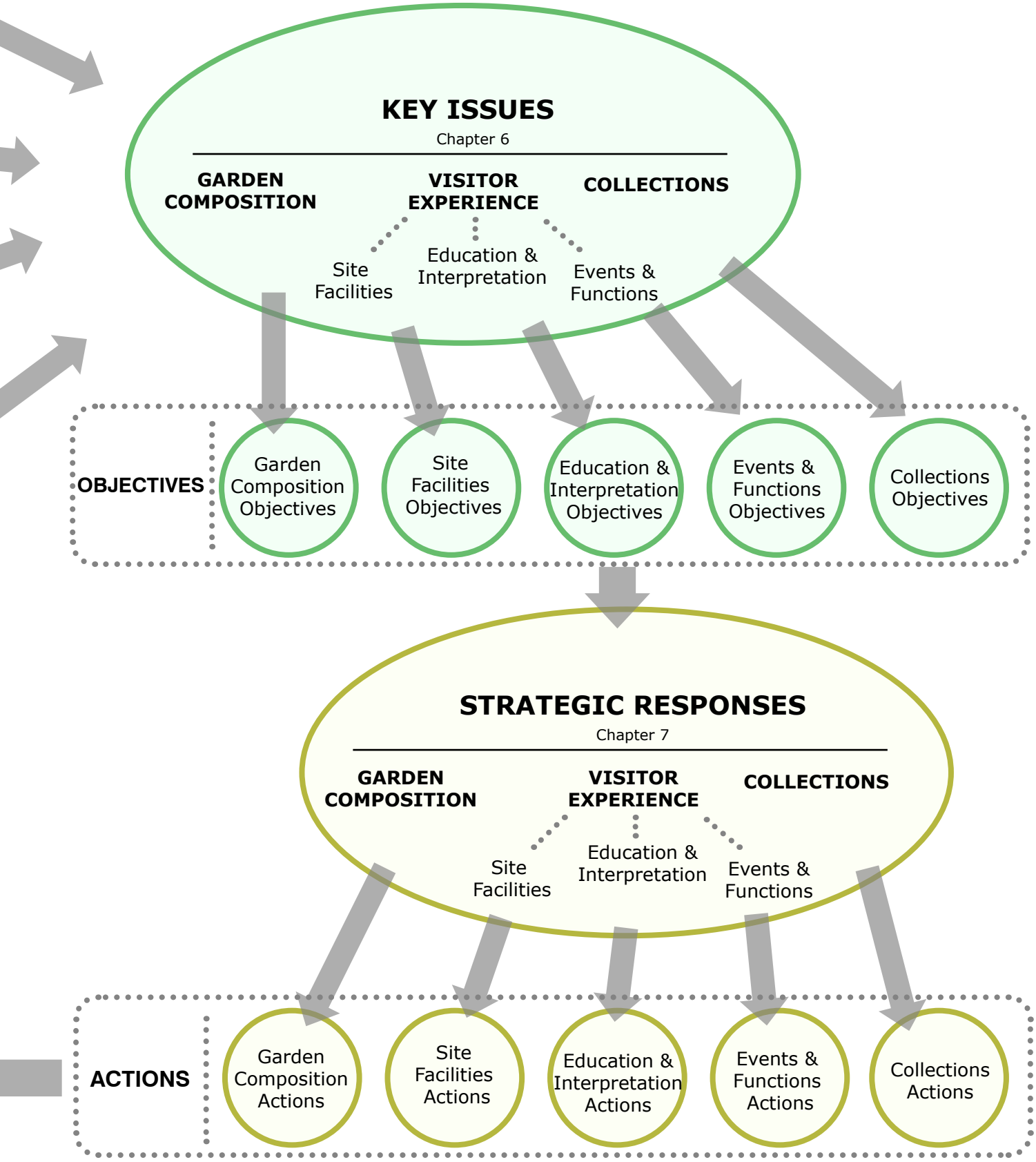
In Section 6, issues for the Masterplan are grouped into three categories and a number of subcategories, with an Objective stated for each subcategory. These Objectives are the basis for the preparation of a set of Strategic Responses that form the framework of Section 7. Each Strategic Response describes broad directions for future actions within the Garden; the actions are subsequently listed.

The final two sections (8 and 9) illustrate the development of a revised Mount Lofty Botanic Garden Site Masterplan, through conceptual analysis of key site planning determinants, before arriving at a final recommended site Masterplan, a concentrated list of the critical priority projects, and finally a full Delivery Plan to realise the Masterplan.

PROCESS

The preparation of a revised Masterplan has involved extensive consultation with the Board, Gardens management and staff. In addition, presentations to a broad range of stakeholders have been delivered and input has been sought during this consultation process. This consultation included meetings with local neighbours to the Gardens and local government authorities. A *yourSAy* survey was also undertaken and the results of this and the other engagement processes have been pooled to enable to staff to respond to draft analysis and actions developed for the precincts in Mount Lofty Botanic Garden.

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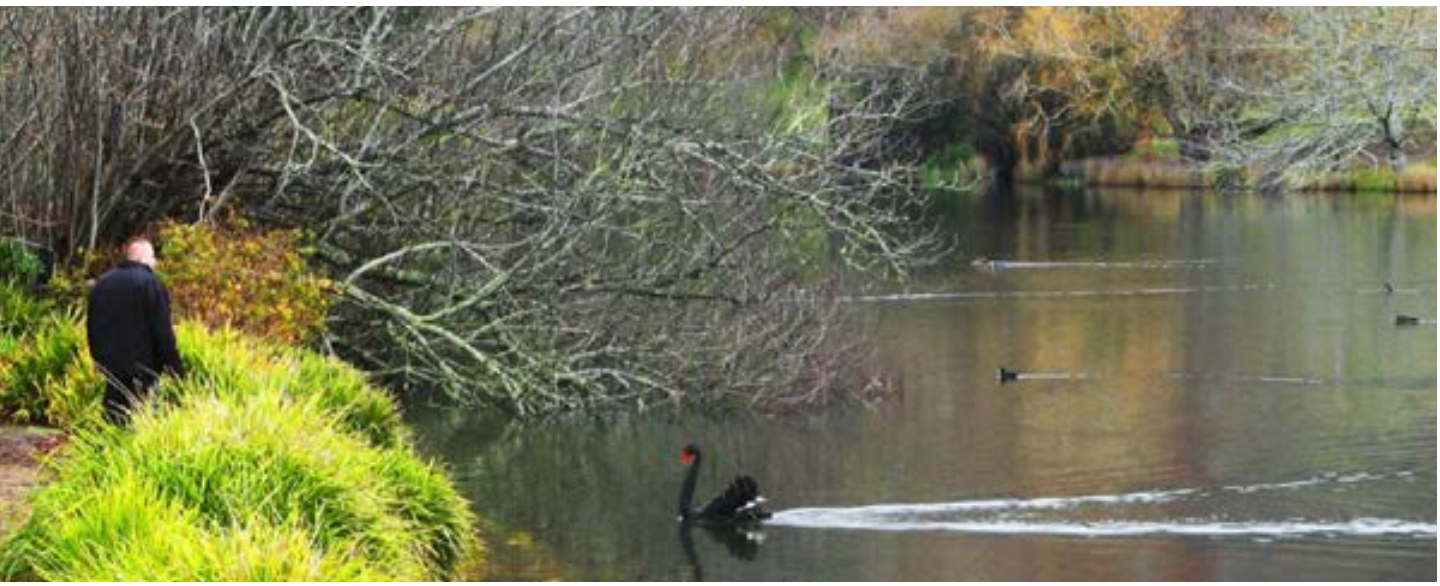
Current BGSH Plans and Policies 2



2. Current BGSH Plans and Policies

2.1 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 BGSH's three Garden sites.

The focus of the current Strategic Plan 2017-2022 is to develop BGSH 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 Mount Lofty Botanic Garden over the next five years include:

Creating Destinations Gardens

- Undertake a formal review and update of the 2006 Mount Lofty Botanic Garden Masterplan (this report);
- A revitalisation of the living collection, and diversification of the herbarium, living and cultural collections;
- Raise the standard of the site's infrastructure to improve visitor experience and working environment; and
- Promote the Garden as a flagship institution in the Mount Lofty Ranges precinct, offering unique tourist experiences.

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.

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:

- *Mount Lofty Botanic Garden Conservation Study 2006*
- *Code of Ethics for the Botanic Gardens and State Herbarium 2007*
- *Facility Asset Management Plan*
- *BGSH Tourism Strategy*
- *various BGSH policy documents (see next section).*

2.2 Policies

COLLECTIONS POLICIES 2013 (Adopted)
The Living, Herbarium and Cultural Collection policies are part of the strategy to conserve and enhance the BGSH's role as an exemplary cultural and scientific institution. In particular, the policies provide a framework for maintaining, building and displaying collections and enhancing the richness and uniqueness of the institution. A review of these Policies and the creation of a Living Collection Development Framework are currently under development.

SCIENCE AND CONSERVATION POLICY 2004 (Adopted)
This Policy provides a framework for integrated plant conservation programmes.

The establishment of partnerships between BGSH 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 BGSH'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 BGSH 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.

ASSET MANAGEMENT POLICY (DEW Adopted)
The Department for Environment and Water (DEW) 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 DEW's commitments and expectations for decisions, activities and behaviours concerning the management of non-current assets. The Policy is reviewed every three years.

SUSTAINABLE HORTICULTURE POLICY (Draft)
This Policy, when endorsed, will provide a framework to support relevant quality services, products and practices that maximise the value and benefit to the community of South Australia's natural resources and heritage. These practices will be modelled on world best practice in all its activities and services. The institution will ensure that adequate resources are made available to equip and train all staff to an optimum level of proficiency.

Mount Lofty Botanic Garden was officially opened on 5th November 1977

New Emerging Considerations 3

3. New Emerging Considerations

3.1 Organisational 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 Botanic Garden sites: Adelaide Botanic Garden and Botanic Park, Mount Lofty Botanic Garden, and Wittunga Botanic Garden.

There are several key areas that need to inform BGSH's key management priorities for Mount Lofty 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.
- Existing accommodation for operational and administrative functions, maintaining the scientific collections, and presenting educational services are dispersed across Mount Lofty Botanic Garden and are generally not fit-for-purpose. The Nursery and Administration building complexes are in declining condition and do not meet current or future needs.
- 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 at the Mount Lofty Botanic Garden to enable BGSH to harness these opportunities.
- The growth in the State's 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 People, Plants, Places and Cultures themes associated with Mount Lofty Botanic Garden's living and cultural collections, garden landscapes and heritage assets. BGSH is working to diversify and enhance the visitor experiences and improve visitor access to Mount Lofty Botanic Garden and its collections.

3.2 Site Considerations

The Mount Lofty Botanic Garden is situated in the scenic Adelaide Hills region, known for the bright autumn leaf colour of the numerous deciduous trees planted in the area. The towns of Aldgate, Stirling, Oakbank, Birdwood, Crafers, Mount Barker and Hahndorf are all within close distance and the region has some of the State's best produce and wineries. The region has many popular destinations, many of which form part of a tourist day visit together with the botanic gardens.

Mount Lofty Precinct
Forming the peak of the Mount Lofty Ranges, Mount Lofty Summit attracts more than 350,000 visitors each year. Rising over 710m above sea level, the summit provides a picturesque panoramic view over Adelaide's city skyline, as far as Kangaroo Island and Yorke Peninsula on clear days. Its Information Outlet, provides the opportunity to learn more about the flora and fauna of the region, as well as the First Nations peoples' history from a knowledgeable guide and educational signage. There's also an on-site gift shop which sells handmade local goods and souvenirs.

The Waterfall Gully Discovery Trail is a short and popular local walking trail which has scenic views from the top. The walk is about 350 metres and visitors can download a mobile phone app to be shown different points of interest along the walk.

More advanced walkers, utilise the Heysen Trail, which weaves through the scenery of the mountain and provides views of Adelaide's city skyline and beyond. The circuit is around 7.5 kilometres and takes 3-5 hours to complete. It is graded at a 3 making it a moderate trail with some prior bushwalking experience recommended. The trail passes through the village of Piccadilly, the Mount Lofty Botanic Garden and through the Cleland Conservation Park. The trail enters the Botanic Garden at the lower car park and weaves it way through the gardens, exiting via the lookout location at the base of Mount Lofty House. The traditional route of this trail has been slightly altered recently to enable it to bypass areas of path that are closed due to unrepaired storm damage.

Mountain biking is also becoming increasingly popular and many cyclists will choose Mount Lofty for their bike rides as the area is less congested than other trails and provides a great training ground for more advanced cyclists.

Cleland Wildlife Park
Cleland Wildlife Park has been a major tourist attraction in South Australia since 1967. Cleland plays an important role in helping visitors connect with animals in their natural environment. By providing an immersive nature experience, with a limited number of enclosures and the chance to get closer to some of the State's most iconic animals, visitors learn more about the importance of conservation. The park is a member of the South Australian Tourism Hall of Fame after winning the 'Significant Tourism Attraction' category at the 2007, 2008 and 2009 South Australian Tourism Awards.

Mount Lofty House
Mount Lofty House, situated next to the upper carpark area of the botanic gardens has also undergone significant redevelopment recently. The house was originally built by Arthur Hardy in 1852 after he purchased 1000 hectares of land along Mount Lofty Summit Road. After 10 years in residence, the house was sold to Arthur Waterhouse in 1865, who extended the front of the house to create the facade of its current appearance. Over the next 100 years the house passed through a number of families and become a commune in 1970's. Many of those residents would have utilised the Botanic Garden. However on 16 February 1983, the devastating Ash Wednesday bushfires burnt down the house along with a third of the Garden.

Since this time, Ross Sands a local architect has rebuilt and restored the house to its former glory using photographs and original plans. The house has been turned into a luxury boutique hotel and was extended

with the Piccadilly wing in 1988. In the last nine years, the house has continued to evolve and a 6 star luxury hotel extension, called “Sequoia”, was opened recently. These luxury hotel suites have views directly over the Garden and the new buildings create a new challenge along the boundary with regard to erosion from the cliff cut but also potentially increased garden visitation.

Township expansion

The region has also continued to grow in local development, with over 1000 new homes being constructed in nearby Mount Barker Township. Public transport that caters from people living in this region and wishing to work in Adelaide as well as visit the region is becoming increasingly deficient and the road and parking no longer adequate for the increased regional population needs. New park and rides have been constructed at Crafers and a new site in Stirling is currently under construction to cater for this need.

Natural forces – bushfire and storms

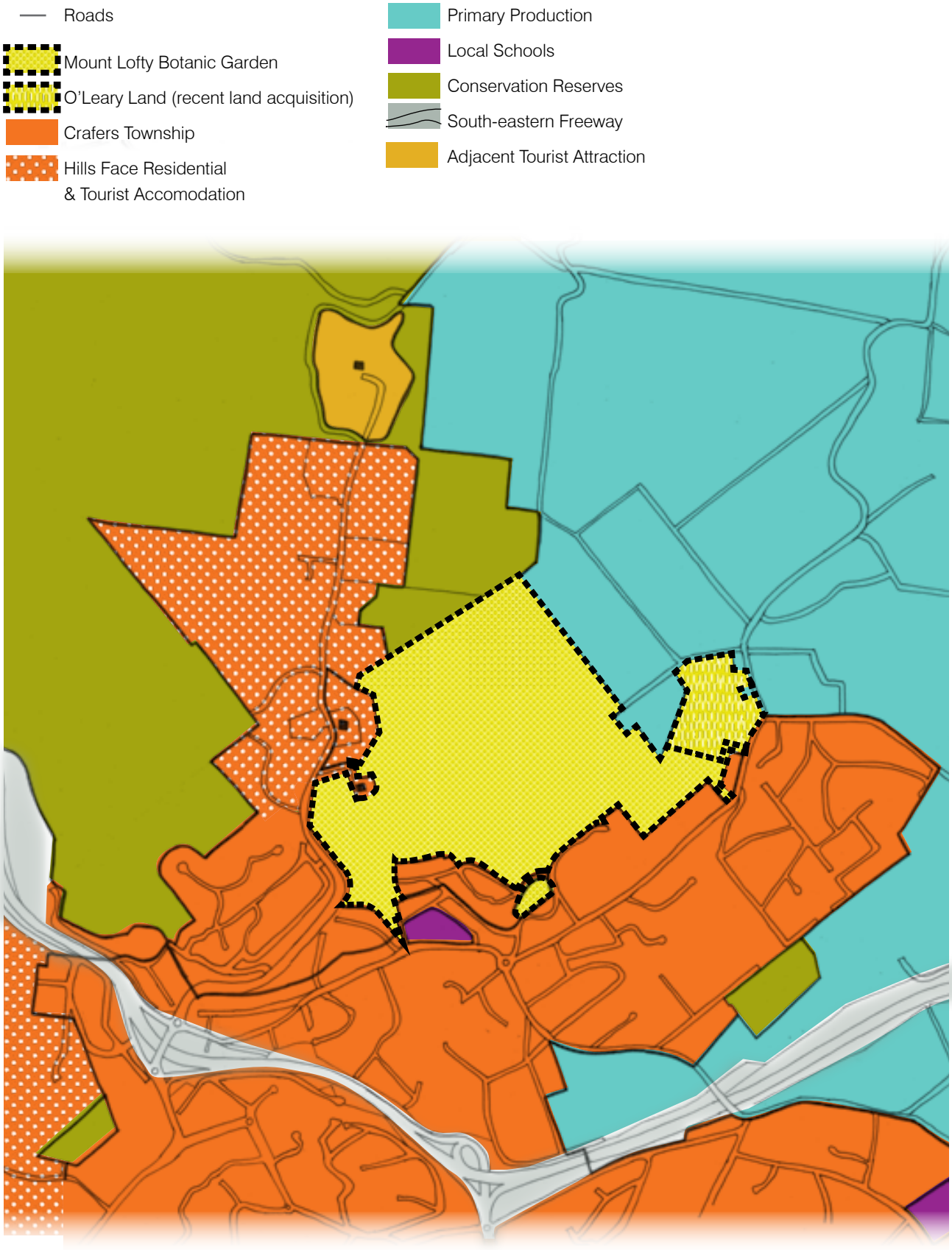
The site constraints of the Mount Lofty Botanic Garden have always included damage to the site and its collections from storms and bushfires. Severe bushfires are a common occurrence in South Australia, due to hot and dry conditions that characterise the State’s weather during summer. Bushfires can occur from mid-October (spring) through to May (autumn), but tend to be most severe during summer - particularly January and February. The Adelaide Hills region is contained within the Mount Lofty Ranges Fire Ban District and on catastrophic, extreme and severe fire danger days in particular, some attractions including the Mount Lofty Botanic Garden and the many National and Conservation Parks may be closed on such days.

The widespread fire, known as ‘Black Sunday’, occurred in the Adelaide Hills on 2 January 1955. The most significant bushfire impacting the site was the Ash Wednesday II fire which occurred in February 1983. This fire devastated more than half the Garden, severely damaging much of its upper reaches (including Rhododendron and Viburnum Gullies). A State Government grant assisted in the reconstruction process.

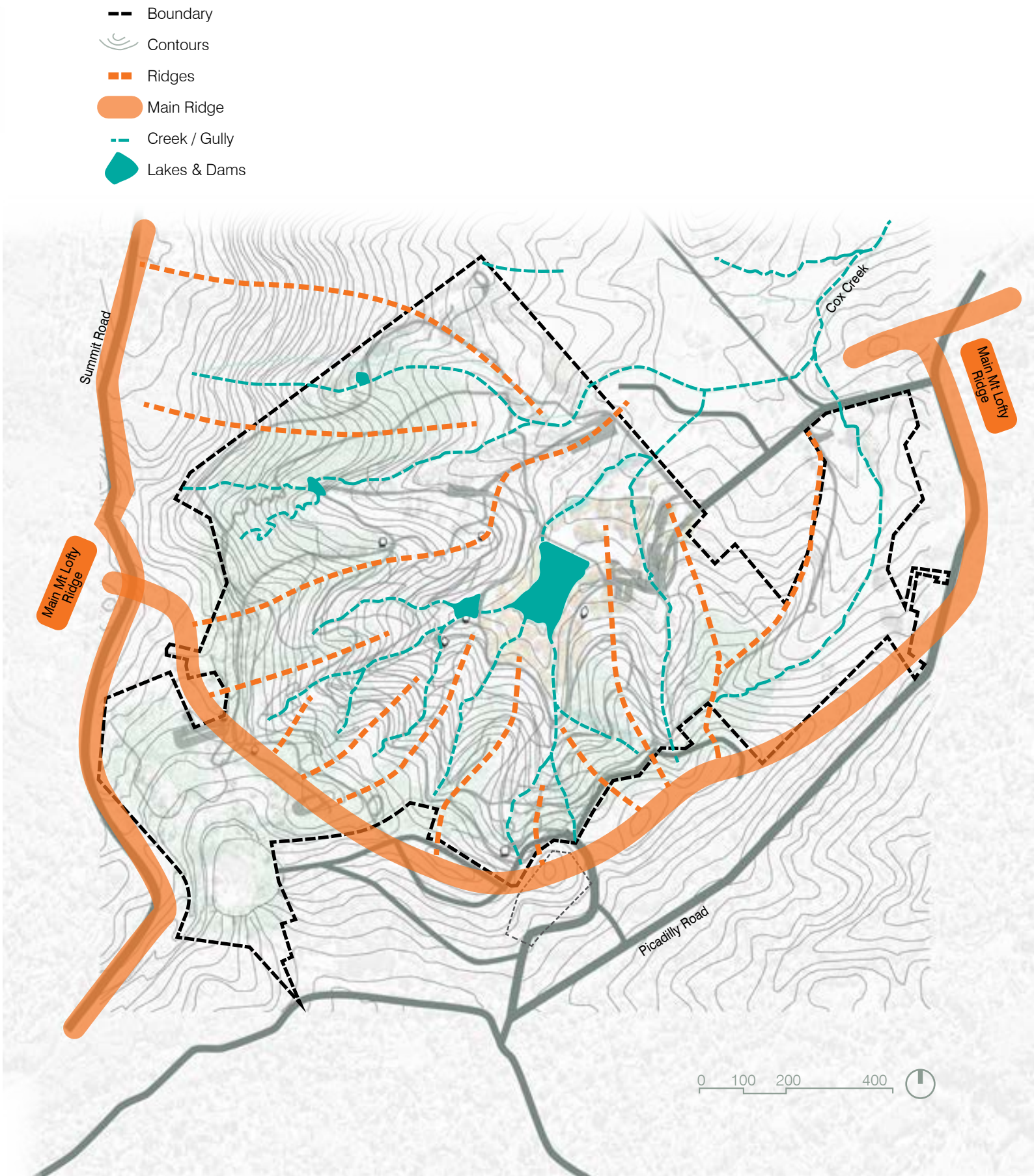
Damaging winds and storms have also had recent impact on the site, particularly on paths and roads, with the Nature Trail still closed to the public awaiting funding for restoration of the pathway. Destructive winds also create an additional site consideration for the management of significant stands of local Eucalypts, and other planted collections, heavily impacted by winds. These winds both damage and dislodge trees and create high risk for staff and visitors safety. In recent years, significant stands of local Eucalypts throughout the Adelaide Hill region including the Mount Lofty Botanic Garden stands have presented with noticeable die back within the tree canopies. The steep terrain of much of the site also presents another management and use challenge.

Mount Lofty Botanic Garden Site Analysis 4

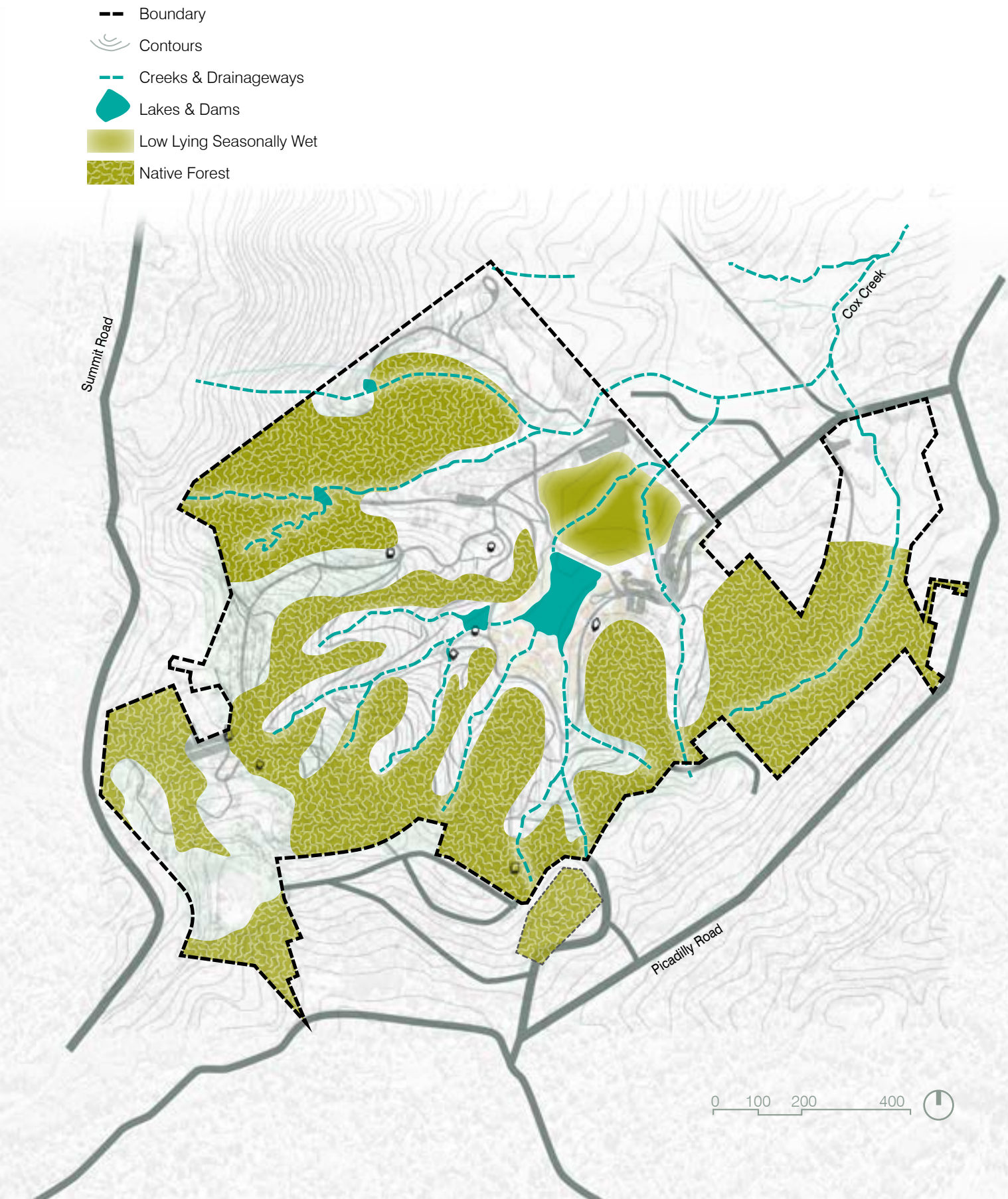
4.1 Location and Surrounding Land Use



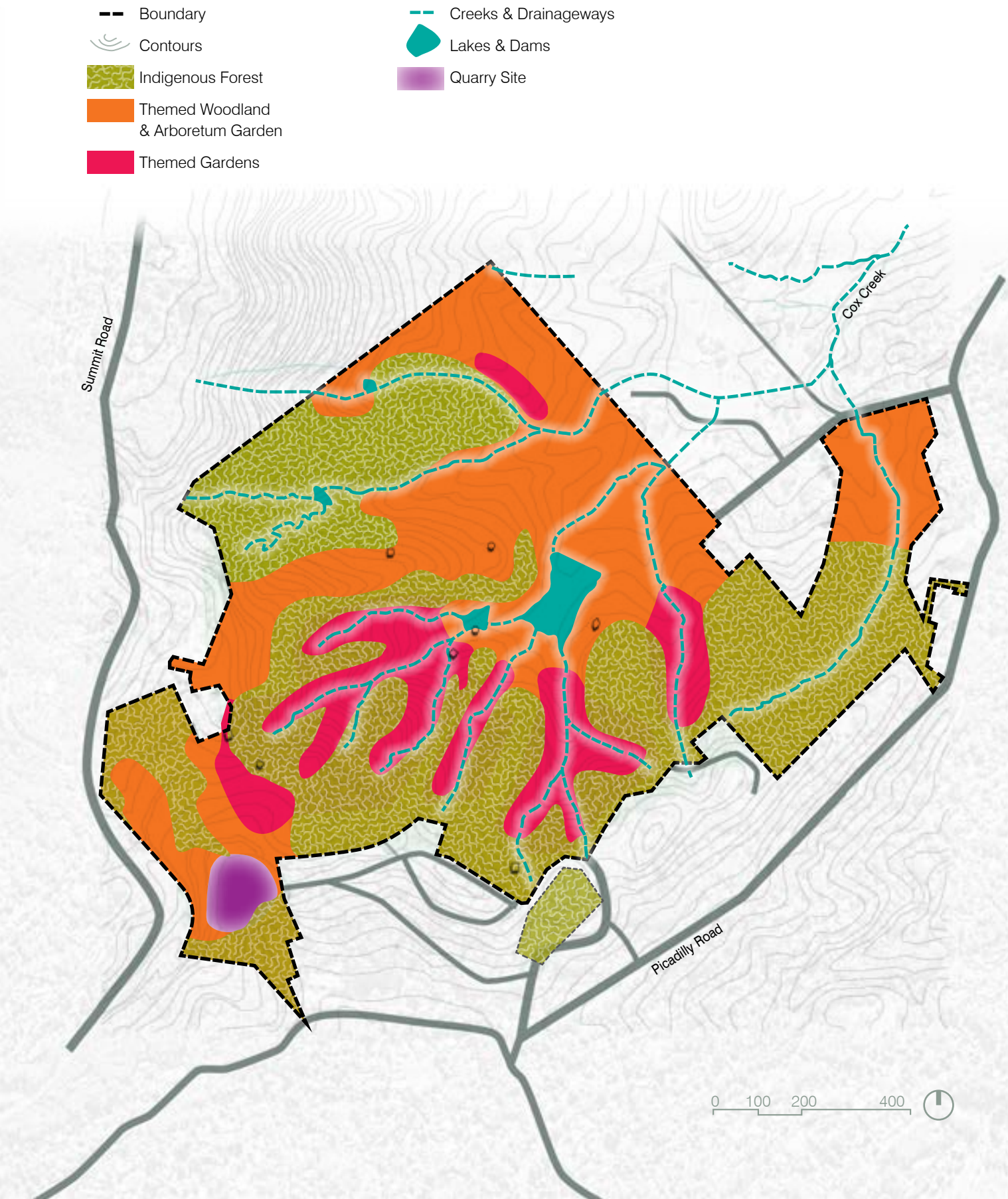
4.2 Existing Topographic Structure



4.3 Existing Waterways



4.4 Existing Landscape Structure



4.5 Existing Heritage

The Mount Lofty Botanic Garden Conservation Study (2006) has identified components of the Garden as having important cultural significance:

- Boundary
- Contours
- High Significance
- Low Significance

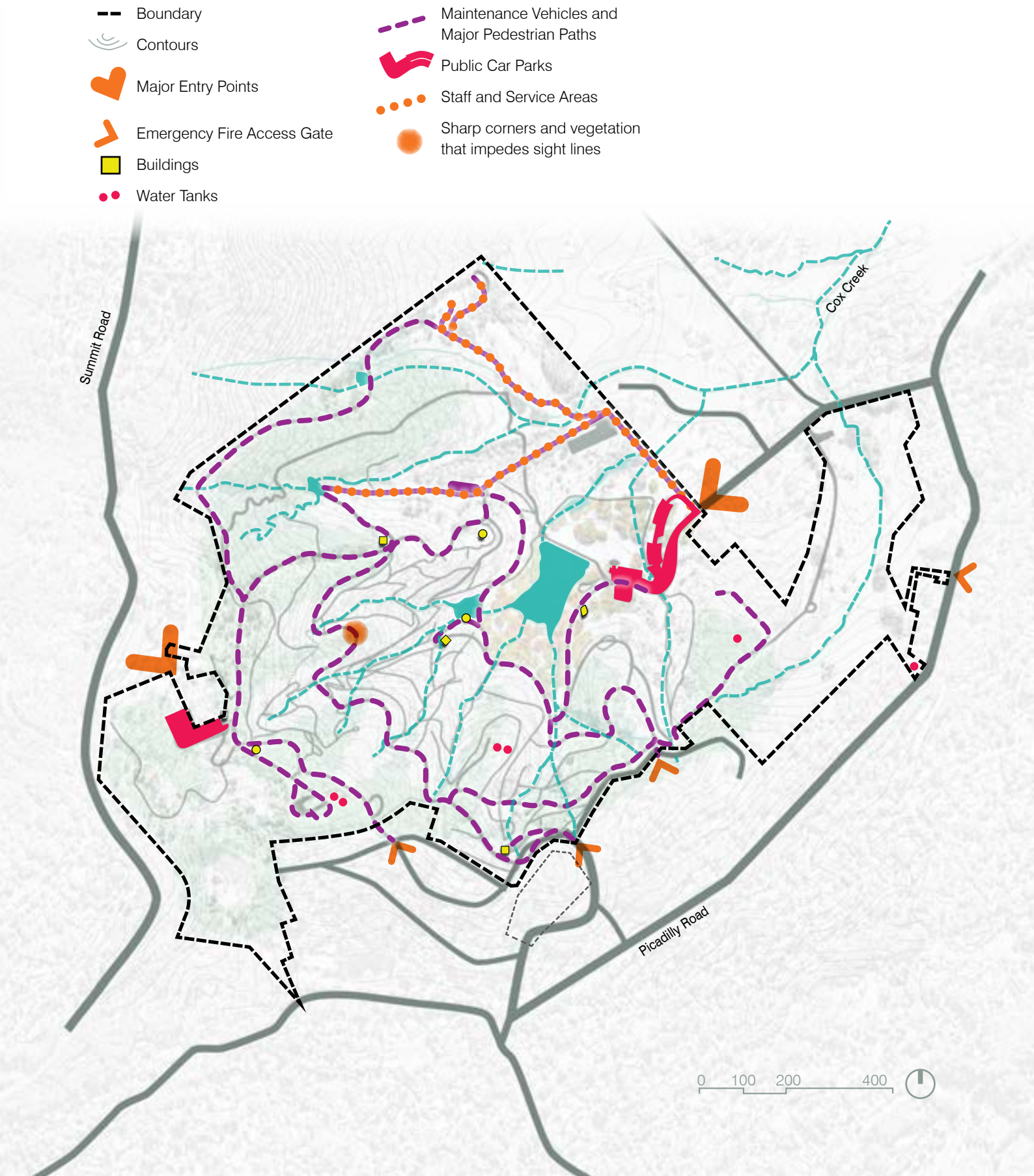
High Significance

1. *Magnolia*
2. *Ferns*
3. *Rhododendrons*
4. *Acer*

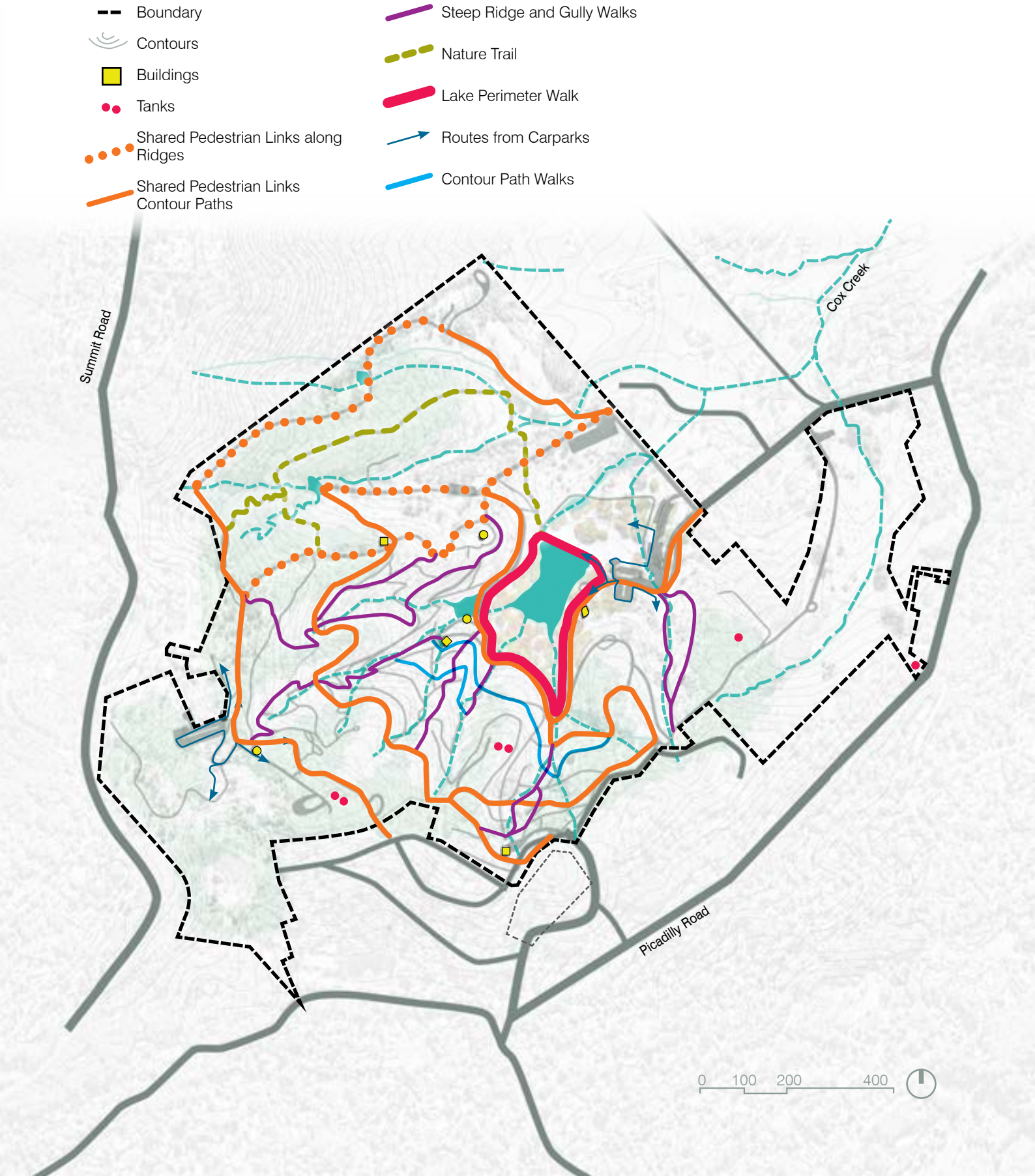
Low Significance

5. *Species Rosa*
6. *Native Forest*
7. *Lakes Landscape*

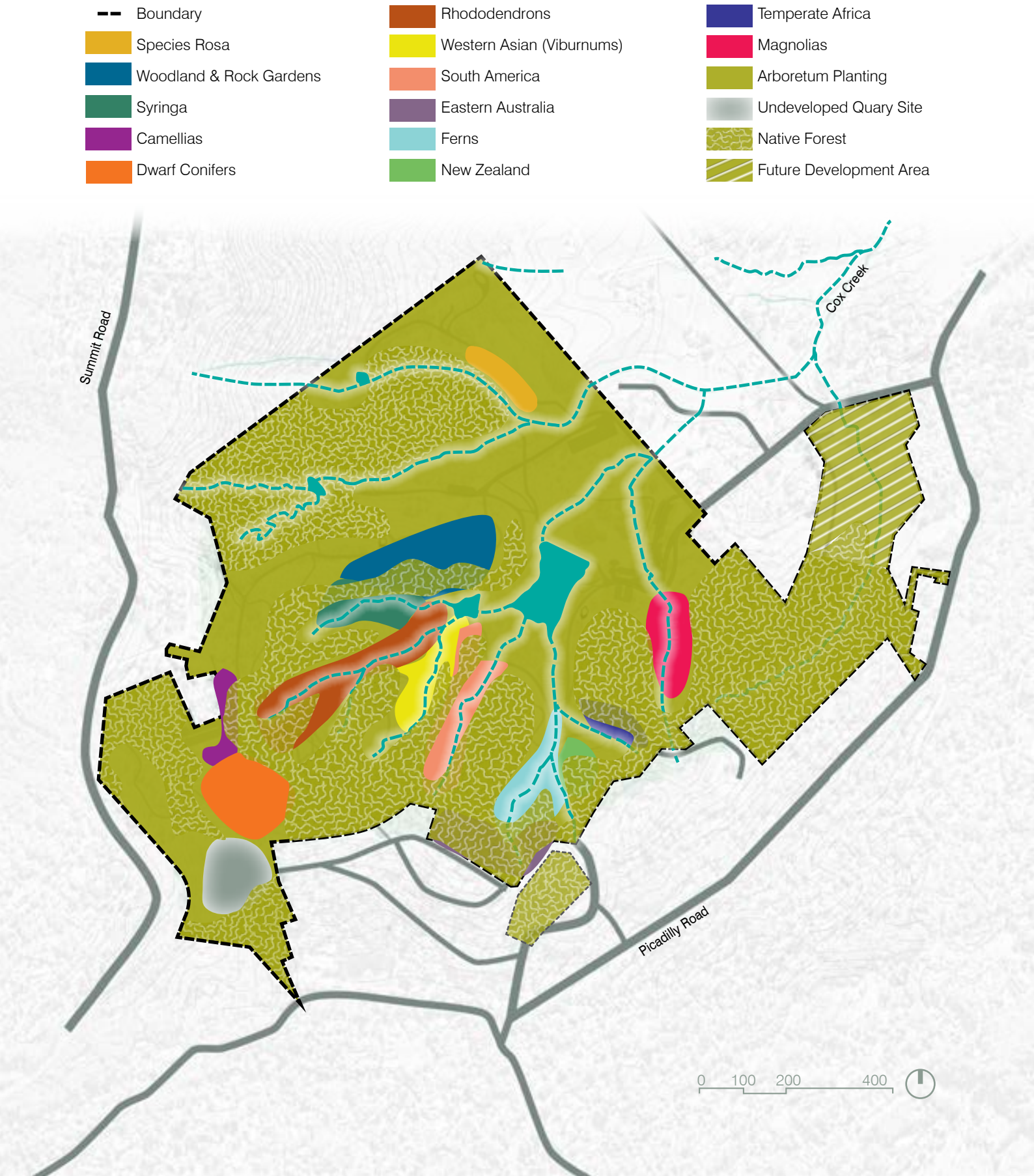
4.6 Existing Movement: Vehicular



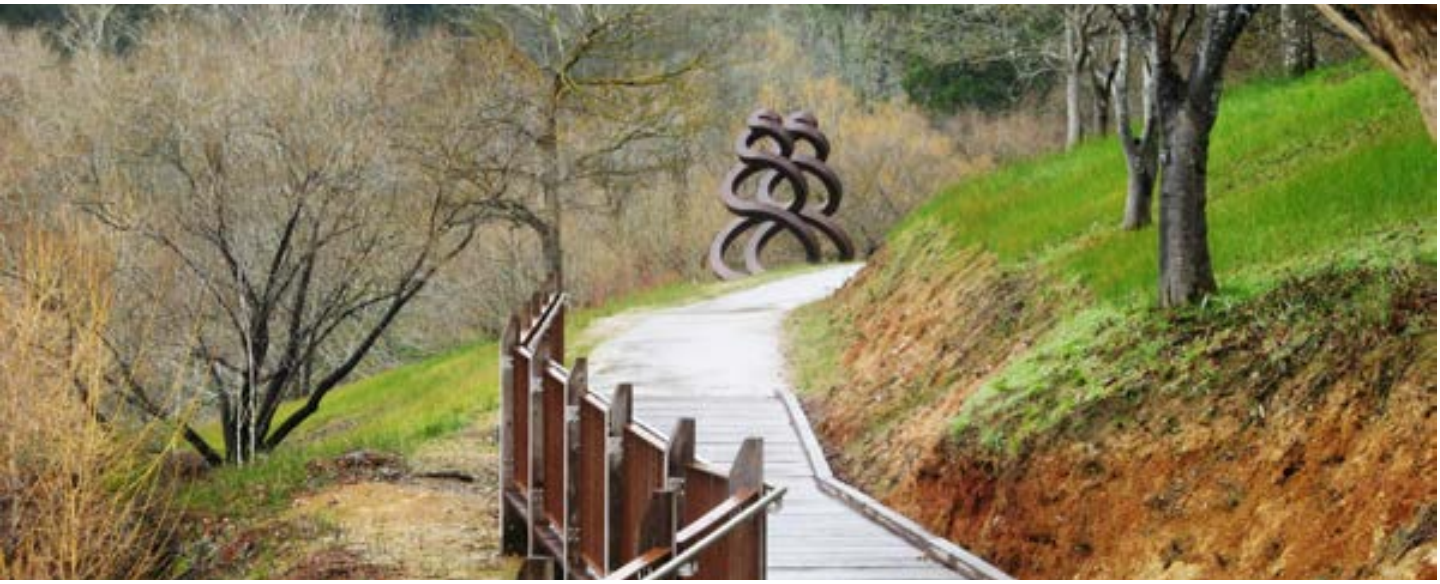
4.7 Existing Movement: Pedestrian



4.8 Existing Collections and Displays



Completed Mount Lofty Botanic Garden Projects 5



5. Completed Projects and Actions Post 2006

The 2006 Masterplan for Mount Lofty Botanic Garden proposed a number of projects and actions as site enhancements, varying in scale and complexity, and responding to observed needs to improve access for visitors, as well as providing opportunities for the Garden to 'regenerate' itself and meet new sustainability goals.

Many of the recommended actions within the Masterplan have however not yet been implemented and the need to maintain current services and provide additional visitor amenity is increasing. This chapter summarises the important changes to Mount Lofty Botanic Garden since the completion of the 2006 Masterplan.

CHRIS STEELE SCOTT PAVILION

The Chris Steele Scott Pavilion opened in 2015 following a partnership with the University of South Australia's School of Architecture and Design. Fourth-year student Sam Chua's pavilion design was chosen from more than 100 entries in the resulting competition, with the project overseen by lead architect, David Gilbert.

The Pavilion provides shelter in all seasons and a meeting place for visitors to meet with Garden Guides for talks and tours, as well as encouraging educational activities surrounding the Garden's unique climate collections. The Pavilion is named in memory of the late Mrs Chris Steele Scott OAM – a lifetime supporter of the Botanic Gardens of South Australia and a founding member of the Mount Lofty Botanic Garden Support Group.

NOEL LOTHIAN VIEWING PLATFORM

In 2019, the Noel Lothian viewing platform was required to be removed. This structure was located over the water holding tanks that service the botanic gardens. The old water holding tanks were upgraded with the installation of four Pioneer Colourbond tanks.

OVERFLOW CAR PARKING

Preliminary investigations into overflow car parking options have been completed. Concept plans for an overflow car park to be able to handle the burgeoning visitation, particularly in autumn, but incrementally all year round have been designed but need to be reviewed and updated for visual appeal as well as functionality. The Upper car park has been reconfigured to increase the number of parking spaces.

SITE INFRASTRUCTURE UPGRADES

Assets which have undergone major upgrades since 2006 include:

- Lakeside Access trail construction and installations of artistic interpretation around that trail to give better disability access around the Main Lake.
- Upgrade and sealing of mains roads to improve fire unit accessibility.
- Post the 2016 storms, bitumen roads were installed on Northern Boundary Road, the entrance to New Zealand /Fern Gullies and South American Gully, and the road between the Lower Road and the entrance into "Cuttings", the undeveloped part of garden used for mulch storage etc.
- Installation of a potable water line to visitor precinct area to allow a drink fountain installation
- Connection to mains sewerage for Lower car park toilet blocks and the installation of a drinking fountain positioned between the lower car park and Chris Steele Scott pavilion.
- Replacement of Nursery greenhouse roof shade cloth and glasshouse heating boiler.
- Construction of a new gazebo and wedding site.

COLLECTIONS DEVELOPMENT

The following collections development work has been undertaken:

- Ongoing new plantings within existing collections with either new species or new cultivars.
- Several targeted woody weed removal projects have occurred in the strips of Indigenous flora within the Garden.
- Vegetation surveys in the woodlands.
- Focus on fire management and disposal of timber post storm damage in 2016 (150 trees blown down in total some not able to be completely removed).
- Scientific investigations into the sudden death of *Eucalyptus obliqua* populations in several locations, which is on-going.

COMMERICAL OPPORTUNITES

- The Picadilly Cottages on the O'Leary property have been upgraded and are tenanted.
- Continuation of Piccadilly Spring water commercial arrangement.
- Participation in a government Nature Based Tourism call for opportunities for activation of the botanic gardens. This process did not result in any new commercial business opportunities being undertaken.
- A temporary pop-up café operated from the Chris Steele Scott Pavilion but was not sustainable with the visitor numbers at the time of the trial.

Key Issues and Objectives 6

6. Key Issues and Objectives

The key issues discussed in this chapter are grouped into either Garden Composition, Visitor Experience or Collections issues, and prompt a response in the form of a set of masterplanning objectives at the end of each sub-category.

These objectives raise strategic responses, leading to a list of specific site masterplan actions. These responses and actions are listed in Chapter 7 of this report.

6.1 Garden Composition

Garden Site

Two First Nations peoples are known to have inhabited parts of the Mount Lofty Ranges prior to European arrival in South Australia. The Kaurna people of the Adelaide Plains were custodians of the western slopes of the Ranges, while the country of the Peramangk people included the eastern slopes of the Ranges and extended east toward Callington. The Mount Lofty Botanic Garden Conservation Study (2006) records that there is no known physical evidence of Kaurna or Peramangk cultural sites within the Mount Lofty Botanic Garden. The Kaurna believe the body of a giant ancestral being, who lay down to die following a battle, forms the Mount Lofty Ranges. The two peaks of Mount Lofty and Mount Bonython are identified as the 'two ears' of the ancestral being.

The sixth director of the Adelaide Botanic Garden, Noel Lothian, first proposed the concept of a cool climate botanic garden annexe soon after his appointment in 1948. He argued strongly for the new garden on the basis that as metropolitan Adelaide encompassed an area with two or three climatic zones and at least three distinct soil zones, additional garden sites would allow for a greater variety of plant material to be cultivated. The estate of Thomas S. Backhouse, located on the eastern slopes of the Ranges, immediately below Mount Lofty House, with an area totalling just over one hundred acres, was acquired by the Board in 1952. The site was covered extensively in regrowth Stringybark forest, a Radiata Pine plantation and open areas, over acid soils and in one of the highest rainfall regions in the State.

By the end of the decade, Lothian and the Board determined that the development of the Garden was a major priority and engaged the landscape architect, Allan Correy, to prepare a masterplan for the 'Mount Lofty Annex' in 1961. Correy completed the Masterplan for the development of the Mount Lofty Botanic Garden in 1965 proposing that "all major planting be carried

out on an ecological basis within a framework of broad geographical regions". Much of the current Garden collections were established in the subsequent years, and the Garden opened to the public in 1977.

Garden Form

The structure of the Mount Lofty Botanic Garden is almost entirely determined by the site's natural topographic landform: a sequence of alternating ridges and gullies, radiating in a semi-circular pattern. The ridges are vegetated with naturally occurring stringybark (*Eucalyptus obliqua*) forest enclosing and forming a backdrop to the gullies below. In accordance with the Correy masterplan, the cool, damp gullies are exotically-planted, informal gardens, sheltered and shaded by the forest around them.

The Main Lake is a large artificial water body, located at a prominent position centrally within the Garden at the confluence of the gullies, and perched above the lower reaches of the Garden to the north. The lower gardens are relatively flatter and spatially more open. The area contains the Garden's arboretum, planted with lawns and widely spaced trees. The high dam wall of the lake screens the upper areas of the Garden, giving the lower arboretum a separated and secluded spatial quality.

As a hilly site, the Garden offers opportunities for panoramic views from its upper reaches down into the Piccadilly Valley beyond. A number of long-distance viewpoints exist along the Garden's Upper Road, the most notable being from the site of the former viewing platform. The platform has been removed due to its state of disrepair and lack of compliant access for those with disabilities. A notable long viewpoint can also be found at the higher levels of the Arthur Hardy Reserve looking south across the quarry site. This view is experienced by very few visitors due to the inaccessibility of the Hardy Reserve to general visitors.

A lookout point in the lower garden takes advantage of the perched topography near the lower car park, and features views both across the Main Lake and down over the grassed arboretum. Various vantage points exist around the central gullies and ridges that look both onto the Lake below, as well as more intimate views up the gullies to a continuous tree canopy beyond; these views are particularly prevalent in the Rhododendron Gully and the South American Gully.

Garden Heritage

The statement of cultural significance in the Mount Lofty Botanic Garden Conservation Study (2006) sought to broaden the statement of significance attributed to the Garden in its citation on the Register of the National Estate. The Study suggested that its "great aesthetic and scientific importance" comes from more than the permanent preservation of natural stands of forest and the unique collections of exotic and ornamental trees and made the point that its importance also comes from its landscape setting envisaged by director Noel Lothian and conceptualised in a landscape design plan prepared by Allan Correy.

The Mount Lofty Botanic Garden Conservation Study ranked the Garden as having high cultural significance, based on the Garden's purpose and overall form, rather than specific items within the Garden. The 2006 Conservation Study identified four horticultural collections within the Garden as having high cultural significance (Magnolias, Ferns, Rhododendrons and Acers), and another three components of the Garden as having a low level of significance (the Species Rosa collection, the lakes landscape, and the remnant native forest areas).

Acquisition of O'Leary Property

In 2014 the Board purchased 13 hectares of land adjacent to Mount Lofty Botanic Garden. The Piccadilly Cottages (formerly the O'Leary Estate) has three dwellings which are leased to tenants and an operating Spring Water Extraction Licence which has been leased to Spring Water Beverages.

Waterways

The Mount Lofty Botanic Garden is located on an elevated site in the Adelaide Hills with a number of gully streams that flow through the Garden via an artificial lake before entering the high end of the catchment of Cox Creek. These waterways are in good health and currently exhibit no serious water quality issues.

As assessed in the 2006 Masterplan, opportunities exist to enhance the values of the existing waterways through measures that:

- protect the water quality of the Main Lake from the risk of high levels of nutrients entering the system; and
- treat run-off from car parking areas to reduce pollutant export.

Further opportunities exist to preserve and enhance the already high values of the existing waterways through rehabilitation of existing streams to enhance botanical and ecological values and address relatively minor stream bed and bank erosion where and when issues are identified in the Garden.

GARDEN COMPOSITION OBJECTIVES

- Effectively manage and maintain the Garden's established features, spaces and collections to enhance their scientific and cultural value, and their contribution to the aesthetic experience of the Garden.
- Reinforce and enhance the spatial experiences within the Garden.
- Maximise and enhance the key views within the Garden to assist orientation, appreciation of the key components as well as the regional context of the Garden.
- Enhance the qualitative values of the Garden's waterways and lake, and investigate opportunities for water conservation.

6.2 Visitor Experience

6.2.1 SITE FACILITIES

Visitor Facilities

Current visitor facilities are dispersed across the Garden with two main entry points and no singular focal precinct for visitor arrival and orientation, general amenity and information gathering. The Mount Lofty Botanic Garden currently has no formal 'visitor centre' facility. Basic visitor amenities are met by shelters, sign boards and toilets at each of the two carparks, with additional toilets at three other locations across the central areas of the Garden site. All five toilet facilities provide only a basic function, and are generally in poor to very poor condition.

The visitor experience is often compromised by limited information about both the Garden itself and its greater purposes and aims. A series of leaflets are provided at the two major entries/carparks to the Garden, providing both visitor maps and specific information on certain collections and activities in the Garden. There are no permanent food or drink outlets, or other retail facilities, within the estate.

Visitor carparking exists at both the upper and lower entries to the Garden. Each provides sufficient spaces for general day-to-day use. Parking is ticketed on weekdays and Saturdays. Parking on Sundays, the day of highest visitation at Mount Lofty Botanic Garden, is currently free. With recent record levels of visitation to the Garden especially in the autumn and spring months, the capacity of the public car parking is exceeded regularly during these peak periods, particularly on warm and sunny weekends in autumn. Temporary car parking has been trialled in the area near the ATCO Rose Garden but is quickly deemed unuseable when heavy rainfall makes the grass slippery and muddy. Additional overflow car parking was previously available at the Piccadilly Oval and CFS sites however recent developments at these sites render them no longer available for use. This has resulted in significant local traffic management issues and impact to neighbouring residents by illegally parked cars and privacy breaches. The BGSH has subsequently commenced investigations into options for the provision of overflow parking on the 'O'Leary Land', accessed via Lampert Road.

Staff Facilities

The Mount Lofty Botanic Garden has a number of decentralised staff facilities dotted through the Garden, with administration residing at the city site in the Goodman Building located at the Adelaide Botanic Garden. The on-site offices, meeting rooms and staff lunchrooms are located at the Administration Building, with an unsealed parking area for staff and visitors nearby. Additional unused facilities are also located at the 'Regional Headquarters' building on the south side of the Garden.

The dedicated nursery facility with associated offices and parking, located adjacent the Arboretum, services all three Botanic Garden sites, Botanic Park and BGSH conservation and learning programmes. As such, the facility is modest in size, consisting of a series of concrete soil bays, growing group shade house, open air benches, under shade cloth benches and two glasshouses. Current biosecurity measures are limited. The nursery is located on the northern slope above the Arboretum lawns, and as such can be clearly viewed by visitors from certain popular locations within the Garden. Should the Nursery remain at this location for the long term, and remain closed to public access, additional screening should be provided. Small 'depot' sites are spread across the Garden, typically in the form of cleared open space for storage of horticultural equipment and bulk materials. They are generally located along 'service vehicle only' tracks, and for the most part are out of view to the majority of visitors. However both the nursery and depot sites are regularly stumbled upon by walkers in the Garden, which could compromise their safety and the BGSH operations.

The service vehicle road network provides a high level of access given the steep terrain, however the

conditions of these roads and tracks, including fire access paths, are in varying levels of condition and are often only one vehicle wide, with noteworthy levels of maintenance required due to high levels of rainfall and resultant erosion.

Amenity Infrastructure

The basic landscape assets of the Garden, such as pathways, garden furniture, bridges, fences and lighting, have a subtle yet important influence on the quality of the overall visitor experience and, generally, are of an adequate standard to meet the immediate requirements of visitors. The production of a Gardens-wide Infrastructure 'Style Guide' was commissioned by the BGSH in 2013 for all three BGSH Garden sites. The document is scheduled to be reviewed to provide future direction for infrastructure maintenance and renewal. The funding required to maintain, replace and add to infrastructure is still to be determined.

The main pathways in the Garden typically consist of varying width bitumen or concrete roadways, such as Allan Correy Drive, doubling as both a major 'collector' path network for pedestrians and a service road for Garden vehicles. The condition of these roadways is variable. A series of narrower pedestrian/operations pathways meander throughout the Garden from the main 'ring roads'. They are most commonly natural ground or consolidated gravel tracks, or occasionally paved in bitumen, and in some places stone, to reduce erosion damage. The newer bitumen paved paths are in better condition, while the others are highly variable, dependent on age, exposure to erosion and level of use. Tracks used for fire appliance access are the ones of best condition as they received more maintenance.

The Chris Steele Scott Pavilion is a more recently constructed open air shelter for visitors to rest and meet, and is used regularly as an assembly point for guided tours. Mount Lofty Botanic Garden Support Group commissioned the University of South Australia's School of Art Architecture and Design's student design and construction program to design and install substantial portions of the structure, which was opened to the public in October 2015.

Outside this project, there has been very few installations of new garden structures or furniture for visitors at the Mount Lofty Botanic Garden in recent time. The existing furniture and structures across the Garden varies greatly in style, quality and condition. Given the size of the Garden, the difficult terrain and relatively high rainfall, the current provision of seating and sheltered resting places is considered minimal. Two large gazebo structures are each located relatively near the upper and lower carparks, and are used as wedding locations, as well as for casual picnicking by general visitors. Two smaller shelters exist in the Rhododendron Gully, with hexagonal pitched roofs and open lattice walling. There is very limited formal sheltered spaces for visitor use.

Memorials within the Garden dedicated to individuals who have contributed to the Garden in some way, are subject to a BGSH garden-wide policy that seeks to protect the integrity of the three Gardens, while allowing appropriate dedications to be made. The policy provides for the use of 'memorial seats' as the only endorsed form of memorial dedication allowed within the Gardens.

Night-time lighting is limited to a restricted area near the lower entrance. Sensor security lighting has also been installed in the administration and maintenance and nursery staff works areas. Hired temporary lighting towers are required for any night-time public events or performances within the Garden.

The Garden is enclosed by chain wire fencing around the perimeter that is for the most part hidden from view by planting, but has sustained damage due to impacts by kangaroos and falling tree limbs, and is in need of constant maintenance. There are several access gates in the perimeter fence that are exclusively used

by emergency services to access or move through the Garden in an event of a bushfire.

Water from three bores is used to top up the Main Lake during summer and flows from a natural spring from above the Administration building have been diverted along the service road to the Bog Garden Duck Pond. The water is allocated through the Western Mount Lofty Water allocation section of DEW. There are four sets of water storage tanks in different locations around the site that supply water by gravity feed to the Garden and nursery.

The 'planted' areas of the Garden are irrigated, while the native forest areas are not. Various irrigation systems are employed across the Garden and system upgrades for improved efficiency are recommended in the short to medium term. The main line for the irrigation system also needs replacing.

The Garden is able to respond to a bushfire emergency according to procedures set out in its Site Bushfire Response Plan. Fire hydrants have been installed throughout the Garden however these are gravity fed and do not provide sufficient pressure to fight a significant fire in the Garden. A small 'drop-on' firefighting unit is fitted to a dedicated 14 fire unit to assist trained staff with fighting small fire outbreaks, and in aiding CFS units. This fire appliance is housed on site but may be seconded for firefighting duty at other locations. The Nursery complex building and the Administration/Depot complex have manually operated rooftop fitted fire sprinkler systems.

Physical Access

As significant public spaces, all of the Botanic Gardens' estates strive to meet the sometimes conflicting demands of being a pre-eminent public garden landscape and a scientific conservation and learning institution. Most of the BGSH living plant material is on display to the public to see, touch, and smell, with obvious risk of vandalism or theft of sometimes rare and valuable plants. Such incidences are recorded to have occurred more often at the Mount Lofty Botanic Garden than at the other sites.

The Mount Lofty Botanic Garden is open seven days a week, including public holidays, and entry is free of charge. The site is a large and steeply undulating. The path network, developed under the original Correy masterplan, seeks to utilise contour paths to reduce the significant impact of the sloping terrain on pedestrian access around the Garden. Narrower and steep gully paths allow visitors to experience discrete plant collections.

The Garden is closed to staff and public on days of Total Fire Ban Days when there is heightened Fire Danger Index of 'Severe' (FFDI 50+), as determined by the Bureau of Meteorology.

While the site may be freely traversed from end to end in any direction, the Garden's size tends to encourage most visitors to experience the Garden by looped walks beginning and ending at either of the Garden two public carparks. The degree to which visitors access the Garden collections is therefore dependent on the visitor's age, level of fitness and the carpark from which they set out. It is noted that due to the size of the Mount Lofty Botanic Garden, and the unrestricted access currently available to visitors, staff can be unaware of whether the Garden is fully vacated prior to the Garden being closed at the end of the day.

Access to the remnant native forest areas is not enabled currently due to the lack of safe walking paths, and is otherwise not encouraged other than by designated pathways, in order to protect this important natural habitat. An area of natural forest in the southwest of the Garden known as the Arthur Hardy Sanctuary is dedicated under the *Crown Lands Act 1929* as a fauna and flora reserve and is open to the public. The abandoned quarry site south of the Arthur Hardy Sanctuary is closed to the public due to its dangerous

cliff faces. The site requires substantial development before being able to be accessed safely by the public. This site however is of a unique amphitheatre shape and has an adjoining carpark also managed by the BGSH, but currently leased to the Crafers Primary School for their use.

Somerset Rocks is another area of native forest and is a legally separate entity within the Garden estate, and physically separated by a local road. The site is not currently part of the visitor experience at Mount Lofty Botanic Garden and not easily integrated into the larger estate but does have good native vegetation coverage and is managed for bushfire.

Public vehicles are not permitted to enter the Garden beyond the major upper and lower car parks. Staff vehicles use a road network of five roads across the site that also service emergency vehicles, particularly for firefighting. In sections, roadways are narrow in width, requiring pedestrians to leave the bitumen surface as staff vehicles pass. Sharp corners and vegetation also impede sight lines for vehicles in some locations.

Public car parking during major events in the Garden is not adequately catered for in the current road network.

Way Finding

Generally, way finding is difficult for newcomers to Mount Lofty Botanic Garden. It could be argued, however, that the circuitous path systems add to the sense of mystery and discovery in a botanic garden.

Due to the steep topography of the site, lookouts offer the best opportunity for easy wayfinding at the Mount Lofty Botanic Garden. The lookout adjacent the lower carpark provides good views across the lake and arboretum precincts. Several lookout points near the upper carpark provide attractive vistas but are less successful as wayfinding tools.

The 'amphitheatre-like' form of the central part of the site focuses many views from the upper Garden onto the main central lake, and as such the lake forms the Garden's most recognisable landmark.

The layout of the Garden, as first planned by the Correy masterplan, with a succession of forested ridges and exotically planted gullies, is in itself a potentially powerful wayfinding tool. This element of the design in its current form, is however not immediately obvious to many visitors.

Signage along the Garden's path network is basic and generally fails to substantially assist orientation around a site that is by its nature difficult to negotiate.

Disability Access

A significant percentage of the Mount Lofty Botanic Garden is inaccessible to visitors with limited mobility due to the steep terrain across the Garden site. Even at the more accessible sites within the Garden, difficulties are experienced by visitors using mobility aids when traversing lawns and gravel paths, and at uneven transitions between differing ground surfaces.

Since the 2006 Masterplan, a code-compliant accessible pathway has been installed from the lower car park to and around the downstream sections of the Main Lake to add an important key location to the otherwise limited universally accessible areas of the Garden.

Access to some areas of the Garden's Administration Building may not comply with current standards and codes for accessibility.

Steps at entries to the gazebos within Rhododendron and Viburnum Gullies prevent equal access to these buildings for people using mobility aids. The two toilet blocks at the north and south ends of Allan Correy Drive do not have dedicated disabled toilets. The other toilet facilities at the upper and lower car parks have

signposted disabled toilets and have been upgraded to comply with disability access codes.

Garden signs and maps are inaccessible to visitors with vision impairment. Some of the locations of bins, drinking fountains and other garden furniture have been installed in positions that are difficult to access for some visitors, particularly those using mobility aids.

Public Safety

BGSH addresses the safety of its visitors through regularly reviewing its Business Continuity and Emergency Response Plans, produced for all three of its Garden estates. The Plans seek to provide strategies and actions to cater for the loss of key operational facilities following a significant event that disrupts the provision of normal services by the Gardens. The objectives of the Plans are to protect Garden staff, volunteers and visitors; to protect the resources of the Board and DEW; to develop procedures and practices to facilitate speedy resumption of normal services; to minimise financial loss; to protect the community and to protect the environment. The Plans act as a guide to BGSH personnel who have key roles in incident management and emergency response processes, and outlines the specific roles and responsibilities of team members before, during and after an incident. The Plans are based on Australian Standards and are consistent with State Government risk management requirements.

The degree of risk to pedestrian safety at the Mount Lofty Botanic Garden is reflected in the level of fitness of individual visitors to the Garden. Printed guides and signs in the Garden warn walkers of the steep gradients of many of the pathways, and designate a time period to allow to complete set walks to reduce the risk of fatigue or exhaustion. The designated time period also assists visitors to the Garden to complete their walk and vacate the Garden prior to the Garden closing. Garden staff have reported incidents of visitors, undetected by staff, remaining in the Garden after closing. In these instances, a mobile phone number is left with unattended cars to allow visitors to have the gates reopened.

The abandoned quarry site is currently closed to the public due to the unsafe nature of the site's steep rock faces and scree slopes. If retained as part of the Garden estate, substantial development of new visitor amenities would be required to allow visitors to experience this area of the Garden safely.

Some of the Garden's roadways are narrow and feature sharp corners and impeded sight lines. Although the roads are closed to public vehicles, there remains a risk to pedestrian safety when Garden's staff vehicles pass.

The risk of bushfire at Mount Lofty Botanic Garden is an on-going managed risk well understood by the Garden staff. A major bushfire entered the Garden in 1983 causing extensive damage and public risk both immediately and over the following clean-up period. The annual Site Bushfire Response Plans, prepared under the supervision and advice of the Fire Branch of DEW, assist the preparation and response to bushfire at the site. The operations and horticultural management practices at the Garden aim to reduce future risk including scheduled vegetation fuel reduction supervised burns.

Another significant risk to visitors, staff and assets is the heavily wooded forested areas of the site. There are many specimens of *Eucalyptus* that are currently being impacted by some unknown pathogen or climatic influence which is causing stress and tree dieback, not only in the gardens but across the Mount Lofty Ranges. There has been a number of large trees that have failed recently, significantly impacting both the sustainability and viability of living collections planted underneath such specimens. When these large specimens fail they often impact paths and signage which cannot be repaired quickly.

Other safety concerns at the Garden are relatively low risk issues, including snake bite and insect sting, apart from during extreme weather events such as high wind days and the risk of limb drop or tree failure.

SITE FACILITIES OBJECTIVES

- Manage and improve visitor facilities to meet visitor expectations and to support communication of the BGSH's vision and key principles.
- Heighten the visitor experience, and effectively maintain basic assets, such as utility services, roads and paths, furniture and shelters, to maximise longevity and to improve the overall quality of the Garden and the experiences it provides.
- Improve on-going physical access to the living collections for all visitors, and as necessary act on public health and safety concerns across the Garden if and when they arise.
- Improve way finding for visitors generally through the Garden, and access to important attractions and visitor facilities.

6.2.2 EDUCATION AND INTERPRETATION

BGSH's public education programme has been developed to cater, for the most part, to primary and some secondary school children. The Garden does present education opportunities through the Australian Centre of Horticultural Excellence, however, there is a lack of a more general dedicated public education programme available to all visitors. The development of a comprehensive Education and Interpretation Policy document and Interpretive Masterplan with an implementation schedule has been identified as a priority.

Free guided walks of the Garden are conducted by the Friends of the Botanic Gardens of Adelaide during spring and autumn. The walks are generally one and half hours in duration and provide introductory information on the history and collections of the Garden.

The Nature Trail is a self-guided walking trail through an area of the Garden's remnant stringybark forest, and forms a section of the Heysen Trail through the Mount Lofty Ranges. Interpretive leaflets, with marker signs, are provided to the public at the starting points at each end of the trail. Lengths of this trail are currently closed to the public due to storm damage of the path and subsequent unrepaired path erosion.

Interpretation of the Garden is generally limited to standard plant labelling. Small signs at the Magnolia and Rhododendron 'gully gardens' describe the collections contained there.

A small number of pamphlets are available to the public interpreting other collections within the Garden, such as the Magnolia Gully. The Species Rose collection is a well interpreted garden of naturally occurring Rosa species, the parent material of the multitude of Rose cultivars grown throughout the world. The collection

however has been heavily impacted by browsing feral deer, and the collection requires some major revitalisation.

A range of appropriate methods of interpretation across the Garden, in addition to the much-needed collections information signage, will be determined through the interpretation masterplanning process.

EDUCATION AND INTERPRETATION OBJECTIVES

- Maximise and diversify education and engagement opportunities which foster appreciation and learning about the plant world particularly in the Garden's key areas of research, collections themes and horticultural management.
- Utilise communication media that maximises the interpretive value of collections and appeals to the greatest diversity of visitors.
- Present interpretation offerings to visitors worthy of a flagship cultural institution.

6.2.3 EVENTS AND FUNCTIONS

Visitor Demographics

Recent visitor surveys showed visitors to this Garden are typically adults aged 30 to 39 years and 42% of visitors come with children under 5 years. The majority of all visitors arrive by car (79%), and most visitors (77%) are in a group of family or friends. Enjoying and viewing plants and bushland, picnicking and exercising by walking were the most common purposes for visiting the Garden. The average length of stay is two hours, with 81% of visits on the weekends and 51% of all visits occur between 9am and 12noon.

Recreation

The Mount Lofty Botanic Garden is a place for passive recreation, encouraging activities such as walking, relaxing, and learning about plants. It is noted however that due to the size and difficult terrain, walking the trails within the Garden would be considered a more active recreational activity, with some walks take over two hours in duration.

Activities such as ball games, cycling, skating, walking dogs, and barbeques are not permitted within the Garden. Similarly, pets, alcohol and sound equipment are not to be brought into the Garden, unless by Director's exemption. The Board of the BGSH does however enable one-off events and functions, including weddings.

Major Events

No major regular events are currently held at the Mount Lofty Botanic Garden, but historically, the Adelaide Symphony Orchestra conducted an annual summer concert on the Arboretum lawns. Temporary carparking, lighting and toilet facilities had to be established around the lawns each year for this night-time event.

In spatial terms, the Arboretum lawns remain well suited to large scale events, however an audit of major event infrastructure and management requirements is needed to fully assess the suitability of the site to host events sustainably.

Private Functions

Use of the Mount Lofty Botanic Garden for private functions, particularly weddings, has developed and increased in the past 10 years and are now common place in the Garden.

Private functions in the Garden are carefully managed to reduce impact on the collections and other visitors, and fees are charged as appropriate. Private use of spaces within the Garden are managed by a private company and BGSH has a commercial agreement.

There are designated sites available to use for formal private group-booked functions within the Garden. The sites are generally selected for their ease of access for catering, lighting and toilet facilities, aesthetics, wet weather contingencies and proximity to car parking and their ability to recover from the impact of functions.

Weddings are the most common private functions, and the private company can hold several ceremonies per day. The rotunda at the top of Rhododendron Gully is used for ceremonies, especially in the case of bad weather, but refurbishment of the building is required.

Private functions are popular at the Garden's lower Arboretum lawns due to its open areas, ease of access, aesthetics, toilet facilities, and proximity to carparking. However, the site becomes unusable during winter months due to waterlogging from the adjacent gully creeks. No dedicated winter weather function venue exists in the Garden.

EVENTS AND FUNCTIONS OBJECTIVES

- Facilitate and support sustainable recreational activities and opportunities for the community.
- Investigate the potential for major events or commercial activities to occur within parameters which protect the Garden's integrity and do not impinge on the achievement of the organisations vision and objectives.
- Identify opportunities to grow BGSH and partened public events programmes based at Mount Lofty Botanic Garden.

6.3 Collections

Living Collections
BGSH is a collections-based cultural and scientific institution, and in acting in accordance with the governing *Botanic Gardens and State Herbarium Act 1978*, is mandated 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 this end the BGSH has, since 1998, maintained a working Collections Policy. The Policy, in its current 2013 revision, provides policy statements for the BGSH's Living, Herbarium and Cultural Collections.

The Collections Policy establishes the criteria for the evaluation and development of the Gardens' living collections into the future by nominating categories which set down the seven primary themes applicable across the three estates. The seven themes are:

- **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 and habitats,
- **Taxonomic and Evolutionary:** a collection of plants which demonstrate 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,
- **Research Collections:** plant collections which demonstrate or are assembled for scientific research.

The next revision of the Policy is due to be undertaken in 2020-21. As such, this Masterplan Review will likely prompt debate and assist formulation of aspects of the collections for this site to be considered by the policy thinking, in the development of the future Policy. This Policy and its delivery frameworks, in turn, will likely focus the site planning of the next Mount Lofty Botanic Garden Masterplan review.

The plant material of the living collections at the Mount Lofty Botanic Garden, and the way it is displayed to the public, significantly determines the visitor experience, and as such is a critical determinant of the masterplanning of the site. Many of the Garden's important founding 'gully garden' collections by their presence create landmarks across the Garden, informing the overall Garden layout in accordance with the original Alan Correy Masterplan. The most successful of these important collections should continue to be key components of the Garden. However masterplanning of the Garden should also continue to present inherent flexibility in its design in order to plan for and accommodate future collections developments and challenges presented by future climatic changes.

Living collections currently held at Garden are well considered representative flora, chosen for their suitability to the Mount Lofty Ranges climate, and thus extending the diversity of overall collections held across the BGSH organisation. Collections tend to be either taxonomic, such as the Magnolia and Rhododendron Gullies and the Camellia collection, or geographic as evidenced in the South American and New Zealand Gullies, and the plants of the Himalayan region.

In terms of sustainability, the collections have generally been gathered from cool climate regions and are well adapted to cold temperatures and the shade of a forest canopy. A sustainability-focussed driver of collections planning assists the BGSH to sustain its collections into

a future that will be inevitably impacted by global climate change to a greater or lesser degree. It is important that Collections Policy is informed both by the broader climatic shifts in the Adelaide bioregion, as well as the specific micro-climatic conditions found across the ridges and gullies of the Mount Lofty Botanic Garden site.

A particularly important issue relating to climate and collections is to note that the lower summer rainfall experienced at Mount Lofty has resulted in the need to irrigate many of the exotic plants over summer, particularly the Fern Gully and Woodland Garden, which in turn has had in places a detrimental affect on the health of the native stringybark forest that has adapted to dry summers.

This naturally occurring native bushland forms an important part of the Garden. Managed rather than cultivated, the plants of the Mount Lofty Ranges stringybark forest are 'held' in the Garden both an as aesthetic backdrop to display non-indigenous plant displays, but also as a display in itself of the Garden's natural habitat prior to European settlement. Dieback in sections of the forest have been increasing observed at the Garden, linked to either altered watering regimes, infections of the soil-borne fungus mould *Phytophthora cinnamomi*, or other as yet undetermined factors. Ongoing monitoring is recognised as being critical to the long-term conservation of this ecological asset.

The Garden holds collection material from all seven of the current Policy's theme categories, and many collections fall into more than one. In such cases, opportunities for interpretive story-telling to visitors can be enhanced beyond simple didactic messages by presenting an opportunity for deeper, multi layered interpretation of the collections. An Interpretive Masterplan will be developed in 2020 with an implementation schedule devised for staged delivery of interpretive stories of the Mount Lofty Botanic Garden collections to follow.

South Australian Indigenous Flora

Indigenous stringybark forest of the Mount Lofty Ranges occupies a significant proportion of the site. Located in tracts in the upper reaches of the Garden, 'fingers' of the forest also penetrate into the central areas of the Garden along naturally occurring ridge lines generally in accordance with the original Correy Masterplan.

The native forest areas do not strictly represent a complete ecosystem, as the gullies below the ridges are planted with exotic display gardens. The existence of complete natural understorey and resident fauna varies across the Garden. Infestations of weed species are largely managed by Garden staff. The majority of the forest is secondary regrowth that has recovered from human and natural intervention in the form of timber felling, mining and bushfire. Large areas of the forest were destroyed in the 1983 'Ash Wednesday' bushfires.

The Nature Trail through a section of forest along the Garden's northern boundary interprets the forest by means of a brochure and signposted stops along the 850-metre walking trail. Sections of the Trail are currently inaccessible due to erosion damage and are in need of repair and maintenance.

There is no management plan to guide the day to day maintenance or the long term future of the stringybark forest. As noted in the Living Collections section above, recently observed dieback in parts of the forest require further assessment and monitoring in order to halt any potential decline in the forest's health and any loss of important species such as the resident ground orchids in these forested areas.

Cultural Collections

A series of site-specific sculptural artworks are dotted throughout the Garden. The earliest are all the work of the local artist Greg Johns. The first, 'Between the Sky and Earth' dates from 1980, followed by 'Guardian Figure' (1987) and 'Balancing Peace Figure' (1994), and the Collin Robjohn Gates, erected on stone piers at the lower carpark entry in 1996.

More recently (2015), a series of eight plant-themed artworks were installed around the Garden's Main Lake as part of the Lakeside Trail. The design was a collaboration between graphic design firm Martins Brand House and Oxigen Landscape Architects. Each artwork conveys a different fundamental message about people, plants and the environment, namely: the Miracle of Life, Wood, Water, Natural Habitats, Beauty, the Senses, the Sun, and Planet Earth.

COLLECTIONS OBJECTIVES

- Effectively manage and develop living and cultural collections to maximise their scientific and cultural value.
- Continue to contribute to flora conservation, particularly the threatened flora of South Australia, to support communication of the Garden's vision and key principles.
- Develop a public art program that maximises the interpretive value of the collections and enhances the recreational and aesthetic experience of the Gardens.

The flowering of the Titan Arum (*Amorphophallus titanum*) in December 2015

Strategic Responses and Actions 7

7. Strategic Responses and Actions

The strategic responses and actions in the following section of the Masterplan are derived from the analysis and interpretation of current key issues and objectives identified in Section 6 and are listed under matching sub-categories (Garden Composition, Visitor Experience and Collections).

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 staff to determine key directions for the Garden and to gain feedback on ideas and proposals. Inherent within this are the principles, together with the collective experience and specific understanding of the operations and issues that affect the future success of Mount Lofty Botanic Garden.

Responses obtained from consultation with key stakeholders are reflected in the actions, with the engagement process providing valuable feedback on the aspirations of the local and broader community, related industries, and state and local government bodies for the Mount Lofty Botanic Garden.

7.1 Garden Composition

STRATEGIC RESPONSE:

Garden Form

Maintain and enhance the existing spatial experience created by the Garden's natural topographic form, and the original Correy masterplan. Identify and preserve the key panoramic views from various precincts of the Garden to allow a better appreciation of the Garden topography.

ACTIONS:

1. Ensure future collection planting in the gully gardens and other discrete garden spaces are undertaken with due consideration to important views in and around these spaces
2. Upgrade the individual gully gardens as prime attractions
3. Prepare a concept plan to redevelop the former Lothian viewing area as an important location
4. Upgrade selected existing lookouts and establish new sheltered lookout points at key locations in the upper Garden to maximise appreciation of the Garden landform, layout and regional context
5. Upgrade the existing lookout at the lower carpark as an important visitor attraction with interpretation and explanatory information to assist wayfinding for visitors to the Garden. Ensure universal access is provided along pathways connecting the lookout to the proposed new visitor facility
6. Undertake a feasibility study for developing the Arthur Hardy sanctuary and quarry site as public garden spaces. Include in this study an investigation into the feasibility of developing a possible third entry and associated parking off Piccadilly Road adjacent to Crafers Primary School
7. Ensure future development within the Garden reinforces, and does not detract from, the natural topographic form of the Garden and its systematic patterning of exotically planted gullies between ridges of native forest

STRATEGIC RESPONSE:

Garden Heritage

Ensure future development recognises the high cultural significance ranking attributed to the Garden, and the findings of the Mount Lofty Botanic Garden Conservation Study (2006) regarding individual gardens and living collections and trees.

ACTIONS:

8. Review all capital works projects with regard to the Conservation Study findings to ensure Garden heritage is maintained and reinforced

STRATEGIC RESPONSE:

Waterways

Investigate opportunities to enhance the waterways within the Garden, address issues of waterlogging, and reduce potential for future problems associated with water quality and erosion.

ACTIONS:

9. Identify, monitor and control problem areas of stream bed and bank erosion across the Garden
10. Prepare a detailed strategy and concept plans for the lower arboretum wetland and recreational lawn precinct to reduce the incidence of waterlogging currently occurring on the site
11. Develop stormwater treatment systems for the runoff from the two main car parks to remove pollutants and improve water quality flowing into the streams below
12. Improve water quality and reduce nutrient loads in the Main Lake through the reconfiguration of upstream ponds and rehabilitation of streams

7.2 Visitor Experience

7.2.1 SITE FACILITIES

STRATEGIC RESPONSE:
Multi-Purpose Visitor Facility
Development of a Multi-Purpose Visitor Facility at Mount Lofty Botanic Garden situated near the arboretum and lower car park.

ACTIONS:
13. Prepare a detailed brief and develop design concepts and plans for a visitor information/café/ amenities/ shop and education facility
14. Pending the outcome of the business case, seek expressions of interest for the operation of longer term food and beverage offerings as part of the facility

STRATEGIC RESPONSE:
Bathroom Facilities
Progressively upgrade toilet facilities.

ACTIONS:
15. Prepare a staged schedule of works and briefs to upgrade toilet facilities to meet current building codes and standards, starting with the Lower Carpark which is the highest usage facility

STRATEGIC RESPONSE:
Garden Shelters and Furniture
Improve amenity for visitors to the Garden by upgrading visitor facilities to provide better all-weather protection, and developing a garden furniture style manual.

ACTIONS:
16. Audit all existing furniture types and styles within the Garden and develop a garden appropriate furniture style manual with a suite of garden furniture
17. Consistent with the style manual, systematically introduce new garden furniture with built-in flexibility to cater to especially themed precincts within the Garden, with consideration to universal access, cost, maintenance and longevity
18. Prepare an asset purchase and replacement program for garden furniture, as part of the site asset management plan
19. Audit existing seating locations in the garden. Prepare a plan which maps the recommended locations and forms of seating, acknowledging the memorial seating. The plan will recognise the need to provide regular seating due to the topography of the site
20. Replace the bridge over the Duckpond/Bog Garden that is observable from the Duckpond Causeway with a suitable inspired feature bridge
21. Provide robust all access drinking fountains at strategic locations in the Garden, including the Upper Carpark
22. Prepare concept plans for shelters which provide all weather protection to visitors

STRATEGIC RESPONSE:
Multi-Purpose Horticultural Science Hub
Development of a Multi-Purpose Horticultural Science Hub at Mount Lofty Botanic Garden to deliver horticultural, nursery and teaching operations.

ACTIONS:
23. Prepare a brief and commission design options for an appropriately located Multi-Purpose Horticultural Science Hub situated on the and referred to as the O'Leary property land

STRATEGIC RESPONSE:
Operational Infrastructure
Review locations of garden sheds and storage yards to determine the best balance between landscape and functional values. Improve irrigation infrastructure in the Garden.

ACTIONS:
24. Audit all existing Garden depot infrastructure

25. Develop a plan to centralise Garden works infrastructure to key locations and decommission duplicated sites for redevelopment as garden or regenerated forest
26. Prioritise the sections of irrigation that need replacing to high density poly from galvanised pipe
27. Replace the asbestos pumping line to Regional Headquarters Tanks and provide a dedicated inlet and outlet system
28. Maintain in good working order irrigation and sprinkler systems used for bushfire response

STRATEGIC RESPONSE:

Lighting and Digital Technology

Introduce feature lighting at important locations within the Garden to improve the night-time landscape appeal, and IT infrastructure to enable digital connectivity for general visitor amenity.

ACTIONS:

29. Undertake the development of a professional lighting design for the lower carpark and Arboretum lawns, both to improve the potential of the Garden for after-hours public programmes, functions and events and to assist way finding and public safety for such activities
30. Provide Wi-Fi connectivity throughout the main areas of the Garden

STRATEGIC RESPONSE:

Entries and Access

Improve site recognition and accessibility of the Mount Lofty Botanic Garden at the main entries and negotiate improved public transport connections and frequency.

ACTIONS:

31. Provide new entry identification signage at Piccadilly and Sprigg Road and Sprigg and Lampert Roads
32. Collaborate with Adelaide Hills Council and Department for Transport and Infrastructure to increase the public transport options and frequency of services to the Garden, especially during peak seasons
33. Advocate for Mount Lofty Botanic Garden to be included in the wider Mount Lofty Precinct for future funding and project initiatives, including transport linkages

STRATEGIC RESPONSE:

Internal Road and Path Network

Develop a recognisable, hierarchical pathway system based on the existing network.

ACTIONS:

34. Audit all existing pathway types within the Garden and develop a coherent, hierarchical pathway system specifying path widths, maximum gradients and surface material, with consideration to existing path infrastructure, universal access, cost, maintenance and durability
35. Install new paths in accordance with the pathway system
36. Review existing gully paths to identify steep sections which require attention to reduce public and staff use risk
37. Create safe passing spaces for vehicles at dangerous areas of the road network to avoid potential conflicts with pedestrians and approaching vehicles
38. Complete construction of the universal walking loop around the main lake
39. Plan and construct a universal access path from the lower car park to the lower event space
40. Prepare a trail plan, based on the site masterplan, which builds on the existing paths and identifies a series of looped contour trails accessible from both the upper and lower car parks. Maintain existing paths and upgrade over time in a manner sympathetic to the overall system

STRATEGIC RESPONSE:

Car Parking Facilities

Make the most efficient use of existing parking and

road resources to improve parking for major events and commence development of a new overflow car park.

ACTIONS:

41. Establish a two-way road and appropriate signage from the lower car park to the staff car park to enable use of the staff car park and adjacent areas as public car parking during major events as appropriate
42. Commission design options for the over flow car park sited on the O'Leary property land, and ensure the design is site appropriate and its neighbouring boundaries are screened by plantings to increase privacy and reduce impact to neighbours
43. Incorporate into new carpark designs water sensitive urban design principles where possible
44. Ensure the access and egress from the car park is engineered to be safe
45. Consult the Adelaide Hills Council on the need for a safe pedestrian access to the Garden entry along Lampert Road

STRATEGIC RESPONSE:

Wayfinding

Review and determine the ideal locations for signage boards, entry signage and wayfinding throughout Mount Lofty Botanic Garden.

ACTIONS:

46. Commission a brief and concept designs to develop a logical, coherent and unobtrusive wayfinding signage system based on the looped contour path system proposed for the Garden acknowledging the Garden's natural 'amphitheatre' form and the succession of forested ridges and gully gardens
47. Upgrade existing lookouts as sheltered rest points and as wayfinding and orientation tools
48. Identify suitable locations on new contour path system to develop lookout points at other key locations to assist wayfinding, and incorporate rest points where appropriate
49. Enhance the presence of the main lake for wayfinding by reviewing planting around the perimeter of the main lake and remove planting that screens important views to and from the lake. Provide new landscaping with consideration for maintaining key views and improving living collection value

STRATEGIC RESPONSE:

Disability Access

Upgrade existing and develop new pathways to provide continuously accessible and safety compliant paths of travel within the Garden.

ACTIONS:

50. Replace loose gravel paths with an alternative surface material where they occur on designated disabled access pathways
51. Complete planning and construct the proposed fully compliant pathway around the main lake
52. Develop a series of designated compliant disabled access pathways to provide disabled visitors with improved access throughout to the Garden
53. Commission concept and design plans to upgrade the Administration Building to better accommodate people with a disability in accordance with the 'Disability Access audit: Botanic Garden of Adelaide Plains and Mt. Lofty (November 2002)', in particular the approach to enter the building, car parking, the lunchroom, toilet and shower facilities, and sick bay if the accommodation is not able to be replaced by a new facility
54. Ensure path materials and widths on designated disabled access pathways are compliant with disability access codes and that transitions between differing grounds surfaces are graded evenly
55. Ensure any future redevelopment of the Garden ancillary buildings provide for improvements to disabled access

STRATEGIC RESPONSE:

Pedestrian Safety

Ensure pathways along walking trails are well maintained and provide resting points at regular intervals to reduce walker fatigue and assist way finding.

ACTIONS:

56. Audit the network of paths throughout the garden for potential rationalisation
57. Audit the condition of existing pathway surfaces within the Garden, and develop a maintenance program to repair or replace damaged or unsafe surfaces
58. Incrementally replace the existing and new paths and roads with a durable, all weather treatment to reduce risk of injury, especially on steep terrain
59. Install rest points with seating throughout the gully gardens, taking advantage of views across the Garden where possible
60. Audit and assess the locations of potential conflict between vehicles and pedestrians on the Garden's roadways, particularly Allan Correy Drive, and prepare a plan to reduce risk through vegetation clearance, road widening or installation of bollards

STRATEGIC RESPONSE:

Fire Safety

Manage bushfire risk to minimise the threat to public safety, infrastructure and collections.

ACTIONS:

61. Continue to review the Garden bushfire risk management strategies and procedures with the Department for Environment and Water, Country Fire Service, including CFS access to the Garden, and public protection and egress issues within the site
62. Consider in the design of the operational facilities the need to have a compliant bushfire refuge building for staff on site
63. Annually review and update the Site Bushfire Response Plan

STRATEGIC RESPONSE:

Water Safety

Maintain and monitor public safety risk associated with permanent water bodies in the Garden.

ACTIONS:

64. Through an auditing process, review the existing lake edge depths of the Main Lake and the Duck Pond and assess compliance with accepted risk management recommendations. Undertake remedial action as appropriate
65. Reduce the impact of seasonal waterlogging on the lower arboretum by channelling water flows to a dedicated wetland zone

STRATEGIC RESPONSE:

Tree Safety

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

ACTIONS:

66. Continue programmed arboricultural maintenance activities
67. Prepare a detailed brief to audit existing tree risk in the Garden, focusing on the more highly visited areas, including the lower arboretum and main pathways. Undertake remedial action as appropriate
68. Continue to manage the natural forested areas, with fallen trees creating habitat but with a fuel reduction approach to smaller timber
69. Continue to monitor trees with declining health and remove potentially high risk trees when safe and possible to do so, otherwise provide an exclusion area around the tree

7.2.2 EDUCATION AND INTERPRETATION

STRATEGIC RESPONSE:

Interpretation Masterplan

Ensure that appropriate interpretive themes are developed and integrated into the Garden as part of the Interpretation Masterplan.

ACTIONS:

70. Deliver specific interpretation themes and objectives for all new and existing garden spaces
71. Provide and promote an understanding of First Nation's people associations with the site

STRATEGIC RESPONSE:

Education Programme

Further develop the public programme focused on learning, utilising the Garden's collections and garden area history.

ACTIONS:

72. Continue to develop and expand successful schools education programme, in particular the innovative learning programmes based on events, performance and student interaction for this Garden
73. Develop and deliver a diverse annual learning public programme
74. Develop and deliver annual communication plan for Mount Lofty Botanic Garden
75. Promote and encourage self-guided walks
76. Continue to operate the free guided walks
77. Include 'outdoor classroom' spaces in the brief for the design of the multi-purpose visitor facility

7.2.3 EVENTS AND FUNCTIONS

STRATEGIC RESPONSE:

Recreation

Develop an Event Programme focused on appropriate active recreation and engagement at the Mount Lofty Botanic Garden for health and well-being outcomes.

ACTIONS:

78. Undertake a review of current recreational use of the Garden and prepare a public programme plan that identifies desirable activities, particularly those that support appropriate learning and active and passive recreation
79. Commission the development of a concept plan for the lower arboretum wetland and recreational lawns precinct, to enhance the potential of the space both for passive recreation and as a major event space. Ensure the design addresses functional connections to the proposed new visitor facility, the main lake and the Lower Carpark
80. Review current lake edge landscaping west of the lower carpark and investigate opportunities for increased public access and recreational use

STRATEGIC RESPONSE:

Major Events

As part of the Public Programme for Mount Lofty Botanic Garden, investigate hosting events such as concerts as well as other performances and gatherings within the Garden, while reviewing management of the events to ensure the sustainability of the sites as events venues.

ACTIONS:

81. Produce guidelines for the functioning of performing arts events in the Garden and propose a framework for engaging with the arts community to increase the profile and quality of the Garden as a long term host of quality outdoor arts events

82. As part of the brief to enhance the lower arboretum and recreational lawns precinct as an event space, fully audit existing services infrastructure and develop a plan for infrastructure upgrades to meet any proposed increase in requirements for future events
83. When preparing plans for the lower arboretum and recreational lawns precinct, enhance the potential of the space as a venue for major events
84. Continuously review the impact of major events on the Garden. Ensure event's organisers and guests follow guidelines stipulated in the Events Policy

STRATEGIC RESPONSE:

Private Functions

Continue to provide open spaces within the lower arboretum for private functions in a managed and sustainable way. Continue to utilise the Dwarf Conifer garden as a wedding site and consider alternative sites either existing within the Garden or in areas proposed for future upgrading works.

ACTIONS:

85. When preparing plans for the lower arboretum and recreational lawns precinct, enhance the potential of the space for use for private functions, such as weddings and improve usability of the space during winter months
86. Upgrade the rotunda adjacent the Dwarf Conifer garden to improve its general function as a garden shelter, with an additional function to serve as a wet weather contingency wedding venue

7.3 Collections

STRATEGIC RESPONSE:
Living Collections
Develop living collections in response to the Living Collections Policy and Living Collections Development Plan.

ACTIONS:
87. Bring focus to the living collections providing distinct high amenity collection zones and lower maintenance grassed and wooded arboreta
88. Develop the existing specimens of showy, flowering trees into a more comprehensive collection spread throughout the Garden
89. Develop the Fern Gully collection as a focus collection for the Garden. Increase the level of interpretation to improve the visitor experience
90. Develop the Rhododendron Gully collection as a focus collection for the Garden. Increase the level of interpretation to improve the visitor experience
91. Develop the Gondwana collection as a focus collection for the Garden. Increase the level of interpretation to improve the visitor experience
92. Continue to maintain the species Rosa collection as an important element in the Garden, but also as a compliment to the Rose collection held at the Adelaide Botanic Garden

STRATEGIC RESPONSE:
Flora Conservation
Maintain the native forest as the major contribution to the overall 'collection' of South Australian indigenous flora.

ACTIONS:
93. Prepare a Management Plan for the Native Forest areas of the Garden, including guidelines for biodiversity, endangered flora, fire management, adjacent horticultural practices and fauna protection
94. Develop strategies to assist survival of the native forest and stringy bark tree canopy

STRATEGIC RESPONSE:
Environmental Sustainability
Ensure that the horticultural activities of the Gardens protect the biodiversity and economic resources of South Australia. Utilise solar technologies and passive solar building design principles in the design of future buildings.

ACTIONS:
95. Develop a Management Plan that audits, monitors and guides the staged removal of weed species from the Garden, with particular attention to the native forest areas
96. Specify in briefing documents for future capital building works building that design proposals should seek to utilise passive solar building design principles, and where possible solar power technologies
97. Provide information on weed removal procedures to the public
98. Continue to assess the weed potential of species held within the collections

STRATEGIC RESPONSE:
Cultural Collections
Expand the current program of installed art works as appropriate and consider both permanent and temporary sculptural works.

ACTIONS:
99. Develop a curatorial approach to the staging or commissioning of events and installations to ensure that synergies with the objectives of the Gardens' Strategic Plan are maximised
100. Investigate ideas for both temporary and permanent art works to form part of the visitor engagement strategies for the botanic garden and its specific garden precincts and collections
101. Develop interactive storytelling based art projects that foster understanding of the First Nations People's relationships with the land and plants

Guiding Design Principles 8

8. Introduction

The Masterplan for Mount Lofty Botanic Garden encapsulates the aspirations of the Botanic Gardens and State Herbarium providing direction for incremental improvements that will realise the potential of this unique site in the Mount Lofty Precinct.

Critical to the success of the Masterplan is the desire to increase access of the Mount Lofty Botanic Garden to the community. With a key component of the Garden's mission being to "Connect people to the botanical world" the decision-making inherent within the Masterplan is driven by principles of improving access to a well-managed botanic estate which utilises the unique site topography.

Access into Mount Lofty Botanic Garden is improved, with additional car parking and clearly designated entry points, legible internal path networks give greater permeability throughout the Garden and heighten visitor experiences. A defined hierarchy of paths connect the visitor to destination points within the Garden, where they can experience the beauty and diversity of the collection, and general ambience and vistas of the Garden. Visitor amenities such as toilets, furniture and shelters are located at key destination points in the Garden.

Clear conveyance of information to visitors enables their experience to be relaxed, informative and inspiring. Improved identification of thematic botanical collections, highlighted destinations and attractions of the Garden are provided. Interpretive signage throughout the Garden details the history and heritage of the Garden together with information about the collections and native forest and the vital conservation work of the Botanic Gardens and State Herbarium.

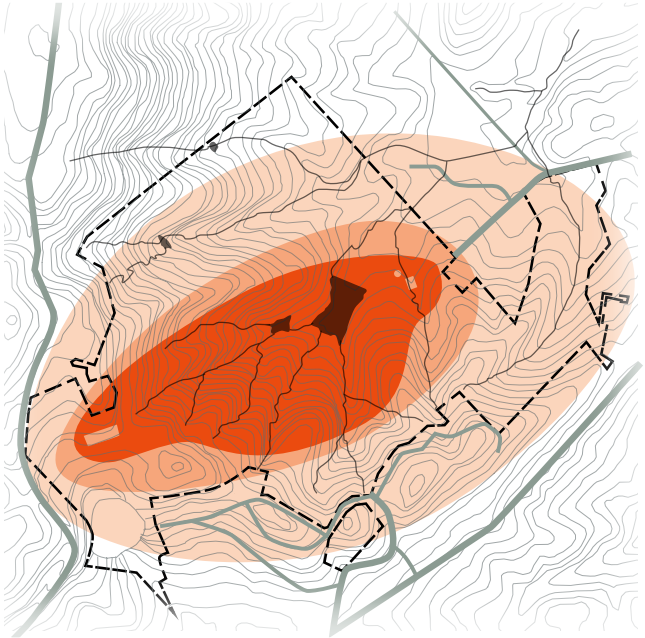
New centres deliver visitor amenities and education opportunities, and fit for purpose operational facilities are respectfully added to the site. This will improve the visitor experience and neighbourhood aspirations, with the Garden's functionality and commercial operator sustainability enhanced.

Build a Central Core of Activation to Promote a Critical Mass of Use

Develop a new Visitor and Education Centre at a prime location in the Garden.

Improve operational facilities across the Garden, including development of a new conservation and horticultural science hub.

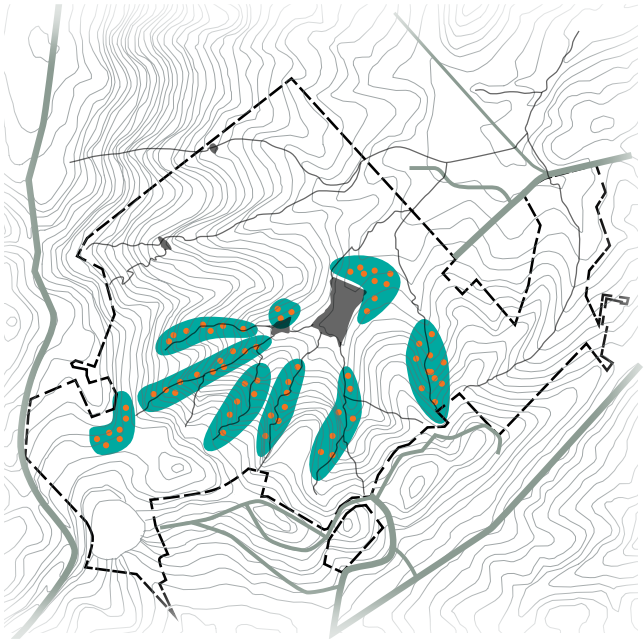
Redesign carparks to provide additional space for peak visitation periods.



Develop and Enhance Thematic Gardens

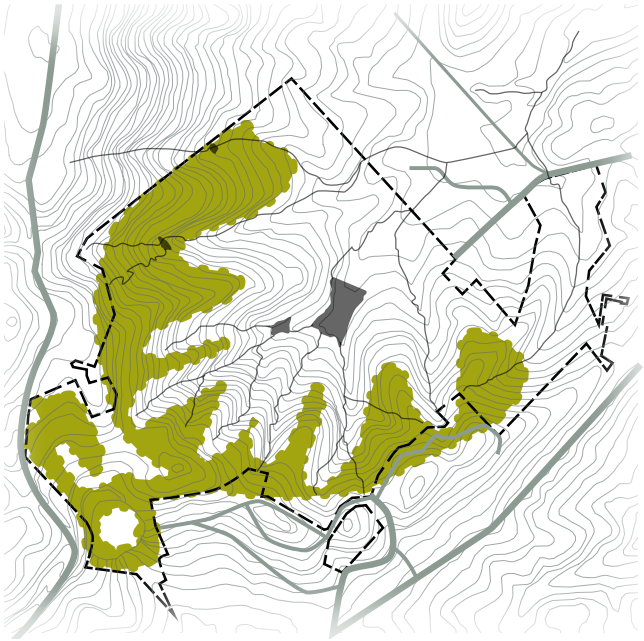
Upgrade the individual gully gardens as the prime attractions at Mount Lofty Botanic Garden.

Intensify the visual, horticultural and interpretive qualities of the display collections.



Manage Forest Regeneration to Frame and Conserve Existing Assets

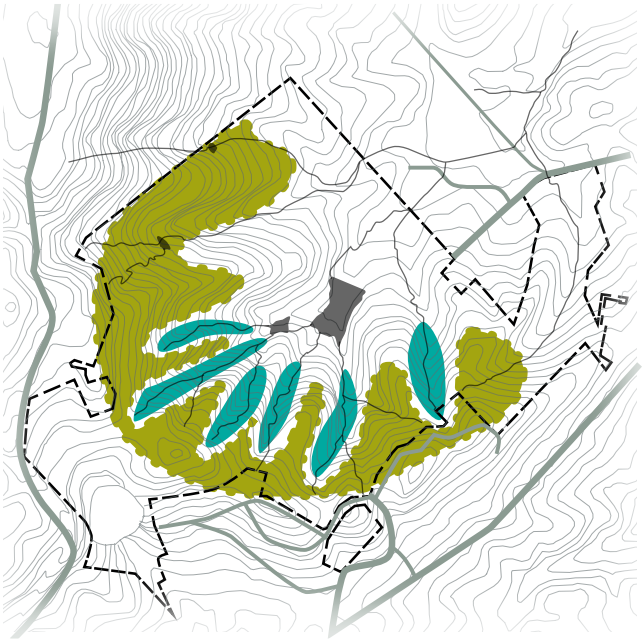
Manage the remnant forest to maximise natural regeneration and biodiversivity values.



Use Topography to Accentuate Garden Structure

Enhance and accentuate the basic structure of alternating forest ridges and garden gullies.

Develop infrastructure at appropriately selected sites to enable an increase in events and functions.

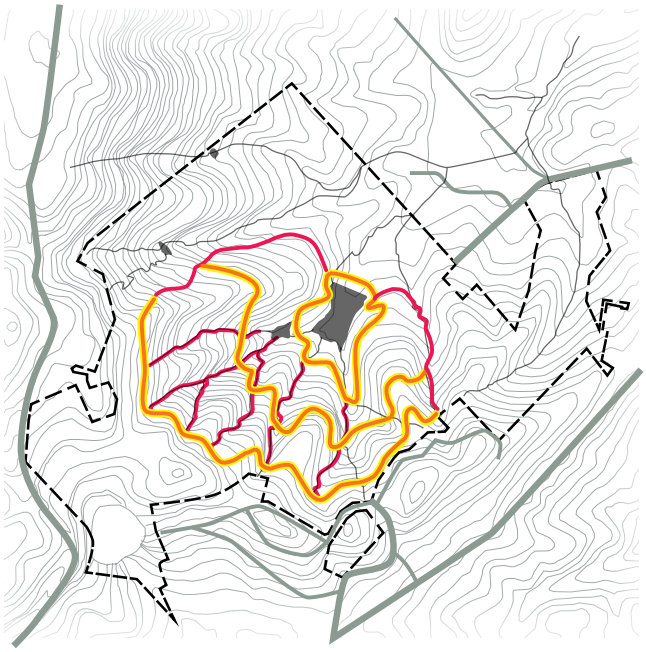


Develop Defined and Integrated Path Network

Develop a network of legible looped contour walks to provide visitors with a choice of walk length and experinence.

Enhance existing gully walks and create immersive garden experiences for each.

Upgrade the paths, roads and visitor facilities to reduce maintenance and increase accessibility and safety for visitors.



Mount Lofty Botanic Garden Masterplan 9

9. Mount Lofty Botanic Garden Masterplan

The Mount Lofty Botanic Garden Masterplan 2020 is an update and expansion to the previous 2006 Plan and responds to the completion of several successful improvements to the Garden over those intervening years. In addition, the revised masterplan responds to new emerging site and regional considerations currently impacting on the Garden and its visitors and neighbours.

As in 2006, this masterplan is an outcome of a detailed review of the determining factors that shape the physical form and operations of the Garden today, and into the future. The Plan has been developed with a deep understanding of the role of botanic gardens in contemporary society and the actual site: its natural topography, its structure, and its heritage. It follows the precedent of the 2006 Plan by investigating the three highlighted aspects of:

- Access - both physical and intellectual, through the enhancement of the presentation of visitor attractions and amenities, information services, interpretation and storytelling;
- Regeneration – reviewing the regenerative potential and maximising the value of previously overlooked areas of the Garden;
- Sustainability – acting to ensure plant conservation, sustainable water use, and appreciation of the world's interlinked biodiversity are key messages conveyed to visitors through demonstration of best practice in these areas.

Importantly, these areas of focus align with the key targets of the BGSH 5-year Strategic Plan of 'creating destination gardens, deepening our science, and facilitating lifelong learning and engagement' as discussed in earlier chapters.

There are various instruments guiding the strategic decision making and investment decisions in relation to the management and development of Mount Lofty Botanic Garden. The *Board of the Botanic Garden and State Herbarium Strategic Plan (2017-2022)* and the Department for Environment and Water's Corporate Plan are aligned to the South Australian government strategic agenda and policy context.

The BGSH strategic vision, infrastructure and the supporting operations, activities and services are also consistent with the objectives and guiding principles of the 30-Year Plan for Greater Adelaide, including: world-class design and vibrancy; heritage and character protection; healthy, safe and connected communities; economic growth and competitiveness and maximising the efficient use of infrastructure; natural resource management and environment protection, restoration and enhancement; ensuring a diverse range of quality public open space and places; and climate change resilience.

With these goals in mind, the Mount Lofty Botanic Garden Masterplan 2020 has evolved in consideration of the overarching guiding design principles illustrated in the previous chapter, while simultaneously taking a 'bottom-up' approach to problem-solving by addressing a broad range of site and operations issues evident 'on the ground' at the Mount Lofty Botanic Garden (as covered in Chapters 6 and 7 of this Plan).

Priority Project Categories

Eight categories of project work have been determined to allow grouping of like packages of work, investigations and outcomes required to deliver the actions identified in Chapter 7, independent of the objective or strategic response the action is addressing.

This grouping permits the ready identification of similar 'types' of infrastructure construction or programming work required to deliver the actions.

The Priority Project categories used for the Mount Lofty Botanic Garden Masterplan actions are:

- Integration into the Mount Lofty Tourism Precinct;
- Accommodation Review;
- Water and Waterway Management;
- Collections and Thematic Landscape Development;
- Building Management;
- Site Infrastructure Management;
- Native Forest Management; and
- Visitor Experience and Event Management.

Prioritisation Process

Actions have been assigned a priority ranking of high, medium, low or recurrent works, to begin to understand the order of action delivery required, and the assignment reflects the following considerations:

- urgency of the identified action to enable the Gardens to reach its potential for visitor experience and satisfaction;
- contribution to improving access to the Garden and its collections and the neighbouring precinct;
- magnitude of the action and its relative contribution to the development of the Garden;
- actions which need to be sequentially built upon or must be undertaken in incremental steps;
- value for money investments that enable the creation of commercial opportunities;
- ability to enable the operational efficiency and effectiveness of the service delivery of the Garden.

Priority rankings, as identified by ideal deliverable timeframes, are nominated according to the following general scale, using the considerations listed above.

High Priority - action to be delivered in the next 5 years

Medium Priority - action to be delivered in the next 5 to 10 years

Low Priority - action to be delivered in the next 10 plus years.

All of the Garden Composition, Visitor Experience and Collections actions proposed in Chapter 7 are considered, categorised into one of eight Priority Project categories and then prioritised by High, Medium and Low Delivery Priority. All of these actions have been charted by time in their categories.

As a quick overview reference, the highlight key moves and associated actions are illustrated in the summary Site Masterplan drawing also presented in this chapter.

In future, the identified strategic responses and actions will require accompanying project plans to inform the Board of the Botanic Gardens and State Herbarium of potential details of the capital works, which are inputs into the formation of a 10 year Strategic Asset Management Plan. These plans will also enable the Board to be nimble and responsively “shovel ready” to philanthropic support and other funding opportunities.

Many of the major capital investment related actions identified in this Masterplan, starting with the back to basics needs, have been submitted for inclusion in the DEW Capital Intentions Statements for future State Government funding consideration.

9.1 Site Masterplan

Existing Administration Building is demolished to create a new themed gully garden.

Site of existing nursery and parts of O'Leary Land developed as sites for overflow car parking

New multipurpose Horticultural Science Hub

Existing creekline rehabilitated with ephemeral wetlands

New multipurpose Visitor Facility with information outlet, education spaces, cafe, retail and amenities

Existing lookout and carparking upgraded to integrate with the new Visitor Facility

Existing path network upgraded with a clearly defined hierarchical wayfinding signage

Gully gardens improved as the prime attractions at Mount Lofty Botanic Garden

Native forest regenerated

New sheltered lookout points at key locations in the upper garden.

Upper carpark upgraded and expanded

Old quarry site and parts of Arthur Hardy sanctuary developed as activated public garden spaces

Magnolia Gully (1)

Fern Gully (2)

South American Gully (3)

Western Asian Gully (4)

Rhododendron Gully (5)

South East Asian Gully (6)

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9.2 Priority Projects

INTEGRATION INTO THE MOUNT LOFTY PRECINCT

Established in the 1960's as a cool climate annexe of the Adelaide Botanic Garden, the Mount Lofty Botanic Garden has become a noteworthy botanic garden in its own right and a prime visitor destination in the Adelaide Hills region. While continuing to operate as an important centre for science and learning in the State, its growing popularity as a recreational destination amongst locals and tourists has seen substantial growth in visitor numbers since the completion of the 2006 masterplan.

This growth presents challenges and creates expectations, but also offers opportunities to add value to the local Mount Lofty precinct. Both as a single point destination but also as part of a greater day-visit itinerary, with other well-known neighbouring attractions such as Cleland Wildlife Park and Mount Lofty Summit and other local food and wine attractions. This special botanic garden has the potential to be an international destination which shows to the world the best the local Adelaide Hills region.

HIGH PRIORITY ACTIONS

33. Advocate for Mount Lofty Botanic Garden to be included in the wider Mount Lofty Precinct for future funding and project initiatives, including transport linkages

MEDIUM PRIORITY ACTIONS

32. Collaborate with Adelaide Hills Council and Department for Transport and Infrastructure to increase the public transport options and frequency of services to the Garden, especially during peak seasons

ACCOMMODATION REVIEW

The review of the current state, efficiency and potential of the key horticultural and visitor buildings, and associated supporting infrastructure, has found them to be no longer fit for purpose for the Garden's current and future functions. Growth in visitation to the Garden is growing annually and once current car parking limitations are resolved on site, the need for a visitor facility that provides shelter, information, food and beverage and education services will be greatly sought after.

Popup seasonal catering has met the historical visitor need, but will not be sufficient if visitor numbers continue to increase in peak seasons and remain high throughout the year, as recent trends are indicating. Such a new multipurpose visitor facility offers the opportunity for a commercial investor and/or operator to work with the Board and the State Government to create an iconic and appropriate visitor experience solution.

Due to their current state, the horticultural works facilities across the Garden fail to meet the site's growing needs, with new conservation programmes requiring the development of new plant material and collections, along with an increased need for higher standards of biosecurity in the plant nursery. The opportunity to create a purpose-built, location-appropriate, energy-efficient complex that can provide staff accommodation, innovative nursery and horticultural teaching facilities is required. Such a multipurpose facility would be transformational and open up new programmes and forms of community and visitor engagement for both the Garden and local region.

When such a facility is designed, it must provide acceptable solutions for blending in with the local neighbourhood, and be appropriately screened and set back from the road and neighbours, and it must offer the community an opportunity to engage with the Garden and neighbourhood in new and rewarding ways. The potential for the Australian Centre of Horticultural Excellence to utilise such a new dynamic space could be game changing for the organisation and BGSH's contribution to the horticultural and botanic garden industries.

HIGH PRIORITY ACTIONS

23. Prepare a brief and commission design options for an appropriately located Multi-Purpose Horticultural Science Hub situated on the and referred to as the O'Leary property land
53. Commission concept and design plans to upgrade the Administration Building to better accommodate people with a disability in accordance with the 'Disability Access audit: Botanic Garden of Adelaide Plains and Mt. Lofty (November 2002)', in particular the approach to enter the building, car parking, the lunchroom, toilet and shower facilities, and sick bay if the accommodation is not able to be replaced by a new facility

WATER AND WATERWAY MANAGEMENT

Water management in this garden is a high priority, as water is vital to the survival of the living collections, local fauna, production of the thematic landscape and sweeping lawns, and in feature landscapes. The availability, quality, source and cost of water is also challenging, requiring an integrated and sustainable management approach to the management of water and waterways, to enable continuation of living collections vitality and visitor experiences.

HIGH PRIORITY ACTIONS

9. Identify, monitor and control problem areas of stream bed and bank erosion across the Garden
64. Through an auditing process, review the existing lake edge depths of the Main Lake and the Duck Pond and assess compliance with accepted risk management recommendations. Undertake remedial action as appropriate

MEDIUM PRIORITY ACTIONS

10. Prepare a detailed strategy and concept plans for the lower arboretum wetland and recreational lawn precinct to reduce the incidence of waterlogging currently occurring on the site

65. Reduce the impact of seasonal waterlogging on the lower arboretum by channelling water flows to a dedicated wetland zone

LOW PRIORITY ACTIONS

11. Develop stormwater treatment systems for the runoff from the two main car parks to remove pollutants and improve water quality flowing into the streams below

COLLECTIONS AND THEMATIC LANDSCAPE DEVELOPMENT

Globally, botanic gardens are becoming more specialised and intimately related to and interactive with other urban green spaces including public parks and gardens, urban forests and nature reserves. Botanic gardens will continue to need to be responsive to the demands of the local community and intensify their efforts in delivering conservation and sustainability messages to the public through their displays, collections and traditional, electronic and social media. Global change continues to affect botanic gardens in many different ways. Human population displacement and large scale movements as a result of demographics growth, changes in agricultural and land use policies and the impacts of industry all place significant impacts on, and risks to, the world's flora and as a consequence the ex situ collections in botanic gardens increase in their value and importance.

The future for botanic gardens' living collections remains challenging. Living collection policies typically encourage the development of focus or signature collections linked to programmes in research, conservation, education, landscaping and culture. The values that underpin a living collections policy for Mount Lofty Botanic Garden will continue to evolve. The ability of the botanic gardens' management to effectively integrate and reconcile living collections values, policy, development and programmes will determine

the effectiveness of the Botanic Gardens and State Herbarium as a scientific and cultural institution.

The acquisition of new living collections for this botanic garden will have to change to take into account the new conditions resulting from changing climates. Some species will no longer be able to be grown, while the successful introduction of others previously unsuitable for cultivation - will become possible. Changes in flowering times may affect the availability of pollinators and increase or decrease hybridisation between species, all of which has serious implications for conservation collections. Invasive species are becoming more common and increasingly cause problems for botanic gardens maintenance.

The living collections in Mount Lofty Botanic Garden are also aging and succession strategies for maintaining and replacing often iconic plantings and conservation collections are essential.

HIGH PRIORITY ACTIONS

2. Upgrade the individual gully gardens as prime attractions
67. Prepare a detailed brief to audit existing tree risk in the Garden, focusing on the more highly visited areas, including the Lower arboretum and main pathways. Undertake remedial action as appropriate.
87. Bring focus to the living collections providing distinct high amenity collection zones and lower maintenance grassed and wooded arboreta
88. Develop the existing specimens of flowering trees into a more comprehensive collection spread throughout the Garden
89. Develop the Fern Gully collection as a focus collection for the Garden. Increase the level of interpretation to improve the visitor experience
90. Develop the Rhododendron Gully collection as a focus collection for the Garden. Increase the level of interpretation to improve the visitor experience
91. Develop the Gondwana collection as a focus collection for the Garden. Increase the level of interpretation to improve the visitor experience
92. Continue to maintain the species Rosa collection as an important element in the Garden, but also as a compliment to the Rose collection held at the Adelaide Botanic Garden
95. Develop a Management Plan that audits, monitors and guides the staged removal of weed species from the Garden, with particular attention to the native forest areas

BUILDING MANAGEMENT

Asset management lifecycle planning and investment is required to nurture the intrinsic public, tourism and scientific value of this garden. Overall investment in new fit for purpose, appropriately located and sympathetically designed buildings will dramatically advance the Garden's tourism development potential and deliver as yet to be realised appropriate business opportunities through achieving an internationally recognised botanical destination. The efficiency and effectiveness of the botanic garden estate's business will also be enhanced with new consolidated and appropriate facilities. The activation of currently unused buildings will also create new opportunities, and the incorporation of more bushfire-considered building solutions will enable greater visitor access and safer staff and collections workplace.

HIGH PRIORITY ACTIONS

24. Audit all existing Garden depot infrastructure
25. Develop a plan to centralise Garden works infrastructure to key locations and decommission duplicated sites for redevelopment as garden or regenerated forest
96. Specify in briefing documents for future capital building works building that design proposals should seek to utilise passive solar building design principles, and where possible solar power technologies

SITE INFRASTRUCTURE MANAGEMENT

Mount Lofty Botanic Garden has experienced long term challenges to maintain and develop its basic operational and visitor experience site infrastructure. As a result, there is a critical need to revitalise and add to the overall infrastructure across the site, starting with the 'back to basics' approach for the most basic of infrastructure such as paths, roads, wayfinding signage, seating, shelters and toilets.

This Botanic Garden contributes to South Australia's scientific and cultural identity. The Garden requires active infrastructure development to nurture and enhance the inherent value of the Garden for the public, science and tourism.

HIGH PRIORITY ACTIONS

13. Prepare a detailed brief and develop design concepts and plans for a visitor information/café/ amenities/ shop and education facility
15. Prepare a staged schedule of works and briefs to upgrade toilet facilities to meet current building codes and standards, starting with the Lower Carpark which is the highest usage facility
16. Audit all existing furniture types and styles within the Garden and develop a garden appropriate furniture style manual with a suite of garden furniture
17. Consistent with the style manual, systematically introduce new garden furniture with built-in flexibility to cater to especially themed precincts within the Garden, with consideration to universal access, cost, maintenance and longevity
18. Prepare an asset purchase and replacement program for garden furniture, as part of the site asset management plan
19. Audit existing seating locations in the garden. Prepare a plan which maps the recommended locations and forms of seating, acknowledging the memorial seating. The plan will recognise the need to provide regular seating due to the topography of the site
20. Replace the bridge over the Duckpond/Bog Garden that is observable from the Duckpond Causeway with a feature bridge
21. Provide robust all access drinking fountains at strategic locations in the Garden, including the Upper Carpark
26. Prioritise the sections of irrigation that need replacing to high density poly from galvanised pipe
34. Audit all existing pathway types within the Garden and develop a coherent, hierarchical pathway system specifying path widths, maximum gradients and surface material, with consideration to existing path infrastructure, universal access, cost, maintenance and durability
35. Install new paths in accordance with the pathway system
36. Review existing gully paths to identify steep sections which require attention to reduce public and staff use risk
37. Create safe passing spaces for vehicles at dangerous areas of the road network to avoid potential conflicts with pedestrians and approaching vehicles
41. Establish a two-way road and appropriate signage from the Lower car park to the staff car park to enable use of the staff car park and adjacent areas as public car parking during major events as appropriate
42. Commission design options for the overflow car park sited on the O'Leary property land, and ensure the design is site appropriate and its neighbouring boundaries are screened by plantings to increase privacy and reduce impact to neighbours
43. Incorporate into new carpark designs water sensitive urban design principles where possible
44. Ensure the access and egress from the car park is engineered to be safe
50. Replace loose gravel paths with an alternative surface material where they occur on designated disabled access pathways
51. Complete planning and construct the proposed fully compliant pathway around the main lake
56. Audit the network of paths throughout the garden for potential rationalisation

57. Audit the condition of existing pathway surfaces within the Garden, and develop a maintenance program to repair or replace damaged or unsafe surfaces
58. Incrementally replace the existing and new paths and roads with a durable, all weather treatment to reduce risk of injury, especially on steep terrain
62. Consider in the design of the operational facilities the need to have a compliant bushfire refuge building for staff on site

MEDIUM PRIORITY ACTIONS

4. Upgrade selected existing lookouts and establish new sheltered lookout points at key locations in the upper Garden to maximise appreciation of the Garden landform, layout and regional context
5. Upgrade the existing lookout at the lower carpark as an important visitor attraction with interpretation and explanatory information to assist wayfinding for visitors to the Garden. Ensure universal access is provided along pathways connecting the lookout to the proposed new visitor facility
22. Prepare concept plans for shelters which provide all weather protection to visitors
27. Replace the asbestos pumping line to Regional Headquarters Tanks and provide a dedicated inlet and outlet system
29. Undertake the development of a professional lighting design for the lower carpark and Arboretum lawns, both to improve the potential of the Garden for after-hours public programmes, functions and events and to assist way finding and public safety for such activities
38. Complete construction of the universal walking loop around the main lake
47. Upgrade existing lookouts as sheltered rest points and as wayfinding and orientation tools
52. Develop a series of designated compliant disabled access pathways to provide disabled visitors with improved access throughout to the Garden
59. Install rest points with seating throughout the gully gardens, taking advantage of views across the Garden where possible
60. Audit and assess the locations of potential conflict between vehicles and pedestrians on the Garden's roadways, particularly Allan Correy Drive, and prepare a plan to reduce risk through vegetation clearance, road widening or installation of bollards
82. As part of the brief to enhance the lower arboretum and recreational lawns precinct as an event space, fully audit existing services infrastructure and develop a plan for infrastructure upgrades to meet any proposed increase in requirements for future events
85. When preparing plans for the lower arboretum and recreational lawns precinct, enhance the potential of the space for use for private functions, such as weddings and improve usability of the space during winter months
86. Upgrade the rotunda adjacent the Dwarf Conifer garden to improve its general function as a garden shelter, with an additional function to serve as a wet weather contingency wedding venue

LOW PRIORITY ACTIONS

39. Plan and construct a universal access path from the lower car park to the lower event space
48. Identify suitable locations on new contour path system to develop lookout points at other key locations to assist wayfinding, and incorporate rest points where appropriate
83. When preparing plans for the lower arboretum and recreational lawns precinct, enhance the potential of the space as a venue for major events

NATIVE FOREST MANAGEMENT

The native forest areas of Mount Lofty Botanic Garden are both challenges to manage for weed control, path accessibility and bushfire risk, but also offer a unique opportunity for conservation and storytelling. Investment is required to reactivate basic infrastructure and mitigate against further declines and impacts to site value.
Site management must address ongoing delivery of living collections stewardship and manage risks to the vegetation from dieback, weed competition and bushfire, and to visitors from fire and tree failure.

HIGH PRIORITY ACTIONS

3. Prepare a concept plan to redevelop the former Lothian viewing area as an important location
61. Continue to review the Garden bushfire risk management strategies and procedures with the Department for Environment and Water, Country Fire Service, including CFS access to the Garden, and public protection and egress issues within the site
93. Prepare a Management Plan for the Native Forest areas of the Garden, including guidelines for biodiversity, endangered flora, fire management, adjacent horticultural practices and fauna protection
94. Develop strategies to assist survival of the native forest and stringy bark tree canopy

VISITOR EXPERIENCE AND EVENT MANAGEMENT

Mount Lofty Botanic Garden is a place of beauty, it is also a place of learning and understanding, a place of science, a place of activity and fun, and a place that reflects the history and endeavour of the people and society that has created it, and those who were here before us. Successful activation, wayfinding, comfort services and interpretation will encourage visitors to further develop a personal connection with the place and its stories and lead to changed attitudes, understandings and values that ultimately will be transformed into actions for the environment and South Australian society.

New multi-layered education and interpretation strategies will help visitors of all ages and backgrounds to engage with the displays and make meaning of the Garden on a number of levels. Tourism is also an area of growth for South Australia, contributing to employment and economic prosperity for the state.

Mount Lofty Botanic Garden is already a key Adelaide Hills destination, drawing interstate and overseas tourists, but has the potential to reach new audiences and attract the attention of new non-traditional botanic garden visitors. There will be many conflicts and challenges in our future, namely preservation of tradition against renewal and change. By finding the balance between old ideas and new initiatives, the Garden will continue to play a major part in our scientific, socio-economic and cultural life.

HIGH PRIORITY ACTIONS

14. Pending the outcome of the business case, seek expressions of interest for the operation of longer term food and beverage offerings as part of the facility
31. Provide new entry identification signage at Piccadilly and Sprigg Road and Sprigg and Lampert Roads
45. Consult the Adelaide Hills Council on the need for a safe pedestrian access to the Garden entry along Lampert Road
46. Commission a brief and concept designs to develop a logical, coherent and unobtrusive wayfinding signage system based on the looped contour path system proposed for the Garden acknowledging the Garden's natural 'amphitheatre' form and the succession of forested ridges and gully gardens
70. Deliver specific interpretation themes and objectives for all new and existing garden spaces
71. Provide and promote an understanding of First Nation's people associations with the site
72. Continue to develop and expand successful schools education programme, in particular the innovative learning programmes based on events, performance and student interaction for this Garden
75. Promote and encourage self-guided walks
76. Continue to operate the free guided walks
78. Undertake a review of current recreational use of the Garden and prepare a public programme plan that identifies desirable activities, particularly those that support appropriate learning and active and passive recreation
81. Produce guidelines for the functioning of performing arts events in the Garden and propose a framework for engaging with the arts community to increase the profile and quality of the Garden as a long-term host of quality outdoor arts events

99. Develop a curatorial approach to the staging or commissioning of events and installations to ensure that synergies with the objectives of the Gardens' Strategic Plan are maximised

MEDIUM PRIORITY ACTIONS

30. Provide Wi-Fi connectivity throughout the main areas of the Garden
73. Develop and deliver a diverse annual learning public programme
74. Develop and deliver annual communication plan for Mount Lofty Botanic Garden
77. Include 'outdoor classroom' spaces in the brief for the design of the multi-purpose visitor facility
79. Commission the development of a concept plan for the lower arboretum wetland and recreational lawns precinct, to enhance the potential of the space both for passive recreation and as a major event space. Ensure the design addresses functional connections to the proposed new visitor facility, the main lake and the Lower Carpark
80. Review current lake edge landscaping west of the Lower Carpark and investigate opportunities for increased public access and recreational use
97. Provide information on weed removal procedures to the public
100. Investigate ideas for both temporary and permanent art works to form part of the visitor engagement strategies for the botanic garden and its specific garden precincts and collections
101. Develop interactive storytelling based art projects that foster understanding of the First Nations People's relationships with the land and plants

LOW PRIORITY ACTIONS

6. Undertake a feasibility study for developing the Arthur Hardy sanctuary and quarry site as public garden spaces. Include in this study an investigation into the feasibility of developing a possible third entry and associated parking off Piccadilly Road adjacent to Crafers Primary School

Aerial veiw of Mount Lofty Botanic Garden
(23rd April 2019)

9.3 Delivery Plan

Action No.	ACTION	next 5 years	next 10 years	> 10 years
	Integration into the Mount Lofty Precinct			
33	Advocate for Mount Lofty Botanic Garden to be included in the wider Mount Lofty Precinct for future funding and project initiatives, including transport linkages			
32	Collaborate with Adelaide Hills Council and Department for Transport and Infrastructure to increase the public transport options and frequency of services to the Garden, especially during peak seasons			
	Accommodation Review			
23	Prepare a brief and commission design options for an appropriately located Multi-Purpose Horticultural Science Hub situated on the and referred to as the O'Leary property land			
53	Commission concept and design plans to upgrade the Administration Building to better accommodate people with a disability in accordance with the 'Disability Access audit: Botanic Garden of Adelaide Plains and Mt. Lofty (November 2002)', in particular the approach to enter the building, car parking, the lunchroom, toilet and shower facilities, and sick bay if the accommodation is not able to be replaced by a new facility			
	Water and Waterway Management			
9	Identify, monitor and control problem areas of stream bed and bank erosion across the Garden			
64	Through an auditing process, review the existing lake edge depths of the Main Lake and the Duck Pond and assess compliance with accepted risk management recommendations. Undertake remedial action as appropriate			
10	Prepare a detailed strategy and concept plans for the Lower arboretum wetland and recreational lawn precinct to reduce the incidence of waterlogging currently occurring on the site			
65	Reduce the impact of seasonal waterlogging on the Lower arboretum by channelling water flows to a dedicated wetland zone			
11	Develop stormwater treatment systems for the runoff from the two main car parks to remove pollutants and improve water quality flowing into the streams below			
	Collections and Thematic Landscape Development			
2	Upgrade the individual gully gardens as prime attractions			
67	Prepare a detailed brief to audit existing tree risk in the Garden, focusing on the more highly visited areas, including the Lower arboretum and main pathways. Undertake remedial action as appropriate.			
87	Bring focus to the living collections providing distinct high amenity collection zones and lower maintenance grassed and wooded arboreta			
88	Develop the existing specimens of flowering trees into a more comprehensive collection spread throughout the Garden			
89	Develop the Fern Gully collection as a focus collection for the Garden. Increase the level of interpretation to improve the visitor experience			
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95	Develop a Management Plan that audits, monitors and guides the staged removal of weed species from the Garden, with particular attention to the native forest areas			

Action No.	ACTION	next 5 years	next 10 years	> 10 years
	Building Management			
24	Audit all existing Garden depot infrastructure			
25	Develop a plan to centralise Garden works infrastructure to key locations and decommission duplicated sites for redevelopment as garden or regenerated forest			
96	Specify in briefing documents for future capital building works building that design proposals should seek to utilise passive solar building design principles, and where possible solar power technologies			
	Site Infrastructure Management			
13	Prepare a detailed brief and develop design concepts and plans for a visitor information/café/amenities/ shop and education facility			
15	Prepare a staged schedule of works and briefs to upgrade toilet facilities to meet current building codes and standards, starting with the Lower Carpark which is the highest usage facility			
16	Audit all existing furniture types and styles within the Garden and develop a garden appropriate furniture style manual with a suite of garden furniture			
17	Consistent with the style manual, systematically introduce new garden furniture with built-in flexibility to cater to especially themed precincts within the Garden, with consideration to universal access, cost, maintenance and longevity			
18	Prepare an asset purchase and replacement program for garden furniture, as part of the site asset management plan			
19	Audit existing seating locations in the garden. Prepare a plan which maps the recommended locations and forms of seating, acknowledging the memorial seating. The plan will recognise the need to provide regular seating due to the topography of the site			
20	Replace the bridge over the Duckpond/Bog Garden that is observable from the Duckpond Causeway with a suitable inspired feature bridge			
21	Provide robust all access drinking fountains at strategic locations in the Garden, including the Upper Carpark			
26	Prioritise the sections of irrigation that need replacing to high density poly from galvanised pipe			
34	Audit all existing pathway types within the Garden and develop a coherent, hierarchical pathway system specifying path widths, maximum gradients and surface material, with consideration to existing path infrastructure, universal access, cost, maintenance and durability			
35	Install new paths in accordance with the pathway system			
36	Review existing gully paths to identify steep sections which require attention to reduce public and staff use risk			
37	Create safe passing spaces for vehicles at dangerous areas of the road network to avoid potential conflicts with pedestrians and approaching vehicles			
41	Establish a two-way road and appropriate signage from the Lower car park to the staff car park to enable use of the staff car park and adjacent areas as public car parking during major events as appropriate			
42	Commission design options for the over flow car park sited on the O'Leary property land, and ensure the design is site appropriate and its neighbouring boundaries are screened by plantings to increase privacy and reduce impact to neighbours			
43	Incorporate into new carpark designs water sensitive urban design principles where possible			
44	Ensure the access and egress from the car park is engineered to be safe			
50	Replace loose gravel paths with an alternative surface material where they occur on designated disabled access pathways			
51	Complete planning and construct the proposed fully compliant pathway around the main lake			
56	Audit the network of paths throughout the garden for potential rationalisation			
57	Audit the condition of existing pathway surfaces within the Garden, and develop a maintenance program to repair or replace damaged or unsafe surfaces .			
58	Incrementally replace the existing and new paths and roads with a durable, all weather treatment to reduce risk of injury, especially on steep terrain.			
62	Consider in the design of the operational facilities the need to have a compliant bushfire refuge building for staff on site			

Action No.	ACTION	next 5 years	next 10 years	> 10 years
4	Upgrade selected existing lookouts and establish new sheltered lookout points at key locations in the upper Garden to maximise appreciation of the Garden landform, layout and regional context			
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22	Prepare concept plans for shelters which provide all weather protection to visitors			
27	Replace the asbestos pumping line to Regional Headquarters Tanks and provide a dedicated inlet and outlet system			
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60	Audit and assess the locations of potential conflict between vehicles and pedestrians on the Garden's roadways, particularly Allan Correy Drive, and prepare a plan to reduce risk through vegetation clearance, road widening or installation of bollards			
82	As part of the brief to enhance the lower arboretum and recreational lawns precinct as an event space, fully audit existing services infrastructure and develop a plan for infrastructure upgrades to meet any proposed increase in requirements for future events			
85	When preparing plans for the lower arboretum and recreational lawns precinct, enhance the potential of the space for use for private functions, such as weddings and improve usability of the space during winter months			
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	Native Forest Management			
3	Prepare a concept plan to redevelop the former Lothian viewing area as an important location			
61	Continue to review the Garden bushfire risk management strategies and procedures with the Department for Environment and Water, Country Fire Service, including CFS access to the Garden, and public protection and egress issues within the site			
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94	Develop strategies to assist survival of the native forest and stringy bark tree canopy			

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	Visitor Experience and Event Management			
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72	Continue to develop and expand successful schools education programme, in particular the innovative learning programmes based on events, performance and student interaction for this Garden			
75	Promote and encourage self-guided walks			
76	Continue to operate the free guided walks			
78	Undertake a review of current recreational use of the Garden and prepare a public programme plan that identifies desirable activities, particularly those that support appropriate learning and active and passive recreation			
81	Produce guidelines for the functioning of performing arts events in the Garden and propose a framework for engaging with the arts community to increase the profile and quality of the Garden as a long term host of quality outdoor arts events			
99	Develop a curatorial approach to the staging or commissioning of events and installations to ensure that synergies with the objectives of the Gardens' Strategic Plan are maximised			
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97	Provide information on weed removal procedures to the public			
100	Investigate ideas for both temporary and permanent art works to form part of the visitor engagement strategies for the botanic garden and its specific garden precincts and collections			
101	Develop interactive storytelling based art projects that foster understanding of the First Nations people's relationships with the land and plants			
6	Undertake a feasibility study for developing the Arthur Hardy sanctuary and quarry site as public garden spaces. Include in this study an investigation into the feasibility of developing a possible third entry and associated parking off Piccadilly Road adjacent to Crafers Primary School